



Saint Bartholomew's Hospital

JOURNAL

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EDITORS

January	JACKIE HALL and COLIN REISNER
February-July	BARBARA APPLEBY
August-December	JOHN LAIDLAW

EDITORIAL

Once again the Spring and Summer of this year brought a wave of student protest in colleges and universities throughout England, differently motivated, yet nevertheless an aspect of the prevalent face of violence. At the moment of writing this, no relevant headlines scream from the Daily Newspapers but this is not a sign of improved relationships or positive communication between the student body of this country and the established order. Neither is it a flight from the cold of December as the explosion of violent protest is proof against the coldest wind.

A natural lull for Christmas and the New Year? The lull allows time for the gathering of forces and the exacerbation of irritations. To look upon the new year as a phoenix rising from the tribulations of the old year is unrealistic.

What did the Authorities learn from the obstinacy and passion of militant youth and what have students learnt from the obstinacy and conservatism of Authority? Will 1970 see the hardening of attitudes; the evidence of failure?

By the very necessity of hospital life we as students pass our time at Bart's in the atmosphere of a stable environment. We can use this to lend us objectivity, and the objectivity to find understanding and also to find a belief in the effectiveness of non-violence rather than the hypocrisy of passivity. However understanding on the part of a minority does little to help the situation as it stands, and 1970 may see the continuation of the feuds which sprang up in 1968.

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ANNOUNCEMENTS

Engagements

HOULTON—MACARTHUR—The engagement is announced between Mr. Peter Houlton and Miss Janet MacArthur.

MATTHEWS—FROGGATT—The engagement is announced between Mr. David Hamilton Matthews and Miss Alyson Mary Froggatt.

PHILENS—STEBBINGS—The engagement is announced between Mr. Hugh Lynton Pihlens and Miss Lois Patricia Stebbings.

SNELL—APPLEBY—The engagement is announced between Mr. Noel James Creagh Snell and Miss Barbara Jean Appleby.

Births

GOODCHILD—On November 14, to Patricia (née Wells) and Nigel Goodchild, a daughter (Joanna Clare).

KUUR—On October 22, to Dr. Carol (née Martin) and Dr. Johannes B. G. Kuur, a daughter (Carolyn Alice Louise), a sister for Jeremy.

Deaths

BAILEY—On October 13, Dr. George Frederick Selbourne Bailey, M.D., aged 88. Qualified 1906.

BROWN—On November 3, Dr. G. C. Woods Brown, B.A., M.R.C.S., L.R.C.P. Qualified 1924.

CLARKE—On October 18, Mr. E. P. Clarke, M.B.Lond., F.R.C.S. Qualified 1936.

HEARN—On November 5, Robert Daniel Hearn, M.B., M.R.C.P.I., aged 55. Qualified 1938.

JAMES—On August 21, Dr. Ernest Taliesyn James, M.B., B.Ch., D.P.H., aged 66. Qualified 1927.

APPOINTMENTS

St. Bartholomew's Hospital Medical College

Dr. James Spencer Malpas, D.Phil.Oxf., B.Sc., M.B.B.S., M.R.C.P., has been appointed Dean of the Medical College.

Royal Masonic Hospital

Dr. D. D. Munro, M.B.Lond., M.R.C.P., D.Obst., has been appointed consultant dermatologist to the Royal Masonic Hospital.

Gilbert Blane Medal

The Gilbert Blane Medal for 1969 has been awarded jointly by the Royal College of Surgeons and the Royal College of Physicians to Surg. Cdr. Norman James Blacklock.

Change of Address

The new address of Dr. and Mrs. C. O. S. Blyth Brooke is 217 Ingrave Road, Brentwood, Essex.

THE WINE COMMITTEE PRESENTS

FRANCE v. ENGLAND
AT THE STADE COLOMBES ON
SATURDAY, APRIL 18th, 1970

The Wine Committee are organising a day trip to Paris to watch this highlight of the Rugby season. Leave early on Saturday morning, return late on Saturday night.

For details contact:—

Steve Leach,
College Hall,
or Ken

NEWS (or lack of it)

There are many interesting events occurring in and around the hospital and reports of these would make interesting reading in the *Journal*. The ratio of readers to *Journal* staff is obviously large and therefore you, the reader, are the most likely person to hear of, or attend such events—reports and information to the News Editor, please.

Good attendances are the result of good advertising! Details of college and hospital events can be included in the *Journal* free of charge and should be sent to the News Editor. Due to the fact that an edition of the *Journal* takes four weeks to complete, such announcements must be sent to the *Journal* a full calendar month prior to the first day of the month in which the event occurs.

letter to the editor

11th November, 1969

DUTY DRESSERS

Dear Sir,

John Frank's comment on night work in the Casualty Department is absolutely true. However, this state of affairs continues throughout one's professional career simply because of the legal situation that anyone has a right to walk into a hospital at any time if the Casualty Department is open. Immediately he traverses the threshold the responsibility is on the hospital and on the unfortunate doctor on duty. This responsibility cannot be delegated legally to an unqualified person. Your correspondent quotes that Casualty Departments in some hospitals outside London are staffed by a nurse at night. Sooner or later trouble occurs when this is the case and even telephone calls for advice must technically be referred to a doctor. Nearly all this abuse of a hospital Casualty Department occurs because general practitioners are not available at night in the big cities; theoretically some one is on call for them but in practice the public knows that this might mean a long chase looking for a doctor and then they might be seen by a radio-doctor on the emergency service! It is always quicker to go to a hospital. To be called unnecessarily, to deal satisfactorily with trivia and maintain a professional patience under all circumstances is something your correspondent will have to do unless he takes up one of the specialities that keeps a 9.30-5 office regime. Until general practice works from 24-hour staffed health centres this state of affairs will be perpetuated.

Yours sincerely,

D. F. ELLISON NASH

students union

REPORT OF THE STUDENT'S UNION COUNCIL MEETING, 18th November, 1969

Paul Cottrell was elected to the new post of publicity officer to deal with student travel offers, forthcoming social events, both inside and outside U.L.U. newspapers, etc.

The following amendment to the Constitution, concerning the teaching committee, was avidly discussed and finally adopted. Mark Britton has asked last year's teaching committee to meet and elect a new committee under the new constitution and voting will be by ballot.

The next matter discussed was the method of voting at future elections since the current method has proved a little farcical in some instances! It was decided in future to vote by secret ballot, though this will only be possible if nominations are more rapidly forthcoming, and if students are more reliable in filling in ballot papers and coming to the A.G.M. In future nominations for the posts will be asked for 14 days prior to the A.G.M., and will be closed seven days prior to the meeting. A list of the nominees will then be posted and ballot papers will be available from year representatives. These will have to be handed in before the A.G.M.

Mark Britton has yet to receive nominations for the post of first year preclinical representative.

Frank Martin was elected as U.L.U. representative for the Union, and Chris Trower was elected Sports representative at U.L.U.

Dates of Future Events

Next S.U. Council Meeting, Tuesday, 9th December.

Christmas Raffle Draw, 1 p.m., Monday, 22nd December. (Winners notified by post if unable to be present).

Pot Pourri (from Ward Shows), 29th, 30th, 31st December.

STUDENT'S UNION CONSTITUTION APPENDIX III Teaching Committee

The Teaching Committee shall consist of two sub-committees, Clinical and Pre-Clinical. Each Sub-Committee shall have five members, three of whom shall be elected at the A.G.M. The two other members, who will act as Chairman and Secretary of the new sub-committees,

shall be elected at the meetings of the outgoing sub-committees immediately prior to the A.G.M. Each sub-committee shall have the power to co-opt up to another three members, who are directly concerned with the teaching under discussion.

The aims of the Committee shall be to express to the academic staff and College authorities, the opinion of the students about the numerous aspects of teaching in the various departments of the Medical College, and also to act as liaison between the two bodies.

The Teaching Committee shall meet as a body at least once in each academic year. The Chairman of the Clinical Sub-Committee shall call this meeting. The Clinical Sub-Committee shall meet at least once in each Clinical three-month period. The Preclinical Sub-Committee shall meet at least once in each term. The minutes of all these meetings shall be published and posted on the Students' Union Notice Board.

The Secretary of the Students' Union shall invite nominations for the Teaching Committee fourteen days before the A.G.M., and notices to this effect shall be displayed on the Union Notice Boards.

Candidates for election require a proposer and a seconder, all must belong to the same division (i.e. Pre-clinical/Clinical). Each member of the Union shall have three votes available for his/her appropriate division.

Members of the Committee shall hold office for one year from date of election and shall be eligible for re-election at the end of that year.

The Chairman of the S.U. is an Ex-Officio member of both sub-committees.

B.M.S.A. Report

Grants

Two years ago B.M.S.A. negotiated an increase in grants for medical students. This was done via the Brown Commission's Report. Since then, owing to the poor financial state of the country, there have been no more increases in grants for any students. The B.M.S.A. is still pressing for the abandonment of the great disparity between clinical and pre-clinical students, i.e. both presumably receive £10 per week for thirty weeks of the

year; any time over this is considered to be Vocational Study. This disparity as a result of which you receive approximately £7 per week should be abolished. It means that clinical students receive less per week than any other students, and have no opportunity to earn a supplementary amount during holidays.

Education

Various conferences have been arranged to discuss the Todd Report and its implications. We have visited Baroness Serota at the Ministry of Health to present our views, which are set out in *Scope*—I hope that you have read it!

Publications

Scope. B.M.S.A. now produces a bi-monthly newspaper which is distributed free of charge to all medical students in Great Britain. I, as editor, will not comment on it except to say that, financially, it is a success. The money comes purely from advertising. Any criticism of its content will be gratefully received.

Introducing B.M.S.A. This is a booklet printed with Freshers in mind. It is designed to show them that the B.M.S.A. is not purely the free diaries association.

Diaries. These are distributed free of charge at Christmas.

I am responsible for the above items. If you have any complaints or queries, please let me know.

Hospitality

This entails providing accommodation and entertainment for foreign medical students in London. I was hospitality officer for London during the summer and it was highly enjoyable. If any of you are interested in this job at any time please will you let me know. Also, if you are willing to provide a bed for a student, male or female. I told you that it was enjoyable!

Visits

Visits have been arranged to various places, including the Atomic Weapons Research Establishment, and prisons, etc. The London Rubber Company visit should be arranged soon.

Conferences

There have been various education conferences organised, including a badly attended one at Barts—Shame. Also the Tropical Medical Conference is being arranged soon in London. These conferences are subsidised by Drug Companies.

Sport

Various rugby matches are being arranged, including one in Belfast, with a team from London.

David Stringer.

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The Detection and Assay of Antibodies

by R. B. Heath, M.D.
Reader in Virology

on reaction between antibody and its specific antigen. The latter are generally referred to as "Serological Tests" because they are mainly used for serum antibody estimations. The term should not be taken too literally because today many of these procedures are used for assay of antibodies in secretions, faeces, cerebrospinal fluid, etc.

Immunochemical procedures measure either levels of total gamma globulin or the individual gamma globulin classes (IgG, IgA etc.). The methods are precise, relatively insensitive and, of course, non-specific. Because of this these assays are rarely carried out but are of value in detecting hypogammaglobulinaemia and also abnormal immunoglobulins.

The more frequently used *Serological Procedures* measure antibody levels against specific antigens and are usually far more sensitive than chemical tests. The essential feature of any one of these tests is that antibody combines with antigen and the result of this union should be demonstrable. It will be appreciated that since there are a near infinite number of antigens and since considerable ingenuity has gone into devising ways of demonstrating their reaction with antibody, there is a very large number of these tests. It is clearly impossible to even mention all of these tests in a short article so that selection will be made on the basis of either frequent use in diagnostic laboratories or because the test demonstrates some important principle.

One further point should be made at this stage: the procedures described in this paper are mainly used for the detection or assay of antibodies but they can nearly always be used in reverse for similar assessment of antigens.

Precipitation

This is the most obvious method of demonstrating a reaction between antigen and antibody but is restricted to soluble antigens. After combination the antigen and antibody complexes come out of solution and are visible as precipitates. It is important to realise that precipitation will only occur when both antigen and antibody are present in optimal concentration and techniques must be arranged to ensure that these conditions are met. Three basic procedures are in common use.

a. *Tube method.* This is carried out by adding the antigen solution to serial dilutions of antibody and, after a certain interval of time, the tubes are examined for precipitates. It is frequently found that in a positive test, the low dilution tubes—i.e. where excess antibody is

A previous article has dealt, in fundamental terms, with our current understanding of immune processes.* It will be clear from these, that most progress in this field has been made in understanding the humeral responses that result from exposure to antigens. Because of this it will not be surprising that assay of antibodies is the most commonly used procedure for detecting and providing a measure of immunity. The presence of the cellular component of immunity can, of course, be demonstrated by delayed hypersensitivity skin tests. These bedside, rather than laboratory tests are crude and difficult to quantitate but nevertheless there are occasions when they are the only immunological test that can usefully be carried out. *The Mantoux test* is the best known example of these procedures but they are also used for the diagnosis of lymphogranuloma venereum (*Frei Test*) and for demonstrating *beryllium hypersensitivity*.

Tests for Antibodies

Antibodies can be estimated either by immuno-chemical procedures or by purely immunological methods which are dependent

* See St. B.H. Journal, September 1969, "Immunology".

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Release the arthritic patient with

BRUFEN

ibuprofen

To the arthritic patient, Brufen means more freedom from pain and stiffness, and the greater freedom of increased joint flexion and a progressively improving range of pain-free movement. Brufen means antirheumatic therapy which is remarkably free from side-effects, and which is so well tolerated by the gastro-intestinal tract that the first dose of each day can be taken on an empty stomach, as soon as the patient awakes. Brufen is ibuprofen, the first non-steroidal antirheumatic agent produced entirely by British research.

BRUFEN  **NEW FREEDOM FOR THE ARTHRITIC**

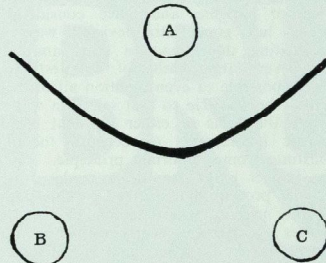
Full information is available on request from Medical Products Marketing
Boots Pure Drug Co Ltd
Nottingham 

present—no precipitation occurs and this is known as the “prozone phenomenon”. This again emphasises the point that it is essential to set up these precipitation tests in such a way that antigen and antibody are present in optimal concentration.

The *Kahn test* for syphilis is a well known example of this kind of test.

b. The *ring test* is a simple way of achieving optimal concentrations of the reactants. In this test the solutions of antigen and antibody are kept separate by careful layering one on top of the other. The solutions diffuse into each other and at the point where the reactants are present in optimal concentration a “ring” of precipitate forms. This kind of test is currently used for the grouping of streptococci.

c. *Gel diffusion*. This is the most elegant method of demonstrating precipitation. Slides or petri dishes are coated with a thin layer of agar and holes are bored into this, in a similar



- A = standard antiserum
B = standard antigen
C = unknown antigen

The use of gel-diffusion as an identity test: The continuous line of precipitate indicates that the unknown antigen in C is the same as the standard antigen in B.

manner to the preparation of antibiotic sensitivity plates. Antigen and antibody solutions are placed in these holes and they diffuse out radially into the agar. A fine line of precipitation appears when antigen and antibody are present in optimal concentration.

A particular advantage of this method is that it is capable of demonstrating the different component parts of an antigenic complex. The reason for this is that these different components migrate at different rates and when they precipitate, a series of lines form in the agar. The test is therefore of value in demonstrating antigenic relationships between similar but not identical substances.

Gel diffusion procedures are extensively used in research but there are two important diagnostic applications. The first is a *rapid test for the diagnosis of smallpox* and the other is *Elek's test* which is used for demonstrating toxigenicity of corynebacteria.

Immunoelectrophoresis is a variant of this test in which the antigens (usually plasma proteins) are first segregated in the agar gel by an electric current. Antibody is then allowed to diffuse towards these antigens from an adjacent well cut into the agar. The various antigens are then demonstrated as a series of white lines.

Agglutination

The principle of these tests is essentially the same as that of precipitation but in this case the antigens are on the surface of some large structure such as a red cell or bacterium, rather than being freely dispersed in solution. It is important that the structures containing the antigens should form an evenly dispersed suspension in some fluid medium so that, when antibody is added, the aggregation that takes place is easily visualized.

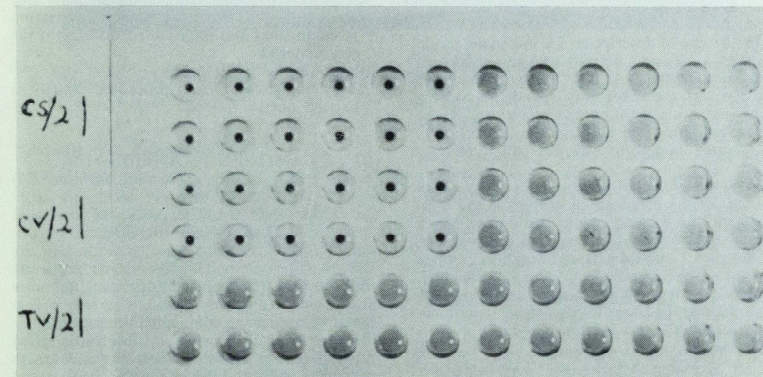
By far the most common application of this test is the procedure used in *blood grouping laboratories* where red cells are directly agglutinated by the natural isoagglutinins. Other important agglutination tests are the *Widal Reaction* which is used for the diagnosis of typhoid fever and similar tests for *brucellosis* and *leptospirosis*. A simple slide agglutination procedure is used for the typing of various gram negative bacteria such as the salmonellae, shigellae and *E. coli*.

The well-known *Coomb's test* is an example of indirect agglutination. In this test incomplete antibody, which is incapable of agglutinating

red blood cells, adheres to their surface. The addition of an anti-human gamma globulin serum will then bring about agglutination. Rather similar to this are the so called “passive agglutination” tests. For these, red cells are treated with substances such as tannic acid so that various antigens can adhere to their surface. The cells can then be passively agglutinated by means of antibody. Synthetic structures such as polystyrene latex (as used in the *latex fixation test* for the detection of rheumatoid factor) can be used in the place of red blood cells.

Non-specific agglutination. In a number of diseases antibodies arise which are capable of non-specifically agglutinating certain red cells or bacteria. These tests are frustrating from an intellectual point of view because in most cases we do not understand the relationship between the antigen on the cell and the inducing agent.

Haemagglutination-inhibition: Duplicate titres of 3 sera. CS/2 and CV/2 have antibodies, TV/2 is negative.

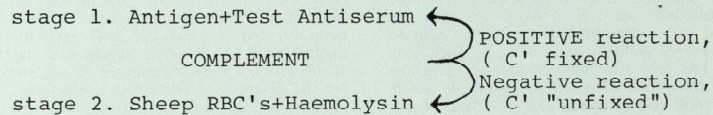


Complement Fixation

The principle behind this test is simply that if an antigen combines with an antibody in the presence of complement, then the latter takes part in the reaction and becomes fixed. The term “fixed”, from a practical point of

view, simply means disappears from the reaction mixture. These tests are in essence a test for complement, after an antigen-antibody reaction has taken place.

The test takes place in two stages and requires 5 reactants as shown below.



It can be seen from this that if the test antiserum contains antibody then this reacts with antigen and complement becomes fixed. When the second stage haemolytic system is added to the reaction mixture, lysis *does not* occur because of the absence of complement. Conversely if the serum is negative (i.e. antibody deficient), complement remains to take part in the second reaction where it combines with the second antigen-antibody complex and brings about lysis of the red cells. It is a common student howler to equate "lysis" with "fixation" whereas, in fact, it is the converse that is true.

In the above description an unknown serum (usually a patient's serum) was tested against a standard antigen. It is of course possible to use the test the other way round, i.e. with a standard serum and unknown antigen. These latter tests are often used for the identification of isolated organisms (the so called identity tests).

The well known *Wasserman Reaction* which is used for the diagnosis of syphilis is the most frequently used complement fixation test but it must be remembered that it is an unusual test, in that heart muscle extract is used as antigen instead of the spirochaete. (This, incidentally, is also true of the *Kahn test* described above). Complement fixation is the most commonly used serological test for the diagnosis of virus infections.

Fluorescent Antibody Techniques

These procedures are being increasingly used because they are capable of visualising specific antigens in tissues or other mixtures of antigenic substances. The essential reagent in these tests is antibody which has been tagged with a dye which fluoresces in U.V. light (a

fluorochrome). This conjugated antibody, when applied to the antigen mixture, attaches to its specific antigen which will then fluoresce when examined with a U.V. microscope. One of the following two methods is commonly used.

(i) *The direct method*

ANTIGEN + CONJUGATED ANTIBODY

This is the simplest procedure as only one reagent is required. The specific antiserum is conjugated and then added directly to the test material.

(ii) *The indirect method*

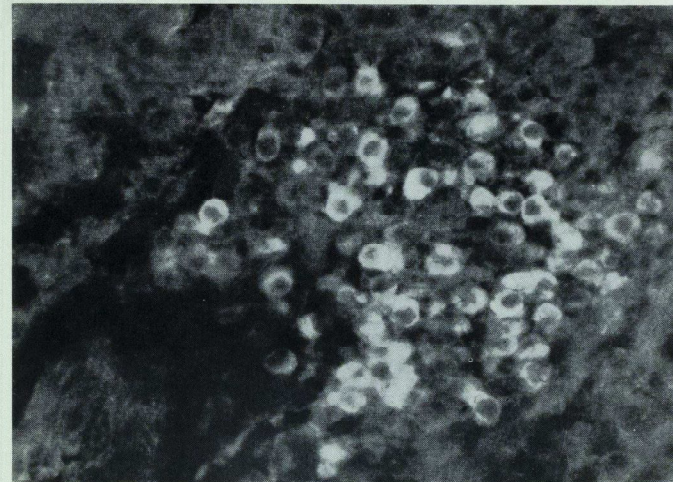
This is a two stage procedure which is carried out as follows.

ANTIGEN + ANTIBODY (raised in host "X") then CONJUGATED ANTI-"X" GAMMAGLOBULIN

This latter method is the most frequently used because if a series of specific antibodies are raised in a single species, it is only necessary to prepare one conjugated antiserum.

These tests are proving to be of value in the rapid diagnosis of virus infections and are in particular well established for the diagnosis of *respiratory syncytial virus* infection and *herpetic encephalitis*. By using standard antigens this procedure can also be used for the detection of certain *autoimmune antibodies*.

A procedure which is similar in principle to fluorescent microscopy is the use of ferritin conjugated antibody. With this test the conjugated antibody can be seen attached to its antigen when viewed with an electron microscope.



Fluorescent Antibody Technique: Demonstration of immunoglobulin producing cells in virus infected lung tissue.

Neutralization Procedures

These tests are, from a theoretical point of view, the most easy to understand but are frequently tedious to carry out. They are usually restricted to noxious antigens. If these are first allowed to react with their antibodies, the antigen is rendered inactive. These tests are used for the assay of antitoxins and antibodies against various infectious organisms.

The properties of these noxious antigens used in neutralization are their ability to kill or produce well defined disease in some laboratory animal or other source of living cells such as tissue culture. It is not essential that the antigen should exert a harmful effect, for if it can easily be shown that replication occurs in the selected host, then this property can be used for neutralization.

The *Treponema pallidum immobilization test* can be regarded as a rather unusual form of neutralization. In this test antibody in the presence of complement exerts a toxic effect on the active spirochaete.

In conclusion, it must again be emphasised that the above is no more than a brief account of laboratory procedures that are used for the detection of either antibodies or antigens. Whilst care has been taken to mention the most commonly used procedures, there must inevitably be a long list of omissions. Those requiring more information should consult the two books listed below. It should also be pointed out that articles written on immunology, a subject which forms an integral part of so many disciplines, are inevitably biased by the writer's personal experience (microbiology in this case). If this article had been written by a haematologist it would undoubtedly have dealt more thoroughly with the elaborations of red cell agglutination. An immunologist would probably have concentrated more on fundamental aspects but might have veered away from clinical applications.

Bibliography

- Clinical Aspects of Immunology*, Edited by P. G. H. Gell and R. H. A. Coombs, Blackwell, Oxford.
- Handbook of Experimental Immunology*, Edited by D. M. Weir, Blackwell, Oxford.

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ACTHAR GEL THE CLINICALLY PROVEN ACTH

Acthar Gel, highly purified natural ACTH has been shown to be both effective and reliable over 16 years of continuous clinical use

In Rheumatoid Arthritis

'In the control of severe rheumatoid arthritis . . . the response to intermittent corticotrophin therapy (Acthar Gel) seemed as satisfactory as to oral glucocorticoids, but advantages observed were that side-effects were few, there was no withdrawal syndrome and approximately a quarter of the patients were so improved that they could eventually cease the treatment.'¹

In Asthma

'A major advantage of corticotrophin is more the ability eventually to discontinue the treatment in some cases than greater efficacy in the control of the disease . . . The absence of a clinical withdrawal syndrome on cessation of therapy is undoubtedly the general experience and is the major advantage.'²

In asthmatic children

'Corticosteroids inhibit growth and lead to considerable stunting. When corticotrophin is given in doses sufficient to control the signs and symptoms of the disease being treated the growth rate increases.'³

In Bell's Palsy

' . . . a form of treatment that produces satisfactory results in 76 out of 77 cases leaves little room for improvement. The earlier treatment begins the better, and even on present evidence both efficiency and economy might best be served by side-stepping special investigations and regarding the condition as one to be treated at once by the general practitioner with a short course of ACTH.'⁴

Duration of Action

Acthar Gel ensures raised blood steroids levels for approximately sixteen hours from one injection. However, clinical benefit extends from twenty-four hours to one week. Thus, even if injections have to be given daily then within each twenty four hour period there is time for the pituitary to recover. Acthar Gel is now liquid at normal room temperature, and easy to inject without discomfort.

References

1. *Lancet* (1966) ii:78
2. *Lancet* (1966) ii:78
3. *Lancet* (1966) ii:568
4. *B.M.J.* (1967) 3:815



Full information on request
Armour Pharmaceutical Company Limited
Eastbourne, Sussex

JA42/AC/9

DEAR MARGE

An interview with Marjorie Proops



It seems a very long time ago now that I had the pleasure of speaking with Majorie Proops on behalf of the *Journal*. It was Summer, the forced ventilation in the *Daily Mirror* Building was failing to reduce the heat and there was an enormous rubber plant in one corner of the office.

She looked very cool, smoking an untipped Senior Service in a long cigarette holder, I was not very cool and spilled half a cup of tea into

its saucer, before managing to turn the tape recorder on.

Journal: What do you think of protesting students?

Mrs. Proops: I think that protesting students are good, are fine, I am for them. If you can't find anything wrong with society when you're young and vigorous, then there's something wrong with you. Because there's a hell of a

lot wrong with society and students and young people are going to inherit this wreck that my generation has presented them with.

Journal: Society has seen many changes. Would you have preferred to have grown up when you did or today, when the situation is so much different?

Mrs. Proops: I don't think, looking back to the days when I was a student that there's any very great difference. I think that young people today are subjected to a lot of pressures and difficulties and problems but then so were we. I was a student just before the war and there were a hell of a lot of pressures and problems in those days. We had the threat of annihilation hanging over us, when we were students.

I myself was one of the small protesting group. I was always in the forefront of any kind of protest that was going on.

Journal: Do you think it's more difficult for a woman to get on in journalism than it is for a man?

Mrs. Proops: Indeed it's more difficult, period. Whatever field of operations, if you're a female it's more difficult.

Journal: Why?

Mrs. Proops: Well first of all there are the traditional prejudices aren't there? Take medicine for example. I don't have to tell you how much harder it is for a woman to become a medical student.

While our society remains the sort of society in which the majority of the men who run it feel that the woman's place is in the home and in the kitchen and in the bed, even if they don't actually say it overtly, so they make it as difficult as possible for women to get out of this domestic ambience.

Journal: Do you think that the very action of writing to you, helps people with their problems?

Mrs. Proops: I think that the very act of writing is cathartic. I get a lot of letters from people, who maybe write ten pages, very confused letters and at the end of it all, at the last line of the tenth page say: "I feel better now I've got it off my chest."

So, even if you weren't able to give any practical help or advice, that in itself would be valuable; because, if you consider the functions of people who conduct advice columns like me, to a certain extent we've taken over this curious kind of social service from family doctors who are form fillers now, and certificate writers. Also we've taken over the function of the priest, to a very great extent. Oddly enough, I don't get very many letters, as far as I know, from Catholics, because Roman Catholics go to the priest still. But Protestants and non-Catholics write to me in great numbers because they don't rush to the priest any more for help and advice, they have no communication.

Journal: Do you have a staff that sorts through your letters, or do you read them all personally?

Mrs. Proops: No, I don't, I have five secretaries and an assistant and we all work together and we all have different functions.

A lot of the letters fall into fairly straightforward categories and have stock replies.

There is even a stock reply for "I am a seventeen year old, expectant, unmarried mother."

Each one gets an individual reply but if you get 30 letters in one week from 30 girls who are seventeen and pregnant and want to know where they can get help or where they can get an abortion, then we can't avoid a certain uniformity in the answers.

Journal: What, in your view are the criteria by which it should be decided, whether a woman should have an abortion?

Mrs. Proops: It's a red hot question and it's a dangerous question. Clearly if a woman who is aged forty-eight and has five children and a

tubercular husband suddenly finds that she is pregnant again, this would seem to me to be a case for an abortion. If a girl of fourteen is raped by her father and becomes pregnant, this would seem to me to be a case for an abortion. If a student of twenty is pregnant by her tutor (married), this would seem to me to be a case for an abortion. I think that each case has to be taken on its merits and on the situation as it pertains at the time. I take the view that no unwanted child should be born because if a child is born unwanted then here we have in the making an unhappy and neurotic citizen. This is the only kind of general criterion that one could use.

Journal: Do you have any unfulfilled ambitions?

Mrs. Proops: No, I'm not really ambitious. I know this might sound hard to believe but I've never thought to myself, I would like to be this, or that or an editor or anything of the sort, my one ambition really is to carry on, to keep my right arm operating.

Journal: Your advice, while invariably sticking to the rules of common sense. I think differs from other advice columns that I've read in that you don't always relate it to so called "conventional moral standards", you seem to deal with the thing on a situational basis. Do you think that certain "permissive" changes, which have taken place over the last ten years or so are for the better?

Mrs. Proops: I don't feel that I have any right to sit in judgement on people or moralize. Who am I? I am just another weak, fallible human being, so I don't ever moralize to other people.

This word permissive, I don't really know what it means. When I was a teenager we did all the things that teenagers do today but we did them rather more secretly. It's true that there's been a rise in illegitimacy and it is true that there are fewer virgins but I think that

this is because people now are more educated on the whole than my generation of teenagers were. Franker, which is good, able therefore to talk about things, which my generation couldn't or wouldn't or were afraid to talk about. I think this is very good, I'm in favour of open discussion about everything.

You know, at the beginning of the war when I was eighteen I was asked to write a booklet for the Wrens about venereal disease. I did not know what venereal disease was, at the age of eighteen I'd never heard of it.

I had a baby, I wasn't an innocent child, I was a married lady but I didn't know what venereal disease was.

I gaily said I'd write it because I needed the money. I had to ring up a doctor friend of mine and say: "Can you tell me anything about venereal disease?" And he said: "You had better come round and see me right away!"

Journal: What developments would you like to see in the future, say by about the year 2000?

Mrs. Proops: All the things that I would like are things that I fear would never come to pass but this is what I would like. I would like racial prejudice to have disappeared from the face of the earth. I would like all human beings to be tolerant of each other, of each other's weaknesses. I would like every human being to accept the fact that there is room for everyone of them. I would like all young couples to be able to find homes. I would like old people not to be afraid of being poor. I would like people to be sufficiently well adjusted to be able to cope with disasters that overtake them. I would like mothers-in-law and daughters-in-law to get on fine and husbands to appreciate wives and talk to them. I would like everybody to know about sex but to keep it in proportion and not to be so obsessed by it that they think that unless the sexual side of a relationship is perfect, nothing else can be right with it. I'd like everybody to have enough to eat, to be warm in the Winter and cool in the Summer. All basic things are what I want.

Interviewer: Malcolm Fletcher

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Medical Protection Society

ASSETS EXCEED £500,000

FOUNDED 1892

*"The first thing we do,
lets kill all the lawyers"*

SHAKESPEARE: KING HENRY VI PART II

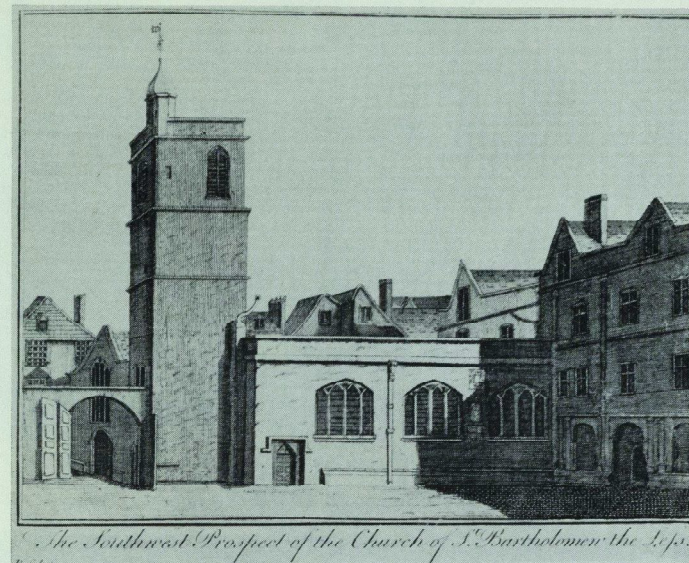
But killing lawyers is illegal. Some 50,000 doctors and dentists prefer to enjoy complete immunity from litigious patients through membership of the MEDICAL PROTECTION SOCIETY. Benefits include unlimited indemnity against costs and damages arising out of allegations of professional negligence.

All doctors working in N.H.S. hospitals are required to belong to a recognised protection organisation. This includes pre-registration appointments.

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The Secretary H. A. Constable, M.R.C.S., L.R.C.P.,
Medical Protection Society, 50, Hallam St., London, W.1.



St. Bartholomew the Less before its rebuilding by Dance

The Hospital Buildings

by Nellie J. Kerling, Ph.D.,

Archivist to the Hospital

Though St. Bartholomew's Hospital is a 12th century foundation only the tower of the church of St. Bartholomew the Less dates from medieval times as it was probably built in the 15th century. A plan of the church dated 1617 gives us some idea of the interior which had probably not much changed since the 15th century. There was a chapel for the poor on the North side, a site now occupied by the

Personnel Office, and two West doors. One is blocked up though one can see where it used to be, and the other one is still used today. In 1789 the church was reconstructed by George Dance, then the Hospital Surveyor. He changed the interior completely and even moved or destroyed the monuments. He designed an octagon with a timber roof which had to be removed after 25 years because of

dry-rot. In 1825 the church was again rebuilt, this time by the Hospital Surveyor, Philip Hardwick who followed as much as possible Dance's design but replacing the timber by stone. Among the surviving monuments are the brass of William Markeby and Alice his wife of 1439, now carefully covered by a carpet, a monument for Robert Barthroppe, surgeon to Queen Elizabeth I, who died in 1591, a memorial tablet to Lady Anne Bodley who was buried in 1611 and who was the wife of Sir Thomas Bodley, the founder of the Bodleian Library, Oxford. They lived in a house which stood approximately on the site of the present George V Block. At the back of the church one finds a monument for John Darker, Treasurer of the Hospital from 1760 to 1784, who died in 1784 and for his wife who died in 1800. On the back of the outer West wall is a memorial tablet to John Freke, surgeon to the Hospital who died in 1756 and who was the first surgeon to be interested in the diseases of the eye. He gave the Hospital the large hand-carved gilded chandelier which hangs over the staircase leading to the Great

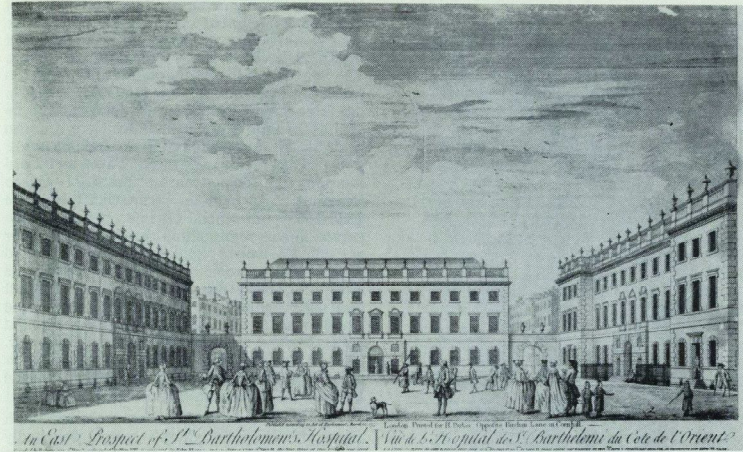
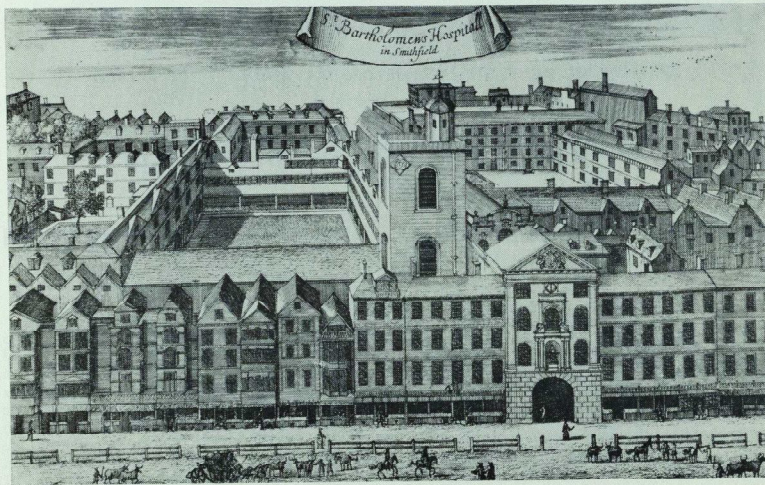
Hall.

The church received some damage during the last War but was restored in 1951. A window dedicated to the memory of nurses killed between 1939 and 1945 was placed on the South side.

We know very little about the medieval Hospital buildings but when the minutes of the Governors' meetings become more detailed, that is after c1550, we notice that there were frequent orders to repair or to enlarge the existing wards. One gets the impression that the Governors did not work according to a plan but rather as the circumstances required. When it was necessary to have a better entrance, a new gate was constructed in 1702 by Edward Strong junior, nephew of Christopher Wren's mason who had worked on the re-building of St. Paul's. This building, carrying the only London statue of Henry VIII, is still in use. After it has been cleaned it will again attract people's attention.

For a time one can continue to repair and alter old buildings but there comes a point where this is uneconomical. Soon after 1700

The Hospital between 1700 and 1730



James Gibbs Design for the Hospital

the Governors realised this and they decided to rebuild the Hospital completely. In 1723 they asked the architect James Gibbs to design a plan for a new and modern Hospital. His plan was accepted in 1729. It consisted of four separate Blocks built around a square. The North Block containing the Great Hall was to be used by the administration, that is for the offices of the Clerk, the Steward and the Renter. On the West side of this Block Gibbs designed a house for the Clerk and his family. The West, East and South Blocks were exclusively for the patients and each contained twelve wards with fourteen beds per ward and a room for the Ward sister near each ward. The stone for the new buildings was Bath stone delivered at a low price by Ralph Allen. Unfortunately this stone is not suitable for London and in 1850 all the walls had to be refaced and the ornamental Greek vases on the top had to be taken down.

By degrees Gibbs demolished all the old Hospital buildings and also any houses which

were still standing on the site. The rubble he used for the foundations of the new Blocks. Even nowadays when one opens up the floor in a basement one may find parts of 16th or 17th century bricks and sometimes pieces of earthenware of that time. Gibbs started with the North Block which was finished in 1734. The ceiling of the Great Hall was made by Jean Baptiste St. Michele, a completely unknown plasterer who gave us an excellent piece of work. The stained glass window, removed from an old building, has often been repaired. It dates probably from the first half of the 17th century and it shows Henry VIII giving the City authorities his Letters Patent of 1546 by which he granted them St. Bartholomew's Hospital with most of its medieval endowments.

Hogarth who was elected a Governor in 1734, painted two murals on the staircase: the Pool of Bethesda and the Good Samaritan, which he finished in 1737. One of the Governors presented a copy of Holbein's portrait of

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*Carved figure of an Injured Warrior
in the Great Hall*

Henry VIII which was fixed in the Great Hall over the mantelpiece on the West side. In the 18th century one could become a Governor if one paid at least £50 to the Hospital funds. The names of these donors were entered on tablets on the wall of the Hall, partly as an official receipt and partly no doubt to induce visitors to follow their example. Here are also portraits of former physicians and surgeons, such as Abernethy, Sir James Paget and Lord Horder with some marble busts of Queen Victoria, Sir William Lawrence (surgeon 1824-1865) and others. Of interest are the two carved figures representing the Wounded Sailor and the Wounded Soldier. In the 17th and 18th centuries some of the wounded of the Army and Navy were nursed in this Hospital and these figures in the Great Hall may have stood near the Hospital entrance carrying a collection box for alms for these poor patients. They date from the second half of the 17th century and though they were probably made locally, their faces are most interesting.

The house on the West side of the North Block, formerly the Clerk's house, was badly damaged in the last war. It has recently been restored and now contains a maisonnette for the Clerk on the two top floors, a kitchen and a room for meetings on the first floor, rooms for the Consultants on the ground floor and for the Hospital's Archives in the basement.

The second Block or South Wing was completed in 1740, followed by the West Wing in 1753. Gibbs died in 1754 but the East Wing was eventually built according to his plans. It was not ready for use until 1769 partly because the Seven Years' war between England and France interrupted the shipments of Bath stone to London, and partly because the Treasurer of the Hospital John Tuff became a bankrupt in 1760 and absconded to the Continent with about £4,000 of Hospital Funds.

By the end of the 18th century some new buildings had been added to Gibbs' quadrangle. At the back of the South Block stables were erected for the horses owned by the physicians and surgeons visiting the Hospital, an apothecary shop was put up behind the West Wing (now the Dispensary) and in the North East corner at the back of St. Bartholomew the Less a house was built for the Treasurer. In the new Gibbs' buildings Out-Patients were received on the Ground floor of the North Block, but soon more accommodation was required as the number of Out-Patients and Casualties was steadily increasing. The Treasurer's House was demolished in about 1840 and here the

Hospital's Surveyor, Philip Hardwick, constructed a new building for these patients with examination rooms and four wards which were opened in 1842. The same surveyor also built the Medical Library and the Museum.

In the 20th century the Governors became very conscious that modern medicine and surgery required better conditions than the James Gibbs' buildings could provide, however modern they might have been in the 18th century. In 1907 a new Out-Patients and Casualty Department was opened on the same site as it is at present. The buildings of Hardwick are now used for Physiotherapy, Occupational Therapy and the Children's Wards. Nowadays only the North Block shows Gibbs' design. Of the East and West Wing only the façades are 18th century but the interiors have been altered.

In 1930 a surgical Block was finished which stands partly on the former site of Christ's Hospital which moved to Horsham, Sussex, in 1902 and partly on the site of the former

stables no longer required in this century of motor cars. In 1934 it was decided to demolish Gibbs' South Block and to erect a modern building for medical cases. In 1937 this Block connected with the new surgical Block was opened by Queen Mary and given the name of George V Block. In 1921 Queen Mary who was always greatly interested in Hospital work, had laid the foundation stone for a new home for the nurses. Queen Mary's Home was finished in 1930 giving the nurses for the first time comfortable rooms.

The second World War temporarily put a stop to new building projects but as soon as peace returned, plans were made for yet another Nurses' Home and a Block for Special Departments. They were built in Little Britain and opened by Queen Elizabeth II in 1961. The latest improvement is the new Pathology Building erected on the site of houses built by the Hospital Surveyor Dance at the end of the 18th century and which were until recently used as Resident Staff Quarters.

AWAY FROM HOME

Survey of Paediatrics and Obstetrics at and away from Bart's

During last summer it was suggested to me that it might be interesting to get some idea of what people thought of the hospitals at which they had done both their paediatric and obstetric courses. As I myself was at that time trying to decide where to do these courses it seemed a worthwhile project.

After considerable thought and enquiry, I finally had duplicated two questionnaire forms, one to collect information on the two one month periods of residence for obstetrics, the other for the three month paediatric course. For distribution one paediatric and two obstetric forms, together with covering letters, were pinned together, addressed to the recipient and placed in cloakroom pigeonholes. I believe it is more common when running such schemes to

leave the questionnaire forms available for those interested to collect them. I felt I would get a better return if the forms were personally addressed to ensure that they at least reached the students who were to fill them in. It therefore seems to me that the magnitude of the response to this scheme is governed only by the attitude of the student to the questionnaire he receives and not by whether he happens to become aware from notices etc. that a survey is being conducted.

The distribution took place over several months to the 100 or so students who did paediatrics and obstetrics in 1968/69. Replies came in slowly and have reached a total of 100 forms returned, corresponding to a response of about 30% (three forms per student). As the forms were returned they were placed, thanks to the generosity of the librarian, in a file in the Hospital Library. The file is labelled "Bart's Journal and Teaching Committee. Reports from Bart's Students on Paediatric and Obstetric Clerkships" and is divided into paediatric and obstetric sections. Within the sections the forms are arranged alphabetically according to the name of the hospital visited.

The Questionnaires

The two questionnaires were very similar in layout. Both asked: the name and address of the hospital visited and the date and duration of the visit: the time spent on and the standard of ward teaching, lectures and tutorials (unfortunately misprinted on many of the questionnaires—such are the hazards of amateur surveys!); teachers, whether approachable, willing to teach, well informed: participation in patient management; specialities of the hospital; library facilities. Space was provided for further comments on teaching and for a description (including cost) of accommodation and food, as well as the "social opportunities" in and around the hospital. Finally the student was asked to give his name.

The paediatric questionnaire also asked how best to travel to the hospital, the variety of teaching material, time spent at work, salary, the local language and how essential knowledge of it was.

The obstetric questionnaire also asked how many deliveries were performed, whether more would have been desired or possible, whether

pupil midwives were present and whether they competed with the student and whether the student felt he had had sufficient time off.

Aims and Results

I do not consider the scheme as primarily an opinion poll from which to make criticisms (or pay compliments) to any hospital. Its main purpose is to help students to decide where to go to do paediatrics and obstetrics. However there are a few trends in the replies received so far which are perhaps worth reporting.

Paediatrics: 35 students replied. The countries visited were: Canada (3 students), Denmark (4), Ireland (1), India (1), Italy (1), Nigeria (1), Poland (1), South Africa (1), U.S.A. (9). In England, Addenbrookes, Cambridge (1) and Bart's (4). The others reported on short stays at other hospitals in Britain.

My general impression was that almost all of those who had gone abroad had found the experience very worthwhile. It was unfortunate that there were not more returns describing paediatrics at Bart's.

Obstetrics: 65 forms were returned; these covered all the hospitals commonly visited by Bart's students. The tone of these returns was less uniformly complimentary than those of paediatrics; some made it clear that there were deficiencies in the teaching at a few hospitals. There seemed to be two independent factors, the teaching from the doctors in the hospital and

the relationship with the nursing staff and pupil midwives on the wards.

Time off at Bart's came in for criticism. In answer to the question, "Do you feel you had sufficient time off?", most returns said yes, perhaps 10% said no. Of the seven from Bart's five said no and two said yes—these two did obstetrics in December. The effect of Christmas spirit?

I was pleased that almost everyone had the courage of his convictions and did not shrink from giving his name.

A Continuing Survey

Forms have already been sent to students of the 1969/70 group who have completed their first obstetric residence. So far the return is about 35%. The aim now is to keep the scheme up to date by sending questionnaires out to students as soon as they have completed the specific course.

I hope the scheme is successful in its main aim of helping people to decide where they shall do paediatrics and obstetrics and it would be interesting to find out whether students do find it useful. Subsequently, if the percentage return increases, it may become an important method of establishing what changes are needed in the teaching system. In the meantime I look forward to handing on to someone else the administration of the scheme.

C. Reisner

MEDICAL SUMMER SCHOOL IN SCANDINAVIA

by Rick Jolly

That the Scandinavians are hospitable people will not be news to anyone who has visited the three countries involved—but it was news to me when I arrived in Oslo at the start of the 1969 Medical Summer School. Each year, a local committee of medical students organizes a visit by an international party of 30 medical students, and once again Bart's had a representative.

In each city a course of lectures was arranged on special topics, together with a very varied social programme for the evenings. Although we had all paid £60 for expenses, the local groups had been subsidised by their respective governments. The excellent value this offered was fully realized by one American, who was using the trip as his honeymoon! His wife (completely non-medical) tried hard, but was usually rudely comatose as soon as a lecture started.

The subject for our edification in Oslo was "Coronary Heart Disease"—a problem that the Norwegians claimed concerned them especially. Here we noticed a typical characteristic—the lecturer would usually rise and apologise for his bad English before delivering a faultless, highly technical rendition on some aspect of the subject.

We visited the modern coronary care units (yes, plural: there was one on each floor of the medical building). It was, however, salutary to come out of a lecture on the dietary prevention of heart disease and then eat a monstrous meal at which gravy and warm fat were passed around separately!

There was a humorous suggestion that the Government should pass laws against saturated fats in the diet, but having heard Dr. Karl Evang, the Director of Public Health in Norway, speak, we realised that this might

soon come to pass! This very able man has built up a health care system that provides good medical services to a widely scattered population in a country nearly a thousand miles long—your local G.P. may well arrive in a seaplane. He combined the work of doctor, lawyer and administrator with demoniacal energy and fine humour to make the whole thing work. I hope he has a successor of similar calibre when he retires.

Socially, a tour of the city showed us (a) how much you miss from a 'bus and (b) the Kon Tiki and two delightfully preserved Viking Ships. Our hosts took us into the mountains for a day's stay at a ski-ing lodge. We swam and sunbathed, and tried to work up an appetite to face yet again the groaning smørrebrød tables. Back in Oslo, a visit to the local discotheque confirmed the fine qualities of the Norwegian female—the combination of a clear, suntanned skin and blonde hair is an irresistible one!

Class Assembles



Despite Oslo's proximity to the Arctic Circle, the temperature was in the 80's, and like the rest of the city folk, we all spent a lot of time by the fresh water lake—Sognsvan—just north of the City.

The final highlight was a reception by the Mayor of Oslo at the City Hall. Drinking sherry on a hot afternoon has its discomforts afterwards, but it helped the memory of two glorious American items—one fellow turned up to meet the Mayor wearing Bermuda shorts and basketball boots, and another popped a flashbulb in the Mayor's face before shaking his hand.

Gothenburg, our next stop, laid claim to the National Geographic-like title of "Little London". I couldn't understand why—it was much cleaner and the skirts were shorter. Here we met an outstanding medical personality, Professor Lars-Erik Gelin, who spoke to us on Renal Transplantation. His department has four years' experience of over a hundred cases. With a very active immunology group the results are continually improving; we were shown a patient who had received a kidney from a traffic fatality in Hamburg!

Professor Gelin pioneered the work on Rheomacrodex—he was a delightful lecturer, combining the disciplines of surgery and philosophy, and was not above drinking with his students (and us!).

Socially, there was a boat trip and a large crayfish party lubricated by much schnapps. During the dinner the Swedish medical students sang many of their schnapps songs to us, so in retaliation the Bart's drinking song was learnt

and sung by all—then the Liverpool and the Aberdeen songs. All this was much to the chagrin of the eight Americans on the tour who had nothing to offer. Finally the "Harlot of Jerusalem" was sung in the cellar to the delight of any Swedes who thought the English were stuffy.

Our week in Copenhagen proved just as good. It seems that this year Copenhagen was "in" with the hippies, as they were lying around in large numbers. The police do not interfere of their own accord in Denmark, but only if a member of the public complains. This attitude applies also to the pornography shops that abound in the docks area. The proprietors are careful to keep too lurid material out of the windows, but inside it is a different matter as *nothing* is banned in the written word or photography, since the recent lifting of all restrictions.

The Danes claim that the incidence of sexual crimes has dropped sharply since this new legislation; they maintain (privately) that a maniac is less likely to rape a little girl when the moon is full if he can see his sexual fantasies acted out before him in glorious Technicolour. They point to the fact that the home market for Danish "porno" is practically nil, but the tourist trade is a busy one, and exports are booming!

Having visited several of these premises (often charmingly called "sex shops") I can see their point of view. After ten minutes of shockingly erotic stimulation the interest wanes to a blasé, clinical point of view. Any reader who doubts this is invited to apply for further proof!

The medical subject for the week was Social Psychiatry. This broadly based subject enabled us to visit the Tuborg Breweries (!) and a seaside resort for deprived children. We were shown an old people's home run with great efficiency, but with compassion too. Before leaving that establishment we were magnificently fed at a two hour lunch with schnapps between courses. No wonder we all had pleasant memories of the place!

The local drug company (LEO Ltd.) took us round their factory, then out to dinner at the poshest hotel in Copenhagen. The Danish girls took us to . . . but that's another story.

The whole trip provided an excellent introduction to Scandinavia on a relatively inexpensive basis. I can thoroughly recommend it to anyone interested in next year's M.S.S.S. My first visit was certainly not my last.



Class in Session

FOOD BORNE DISEASE IN HOSPITALS

by Dr. A. C. Buck, M.C. PATH. Dr. E. M. Cooke, M.C. PATH.

Department of Pathology

The commonest illnesses spread by food are those of the food poisoning type caused by the presence of salmonellae, clostridia or staphylococcal toxin in the food. Other organisms, such as coliform bacilli and pseudomonas species, can also contaminate food and it is possible that this is also important in disseminating strains of bacteria throughout a population.

In this article these two aspects of food borne disease will be considered with special reference to their importance within a hospital.

Food Poisoning

On average each year forty outbreaks of food poisoning are reported from the hospitals in England and Wales although the true incidence is certainly much higher. Over half of these are due to salmonella infection, and staphylococci and clostridia cause most of the remainder. However, these latter two organisms tend to be associated with larger outbreaks than are the salmonellae. Food poisoning within hospitals is associated with the difficulties of providing meals in bulk, especially when, after preparation, they have to be transported considerable distances before they are eaten. Delay between preparation and consumption gives micro-organisms the opportunity to multiply unless special steps are taken to prevent this happening. Standards of food hygiene practised within hospitals can also fall below those in outside catering establishments, as hospitals are outside the jurisdiction of the medical officers of health. The three types of bacteria causing food poisoning differ in their

epidemiology and growth requirements and tend to be associated with poisoning due to different types of food.

The salmonellae species which can cause food poisoning are widely distributed in nature, infecting mammals, birds and reptiles. Those infecting farm animals and poultry are the most important in this context, as a chain of infection, from contaminated animal feeding stuffs, through farm and broiler house infections, to the production of contaminated meat, poultry and dairy products for human consumption is set up. This pathogen therefore normally enters the kitchen with the raw food, though occasionally a human carrier in the kitchen may contaminate food. Salmonellae do not form spores, so that adequate cooking renders the food safe provided it is not re-contaminated.

Clostridial food poisoning is caused by *Cl. welchii*, a normal inhabitant of the bowel of man and animals. It is, therefore, a very common contaminant of food, especially meat, and like salmonellae is normally present on the food when it is first brought into the kitchen. Being a spore forming organism it is relatively heat resistant, and many strains will withstand boiling for one hour. It is thus much harder to kill during cooking than the other food poisoning organisms, but as it is anaerobic it will only grow in a reducing environment as is found in stews and the centre of rolled meats.

The least common type of food poisoning is caused by certain enterotoxin producing strains of *Staph. aureus*. This organism normally gains access to the food within the kitchen from a carrier, especially if that person has a septic lesion. Unpasteurised milk and milk products

may however be contaminated before they reach the kitchen by enterotoxin producing strains of bovine origin. For sufficient toxin to be produced to cause illness, rapid growth of the organisms is required and most outbreaks of this type of food poisoning occur in the summer months when the ambient temperature is high.

Illness due to salmonellae and clostridial food poisoning is dependent on the presence of viable organisms in the ingested food, but staphylococcal food poisoning is caused by an enterotoxin produced during bacterial growth. This toxin is more resistant to heat than the bacterial cells so it is possible to be poisoned by food which has been subsequently sterilised by cooking.

When an outbreak of food poisoning occurs the contaminated food is normally only present in one or two meals on the same day so that all those at risk are exposed at approximately the same time. This leads to an epidemic with an abrupt onset and is normally of short duration as secondary cases due to person-to-person spread do not occur with staphylococcal and clostridial food poisoning and are unusual with this type of salmonella infection. The diagnosis is suggested by the simultaneous occurrence of vomiting or diarrhoea in two or more persons who have eaten the same food in the preceding 48 hours, and a careful history will indicate which food was most likely to have been responsible. Confirmation of the diagnosis depends on isolating one of the three food poisoning organisms from the vomit or faeces of the affected person and, if available, from the food. Clostridia and often staphylococci are present in normal faeces and their isolation does not necessarily mean that they are causing the illness, but if they are present in large numbers in specimens from most of the subjects examined it is likely they are responsible. The case in favour of them playing a pathogenic role is further strengthened if they belong to the same serotype or phage type. Recently with staphylococci it has become possible to demonstrate serologically whether a particular strain is capable of producing enterotoxin. Salmonellae are not normal inhabitants of the bowel and if found in the faeces are almost always responsible for the symptoms.

Although a careful history taken from each patient will usually incriminate one article of food as being responsible for the outbreak this can only definitely be proven by isolating the

pathogen from the suspected food. In this hospital it is current practice to keep small portions of all meals served for three to four days so that in the event of an outbreak of food poisoning the food will still be available for examination.

Staphylococcal and clostridial food poisoning are short self-limiting illnesses which require at most symptomatic treatment. The same is usually true of salmonella infection, although on occasions the severely ill patient with systemic spread of the disease will require treatment with an antibiotic to which the organism is sensitive. People who have recovered but who continue to excrete the organism in their faeces should not be treated, as antibiotics do not shorten the period of carriage and may even prolong it. Only patients with salmonella infection require isolation and if they become carriers they must also not be allowed to return to work in which they may infect others until they are no longer excreting the organism. This may sometimes necessitate taking doctors and nurses off duty for considerable periods if they become carriers of salmonellae after an acute attack of food poisoning.

Other Food-Borne Organisms

Although generally the bacteriological examination of food is carried out either for public health reasons, as have been described, or for commercial reasons concerned with its keeping qualities, we have, recently, become interested in organisms in food other than those which are known to cause spoilage or food poisoning.

Ps. aeruginosa causes urinary tract infections, chest infections and infections of burns and wounds. Outbreaks of infection due to pseudomonas may occur and these are usually due to the use of contaminated liquids, but in sporadic infections the source of the organism is generally difficult to determine. It has been shown that patients who carry pseudomonas in the bowel are more likely to become infected than those who do not, so the source of the faecal organisms is important (Shooter *et al.*, 1966).

If a culture of pseudomonas is ingested by a normal person, 10^6 organisms must be swallowed before they can be detected in the faeces; they appear between 18 and 24 hours after ingestion and are present for up to 7 days. In our experiments multiplication did not occur unless an antibiotic was also taken (Buck and Cooke, 1969).

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Certain types of hospital food and one medicine have been found to contain large numbers of pseudomonas. The foods most likely to be contaminated are salads and food that has been pureed or sieved; peppermint water was the only contaminated medicine found, the source of the contamination being a stock bottle in the pharmacy department (Shooter *et al.* 1969). Strains of pseudomonas have been traced through from food and medicine into the faeces of patients. In an attempt to determine the source of pseudomonas in the food the kitchens have been examined, and pseudomonas has been found in a large number of moist situations including taps fitted with a proprietary detergent dispenser. Recently, by altering procedures in the kitchens, we have managed to reduce considerably the faecal pseudomonas carriage rate of patients on a medical ward.

The other organism in which we have been interested in this context is *Escherichia coli*. This again is found in large numbers in some items of hospital food and strains have been traced through from the food to the faeces of patients. Food appears to be the source of the constantly changing faecal population that we have found in hospital patients. The acquisition of new strains of *Esch. coli* may be important because some of the strains in food are resistant to several antibiotics. At the present time we are investigating the possibility that antibiotic resistant strains from animals are brought into the kitchen on raw meat, that these strains subsequently contaminate the cooked meat and that this provides a route whereby animal *Esch. coli* strains reach the human population.

It appears from this work that in hospitals at least it may be of value to change the criteria by which we judge if food is satisfactory so as to include organisms which have not previously been considered to be important in this situation.

Prevention of Food-Borne Disease

This rests on three factors, first, avoidance of contamination, secondly, prevention of multiplication of contaminating bacteria and thirdly, elimination of pathogens by heat.

Many foods especially meat and poultry are contaminated with potentially pathogenic bacteria when they first enter the kitchen and it is important to ensure cross contamination

does not occur between them and other foods. This means different working surfaces for raw and cooked foods and different refrigerators. Utensils should be carefully cleaned between use for different dishes. Some organisms, for example staphylococci and occasionally salmonellae, gain access to the food from a carrier in the kitchen. The risk of this occurring can be reduced by encouraging the staff to report sick if they have septic lesions or diarrhoea. Handling of food should be kept to a minimum and the importance of hand-washing after visits to the toilet should be stressed. Initial screening of staff is normally undertaken so as to exclude those carrying pathogenic organisms in the bowel. As many kitchen workers are from abroad it is also customary to examine their stools for *Entamoeba histolytica* as this parasite can be spread by food although such spread in this country is rare.

Salmonellae and clostridia only cause food poisoning if large numbers are eaten. Such numbers are normally only attained in food when multiplication has occurred after initial contamination. The same is true for staphylococcal food poisoning where the organism must multiply for sufficient toxin to be produced. Thus, keeping food at temperatures below 10°C or above 65°C will prevent food poisoning by preventing bacterial multiplication. The time food is kept at intermediate temperatures should be kept to a minimum.

Adequate cooking will kill all vegetative bacteria, but it is most important that the heat should penetrate properly. This means that joints should be kept as small as possible and when initially frozen should be completely thawed before placing in the oven. Stuffing in chickens prevents access of heat to the centre of the carcass, so is best cooked separately.

The use of these and other measures may prevent not only outbreaks of food poisoning but also the spread of organisms pathogenic in other situations within the hospital.

References

1. Buck, A. C., Cooke, E. Mary (1969), *J. med. Microbiol.* In press.
2. Shooter, R. A. *et al.* (1966), *Lancet* *ii*, 1331.
3. Shooter, R. A. *et al.* (1969), *Lancet* *i*, 1227.

Suggested reading:

Food poisoning and Food Hygiene by Betty C. Hobbs, 2nd Edition. Published by Edward Arnold Ltd., London.

ST. BARTHOLOMEW'S HOSPITAL SOCIAL WORKERS

(ALMONERS DEPARTMENT)

by Joy Cross, Medical Social Worker

What function does a Social Work Department carry out at the present time? What are we here for?

Primarily, our job is to help the patients with social problems arising out of their illness and to do this properly we must work in close co-operation with the medical, nursing and other members of hospital staff. During the years our work has undergone a considerable amount of change and many of the duties we used to do are now ably dealt with by other Departments. We no longer see every patient who is admitted to the ward but rely on hospital staff to refer to us both In Patients and Out Patients who have social problems. Many patients do not require our help; they are able to deal very satisfactorily with their own affairs. But there are many who are not so fortunate and do have problems which, if not resolved with our assistance, can delay recovery. For instance, care of children while a mother is in hospital, poor housing, anxiety over suitable employment, underlying emotional worries—these can all play a very big part in a patient's illness. Sometimes it takes several interviews to discover the true problem, and patients must feel secure in their relationship with a Medical Social Worker before they are able to talk freely about their anxieties. It is therefore important that we should try first to build up a good relationship with our patients; they must be confident that what is discussed with us is confidential and

that, regardless of our private opinions, we are here not to judge but to help them with their problems. It is also part of our function to try and help patients to discuss their anxieties and, where relevant, to try and bring some insight into personality difficulties affecting their relationships. Lastly, we must encourage people to make the right decisions themselves, and not take this responsibility away from them. People do ask for advice, but invariably it is not taken unless it coincides with what the person concerned intended to do in the first place. It takes time and patience to allow a patient to discuss his problems at his own pace. On the other hand, it may be necessary to bring an interview to an end, for it is seldom helpful either to patient or Social Worker to allow an interview to last longer than an hour.

Much of our work is concerned with making practical arrangements for patients when they are discharged from the wards. Such matters as domiciliary care, admission to chronic hospitals and geriatric hospitals and transfer to terminal homes are all dealt with in this Department. We are able through the Resettlement Officer to help people to undergo training if they are not able to return to their usual employment. Arrangements for convalescence are also made through our Department, this work being carried out by the Convalescence Secretaries.

We all know that many patients' illnesses

can be very much aggravated by anxieties and sometimes by personality difficulties. It may be that patients are not really aware of what is worrying them. For instance, a woman may say she cannot come into hospital because she is unable to leave the children, yet it transpires that she has a mother and other relations who could help her with this problem, and her real trouble is her fear of coming into hospital, which can be a very terrifying experience creating enormous anxieties. We are sometimes asked to help with the assessment of a patient's condition by contributing a social history of the patient's background. It is often important for the doctor concerned to have information about the environment from which the patient comes and to which he will return. This, of course, is only carried out with the patient's consent.

Besides our work with the patients we take part in seminars and symposia with student nurses organised by Miss Hector and her staff. We also have discussions with other students in the hospital field and these usually take the form of informal discussions in the Department. In addition we train our own students who spend about six months with us working with patients under the supervision of a Medical Social Worker.

At the present time the training for social work usually involves taking a Sociology degree or diploma, followed by a year's field work either in a hospital or a similar institution. There is, however, a course for the Certificate of Social Work which is undertaken at a College of Further Education. This course, combining theory with practical work, is very suitable for older students who have had previous experience of social work.

The future of hospital Social Work Departments is uncertain and we have to consider the impact of the Seebohm Report, if this is implemented. There is, of course, also the question of the reorganisation of the Health Service as a whole. If all hospitals do come under the

direction of Area Boards it could mean that the Social Work Department might be situated out of the hospital, Social Workers visiting the hospital when requested to do so and perhaps coming from the area where the patient normally lives. There could be many disadvantages to this arrangement, especially for teaching hospitals where patients come from such a wide area for treatment. Social Work Departments will undoubtedly become smaller. There is a definite trend at the present time for staff to take posts under Local Authorities where they are not necessarily working with sick people. If Health Centres increase in number, there will be great scope for Social Workers in them.

In this short article it is impossible to cover all aspects of our work and to comment on all the discussions which have taken place regarding our future. Nobody at this stage can foresee what will happen. However depleted the hospital department might become, I feel there will always be a need for some Social Workers within the hospital. The Department could become an advisory service and act as a liaison between the hospital and Social Workers in the community. There will always be problems arising in an Out Patient Department such as immediate admissions, helping anxious relatives, and similar emergencies which must be dealt with at once. We must also maintain responsibility for teaching social work to student nurses, medical students and others whose duties demand a certain knowledge of the social services. We must bear in mind too that hospital Social Work Departments train a very large number of Social Workers for various special fields and it is essential that this work should continue if there are to be sufficient Social Workers in the future to help those who are socially sick either in hospital or in the community. We can offer such excellent facilities to students of social work in observation and practice, that this leads me to conclude that there will always be a place for a Social Worker within the hospital.

CARS AT THE MOTOR SHOW

by RALPH SMALLHORN

Once again the annual British motorists pilgrimage to Earls Court took place in mid-October, and your intrepid reporter was there on Press Day to see and hear all.

Entering as usual through an exit, I was confronted by more than the usual pre-show chaos, the workmen had once again gone through their strike—no strike routine, and this time had left things too late. Most stands were barely finished, and the upper floors for the accessory manufacturers were still closed on the opening day. The show is always a bit of an anti-climax, cars are inanimate objects especially when placed on boxes, painted odd colours, and surrounded by greenery. To try to make up for this, some manufacturers had imported semi-naked ladies. After viewing with the critical medical eye, I thought the fuss in the national press was a little hysterical. The stands with the ladies were certainly surrounded by men, but from the makers point of view they were examining the wrong bodywork.

The Exotica

Quite why these cars are ever shown is a mystery. I am sure the people who could

buy them would not bother to go and see them, but rather acquire one for a private demonstration. Mere mortals look, gape, and dream of that elusive pool of will.

Aston Martin DB 5 V8. This is a new member of the exotica and is basically a DB 5 given the new 5,340 c.c. V8 fuel injected Aston Martin engine. The makers claim 170 m.p.h. with brakes and roadholding to match. For aspiring senior registrars, who like to arrive before they start, this is surely the answer. I hope to do a test at a later date! In the same class are the Lamborghini and Ferrari, but these have V12 engines.

Sports cars

Quite what defines a sports car is open to argument, and though there were no new British cars, several had been modified to some extent.

Ford Capri 3000 GT. The now familiar fastback Capri appeared with a Zodiac engine. The 136 b.h.p. engine gives the car a maximum of 114 m.p.h. and acceleration to match. The fuel tank now holds 13½ gallons each of which will take you 23.4 miles. It appears very good value at £1,291.

MGB/MG Midget/Austin Healey Sprite. The MGB has now ceased production after only a short run. The MGB goes on into its second decade with a new grille and wheels, and modified trim including reclining seats. The roadster costs £1,125 and the GT £1,254. The Midget also has a new grille, matt black screen surrounds, and other minor modifications, and now costs £818.

Sunbeam Alpine. Based on the fastback Rapier but costing £187 less at £1,085, the car is less luxurious, 10 m.p.h. slower, and an expensive way of buying a Hillman Hunter rather than a cheaper Rapier.

Gilbern Invader. The only car "Made in Wales", and including many extras as standard, it is still expensive at £2,402, though available in a kit for £1,790. A lot to pay for a car based on the Ford Zodiac engine.

Foreign Cars

Most foreign manufacturers have been steadily increasing their sales in the past few years. Since the devaluation of the Franc last August, French cars are now even better value at all price levels. Anyone buying a new car should consider the small Citroens and Renaults, and in the £1,000 bracket, the Renault 16. The best thing is to hang on to an old 2 CV, despite the prestige gained by a bright red Lancia parked outside College Hall!

The new cars from abroad are as follows.

Auto-Union Audi 100 LS £1,425. A good looking 106 m.p.h. car by Mercedes, and now available in coupé form.

BMW 2500, 2800. Two absolutely superb cars, expensive compared with the Jaguar XJ6,



Fiat 128

yet highly desirable. £2,958, with more than 120 m.p.h. to show for it.

Fiat 128. The first front wheel drive car from Fiat. Four cylinders are mounted cross-wise, with a radiator in front of the engine and cooled by an electric fan, 2/4 doors from £790.

Fiat 130. This is a brand new car with a V6 engine developing 140 b.h.p. from 2,866 c.c. Automatic transmission is standard. No price is available yet, but buy one and help Britains booming imports.

Peugeot 304. Just a bigger version of the 204.

Renault 6. Anyone who knows the Renault 4 will appreciate this new family car. Front wheel drive, and 850 c.c. engine, following the latest 5 door pattern of the Renault 16. Good value at £725. I hope to road test this motor car in February.

Lancia. Now in Fiat ownership. Lancias should be financially stable. Expensive, but superb cars. The Fulvia has a 1.6 litre engine, and the Flavia a 2 litre engine. The red Lancia

outside College Hall is an Aurelia.

Family cars made in Britain

Triumph 2000 and 2500 PI. Following the trend from the New World, these have now been stretched by 8½ inches, with revised interiors. Comparable with the BMW 2500, yet cheaper, not to say British. Available as an estate, £1,595, and due to be Barts tested.

Hillman Imp. A reliable British car for £570—less heater.

Mini Clubman. A comfortable Mini, with winding windows and many other modifications, also as an estate. The 1275 c.c. GT version has an untuned Cooper S engine, yet is capable of over 85 m.p.h. and relaxed cruising at 70 m.p.h. The price is £850.

Daimler Sovereign. A new model on the familiar Jaguar XJ6. The fluted grille gives the car a more purposeful look, but the grille and new door fittings is all you get for the extra £382.

Renault 6





Fiat 130

Miscellany. Dunlop introduced a new non-radial tyre at the show. Known after an artists doodle as the Groundhog D 70, it has a racing tyre principle in the design to make it flat when inflated.

While meditating on one of the models at the show, I was reluctantly persuaded to sit in a car beside a pretty young lady who wanted to show me her Motorola 8 track stereo tape player. The choice of pre-recorded tapes is now considerable, and for £42 you need never listen to Jimmy Young again.

Reminder. As from the 1st January, 1970, auxiliary lamps if fitted must be in pairs, on the same level, at least 14 inches apart, and symmetrical. If less than 24 inches above the ground, they may only be used in fog or falling snow. Both lamps must be used at the same time.

Dipped headlights "should" be used in poorly lit streets. This is only "advice", but apparently it can be used as evidence against a driver involved in an accident if he does not follow it.

ST. BARTHOLOMEWS HOSPITAL

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The Joy and Despair of Dinghy Racing



Following two articles on saline in the November edition of the Journal, Roger Down describes his own personal experience of dinghy racing.

I was brought up in Dar-Es-Salaam in East Africa and learnt to sail there. Later I was sent "home" to England and during one summer holiday borrowed a school "Firefly". It was during this summer that I really began to learn what dinghy sailing was all about. I had been bitten!

My introduction to English waters was in Chichester Harbour, where Chichester Harbour Twelve-Foot Week is second only to the Firefly Championships. It is a lovely spot with

strong currents as the water rushes in and out of the reed banks as the tide rises and falls. There are good steady winds varying in strength from force 0.9

After that summer I got to know the top helms at Chichester. I learnt by observing their boats to check on the latest gadget and by chatting with them about the different techniques, how they made their boat faster than the next. The firefly is a good, clean, cut-throat class. Exceptionally competitive on the water—there is no room for the soft hearted man—and very friendly on the shore when everybody gets to know each other. The firefly, a 12ft. moulded hull boat has an excellent racing performance, being very lively and fast and yet you have to

work to make it go. I regard it as being among the top three classes of racing dinghy in the country and still prefer it to any other class—if you want first rate world-class close racing.

Apart from the many Open Meetings—occasions when firefly owners from all over the country meet at different sailing clubs to compete for a special trophy there are many team-racing meetings. Here clubs from all over the country send a team of three boats to compete in either a "knock-out" or American type tournament for the Residents Club Trophy. This is where one needs the foresight of the prophets, the wisdom of Solomon and the speed of light. Not only do you have to get yourself to the finish first but also your teammates, with the full knowledge that any opposition in front is likely to sit on you to let his own team through! It is a hard game but very stimulating in that all the racing is done at close quarters perhaps six boats within 40 yards of one another. The tactical and practical ability required for this type of dinghy racing could not be explained here but just enough to stimulate your appetite.

"Right Phil, go hard and keep out of trouble at all costs." "Alright but watch out for Brockbank. He's a dirty devil!" came the reply. This is the start of the "Bosham Bell Trophy" final as Phil, Peter and I climbed into our own boats. It was the end of July at Bosham. There were grey skies and a force 3-4 southerly and a beat up the reed banks against a strong incoming spring tide.

The 10 minute, then the 5 minute gun went. We were under racing rules. "Bang" we were off. Six boats emerged across the short line and headed for the reed banks; we beat up them to the wind-ward buoy. We rounded 1st, 4th and 6th but all six of us were within ten yards and jockeying for the inside berth at the leeward mark, the positions rapidly changing. Round I slipped behind Phil with two boats in my dirty wind. "Go Phil—I'll hold the others back and get Peter through." So Phil led by 50 yards at the wind-ward mark while the rest of us were still beating up to it. "Watch out for Bill." Crunch—too late. Phil had hit him while on port tack. He had to retire and we were left with 1st and 4th as we approached the finish.

Suddenly one of the other team stopped, turned round and came back to sit on my wind and so stop me. Tack, tack and back again we both went, while the others caught us up. "Now", I said, and we gybed round and were in clean wind and were through our opponent

and across the line before he could catch us again. We had won with a 1st and 2nd and retired, even against odds. A word of advice—the race is never over until you all cross the finish line.

The following years were the most frustrating in which I gained many second, third, fourth and fifth places in Open Meetings but never succeeded in winning the pint tankard. However it came two years later, sailing for the "Barnard Trophy"—a £400 silver model firefly! On the strength of this my Bosham club-mates tried to persuade me to sail in the National Firefly Championships that year. However I felt I was not ready yet.

The following year, my first at Barts with a lovely long summer holiday, a friend and I worked very hard on the boat "Zawadi" (Swahili for a gift from my Grandmother) also spending many hours practising along a line of buoys day after day. That year I thought we were ready. Championships were held from the Royal Torbay Yacht Club at Torquay. I and all my club-mates left with our boats to live in a small caravan for the week and race in the "Champs". I was terrified at the prospect of racing with one hundred and eighty boats around me in a strange place and using a completely new type of starting-line—a gate start.

By the last day, with one race to go, and the Championships depending on the result, we had a fourth, first, fifth and first which left us one point behind the leader Mike Arnold. The wind was a light and steady force three southerly. Mike started earlier further down the gate and I could see was going well out in front. We were boxed in, having only just avoided disqualification at the start. Completely blanketed by another boat, we began to think all was lost, and yet soon managed to extricate ourselves from this disastrous position, to find "Zawadi" overtaking many boats. By the wind-ward mark we had climbed from one hundredth to fifth still fifty yards adrift of Mike. With one hundred yards to go to the end of the first lap we were now only ten yards behind. Then suddenly, "Bang... bang," the "S" flag broke, signifying a shortened course. The end of the first lap was now to be the finish! A cry filled the air "boo... boo...". This was it, all or nothing. Slowly the gap closed. We were now just under Mike's transom being covered tack for tack as we laboured to get clear wind beating towards the finish. "Bang." Too late, no ground left! We had lost the Championship by one point or twelve feet!

SPORTS NEWS

Barts v. Falmouth

Under the bright floodlights, and with the problems of opposition hooking, Barts failed to gain enough ball to dominate. Hill defended manfully despite suffering from a bruised hip.

Barts v. Newton Abbot

Encouraged by the presence of McIntyre, Barts played a not uninspiring end of tour game, the final score being a penalty and a try to a try. The loss of Cassidy from the field had little effect as the final whistle went soon after.

Barts v. Old Haberdashers

The final score was 14-3 in favour of Barts, but should have been more. Wellingham at scrum-half played an excellent game, paving the way for more than one try.

Barts v. London University

This was a disappointing game, hampered by a strong wind and a distinct lack of possession.

Barts v. Oxford University Greyhounds

The first half saw some good play by the pack, but little adventure outside. By half-time Barts were 13-0 down; the second half saw some splendid work by all; a try by Fenton, started by a Lambert-Smith scissors, was the result of some well co-ordinated passing in the forwards and a chip kick by Lambert. Laidlow scored a good try which Cassidy converted.

RUGBY CLUB REPORT

Oct. 25th	Barts v. Sidcup lost 18-9.
Nov. 1st	Barts v. Cambourne 'A' won 21-0.
" 3rd	Barts v. Falmouth lost 0-14.
" 5th	Barts v. Newton Abbot won 6-3.
" 8th	Barts v. O. Haberdashers won 14-3.
" 12th	Barts v. Lond. University lost 3-30.
" 19th	Barts v. Oxford U.G. lost 8-13.

Barts v. Sidcup

Barts played well but were harried by a definite lack of first phase possession. Had it not been for this, the scores would have been closer; as indeed they were by half-time.

Barts on Tour

An interesting tour was had by all. After an initial (successful) warm-up against Cambourne 'A' XV we proceeded to two 1st class games:

Barts v. Cambourne

Eighteen points in the first half against the wind boded well for the 2nd half. Cassidy netted two penalties and two drop goals, while Lambert and Smith scored a try apiece. The loose play of James was impressive, and the return of our captain, Mark Britton, was especially welcome; he dominated the lineup. In the second half the play relaxed except for Britton, who ran in for a 50-yard try.

JUDO CLUB REPORT

This term has started well, as our new mats finally arrived from Japan. Also we welcome Allan Wood (1st Kyu) who will greatly strengthen our team.

Only two matches have been fought so far this term; the first against Royal Vets. was a convincing win, but, unfortunately, we failed to win the Inter-Hospitals Cup back from St. Mary's by only 2-3. Our turn next time St. Mary's!

Several freshers have started Judo this term, with great success, but no ladies. Anyone, nurse, student or other Barts girl is very welcome to either of the sessions on Tuesday at 5.30 or Thursday at 6.00.

J. R. DAVIES,
Captain.

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BOOK REVIEWS

Essentials of Human Embryology. Frank D. Allan, Oxford University Press. Second edition: 1969. 344 pp. + xii. 175 figs. 85s. 0d.

The aim of this book is to present some information very briefly about the early stages of foetal development and show how the principal systems of the body emerge.

In order to achieve this the author devotes twenty concise chapters to general development and "systems" and supplements his text liberally with diagrams. Thereafter, three chapters are concerned with clinical case studies, a series of fully annotated serial sections of embryos and finally an account of foetal dissection. Generally speaking, the book reads easily and the information contained in it is assimilated readily. Many of the diagrams are good and some in particular (Figs. 12 and 109) give a remarkable three-dimensional impression.

Inevitably, as in most books, criticisms can be made. The more important of these concern accounts of the development of the heart, its septa and the rotation of gut, which are so compact that clarity is lost. It may not have been possible to incorporate more recent information upon the ultimobranchial bodies at the time the book went to press. Small typographical errors exist, e.g. "spinal bifida" and "scleratome". The derivation of "omentum" is very suspect. Students should note the American method of dating a clinical history. The clinical embryology is dealt with very briefly and the commoner errors of development are not emphasised. However, the book is designed primarily as a pre-clinical source of information. The serial sections are beautifully presented. Although dissection of a foetus is not part of our curriculum, it would do students no harm to read this short account.

Apparently a paperback version of this book is available also. Provided students are aware that this book is a synopsis and the dangers of "potted knowledge" are known, there is no reason why this volume should not be of use.

J. A. Clarke

"Later Life—Geriatrics Today and Tomorrow" by Ivor Felstein. Published by Penguin Books Ltd.

This is a methodical, up-to-date account of the changing position held by Geriatrics in the National Health Service.

Dr. Felstein discusses the hospital management of the elderly as well as their care at home. The many ancillary services connected with elderly welfare—District Nurses, Meals on Wheels, Medical and other Social Workers—are rightly given prominence.

This book abounds in sound practical advice and could be read to advantage not only by medical students and others wanting an introduction to Geriatrics, but also by those who are perplexed by the problem of looking after an elderly relative: the language has been kept purposely untechnical—diabetes is "sugar diabetes" throughout!

Although the book was not written solely for para-medical people, I think its most important contribution (especially for medical students) is to show how symptoms in the elderly may have a very different meaning from those in a younger age group. Just as a child is not medically a "miniature adult", so the elderly are not "larger than life adults". The author shows how symptoms of disease, disease patterns and drug dosage, differ in the elderly. Hence an old person may become quite confused simply because of an environmental change—often that of home to hospital. Similarly mild dehydration and severe constipation may cloud consciousness. The classic presentation of a coronary thrombosis—pain, pallor and prostration—may be replaced in the elderly by symptoms of mild dyspepsia or vague discomfort in the chest. The only symptoms of peritonitis may be a mild gastro-intestinal disturbance; the prognosis is equally grave. Other conditions, e.g. Myxoedema, Angina and Arthritis are discussed in their geriatric context and the author points out that diabetes in the elderly is often mild and responds to oral hypoglycaemic agents, or even diet alone.

Two criticisms must be levelled at the book, neither of which invalidate it.

Firstly, despite the author's own admission that it might be considered a "too rosy picture" of geriatrics, nevertheless parts of the book are not realistic. For example, his long account of the mechanism by which an elderly patient is cared for at home or admitted to hospital. This involves domiciliary geriatric visiting, and the whole armamentarium of social support, but is often short-circuited by the over-burdened G.P. He, seeing his patient is finding it difficult to manage at home, will summon the Emergency Bed Service (in London), attach a somewhat dramatic diagnostic label and have the patient admitted to hospital. No blame should be attached to the G.P. since if all the Geriatric beds in his area are full, he has no option but to get his patient into a General Hospital.

"Fortunately, most families have a sense of devotion and a good measure of affection for their senior members and readily accept their restoration to full function and return to home life." Oh dear, if only this were universally true!

The second criticism is that of style, which is too often verbose and clumsy. One quotation will suffice, "All members of the geriatric team

and voluntary and professional workers in the field can guide and advise old people on the dangers of carpeting or rugs which are not nailed down, or split level floors with badly lit steps, or polished linoleum floors, or household needs kept on high shelves, for example." Phew!

Despite these short-comings, the book exudes enthusiasm and hope for the future of geriatrics. It is well worth reading.

"Holland and Brews Manual of Obstetrics", Thirteenth Edition 1969. Edited by Robert Percival. £6.

The Thirteenth Edition of this work has now increased to some 850 pages. This should not deter the student as it is clear, well written, and, with its more than adequate number of drawings, photographs, diagrams and in particular comparative lists, is a singularly attractive book to read.

It is now good to see the whole aspect of abortion dealt with in detail in a standard textbook. The Abortion Act (1967) with its

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increased scope is explained clearly and this section more than anything else makes it imperative reading for the student sitting finals.

Other chapters of particular interest are those given to abnormal labour with its management, foetal circulation, and foetal asphyxia. Rhesus incompatibility is concise and clear and the method of intra-uterine transfusion is explained. *Amnioscopy* and foetal blood sampling are also included as indeed are all the more recent advances in obstetrics over the past 10 years.

If any criticism must be made perhaps this should be directed at the management of eclampsia. Agreed, the morbid anatomy of the disease is dealt with clearly but one would like to read of such drugs as Tribromethanol and Diazepam discussed. One feels also that too much place has been given over to the diagnosis of Pregnancy while in contrast only three pages are devoted to the management of the diabetic mother.

With the growing interest in population control one would have thought that a small section should have been included on contraceptive instruction at the post natal clinic. Despite these few minor details the textbook is eminently readable and contains more than adequate information for finals. It would form an excellent basic study of obstetrics for those contemplating sitting the membership exam.

H. O'CONNOR

"Sir Walter Scott: the wounded falcon", by Sir Arthur Salusbury MacNalty, 189 pp., frontispiece. London, *Johnson*, 1969. 35s.

Sir Arthur MacNalty first wrote a short biography of Sir Walter Scott in 1931-32, which was privately printed in a limited edition of 100 copies with the title *The Great Unknown*. Part of this is incorporated in the present volume, with the addition of much new matter, and with particular emphasis on Scott's medical history.

Sir Walter Scott was considered delicate as a child. At the age of 18 months he developed poliomyelitis, and was left permanently lame in the right leg, which was particularly troublesome in later life when he suffered from arthritis. Sir Walter's medical history included bouts of haemorrhage, gall-stones, "prickly heat", renal colic, haematuria, fibrositis, arteriosclerosis (probably due to financial worries connected with the failure of Ballantyne's printing

business), and cerebral thrombosis. The wonder is that he was still capable of such a tremendous literary output, and that his early experiences with ill-health, and the attendant rigorous treatment, failed to prevent his development into the outstanding novelist and poet of his period.

Sir Arthur provides a report of the post-mortem on Scott, and five appendixes devoted to: Dr John Rutherford (1695-1779); Sir Walter Scott as President of the Royal Society of Edinburgh; supplies of opium to him; his last verses; note on his descendants; and modern critics of Sir Walter Scott. Quite obviously Sir Arthur MacNalty was keenly interested in Sir Walter Scott throughout his life, and it is fitting that Sir Arthur's final contribution to literature and medical history should be this short, but significant, biography of his hero.

JOHN L. THORNTON

"Cooking with Wine", by Robin McDouall. Published by Penguin. 5s.

Robin McDouall's book on "Cooking with Wine", which includes Beer, Cyder and Spirits as well, is short and comprehensive. It is not however, designed for beginners. A basic understanding of culinary terms and methods of preparation is expected of the would-be cook, because the glossary is not very explanatory. For example, Roux is listed in the Glossary, but the art of making the foundation to all sauces, which is so important in cooking with wine, is sadly lacking.

The section on soups is excellent for those with Turtles, Hare, Wild Duck, Peanuts or Lobster at hand. Of the 59 fish recipes, 31 are exclusively for Sole. A good selection of meat dishes and ways of cooking game and poultry are given. The chapter on puddings is weak in that fresh fruits are necessary for all of them, bar the soufflés. No mention is made of Charlotte Russes or Chocolate Bavaoise, for instance, with which I am sure the author is familiar. Also a surprisingly fruitless recipe for a trifle is given. A couple of short sections on drinks and savouries is provided. No mention of the various ways of cooking vegetables with wine is made.

For 5s., this book is worthwhile. It contains a lot of ideas, states the quantities of which wine should be used and warns the reader of adding too much wine to a dish.

B. J. APPLEBY



Saint Bartholomew's Hospital

JOURNAL

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EDITORIAL

Before 1953 there was no compulsory training for any doctor after the completion of the undergraduate medical course: admission to the Medical Register was conditional only on the possession of one of the primary medical qualifications specified in the Medical Acts. The Goodenough Committee reporting in 1944 recommended amendment of the Medical Acts to provide that a man or woman obtaining registrable qualification should not be entitled to registration until he or she had held approved house appointments for a prescribed period, envisaged as 12 months, equally divided between general medicine and general surgery. The Committee stressed that doctors in these appointments should still be regarded as students but that there should be no examination at the end of the pre-registration period. Legislation to give effect to these proposals was enacted in 1950 and came into effect on January 1st, 1953.

The Royal Commission on Medical Education reporting in 1968, recommended that for the present, the period of compulsory initial postgraduate clinical training, common to all doctors, should be retained and should remain at one year. The commission also states that the Universities should exercise much stricter supervision over posts for the intern year than they have done in the past and that "a graduate should normally spend his intern year in the area of the medical school which provided his clinical education."

The Commission proposed that the Medical School should make itself responsible for ensuring that the purpose of the pre-registration year is to complete the young doctor's basic medical education, and of the implications of this, and "should be prepared to give advice and guidance to graduates on suitable training posts." Mention is made that at some centres arrangements for matching graduates to posts throughout the area work reasonably well and that every university with a medical school should establish a satisfactory procedure for arranging a suitable combination of posts for its new graduates, taking account of their needs as well as their abilities. It was also expressed that no arrangements for appointments to the Intern posts should be made before a medical student reaches the final year and that preferably the arrangements should be made only after the final examination.

The Todd Report makes many recommendations for Medical Education some of which appertain to the present situation. With the increasing number of students qualifying, not knowing when the Todd Report and the Green Paper on the National Health will be implemented, it would be of some comfort to the student if some of the recommendations concerning the Intern year could be considered positively at the present time.

The present form of the *Journal* comes to an end this month and next month the *Journal* will be different with larger pages. The *Journal* recommends that for those readers who bind their copies, they should bind January and February 1970, with their 1969 *Journals*.

LETTERS

Abernethian Room
December 5th, 1969

The Editor of the Journal,
Dear Sir,

It has been brought to our notice that of the 88 newly qualified Bart's men who applied for Bart's and circuit positions, 24 are in the unenviable situation of having no job.

We feel that one of the responsibilities of the college should be to help doctors recently qualified at Bart's to find their first House jobs. The situation can only get worse. Next year there will be about 120 people qualifying, and the number of applications for Bart's and circuit jobs is likely to far exceed the number on this occasion.

This problem was discussed by the Teaching Committee 18 months ago, both in their report on the "Todd Commission" proposals, and in meetings with several members of the staff. The provision of extra jobs at Bart's by limiting appointments to 6 months has helped, but is clearly inadequate to cope with the size of the problem.

Yours sincerely,

J. Burman
P. Dieppe
A. Newman-Taylor
15th December, 1969

Abernethian Room,
December 5th, 1969.

Sir,—It may be of interest to state the position of 24 newly qualified ex-Bart's students in relation to House jobs.

1. For the past 5 years they have been trained at this hospital.
2. They are encouraged, naturally enough, to apply for Bart's and circuit jobs.
3. Without assistance from the hospital, apart from letters of reference, they then have to find a job on their own within 4 days of hearing that they have been refused a Bart's or circuit job. Failing this they stand to lose at least one month's pay, i.e. at least £100.
4. As no help or advice is available, it is not surprising that this leads to some inconvenience.

Is this situation necessary? We would like to suggest some measures that might improve things.

1. When applying for a job, it would be useful to know how many applications there are for that job. At present nothing is revealed; it is possible that 20 people are applying for the same job, each with high hopes of success.
2. There is no obvious reason why each applicant should not know precisely who else is applying for that job. What justification is there for the present secrecy?
3. Allow adequate time between announcement of Bart's and circuit jobs, and the last date for application to other hospitals.
4. The existence of a permanent body advising on jobs at circuit and other peripheral hospitals, and providing contacts as is done at other London Teaching Hospitals. Such a body may also retain contact and provide similar facilities for all post-graduate Bart's men. A further function of this body might be to advise students on outside appointments, e.g., in paediatrics.

In spite of the extra work involved, the absence both of these facilities and some showing of responsibility towards subsequent careers is far from commendable for a Teaching hospital.

Yours sincerely,

P. COBURN
I. CRABBE
D. GRIFFITHS
P. MARKHAM
P. QUINN
T. SPOONER

Dear Sir,

Concerning "Consultant opinion" printed in the December Journal, I would like to welcome the interchange of views between Consultants and students, which I hope you will allow me to reciprocate.

As regards blood samples, most students realise their responsibilities especially when

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they are urgent or for cross-matching. We are sometimes the whipping-post for all errors, but more important are the sparse and erratic laboratory collections. In one other large teaching hospital there are six full rounds a days including supply of sample bottles and transfusion blood. In fact, blood for transfusion is almost entirely transported by porters, and students only handle emergency samples.

The rigid classification of people into "distinct groups" on whatever criteria, is anathema to me. This applies to medical students as much as to racial "groups" or social "classes". Generalisations of this nature can be distorting because they tend to segregate groups of people upon whom authority can be wielded in accordance with rules devised to apply to those groups. A fundamental principle of medicine is that everyone is an individual and deserves to be treated as such. Indeed, most students could fill most of the groups described at some time in the course depending on the encouragement given them, the inspiration received or the reward for efforts. The human qualities of each group are largely interchangeable, and the combinations suggested can only be a matter of chance.

To suggest that "good upbringing" figures in only one of the four groups must be a matter of conjecture, assuming the ability to define the term and produce a correlation between it and the other qualities described.

A combination of "sport, love and debt" occurs in all students' lives, often producing greater responsibility and maturity which, by its extra burden, may lead to an impression of laziness and irresponsibility. Likewise, many different students join the Armed Forces as the result of a considered opinion which can offer very little shelter other than some financial security. As the article states, even the seemingly lazy and irresponsible can be excellent in any branch of medicine.

Finance is still a large motivation for students to do well in their clinical course. A "full" grant does not give security because the extra 16 weeks are paid at £6 a week, and the majority of Bart's students still rely heavily on parental support which must be a restraining influence.

I must emphasise that I agree with most of what was written and particularly the recommendation for a tutorial system.

I. M. HANN
2nd year Clinical student.

ANNOUNCEMENTS

Engagement

REDDINGTON — TREACY — The engagement is announced between Mr. J. L. Reddington and Miss M. M. Treacy.

Birth

EDELSTEN—On October 11, to Nikki and Dr. A. D. Edelsten, a son, Andrew James.

Deaths

MORGAN—On October 2, Dr. Cyril James Morgan, M.R.C.S., L.R.C.P., aged 65. Qualified 1932.

SHAW—On December 10, Dr. Campbell Shaw, M.R.C.S., L.R.C.P., D.O.M.S. Qualified 1920.

Appointment

The title of Professor of Radiation Biology has been conferred on Dr. Patricia J. Lindop in her post at St. Bartholomew's Hospital Medical College

Change of Address

From January 1, 1970, Dr. R. W. E. Watts will be at the Clinical Research Centre, Watford Road, Harrow, Middx. HA1 3UJ.

REMINDER

The Dean would like to remind all pre-clinical students, all residents of College Hall and any one else frequenting Charterhouse Square that it is a rule of the College that no one is allowed to walk over the grass lawn in Charterhouse during the winter months. Barts students are very lucky to have this lovely lawn in the middle of London and, as it cost over £2,000 to relay it, they should do all in their power to preserve it for future years and for their own enjoyment during the summer months.

The Dean also wishes to remind everyone that we have an agreement with the Charterhouse Authorities that any cars parked against the Charterhouse Cloister be parked bonnet first and NOT reversed in.



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ST. BARTHOLOMEW'S HOSPITAL

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30th June, 1970

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 Dr. G. W. HAYWARD
 Dr. H. Wykeham Balme
 Dr. K. O. BLACK
 Dr. A. M. Dawson
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 MR. D. F. ELLISON NASH
 Mr. J. D. Griffiths
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Department of Child Health

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 (Casualty House
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 Mr. David Williams Mr. A. B. Gordon
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 Mr. F. R. Coffin (until 31.1.70)
 Mr. B. D. Markwell Mr. B. J. Smith
 Mr. D. Winstock (from 1.2.70)

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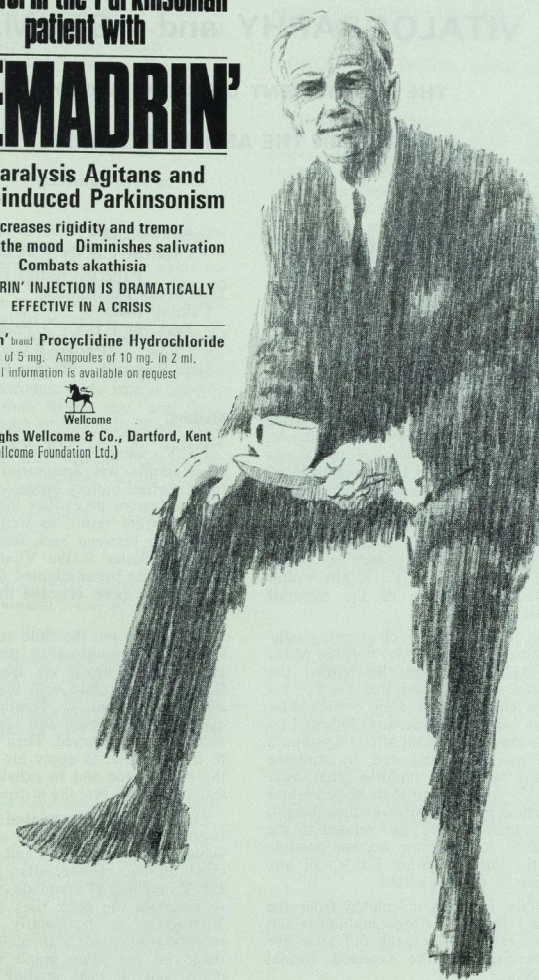
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VITALOGRAPHY and ASTHMA

THE ASSESSMENT OF RESPIRATORY

FUNCTION IN THE ASTHMATIC CHILD.

by P. J. FURNESS

For many years asthma has presented few problems to the diagnostician. The main difficulty in dealing with this condition has been making an assessment of its severity. An initial assessment in a new patient would be useful to the practitioner as a guide to the treatment necessary in that particular case, and serial assessments would be invaluable as an index of the success of that treatment.

Respiratory disorders in general may be functionally assessed by the initial and serial testing of the Forced Expiratory Volume in one second (F.E.V.₁), which measures the maximum rate at which air can be pumped out of the lungs. Asthmatics, however, suffer from a specific abnormality of function which makes the evaluation of such F.E.V.₁ results difficult. This abnormality is a labile type of bronchoconstriction, so that even a severe asthmatic may produce F.E.V.₁ results within the normal range because of the essential lability of his condition.

A solution to the problem of assessing asthmatic children was found by R. S. Jones M.D., M.R.C.P., D.C.H., in what he termed the Lability Index. It was found that the F.E.V.₁ of asthmatic children rose after bronchodilation (with an isoprenaline aerosol) followed by one minute's exercise, and fell after 5-8 minute's exercise. It was also discovered, by studying a long series of normal children, that their resting F.E.V.₁ is related to their body surface area, and hence approximately to their height. The values obtained were also related to the sex of the child, so it has now become possible to predict the normal resting F.E.V.₁ of any child knowing its sex and height.

The Lability Index is calculated from the peak rise in F.E.V.₁ after bronchodilation and one minute's exercise, the peak fall after five minute's exercise, and the expected normal resting F.E.V.₁.

$$\text{Lability Index} = \frac{\text{Peak rise F.E.V.}_1 + \text{Peak fall F.E.V.}_1}{\text{Expected resting F.E.V.}_1}$$

Thus in normal children:

$$\text{Lability Index} = \frac{\text{Peak rise F.E.V.}_1 + \text{Peak fall F.E.V.}_1}{\text{Resting F.E.V.}_1}$$

$$\text{since Expected} = \text{Resting F.E.V.}_1$$

Method.

F.E.V.₁ values may be obtained by the use of a simple wet Spirometer with a built-in transistorized battery operated timing unit, but this equipment necessitates the taking down of each separate result, as well as resetting the instrument between each reading. The instrument of choice is the Vitalograph which as well as being better adapted for this valuation, is also far more versatile than the simple wet spirometer.

In order to put the child at ease and to gain subsequently meaningful results, "test runs" are first performed on the Vitalograph to familiarise the child with the equipment. The subject is asked to breathe normally and quietly until an even and regular chest movement may be observed. Then the child is asked to inspire fully, to apply his lips firmly round the mouthpiece and to exhale as hard and as fast as possible into the instrument.

Once the child is relaxed and used to the instrument, an isoprenaline aerosol is used to achieve bronchodilation, and the child is exercised for one minute, after which a series of F.E.V.₁ recordings are made on the Vitalograph to ascertain the peak rise. This is where the Vitalograph is particularly useful. Since its recordings are made graphically, a series may be made on the same graph with a minimum delay, and the peak reading required may be

read directly from the graph.

After the peak rise has been recorded, the child is exercised for five minutes, and the peak fall in F.E.V.₁ is found in like manner.

The expected normal resting F.E.V.₁ is obtained from tables calibrated by sex and height, and the Lability Index may be simply calculated.

Results

Jones et al. have demonstrated that with few exceptions the Lability Index of normal children is less than 15 per cent., whereas the value for the asthmatic child is always greater than 20 per cent. (with a very few exceptions which are between 15 and 20 per cent.).

After bronchodilation with isoprenaline, most asthmatic children have an F.E.V.₁ within the accepted normal range. These children Jones divided into two Groups, those with a Lability Index of greater than 30 per cent., and those with a Lability Index of less than 30 per cent. The remainder, those with an F.E.V.₁ below the normal range after bronchodilation with isoprenaline, gave very variable Lability Indices, and constituted a separate group.

These groups were found to exhibit their own clinical features.

GROUP I. (Lability Index 20-30 per cent., F.E.V.₁ within normal limits after isoprenaline).

Children in this group suffer infrequent asthmatic attacks which are never severe. Their tolerance to exercise may be normal or slightly impaired (i.e. bronchoconstriction does not occur during exercise or only to a very limited extent).

GROUP II. (L.I.30+ per cent., F.E.V.₁ within normal limits after isoprenaline).

Children in this group may suffer severe and/or frequent asthmatic attacks, but may be symptomless for periods of up to several months between attacks. Their exercise tolerance is always reduced, the reduction being proportional to the degree of bronchoconstriction occurring, which may vary from slight to severe, though severe reductions are more common.

Some subjects in this group have a clear history of sensitivity to antigens.

GROUP III. (F.E.V.₁ below normal after isoprenaline).

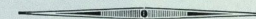
This group comprises the severe asthmatics, with a history of early onset, and frequent severe attacks. Even between attacks, these children are seldom free of symptoms.

Exercise tolerance is always impaired.

Subjects in this group often have an associated low grade respiratory infection, and intercurrent respiratory infections may lead to severe exacerbation of the disease.

Histories of sensitivity to specific allergens are rarer and less clear cut in this group compared to Group II.

These results show both the qualities and the limitations of this type of assessment of the asthmatic child. The Lability Index is clearly useful for estimating the severity of the disease, as demonstrated by the characteristic clinical features found within each of the three groups. The problems of exercising patients with poor exercise tolerance, however, make it difficult to directly compare results gained from individual patients, and possibly the greatest value of the Lability Index is the guide to the individual patient's progress.



JONES, R. S. The assessment of respiratory function in the asthmatic child. *B.M.J.* 1966.
DREW, C. D. M., HUGHES, D. T. D.—Characteristics of the Vitalograph spirometer. *Thorax*, 1969.
Also thanks to the Paediatric Dept., Peterborough District Hospital, and to Vitalograph Ltd., Maids Moreton Hse., Bucks.

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DRAMATIC SOCIETY

REVIEWS OF THE NOVEMBER NURSFRY PRODUCTIONS



1. UBU ROI by Alfred Jarry.

A riot ensued—the programme drily told us. Words to quicken the interest. The first night full house, a tribute to improved publicity, waited expectantly. The new apron stage squatted confidently.

UBU ROI first of three UBU plays was a forerunner to avant-garde. Originally conceived as a marionette play, it evolved from months of baiting of a hated Physics master M. Hebert by his 15 year old pupils at the Lycée. A fellow pupil wrote the prototype,

Alfred Jarry contributing to the satirical sketches which showed Pere Hebe-Ebe-Ubu suffering unspeakable indignities as an imaginary King of Poland. Jarry next persuaded enough backers and put on the first performance by live actors on December 10th, 1896.

Masks, placards and toy hobby horses were used as never before to reinforce the impact of the vituperative dialogue. The eternal theme Power corrupts, Absolute Power corrupts Absolutely presented thus met with both disgust

and delight; pandemonium reigned in cafe, salon and journal between protagonists and antagonists of the new Surréalisme.

Jarry emerged living out Pere Ubu in his daily life, answering only to that name. He went on to dissolution and an early death at 34 of alcoholism.

Against this background the revival of UBU ROI in Gloucester Hall by Bart's Drama was a bold imaginative choice, coinciding well with the use for the first time of the Society's new rostra designed and executed by Messrs. Swain and Blake-James. The long awaited apron allowed an uncluttered effect of the striking costumes and excellent uniforms sewn by a veritable school of needlewomen.

Paul Swain and Susan Raven's masks were very clever, those which left orbicularis oris free allowed effective unimpeded delivery.

James Griffiths as Pa Ubu presented all the facets of this disreputable character supremely. He exuded avarice, cunning, vulgarity, treachery and sadism but his cowardice and fear were not feeble enough. For a millisecond in Act 2 he seemed to relax and rest on early won laurels, but I need not have worried, he carried the grotesque Ubu and the play with a skilful mixture of aplomb and panache au fin.

Kate Walker as Ma Ubu conveyed consummately the power behind the anti-throne of her anarchist spouse. With symbolically pointed quill atop her Medusa coiffure she relentlessly goaded others into action on her account, while keeping a balanced view, being quick to see the value of well-timed rewards. This was a superb, thoroughly believable performance.

Ian Young was a competent King Wenceslas depicting well royal self confidence in his choice of Ubu as supporter, albeit short-lived.

Jila Pezesghi as Queen Rosamund gave an excellent performance. In her dying scene we heard a particularly accomplished use of voice.

Captain MacNure, betrayed aide-de-camp, was conveyed in a full-blooded portrayal with infectious enjoyment. His Scottish brogue—apparently acquired—was admirable.

Janet Dinwiddie did well with the chances given her as the 14 year old Prince Boggerlass bent on revenge, exploiting the few movements of melodrama.

Peasants, armies, nobles and lunatics were well trained, usually punctual on and off—quite an achievement—and there were some good cameos amongst the supporting cast.

Yes, yes I know it's LIFE, it's ESSENTIAL to the play, yes I know it's all in the very clever

translation by Cyril Connolly but were not the most true to life, wickedly funny speeches those which made good use of more acceptable dialogue? Tedious repetition of 4-letter words merely bores.

Direction was by Jolyon Oxley and Paul Swain who showed imaginative grasp of the play and good control of its production. The evening proved once again that Bart's Drama is something to be reckoned with, rich in talent on and off stage, some established, some, amongst our welcome Freshers, yet to be fully exploited.

Benita Wylie.

2. "THE BITTER END"

by Alfred Shaughnessey.

This was the curtain-raiser for the Bart's Drama Society's autumn productions this year; a short play, never before performed in public, produced by the author's nephew, George Lodge. Of the play itself, not much needs to be said—the plot was unoriginal, and melodramatic, and the dialogue uninspired, leaving the players very little scope. Given this poor vehicle for their talents, the cast did remarkably well. There were several newcomers to the Society, and their performances, especially the two girls Ruth Illiffe and Jane Low promises well for the future. Salome's dance at the end of the play, leading to its very predictable "bitter end", was well done, and the lighting and sound-effects staff had a heyday. The lighting staff were kept busy throughout, having constantly to show the change of scene from upstairs to down in a house which seemed to have been furnished, partly at any rate, with plunder from College Hall! I think that the cast placed themselves at a great disadvantage by electing to perform the play in a North Country accent. Even when spoken naturally, I do not find this accent pleasant, but, if delivered less than completely fluently, it grates. It was perhaps significant that the most convincing character vocally was Andrew Boon, whose accent was the least pronounced of all, but just sufficient to let us know that he was from the North. Special mention should also be made of Julie Gould, who tried very valiantly to bring some New Year's Eve cheer into a very contrived play.

Bob Le Quesne

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CHORAL CONCERT REVIEW

As a newcomer to any society one is always intrigued to discover the new standards to which one must aspire in order to be able adequately to join in the life of that community. At Southwark Cathedral on 10th December, the Bart's Choral Society revealed its standards to the world and to myself. The introduction was impressive; adequate ushering, a pleasant atmosphere, and the choir easily distinguishable by their colours, if not their uniformity of style. The air of competence and friendliness gave everyone hope of a good performance.

The "David Penitente" is a difficult work, because of its hybrid nature. The operatic solo arias do not immediately blend with the choral pieces. By and large, however, Robert Anderson overcame this difficulty by coaxing from the orchestra a commendable uniformity of tone, which, with one or two exceptions was evident throughout the performance. For the size of the building and the choir they were at times too loud, drowning all but the sopranos. This is more a reflection upon the choir itself, for the lower parts were quite constantly inaudible.

The soloists were good and expressive, but the first soprano solo suffered from a lack of manoeuvrability over the range required. The tenor tended to err on the side of quietness and often was nearly inaudible under the orchestra.

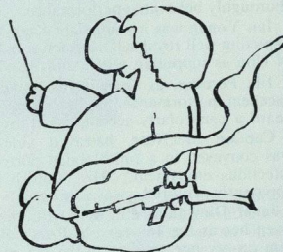
"Ave Verum Corpus", the second work in the programme was beautifully sung and played, but I am doubtful whether a concert of this kind and size is really the proper and most effective place for it to be performed. Surely it should be put into the evening service and impress without the fuss it received on this occasion? Certainly it is a fine work, but separated as it was from the rest of the music, by intervals, the true religious beauty of it was lost in its small size.

The "Vesperae" was the most successful work in spite of a most disastrous beginning to the fugue by the male voices. The whole ensemble seemed to work together most im-

pressively, a little raggedness in the choir's entries being excused on account of the excellence of their tone. As a work it is superbly conceived, the finale coming as a welcome relief after the intensity of the soprano solo up to which the previous movements have been buildings, and this was all mirrored in the performance.

In summary, it was a concert the Choral Society may be proud of, and especially the sopranos. It is to be hoped, however, that it has acted as a recruiting campaign to obtain more tenors and basses, for with those parts enlarged and more confident, Bart's will have a very fine choir.

George Blackledge.



THE MUSIC SOCIETY IS NOT
AS BAD AS IT SOUNDS

gd

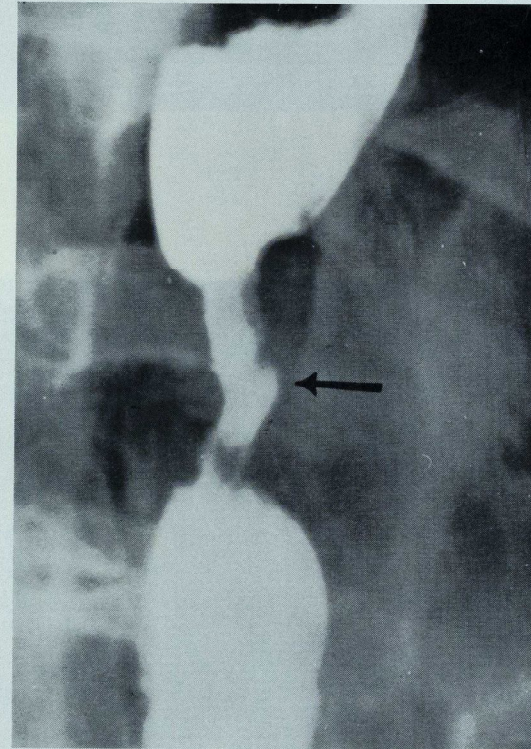
PHYSICAL AND RADIOLOGICAL DIAGNOSIS

A monthly series by B. D. F. Grimaldi, in association with the Departments of Medical Illustration and Diagnostic Radiology.

The captions are placed at the end so that you can try your hand at diagnosis before looking at them.

This section is designed to be pulled out and kept. Added to, month by month, it will provide a collection of Physical Signs and X-Rays illustrating some of the commoner appearances that the Student may be confronted with.

no. 1. **Barium Swallow**
Barium Meal
Barium Enema



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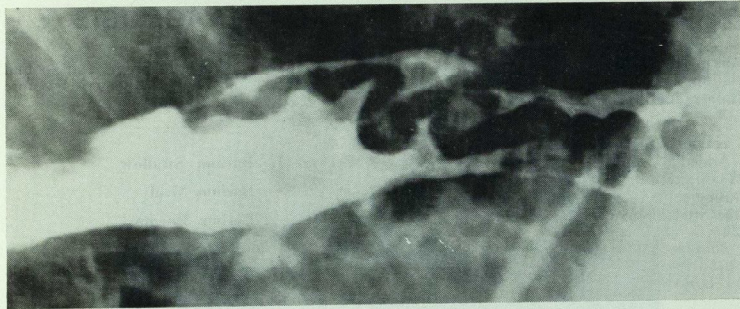
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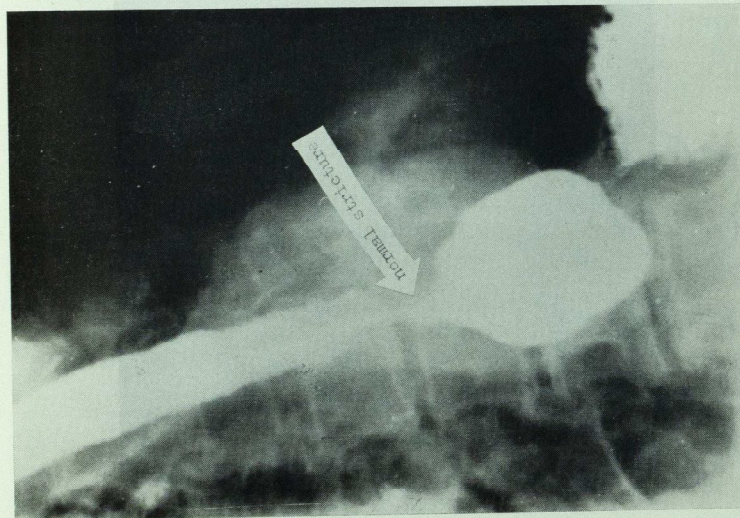
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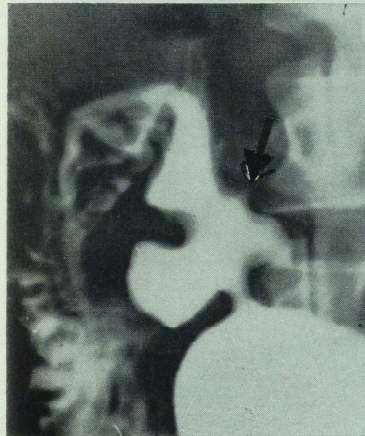
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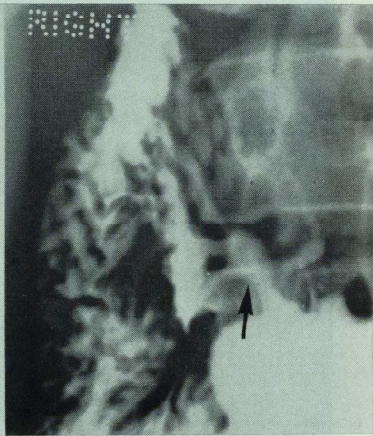
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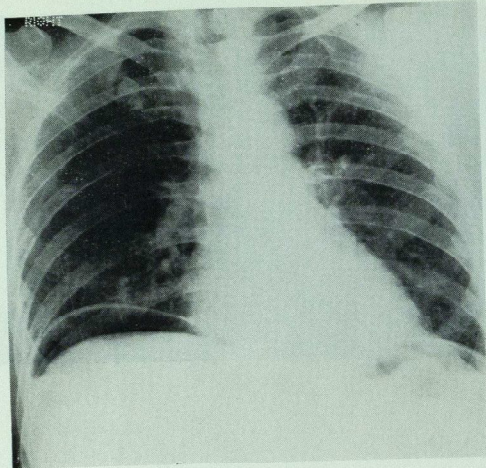
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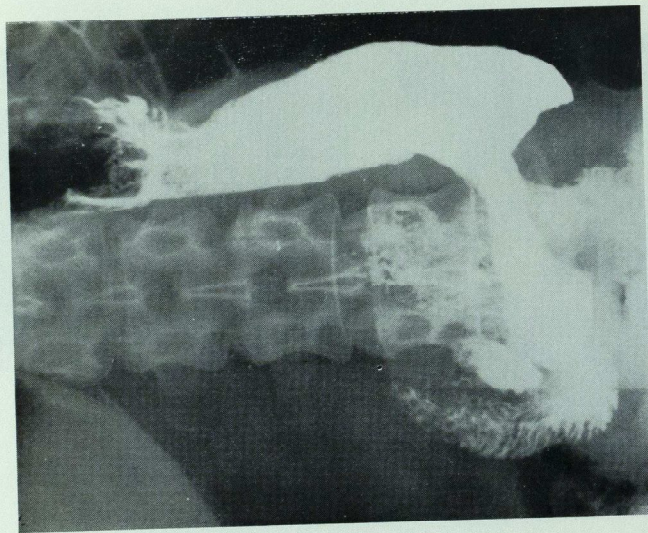
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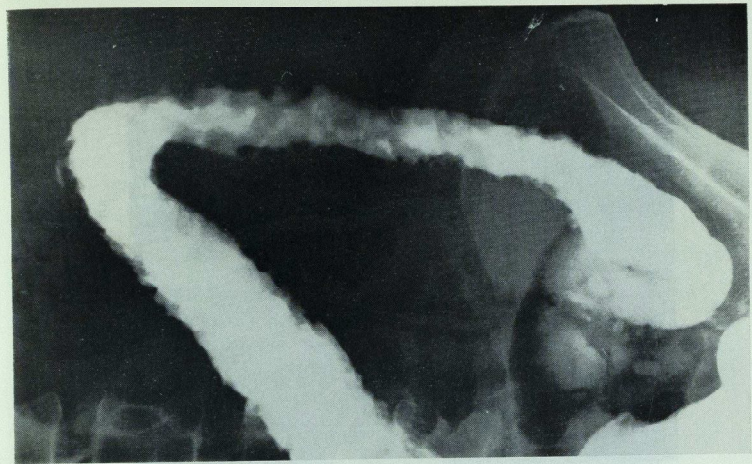
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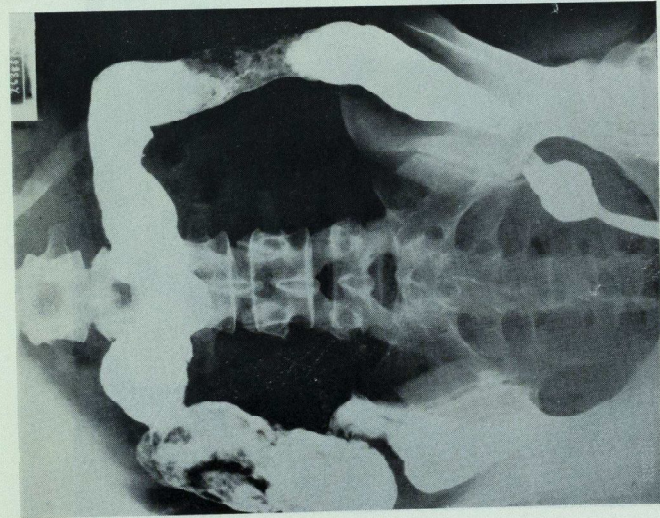
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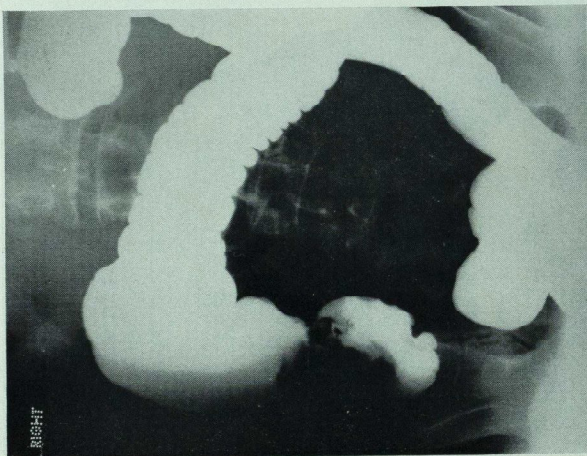


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No. 10



No. 11

RIGHT



No. 12

BARIUM SWALLOW

1. OESOPHAGEAL CARCINOMA

(middle third)

Note: Irregular Filling Defect.
Proximal Dilatation.

2. OESOPHAGEAL VARICES IN PORTAL HYPERTENSION.

Note: Dilated, tortuous veins.

BARIUM MEAL

3. HIATUS HERNIA.

Note: Large hernia of the "Sliding" type. Oesophagitis and stricture due to Peptic Reflux.

The patient is examined in the head-down position. This accentuates the hernia and demonstrates reflux.

4. TWO BENIGN GASTRIC ULCERS.

Note: Two niches along the usually smooth line of the lesser curvature. There is often a notch of spasm opposite, on the greater curvature: THE INCISURA.

A blob of Barium may be left in the ulcer crater after stomach emptying.

A benign ulcer may be indistinguishable on examination from a malignant ulcer. The following features are suggestive of malignancy:

Raised everted edges to the ulcer.
Failure to improve on medical treatment.
Rigid surrounding stomach wall.
Antral lesion.
Atypical site.

5. DUODENAL ULCER.

In 5a the ulcer is seen from the side as a niche with the Incisura opposite.

In 5b the ulcer is seen as a blob in the centre of the duodenal cap, with fibrosed rugae radiating from it.

6. GAS UNDER THE DIAPHRAGM.

From a patient with a perforated Duodenal Ulcer (patient erect).

7. CARCINOMA OF THE STOMACH.

Note: Large filling defect in the Subpyloric region.

Appearances on X-Ray in carcinoma of the stomach:

A malignant ulcer, with raised everted edges.

A space-occupying lesion, as here. Infiltrating type, with thickening of the whole stomach and rapid emptying.

BARIUM ENEMA

8. CROHN'S DISEASE IN THE COLON.

9. ADVANCED ULCERATIVE COLITIS. *Crohn's Disease.*

The mucosa shows coarse ulceration, and extensive undermining of the mucosa. "ROSE-THORN" and "COLLAR-STUD" ulcers can be seen as projections from the lumen. The rectum is less commonly involved, than in Ulcerative Colitis, and is free from disease here.

Ulcerative Colitis.

In Ulcerative Colitis the colon may show very fine serration on Barium Enema; the ulcers are small and shallow. Pseudopolyps may be present, representing tags of oedematous mucosa between ulcers.

The appearances in this X-Ray are of a later stage, in which there is complete loss of haustration and shortening of the colon: "DRAIN PIPE COLON". The rectum is involved and here is grossly narrowed and shortened. This pulls it away from the sacrum, and lateral views show the characteristic "PRESACRAL GAP". After ten years with this disease, a high proportion of patients have one or more neo-plastic lesions in the colon. In this patient a carcinoma can be seen as a stenosed area below the left Sacroiliac joint.

10. DIVERTICULOSIS.

Post-evacuation film showing Barium retained in the Diverticula.

11. CARCINOMA OF THE CAECUM.

Note: Large filling defect.

12. HIRSCHSPRUNG'S DISEASE (CONGENITAL MEGACOLON).

Note: Narrowed rectal segment.
Colon above dilated and full of faeces.

The *Journal* would like to thank Dr. Dawson for his help in the preparation of this article.

more drama

This month Bart's Drama are presenting two new productions: the main production at the end of the month, and a one act play which will be Barts' entry for the U.L.U. One-Act Festival earlier in the month.

The Duchess of Malfi by John Webster. This passionate Elizabethan tragedy will be the main production this February, and on the play's merits alone should provide the audience with a memorable piece of theatre. Written in 1612 and 1613, it was probably first performed at the Blackfriars Theatre and at the Globe in London, about two years after the first production of the "The White Devil," Webster's one other major tragedy. Both plays are set in the small independent Italian states of the time, both show considerable Machiavellian influence, both concern themselves with a world where ambition, lust, revenge, and cynicism motivate acts of sensational horror and violence. The major difference between the two plays lies in Webster's treatment of the central character, in both cases a woman: in "The White Devil," Vittoria Corambona, a vicious Venetian courtesan, suggests to her lover the murder of his wife and her own husband; in "The Duchess of Malfi," the Duchess, a woman of remarkable integrity and virtue, is the victim of a deliberate and concerted plot against her life and her dignity by her two brothers, one a cardinal, the other (her twin) a duke.

Throughout the two plays there is little humour—Webster was here more concerned with creating strong passions, horror and terror, with occasional contrasting flashes of pathos. Rupert Brooke wrote that "a play of Webster's is full of the feverish and ghastly turmoil of a nest of maggots. The sight of their fever is only alleviated by the permanent calm, unfriendly sunnits and darknesses of the background of death and gloom. Human beings are writhing grubs in an immense night. And the night is without stars or moon. But it has sometimes a certain quietude in its darkness; but not very much." Despite this, Brooke still thought Webster was a great writer. Whether one agrees with him, or whether one considers Webster to have taken a delight in horror for its own sake,

"The Duchess of Malfi," with its rich poetry and prose, its superb and complex characterisation, its multiple murders and its overall magnificence, should make compelling drama.

The Zoo Story by Edward Albee. After presenting "Ubu Roi" in November, it is apt that there should be a production of "The Zoo Story." Albee is an American dramatist of the Absurd; and "Ubu Roi" might be described as the first modern example of the Theatre of the Absurd. "Who's Afraid of Virginia Woolf?" is undoubtedly Albee's best-known play "The Zoo Story," written earlier, is nevertheless equally complex. In it he presents an image of the difficulty of communication between human beings, and a fascinating study of schizophrenia.

"The Zoo Story," a one-act play, is the Bart's entry for the University of London One-Act Festival, which is being held from the 10th to the 15th February. Three years ago Barts came second in this festival, and Pedro Vieira won the best actor award. In this production he will take the part of Peter, while James Griffiths plays Jerry and also directs. The play will be performed in the Recreation Room in College Hall during the second week of February. We would also be grateful for your support at the Festival itself.

Nicholas Whyte
Andrew Boon

The Edinburgh Fringe 1969

Last year's Festival Fringe at Edinburgh was the most ambitious to date. Years ago, the fringe outstripped the legitimate festival in terms of quantity, and the most recent fringe boasted over 300 separate productions. Most of these were theatrical, and in general they were staged by University Drama Societies—though I noticed that more than one school had participated, and the bravest of these put on a specially written version of Bergman's film "The Seventh Seal."

As usual there was enormous variety in the quality of work. Some of the societies, I felt, attempted a great deal too much by spreading their talent thinly over four or five productions—in order to be able to play to audiences from 11 a.m. onwards. Keele University was certainly guilty of this, though the vast amount of work which its small company undertook deserves nothing but praise. The reliable regulars were there in force—without doubt the most polished production I saw was the Cambridge University

Theatre Company's Footlights Review; marvelous sketches, beautiful delivery and great musical skill all threaded together with loving and expert fingers. I liked another CUTC production too: "The Performance," by Jonathan Chadwick, a Cambridge undergraduate. This was a remarkable mime-play of the history of events in Czechoslovakia two years ago which led up to the suicide of Jan Palach, the student who immolated himself in protest against the Russian invasion. In a fringe relatively free of political comment and commitment, and thus largely unconstructive, this very moving production hit hard and kicked one's complacency in the groin. In fact it was even more emotionally gory than the bloodthirsty production of "Dracula" which I saw at the new Traverse Theatre Club, an extraordinary place with carpeted tea-chests for seats and piano entrails for musical effects. I was terrified but the four year old girl on my right loved it all and assured me it was only make-believe. I was glad of the chance to see some more orthodox theatre—we had Macbeth, Antigone, Waiting for Godot (already part of the establishment) and Le Miserable.

Although the Barts Drama Society has never been involved in the fringe, three of its members took part in the R.A.D. Company's production of Pirandello's "Each In His Own Way"—a British premiere. This is a play more full of dross than highlight but nevertheless worth doing and enormous fun largely because of the turmoil it produces in the theatre; for this is a play involving audience participation. So much so that the last lines of the play are those of the Stage Manager, who tells the spectators that owing to the disturbance, there can be no third act this evening. The audience is asked to leave quietly, though by this point they are usually (and quite rightly) incensed, and only a judicious playing of God Save The Queen got them out. However the critics liked it and gave us the prize for the best premiere—the only award of the festival—at a ceremony presided over by Mr. Edward Heath.

In spite of the success of the play, it would probably not be sensible for Barts to send a contingent to Edinburgh, because of the huge financial risk. Certainly, the recent Barts productions are very much better than many I saw there, and it might be an idea to enter for one of the less well-known fringe festivals where audiences aren't quite so hard to find, and where, I am sure, our Drama Society would do extremely well.

Jeffrey Tobias.

ROAD TEST

R 6

Those readers who have driven on the continent in past years will no doubt have pondered on the strange looking small cars with praying-mantis like suspension which have gone past them when they were just congratulating themselves on their high average speeds. I have just tested the latest of this species, the Renault R6.

The Renault R6 was introduced in France last year to fill the gap in the Renault front wheel drive range between the R4 and the R16, and with updated R4 mechanicals it is a good buy at £758.

The body is one of the new generation of saloon/estate five door cars which by different rear seat combinations can take two people with 32 cu. ft. of space, or four people and 12 cu. ft. The load capacity is 815 lbs., or in more practical terms, four 11-stone weaklings and 200 lbs. of luggage for them to train with.

Mechanically the car is similar to the familiar Renault 114. The 845 cc. 4 cylinder engine produces 34 bhp whilst the 8:1 compression enables 3 star fuel to be used without problems. The engine is water/glycol cooled in a "sealed for life" system, and is safe to -35°C, a valuable selling point you will agree. There are no greasing points and the oil changes are specified at 3,000 mile intervals. The tank holds 7 gallons, each worth about 40 miles. The engine has a reputation for extreme reliability and ruggedness. The test car engine used no oil and was remarkable for its smoothness and quietness for what is really a little engine in a large car. In fact the car is 12' 7" long, with a 5' beam



and a 29' turning circle on an extremely accurate and easy steering.

The engine started easily even after standing in the open on wet, snowy nights and warmed up within ½ mile of starting. The heater has a 2 speed fan with an ingenious cut-out, and the ventilation was first class, the rear extractors working so well that the large rear window never once misted up.

The windscreen wipers initially seem to work rather frantically but this is appreciated the first time one drives behind a lorry on a wet day, there is also a foot operated windscreen washer. The wipers were set up for left hand drive but the longer blades now fitted provide reasonable coverage of the screen for even the tallest drivers.

The head lights looked small but provide adequate amounts of light for the performance. The test car had right dipping which is peculiar to this car only, I was assured. The dipped lights have the flat topped continental type beam.

The proof of the pudding being in the eating, the car proved capable of doing all claimed for it. The maximum speed was around 75 m.p.h., give or take 3 m.p.h. depending on wind and gradient. It will cruise at any speed up to the maximum but is happiest at 60-65 m.p.h., above which wind noise becomes excessive. The road holding is faultless and forgiving, in that the car if cornered too fast, scrubs off speed with the front tyres, enabling the corner to be taken in a somewhat hilarious style. Hilarious because the ride (in the Rolls Royce class) is achieved by vast suspension travel which naturally produces a righting stance with energetic cornering. The main point is that the car is always completely safe. The tyres were Michelin ZX, which should last for at least 30,000 miles on the 13 inch wheels.

Comfort is something French motor manufacturers know all about. The front seats had the optional reclining back rest and were up to expectation. Rear seats were better than most estate type cars and leg room was adequate for a 6 foot man. The seats enable long journeys to be undertaken without strain, a 10 hour drive being common on the Continent. The comfort and roadholding makes up for the lack of acceleration (0-60 in 30 secs.), and top speed: after 10 hours in some cars you would need traction to even stand up straight.

The brakes are drums, and proved that, for normal motorists, on small cars, drums are perfectly good. They were light and progressive in action. Only one point being that they need drying out after a long wet run without application, e.g., on a flooded motorway.

The one thing that may put some people off the Renault 6 is the gear lever. It sprouts out of the dashboard as a long horizontal rod with a knob on it. Once one realises this simply connects to a vertical gear lever under the bonnet, the twist and push/pull is extremely easy, even on the slightly odd change pattern. It is sprung in the second and third gear plane which adds to the simplicity. There are four speeds and reverse. The fascia itself is a revelation in asymmetry, but once learnt, is easy to use. If worried about servicing, take heart, for I managed to get a small screw for the choke wire late on a Friday afternoon in London.

There is a substantial platform chassis integral with the body; the front wings bolt on for ease of mending if the wife can't negotiate the front gate. In summary, this car has a lot to recommend it, except, of course, that it is a foreign product in a field where there are many good British made motor cars.

Ralph Smallhorn.

CHRISTMAS EVENTS AT BART'S

December 23rd

The Bart's Choir visited Charterhouse and sang carols whilst proceeding along the corridors and met the elderly gentlemen, who insisted on giving a conducted tour of the Home.

Christmas Eve

Men from the Foreign Section of the Post Office made their annual pilgrimage to the hospital in colourful fancy dress where they made merry in the square before proceeding to the Childrens wards to present their gifts.

Christmas Day

This was as merry as any other year and at the Nurses Christmas Lunch a certain "nurse" who will remain nameless proposed a toast to Miss Jones (no. 10) who duly returned the compliment with the offer of a post as a sister (no. 7).

Matron's party on Christmas night saw Gloucester House packed to bursting point with people, food and drink. The highlight of the evening was the Theatre Belts Cabaret which was highly entertaining: nurse S. Snelgrove particularly excelled herself in efficiency and the interpretation of that great record "Je t'aime" was especially stimulating and was received with great mirth.

Prior to Christmas Day the Christmas spirit was brought to the wards with carol singing and continued on Christmas Day and Boxing Day with the Ward Shows: there were six different shows this year and they were of a high standard and well received. Full details appear in the report on the Pot Pourri.



A swinging time at the enchanted place. Waring Ward.



"And after Turkey . . ."

An enjoyable Christmas seemed to have been had by everyone at Bart's and the following letter from a lady patient was published in the Evening News on 1st January:—

"We have just had the most wonderful Christmas thanks to the staff of St. Bartholomew's Hospital.

On Christmas Eve there was carol singing by candle light with the nurses in their red cloaks making a lovely picture.

There was a big tree decorated with lights and everyone received a present.

We also had two variety shows on Christmas Day and Boxing Day, given by the housemen and students.

I came in feeling ill and Christmas was never further from my mind, yet despite everything I have seldom enjoyed myself more.

I speak for thousands like me who know that if we gave these people gold we could never repay them for saving so many lives and spreading so much happiness.

I wish to say thank you to all the staff in Barts for being so kind to us all."

Mrs. M. Coleman, Colston Ward.

Pot Pourri

The 1969 Pot Pourri took place at the Cripplegate Theatre on the evenings of 29th, 30th and 31st December. Thank you, Mr. Thornton and your staff, for running the box office, and congratulations to all those responsible for the production.

Past and present members of the Drama Society performed short sketches to separate the six shows; of these I thought Graham Chapman's "Cry "God for Harry"" was the best. The Society again had its own show—a

pantomime in the finest pantomime tradition with some incredibly bad rhyming in places! Queen Oxley failed to marry off her ugly daughter Boon to Prince Charming Griffiths who, we assume, is now living happily ever after with the beautiful Princess Benita. The standard was as high as expected.

The Clerks' sketch about the old crock was an excellent idea which they carried off very well—I especially liked the tyre inflation. The busy Miss Blackhead in her anatomy viva was also good.

The Dressers' show was fast-moving and fairly musical. Their opening song ("Abernethy, Abernethy . . .") was particularly tuneful. Hairy legged Eartha Dung was cleverly portrayed and the transformation scene was neatly executed. "Making it with a Pink" was, and still is, a good idea and the nurses in both of these sketches were excellent. The sketch with the two old men also went down well.

The Midder and Gynae show was highly original and was probably the most polished one of the (Wednesday) evening. The song about the tiring evenings given by housemen (" . . . but they all give in!") richly deserved its encore: a dilute impersonation, too!

The Handelian nursery rhymes were very popular, the forceps delivery was very funny and the surgery commentary was sufficiently coarse. There was an excellent song to 'eap' it all.

The Finalists had several good ideas. Salt and Winner explained how to get on in medicine without really working, Elliot and Lloyd were fairly convincing gnomes, and Hunt explained

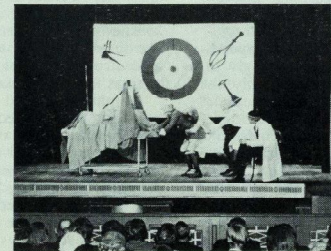
to the patient what Dr. Breeson really meant. ("It's a case of mind over matter" means "I don't mind, you don't matter!") The whole company then had "planning problems with the family" with their benighted "unplanned" offspring on stage as evidence of their bad luck.

The House show had the best back-drop and the performance was delivered slickly. The opening song referred to certain Bart's worthies, the N.H.S., poor pay and long hours—"didn't mean to wake you mate, I was just passing by the gate" was a memorable line. Other songs featured a dragon who played with himself, and the hopes and dreams of a sexy Pink (Savage). An infertile housewife nearly went to far with a photographer, a houseman answered a late night telephone call from a woman who lives in The Mall, and the wrestling Jordan defeated his lovely opponent Barolay and then made a Reckless assault on the referee.

The House's closing number was unusually good and it is a pity that the audience was forced to miss half of it by the water bomb throwing of a thoughtless few. The first missile struck Sue Pearsall—I trust that the cad has apologised. It is a pity that an otherwise delightful evening was marred in this way.

Robin Rayner.

Bert Cambridge retired on the 31st January after fifty-one years at Barts. In appreciation of the magnificent job he has done in running the box office for thirty-seven years, the producer, Pete Jordan, presented him with a large tankard on behalf of the cast on the first night of the show.



Pot Pourri—Mrs. Virginia Mulpip being assisted into the home straight in the Maternity Stakes. Mirda and Gynae Show.

BOOK REVIEWS

"Operative Surgical Revision"—by John J. Shipman, M.S., F.R.C.S. 2nd Edition. London. H. K. Lewis & Co., Ltd., 1969. (Pages: 171 + VII, PRICE: £1 15s. 0d.)

The author states that this book is intended to facilitate revision of routine operations for the final fellowship examination and as such it could certainly be of use to fellowship candidates.

The book's size, print and lay-out are conducive to revision reading, and its cost is reasonable.

The choice of operations is comprehensive although pelvic abscesses and subdural haematomata are common enough to warrant inclusion as are the operations of circumcision and through and above knee amputations.

The regional organisation of the operations provides continuity, but there is marked lack of uniformity in the individual operation details. For instance, general anaesthesia is first mentioned in operation note 4, although it would be unusual for any of the previous three operations to be anaesthetised in any other fashion. Similarly, skin preparation is first mentioned in operation note 34, diathermy first advocated in note 54, and a non inflammable anaesthetic for use with diathermy first advised in note 97. Suture material gets only occasional mention and a brief general note on this subject would be useful.

The first operation considered is an appendectomy and this description is amazingly incomplete—in the grid iron incision only the external oblique and rectus abdominis muscles are mentioned and the appendix is never actually removed—reference to an inadequate index indicates the operation is not completed elsewhere in the text.

Subsequent operations are however more factual and the sections on sympathetic, thoracic and neurosurgery are clearly written.

The operative details are generally accurate although the limitation of conservative treatment of a perforated peptic ulcer to the old and ill is not common practice. While many experi-

enced surgeons do not advocate the use of routine operative cholangiography the single brief mention of this technique in cholecystectomy and choledochotomy (and this only after opening the common bile duct) would seem inadequate. The text is occasionally out-dated, as in the recommendation of freeze dried homografts for use in vascular surgery.

In any further edition an introductory section on anaesthetic techniques, patient positioning, skin preparation and towelling, together with the details of routine abdominal and thoracotomy incisions would be helpful. Such a section would allow candidate and examiner to pass unhindered to the deeper parts of the operation within the scheduled time.

John S. P. Lumley.

Dying by John Hinton. Pelican Original. 4s. 1967.

"Neither the sun nor death can be looked at with a steady eye."

—La Rochfoucauld. 1613-1680.

The title page quotation crystallises the need and reasons for this book. I wish it had been written years ago. It is written now, by a Psychiatrist at the Middlesex Hospital who became concerned with dying patients and here discusses rational and irrational emotions associated with death.

The book is in sections and deals with Attitudes to death, acceptance of it, denial of and struggle against it, care of the dying, reactions to bereavement and modes of mourning.

Emphasis is laid on fear the commonest emotion, felt often equally by the dying person, relatives and attendants.

There is a liberal sprinkling of case-histories and a comprehensive bibliography.

I urge all Nurses, Students, Newly-Qualifieds and others interested to read this paper-back. It has given me the courage that even nursing and medical studies had not given, to meet dying patients and their relatives with greater confidence.

Benita Wylie.

"Basic Drawing for Biology Students"

by

Emil G. Bethke B.A.

Published by Charles C. Thomas (U.S.A.)

In our early years, art, as a part of our general education, tends to be a low priority activity and its status in the curriculum appears to diminish as we progress through the primary to secondary and grammar levels. If you ask teachers for an explanation of the role which art plays in education, their answers differ widely and include such statements as "it develops a child's creative ability", "it helps children to appreciate art", "it serves to seek out and help those who have talent and may eventually take up the subject professionally". All these are excellent and valid, but one vital aspect very often seems to be overlooked—the need to develop a child's ability to record and communicate in pictorial form in the same way as he does with words.

In so many fields of human activity the ability to record things seen, and express ideas visually, by plan, diagram, graph or simple drawing is a tremendous asset and this applies not only to the learning process, but also in communicating with, and teaching others. Nowhere is this more true than in the life sciences. What is lacking and badly needed in general education is some form of tuition in drawing of a purely representational nature, devoid of all the emotional aspects of "Art".

Emil Bethke's book is aimed to make good this deficiency by leading the student through a series of graded exercises in elementary drawing technique and he attempts to show that by using observation and logic, supplemented by a little practice, most people are capable of producing acceptable drawings whether or not they are equipped with a basic talent.

The book is mainly designed for students of the life sciences, but most teachers who need to produce diagrams and drawings in the course of their work either for blackboard or lantern slide illustration will find this book equally useful.

There is a minimum of text, kept simple and concise and mainly used to back up the profuse illustration content. Following an introduction to materials and equipment the author goes on to deal with such matters as shape, proportion, perspective, light and shade, texture etc., together with various technical aspects shading in pencil and pen.

As the author says the ability to draw, not only serves the purpose of being able to record what you see, but automatically increases ones

powers of observation and helps develop a visual memory and from this aspect alone it is a contribution to learning.

Learning to draw from a book is not the ideal way, but in the absence of other facilities it serves a useful purpose. It is interesting to note that some years ago it was suggested that preclinical students at Barts should be offered the opportunity to receive tuition in drawing. Perhaps it may still come about.

Peter Cull.

RECORD REVIEW

Memories are Made of These—Music for Pleasure (MFP Stereo 1348).

The record consists of twelve recent recordings of songs from the period 1939-40. The renderings are fairly true to the originals but I think one or two have had their tempo raised a little. The songs of Bing Crosby are well represented: An Apple for the Teacher, Sierra Sue and, from "The Road to Morocco", Moonlight Becomes You So. There are two by Hoagy Carmichael Two Sleepy People (originally sung by Bob Hope and Shirley Ross) and The Nearness Of You—and one made famous by a young Frank Sinatra when he was male vocalist with the Tommy Dorsey Orchestra—I'll Never Smile Again, Wishing Will Make It So was one of the first big hits of the war—made popular by the "Forces' Sweetheart" Vera Lynn. The other songs are: Our Love Affair, Scatterbrain, Who's Taking You Home Tonight?, a terrible Andrews Sisters song The Ferryboat Serenade, and A Nightingale Sang in Berkeley Square. I would have left out the last two and would have included one of Al Bowlly's songs and Thanks For The Memory. Otherwise, this is excellent value for 14s. 6d.

Robin Rayner.

RECENT PAPERS BY BART'S MEN

- ABELL, E. Rosacea with steroid atrophy. *Brit. J. Derm.*, 81, 1969, pp. 870-871.
- *ALLEN, J. C. The octadeca-9, 12-dienyl sulphate anion; a new, water-soluble substrate for lipoygenase. *Chem. Communications*, 1969, pp. 906-907.
- BACKHOUSE, K. M. Mechanical factors influencing normal and rheumatoid metacarpophalangeal joints. *Ann. rheum. Dis.*, 28, 1969, Sept. Suppl., pp. 15-19.
- BESSER, G. M., and others. Influence of amphetamines on plasma corticosteroid and growth hormone levels in man. *Brit. med. J.*, Nov. 29, 1969, pp. 528-530.
- BLACHE, L., see WATSON, B. W., and others.
- *BLACK, K. O. The care of diabetics. *Med. Digest*, 14, 1969, pp. 669-678.
- BLACKBURN, G. Carcinoma of the thyroid. *Guy's Hosp. Reports*, 118, 1969, pp. 347-352.
- BOXALL, T. A. A physiological study of the isolated spleen. (Attris and Gale Lecture). *Ann. Roy. Coll. Surg.*, 45, 1969, pp. 277-293.
- BRAIMBRIDGE, M. V. Replacement of heart valves. *Med. News. Med. Review*, Oct. 1969, pp. 5-8.
- *BRÖCKE-FHIRST, K. On the mechanism of the -chymotrypsin-catalysed hydrolysis of 4-*is*-benzylidene-2-phenyloxazolin-5-one: evidence for covalent non-productive binding. *FEBS Letters*, 5, 1969, pp. 63-67.
- *BROOKE, B. N. Ulcerative colitis and carcinoma of the colon. *J. Roy. Coll. Surg. Edin.*, 14, 1969, pp. 274-278.
- BROZOVICH, B., and COPESTAKE, J. Semi-automated micromethod for estimating the unsaturated iron-binding capacity of serum using radioactive iron. *J. clin. Path.*, 22, 1969, pp. 605-608.
- CANTRELL, E. G. Why use gastric cytology? *Gut*, 10, 1969, pp. 763-766.
- *CAPENER, N. Sports injuries: Introduction and appraisal. *Proc. Roy. Soc. Med.*, 62, 1969, pp. 915-917.
- CASSELL, P. Perforated duodenal ulcer in Reading from 1950 to 1959. *Gut*, 10, 1969, pp. 454-459.
- , The prognosis of the perforated acute duodenal ulcer. *Gut*, 10, 1969, pp. 572-574.
- , Urinary retention associated with infection in the ischio-rectal and supralevator spaces. *Brit. J. Surg.*, 56, 1969, pp. 918-920.
- CATCHPOLE, B. N. Ileus: use of sympathetic blocking agents in its treatment. *Surgery*, 66, 1969, pp. 811-820.
- CATTELL, W. R. Substitution of kidney function by artificial means: 2. Dialysis therapy and peritoneal dialysis. 3. Problems of chronic dialysis. 4. Home dialysis. *Nursing Times*, Sept. 25, 1969, pp. 1236-1238, Oct. 2, 1969, pp. 1263-1264, Oct. 9, 1969, pp. 1298-1300.
- , see also O'GRADY, F., and others.
- *CHALMERS, R. A., and others. Xanthinuria with myopathy. (With some observations on the renal handling of xypurines in the disease). *Quart. J. Med.*, 38, 1969, pp. 493-512.
- , and others. Microscopic studies on crystals in skeletal muscle from two cases of xanthinuria. *J. Path.*, 99, 1969, pp. 45-56.
- *CHAMBERLAIN, D. A. (with others). A comparison of the hemodynamic effects of ventricular and sequential A-V pacing in patients with heart block. *Amer. Heart J.*, 78, 1969, pp. 502-508.
- , see also O'GRADY, F., and others.
- *CHARLTON, C. A. C. Should a consultant post be permanent? *Lancet*, Sept. 20, 1969, pp. 633-634.
- CHRISTIE, R. V. Medical education and the State. *Brit. med. J.*, Nov. 15, 1969, pp. 385-390.
- *CLARK, J. B., and PINDER, S. Control of the steady-state concentrations of the nicotinamide nucleotides in rat liver. *Biochem. J.*, 114, 1969, pp. 321-330.
- *COHEN, E. Lipman. Hair—too much and too little. *Med. Digest*, Aug., 1969, pp. 539-548.
- *COHEN, L. Influences of pII on vaginal discharges. *Brit. J. vener. Dis.*, 45, 1969, pp. 241-247.
- *CONNOLLY, R. Campbell. Surgical treatment of pituitary disease. *Brit. J. Hosp. Med.*, 2, 1969, pp. 1706-1711.
- COOKE, E. Mary and others. Changing faecal population of *Escherichia coli*, in hospital medical patients. *Brit. med. J.*, Dec. 6, 1969, pp. 593-595.

- COPESTAKE, J., see BROZOVICH, B., and —.
- COTES, J. E. (and others). A 60% oxygen supply for medical use. *Brit. med. J.*, Oct. 18, 1969, pp. 143-146.
- *COUTAR, I. M. and others. The effects of taloximine and aminophylline on isolated human smooth muscle. *Arch. int. Pharmacodyn.*, 180, 1969, pp. 492-501.
- CROSFILL, M. L. (and others). The use of chlorhexidine antiseptics in contaminated surgical wounds. *Brit. J. Surg.*, 56, 1969, pp. 906-908.
- CROWTHER, D. (with Guyer, R. J.). Active immunotherapy in treatment of acute leukaemia. *Brit. med. J.*, Nov. 15, 1969, pp. 406-407.
- DAWSON, A. M. Non-inflammatory diarrhoea. Disaccharidase deficiency in man. *Trans. med. Soc. Lond.*, 85, 1969, pp. 32-40.
- , see also DYER, N. H. and —.
- DU BOUILLAY, G. (with others). Regional blood flow in the normal cerebral hemisphere. *J. Neurol. Neurosurg. Psychiat.*, 32, 1969, pp. 367-378.
- *DYER, N. H., and DAWSON, A. M. La síndrome da malabsorbimento. *Sintesi Clinica*, 1969, pp. 5-28.
- *EDMONDS-SEAL, J. (and Maroon, J. C.). Detection of air embolus by Doppler ultrasonics. *Proc. Roy. Soc. Med.*, 62, 1969, p. 1022.
- EWINS, Susan, see COOKE, E. Mary, and others.
- FLEMING, J. Cardiac Arrhythmias. *Med. News, Med. Review*, Oct. 1969, pp. 12-14.
- , see also HAMER, J., and —.
- FLETCHER, C. M. The diagnosis of emphysema: How and why. *Proc. Roy. Soc. Med.*, 62, 1969, pp. 1029-1030.
- FRY, I. Kelsey, see O'GRADY, F., and others.
- GARROD, L. P. The possible scope of trimethoprim-sulphonamide treatment. *Postgrad. med. J.*, Nov. 1969, Suppl., pp. 52-55.
- *—, and WATERWORTH, P. M. Effect of medium composition on the apparent sensitivity of *Pseudomonas aeruginosa* to gentamicin. *J. Clin. Path.*, 22, 1969, pp. 534-538.
- GAUCI, C. L., see WATSON, B. W., and others.
- HADFIELD, G. J. Discharges from the nipple in women: significance and management. *Med. World*, 107, 1969, pp. 12-14.
- HAMER, J., and FLEMING, J. Action of propranolol on left ventricular contraction in aortic stenosis when a fall in heart rate is prevented by atropine. *Brit. Heart J.*, 31, 1969, pp. 670-675.
- , see also POWLES, R., and others.
- *HEATH, R. B. Antiviral chemotherapy. *Brit. J. Hosp. Med.*, 2, 1969, Nov., pp. 1807-1811.
- , see also MARTIN, Gillian V., and —.
- HEATHFIELD, K. W. G. (with Dallos, V.). Iatrogenic epilepsy due to antidepressant drugs. *Brit. med. J.*, Oct. 11, 1969, pp. 80-82.
- HEDGES, Anmarie, see COUTAR, I. M., and others.
- HIBBARD, B. M., and others. Abruptio placentae and defective folate metabolism in Singapore women. *J. Obstet. Gynaec. Brit. Cwlth*, 76, 1969, pp. 1003-1007.
- HIBBARD, Elizabeth, see HIBBARD, B. M., and others.
- HOLDSWORTH, C. D. (and others). Pathophysiology of post-gastroectomy hypoglycaemia. *Brit. med. J.*, Nov. 1st, 1969, pp. 257-260.
- HUNT, J. H. Religion and the family doctor. *J. Roy. Coll. Gen. Pract.*, 18, 1969, pp. 199-206.
- *JEWESBURY, E. C. O. Parietal lobe syndromes. In Vinken, P. J. and Bruyn, G. W. eds. *Handbook of Clinical Neurology*, Vol. 2, 1969, pp. 680-699.
- JOHNSON, Margaret, see CHALMERS, R. A., and others.
- *JONES, H. Bevan. Group therapy for mothers and children in parallel. *Amer. J. Psychiat.*, 125, 1969, pp. 1439-1442.
- KINMONTH, J. B., (with Edwards, J. M.). Lymphovenous shunts in man. *Brit. med. J.*, Dec. 6, 1969, pp. 579-581.
- KNILL-JONES, R. P., (with others). A controlled trial of a protein-free liver extract in the treatment of chronic liver disease. *Gut*, 10, 1969, pp. 882-885.
- KNOX, R. The antibiotic jungle. *Med. Digest*, 14, 1969, pp. 756-768.
- LANDON, J., see BESSER, G., and others.
- *LANGFORD, A. W. History of Hereford General Hospital. *Woolhope Naturalists' Field Club. Papers* 1959, pp. 149-160.
- LAWTHER, P. J. Air pollution hysteria must end. *G.P.*, Oct. 10, 1969, pp. 10-11.
- *LEHMANN, H. Molécule d'hémoglobine et hémoglobinopathies. *Ann. Soc. belge Méd. trop.*, 49, 1969, pp. 87-92.
- *—, (with Carrell, R. W.). The unstable haemoglobin haemolytic anaemias. *Seminars in Hematology*, 6, 1969, pp. 116-132.
- *—, (with Gaffney, P. J.). Residual enzyme activity in the serum of a homozygote for the silent pseudocholin esterase gene. *Human Heredity*, 19, 1969, pp. 234-238.
- *—, (with others). Abnormal haemoglobins

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in Zambia. A new haemoglobin Zambia 60 (E9) Lysine→Asparagine. *Brit. med. J.*, Dec. 6, 1969, pp. 595-596.

- * —, (with others). Abnormal human myoglobin: 53 (D4) glutamic acid→lysine. *Nature*, 223, 1969, pp. 823-833.
- * —, (with others). The hereditary blood factors of some populations in Bhutan. *The Anthropologist* (special vol.), 1968, pp. 29-43.
- * —, (with others). New unstable haemoglobin Borås: β88 (F4) leucine→arginine. *Nature*, 222, 1969, pp. 953-955.
- LIND, Norma A., see TURNER, P., (with others).
- * LUMB, G., (with others). Subcellular distribution of catecholamines and specific granules in rat heart. *Lab. Invest.*, 21, 1969, pp. 19-26.
- LYON, D. C. Recurrent pancreatitis caused by peptic ulceration in an intra-pancreatic gastric reduplication cyst. *Brit. J. clin. Pract.*, 23, 1969, pp. 425-427.
- MAINGOT, R. The partial gastrectomies for chronic peptic ulcer: Finocchetto's modification of the Billroth I operation. *Brit. J. clin. Pract.*, 23, 1969, pp. 437-445.
- , Pancreatic fistulae. *Nursing Times*, 65, 1969, Nov. 13, pp. 1447-1449.
- * MARSHALL, R. D., (with others). Intermittent positive-pressure ventilation in chicken-pox pneumonitis. *Brit. med. J.*, 3, 1969, Sept. 13, pp. 637-638.
- * MARTIN, Gillian V., and HEATH, R. B. Rhinovirus infection of vervet monkeys: a model of human rhinovirus disease. *Brit. J. exp. Path.*, 50, 1969, pp. 516-519.
- MEICALFE, Helen, L., see COUPAR, I. M., and others.
- MISIEWICZ, J. J., (with Waller, S. L.). Prognosis in the irritable-bowel syndrome. *Lancet*, Oct. 11, 1969, pp. 753-756.
- * —, (and others). Gastrointestinal motility and gastric secretion during intravenous infusions of gastrin II. *Gut*, 10, 1969, pp. 723-729.
- NEELY, J. The effects of analgesic drugs on gastro-intestinal motility in man. *Brit. J. Surg.*, 56, 1969, pp. 925-929.
- * NOBLE, M. I. M., (and other). Force-velocity relationship of cat cardiac muscle, studied by isotonic and quick-release techniques. *Circ. Res.*, 24, 1969, pp. 821-833.
- O'GRADY, F., and others. Long-term, low-dosage, trimethoprim-sulphonamide in the control of chronic bacteriuria. *Postgrad. med. J.*, Nov. 1969, Suppl., pp. 61-64.
- PALLIS, C., see CHALMERS, R. A., and others.
- * PARKER, R., and others. The mass-spectro-

metric identification of hypoxanthine and xanthine ("oxypurines") in skeletal muscle from two patients with congenital xanthine oxidase deficiency (xanthinuria). *Biochem. J.*, 115, 1969, pp. 103-108.

- * PERKINS, E. S., (and Saiduzzafar, H.). The effect of plasmin on the facility of outflow in cynomolgus monkeys. *Exptl. Eye Res.*, 8, 1969, pp. 386-396.
- PINDER, S., see CLARK, J. B., and —.
- * POTTER, J. M. Who looks after head injuries? *Brit. J. Surg.*, 56, 1969, pp. 724-725.
- * POWLES, R. L., and others. Selective cardiac sympathetic blockade as an adjunct to bronchodilator therapy. *Thorax*, 24, 1969, pp. 616-618.
- REES, Lesley, see BESSER, G., and others.
- * REESE, A. J. M., (and Israel, M. S.). An investigation of a possible humoral factor produced by the thymus in terms of its effect on immunological competence. *Brit. J. exp. Path.*, 50, 1969, pp. 461-470.
- * ROBB-SMITH, A. H. T. A history of the College's nomenclature of diseases: its reception. *J. Roy. Coll. Physns. Lond.*, 4, 1969, pp. 5-26.
- RUSSELL, B. F. Dermatology at the London Hospital. *Brit. J. Derm.*, 81, 1969, pp. 780-793.
- SARDSON, J. M., see O'GRADY, F., and others.
- SHINEBOURNE, E. A., see POWLES, R., and others.
- SHOOTER, R. A., see COOKE, E. Mary, and others.
- SNEDDEN, W., see PARKER, R., and others.
- SPIRO, F. I., see O'GRADY, F., and others.
- STALLARD, H. B. An eye surgeon's thoughts about eyelid reconstruction. *Proc. Roy. Soc. Med.*, 62, (Part I, Nov.), 1969, pp. 1083-1086.
- STARK, J. Respiratory viruses. *Brit. J. Hosp. Med.*, 2, 1969, Nov., pp. 1791-1804.
- , see also O'GRADY, F., and others.
- TAYLOR, G. W. Surgical management of degenerative arterial disease. *Trans. med. Soc. London*, 85, 1969, pp. 147-152.
- THEOBALD, G. W. Uterine contraction and induced labour. *Med. News-Tribune*, Dec. 12, 1969, p. 14.
- THOMAS, D. P. Experiment versus authority. James Lind and Benjamin Rush. *New Eng. J. Med.*, 281, 1969, pp. 932-934.
- * TURNER, P. The human eye as a target to analyse the mechanism of action of substances. *Triangle*, 9, 1969, pp. 91-97.
- , (with others). Mydriatic responses to sympathomimetic amines in patients treated

with L-dopa. *Brit. med. J.*, Nov. 15, 1969, pp. 1043-1044.

- VERBOV, J. Scleromyxoedema a variant of lichen myxoedematosus (Papular mucinosis). *Brit. J. Derm.*, 81, 1969, pp. 871-873.
- WATERS, A. H., see O'GRADY, F., and others.
- WATERWORTH, Pamela M. Practical aspects of testing sensitivity to trimethoprim and sulphonomide. *Postgrad. med. J.*, Nov. 1969, Suppl. pp. 21-27.
- , see GARROD, L. P., and —.
- WATKINS, P. J., (and others). Interrelationships of blood sugar and ketones in insulin-treated diabetics. *Brit. med. J.*, Dec. 13, 1969, pp. 648-651.
- * WATSON, B. W., and others. A simple turbidity cell for continuously monitoring the growth

of bacteria. *Phys. Med. Biol.*, 14, 1969, pp. 555-558.

- * WATTS, R. W. E. Hyperuricaemia: some biochemical aspects. *Proc. Roy. Soc. Med.*, 62, 1969, pp. 853-857.
- , see also CHALMERS, R. A., and others.
- , see also PARKER, R., and others.
- * WILLOUGHBY, D. A. Mediators of delayed hypersensitivity reactions. *Int. Arch. Allergy*, 36, 1969, pp. 22-28.
- * —, (with others). A study of the anti-inflammatory action of pyridinolcarbamate (Anginin). *J. Path.*, 97, 1969, pp. 527-536.
- * Reprints received and herewith gratefully acknowledged. Please address this material to the Librarian.

RUGGER CLUB BALL '69

The Foyer was a masterpiece of castle-walling, forestry, B.B.C. spine-chilling sound effects and subdued lighting, rivalled (in style only) by the Rymer "Desert-Oasis-Kebab-Room" in the Bar Lounge, which briefly housed a Steel Band and about 200 squatters.

The attempt at a Bier Keller in the Recreation Room was the work of genius and clever helpers. The flood-lit Lady depicted on the window was in poor taste but delighted many. (Blame Fowler's imagination; Technicolour by Lambert . . . Wup, wup.) Black Plastic(!) and the Octopus were in mind-blowing evidence in the Refectory, and Alcan foil plus Strobe-aided Discotheque finished off what Leach's Domain had begun. Thanks are due to the Snell-Appleby Combo for all those Supper Baskets which have taken all the fun and bother out of feeding at a Bart's ball!

And this was such a good ball, Elliott (even Davies said so!) that you wouldn't even READ about it!

MIKE KNOWLAND

By the time you read this (if you went to it, that is) you've probably forgotten all about it, but there WAS a Rugger Club Ball in College Hall on the night of December 4th, 1969.

This ball might justly be called "Elliott's Ball", and it's mainly due to him that the Rugger Club has at last lost its Bun-fight image at this annual occasion and produced a ball which will be hard to beat in 1970, and was, I thought, the best Bart's ball for three years.

SPORT

The Hospital Colours committee has awarded Honours Colours to the following gentlemen in recognition of their achievements in the sport specified.

B. I. REES	RUGBY
E. A. LLOYD	RUGBY
P. J. FURNESS	CRICKET
J. BROOKS	CROSS-COUNTRY
C. I. FRANKLIN	SHOOTING

The Annual Boat Club Ball will take place at College hall on February 20th. Double tickets at 3 gns. are available from N. Snell at College hall, or from any member of the boat club.

BOAT CLUB REPORT

This term we decided to run the club as two separate squads; a senior squad training with the university and rowing in the UL trials, and a Junior squad rowing in an eight. This meant that the seniors were all very fit, but unable to train together, so that the standard of our Senior entries for the winter regattas was lower than usual; however, it is hoped that this lack of success will be cancelled out by victories in the summer season when our greater fitness will tell.

The Junior VIII was probably the best put out from Bart's for several years; they were all very keen and trained hard, and developed a fine team spirit. They were ably coached by Barry Grimaldi who worked wonders in the short time he had before the regattas.

For the United Hospitals regatta on November 26th we assembled a light four, a pair, a double scull, and a junior sculler (J. Close) from the senior squad, all of whom were defeated in the first round, though none with ignominy. The Junior VIII raced very well to reach the final, where they were unlucky to meet the Guy's 1st VIII; after a great race they lost by a mere half length. Our only victory was in the Rugger fours, which we won by some 200 lengths due to the sterling efforts of octogenarian W. P. Garson and his compatriots.

On the following Saturday the UL winter regatta was held. A first VIII of trialists and rugger players was assembled, which entered the open division, where they met their old enemies, the Imperial College 1st VIII. The crews were neck and neck over the first half of

the course, when I.C. drew away to win by $1\frac{1}{2}$ lengths.

The Junior VIII was slightly reshuffled to make it eligible for the Novice division. On the day of the regatta the crew was almost scratched due to lack of numbers and an attack of D. and V. in the bows. However, by dint of broadcasting appeals round college hall, an oarsman, albeit rusty, was procured, and all was well.

The first round resulted in a row-over for Bart's as their opponents (UCH) failed to arrive. In the second round a splendid race against Guy's produced a $\frac{1}{2}$ -length win. Meeting OMC 1st VIII in the next round, our crew had their finest row, coming through from behind to win by 6 feet! So to the final, while Bart's, the bit between their teeth, beat Westminster 1st VIII by $2\frac{1}{2}$ lengths, to win our first pot at this regatta for 6 years.

In the annual races against Guy's (who are celebrating their 125th anniversary) both our crews were unsuccessful, though the 2nd VIII again raced magnificently, producing their now customary finishing burst to cut the deficit to $\frac{1}{2}$ -length.

A composite Junior VIII entered for the Vesta winter regatta where they were unlucky to draw I.C. However they went off at an incredible rate, and led to half-way, where they were passed, but again spurred at the finish to lose by $\frac{1}{2}$ -length.

Rowing starts again in January, when we will be boating a Junior-senior IV and a Novice VIII. Anyone who is interested in rowing is still needed so please come along.

Successful Bart's crews, winter, 1969.

UH regatta rugger IV: W. GARSON, T. O'CARROLL, D. DAVIES, R. FOWLER, D. BOURSNELL (cox).

UL Novice eights: M. HARFORD-CROSS, T. HUNT, I. JACK, S. WHITING, J. BLAKE-JAMES, T. COYLE, J. CLOSE, J. WINNER, I. BINTCLIFFE (cox).

STOP PRESS: P. Featherstone, N. Snell, and T. Dehn competed at the Molesey Christmas Scratch Eights on December 21st. N. Snell was fortunate enough to be a member of the winning crew, and took home a bottle of port as his reward.

CROSS-COUNTRY CLUB

U.L. Cross-Country League Div. 1. Race No. 2 at Petersham (5 miles) 29.10.69.

Over a very fast course at Richmond Park Bart's ran well to finish in 8th position in Div. 1. Both Miller and Campbell improved their positions by about 30 places over their corresponding performances 10 days ago.

Results: 23 J. Brooks; 33 D. Pinkard; 47 R. Moody; 77 R. Miller; 103 B. Campbell (140 ran.)

U.L. Winter relays Meeting—Motspur Park. 12.11.69.

Bart's entered a team in the 880 x 880 x 1 mile relay at this meeting. R. Moody finished in 3rd position on the first leg and D. Pinkard improved on this by handing over to J. Brooks in second place. Brooks ran well to resist the challenge of the Royal Veterinary College and Bart's finished in 2nd place out of the 8 teams competing.

Result: 1 Imperial College 8 m. 42secs.; 2 Bart's 9m. 2secs. (8 teams ran).

U.L. League Div. 1 Race No. 3 at Osterley Park (5½ miles) 19.11.69.

A steady performance by the team to consolidate 9th position in the league. Brooks and Pinkard both found the flat course to their liking, and improved their positions by 10 places over their last league race.

Results: 14 J. Brooks 32m. 26secs.; 24 D. Pinkard 32m. 58secs.; 46 R. Moody 35m. 2secs.; 51 R. Miller 35m. 32secs.; 58 B. Campbell 36m. 34secs.; 62 M. Page; 63 R. Thompson.

Porrit Cup Race, Hyde Park (5 miles) 26.11.69.

The whole team ran well in this Inter-Hospitals road race, but were still pipped by

5 points by St. Georges Hospital, who had 3 men in the first five home.

Result: 1 J. Booth (SGH) 26m. 49secs. record; 4 J. Brooks 27m. 48secs.; 7 D. Pinkard 29m. 00secs.; 9 R. Moody 30m. 0.5 sec.; 12 R. Miller 30m. 41 secs.; B. Campbell 31m. 44secs.; M. Page 31m. 52secs.; H. Glennie 32m. 43secs.

U.L. Championships, Wimbledon Common (5 miles) 6.12.69.

Although J. Brooks and D. Pinkard ran extremely well to finish 10th and 19th respectively, the rest of the team failed to provide the support necessary to win the cup reserved for the smaller Colleges.

Results: 10 J. Brooks; 19 D. Pinkard; 46 R. Moody; 50 R. Miller; 51 B. Campbell.

Bart's finished 6th overall, 2nd in the smaller Colleges Cup.

SOCCER CLUB REPORT

So far, this has been a mediocre and in many ways a surprising season for Bart's F.C. This season we have managed to raise a second XI for the first time in many seasons.

The intake was very promising and we looked forward to a very successful season. We gained freshers Peter Jerreat, Pete Dunlop, Pete Schlesinger and Martin Gore who all stepped into the first team and we therefore look forward to many seasons of service from them.

We were unlucky to lose Chris Ellis our goal-keeper who received a fractured zygomatic bone whilst playing for U.H. However, we soon found a replacement in Pete (THE CAT) Hull who seems to improve with every game, having had little experience in hospital football before. To add to our list of serious injuries we also lost Ian Barrison at full-back (fractured fibula) and Pete Jerreat (fractured tibia). Both injuries were received in one game.

On a happier note, we would like to congratulate Mike Murphy playing his second season for Bart's who now seems to have established himself as a regular member of U.H.

We began the season with a 0:0 draw at home to Bickley Park. Since this was the first game of the season both sides were relatively unfit and Bart's were unlucky not to win. The ball made contact with the woodwork several times but refused to make contact with the inside of the net. This was only a friendly fixture and so we were not too disappointed.

Charing Cross v. Bart's. Although Bart's finally lost 4:1 this score was in no way a true reflection of the game. In the first half Bart's had most of the play and should have gone ahead but the score at half-time was 0:0. In the second half both sides, obviously inspired by a half-time talk from their captains, played better football and the score read 1:1 with ten minutes to go, Mike Murphy scoring for Bart's.

In the last ten minutes, slack defensive play by Bart's and much Charing Cross luck made the final score 4:1 to Charing Cross.

Bart's v. R.D.H. This was the first victory of the season for Barts and a very welcome one.

Trailing 1:0 after 20 minutes Bart's suddenly took control of the game and Pete Dunlop equalised after a goalmouth scramble. Just on half-time Bart's went into the lead with a shot from 20 yards by Skanderowicz.

In the second half Bart's went further into the lead when Pete Dunlop pounced onto a bad back pass to the goalkeeper and calmly slid the ball into the net. R.D.H. then replied with a good goal from Mike Lambert and could have increased their goal tally had they not missed a disputed penalty.

Pete Schlesinger sewed the game up with ten minutes to go when he shot from twenty yards after a move which started way inside Bart's half of the field to make the final score 4:2 to Bart's.

Bart's v. Guy's. Although slightly disheartened by the two previous results before this game, losing both to London and King's, Bart's went on to the field to face the league leaders, Guy's, who were unbeaten so far this season and were favourites to win the cup and the league this season.

It was a day Bart's F.C. (not to mention Guy's F.C.) would remember for a long time to come.

Right from the kick off Bart's took firm control of the game and held that position for the rest of the game.

Bart's went into the lead after a fine cross from the left wing, which Gore nodded in. By half-time the score was 2:0, Pete Jerreat scoring the second with a powerful drive. In the second half Bart's scored three more times through Jerreat, Gore and Knight (penalty) and had another two disallowed. Guy's managed a consolation goal with seconds to spare.

Praise must go to our brilliant back four of Wall, Power, Schlesinger and Barrison who reduced the Guy's attack, consisting mainly of U.H. players, to almost zero.

On reflection this was undoubtedly the finest

performance of the season and perhaps one of the finest performances for many seasons, by any Bart's F.C. side.

Let's hope we can produce this sort of form in future especially in cup games.

The next two games were lost to George's and Mary's and once again there was disappointment amongst the lads who all thought that things would go better after the performance against Guy's.

Despite this, we played our last fixture of the Christmas term against U.C.H. who were strongly equipped with a few U.H. players. U.C.H. went into the lead and by half-time were 2:0 up. At this stage praise must go to Ron Knight the captain who kept a cool head and convinced everyone at half-time that we should win the game. This must have penetrated a few skulls for in the second half Bart's were a completely new team.

Ron Knight showed the way to goal with a brilliant run, after a pass from Murphy, which ended with an accurate shot, leaving the goalkeeper no chance of saving.

Our second goal came from a breakaway shortly after, when Skanderowicz picked up the ball just inside the U.C.H. half, beat the centre half, ran through the middle, rounded the keeper to slot in an easy goal.

With the score at level pegging both sides went all out on attack. U.C.H. made some brave efforts at goal but came up against a cool Bart's defence and some brilliant goalkeeping by Hull.

With ten minutes to go Schlesinger made an accurate pass to Skanderowicz who ran through to make a final pass to the injured Pete Jerreat, who was now almost reduced to a passenger after a previous foul. Jerreat made no mistake with a first time left-footed shot. The final score was 3:2 to Bart's.

Afterwards we heard the sad news that Peter had in fact fractured his tibia. In the same game Ian Barrison received a fractured fibula after a mistimed tackle.

Bart's 2nd XI v. Guy's 2nd XI. This was the first time in many seasons that Bart's have fielded a second XI. It was indeed a great pleasure to see so many lads who were keen on football, and who couldn't quite make the first team to turn out and even surprise Guy's 2nd XI who have been going for a number of seasons.

At one stage of the game Bart's were 7:2 down, but due to the cool head of captain Dick Abbott and some goal striking power from Dave ("the goal machine") Thompson and Janus Kolendo, Bart's fought back magni-

ficently to draw 7:7 at full-time.

It has since been decided to run a regular 2nd XI and we look forward to much success from them.

A. Skanderowicz
Secretary.

GOLF CLUB

Bart's were unlucky to get knocked out so early in the Hospitals cup at Hendon this year. In the quarter-finals we lost 3-2 to a strong Middlesex side which included three University first team players. Had Davidson and Duckes not been suffering from 'flu the result might have been different.

S. Davidson v. M. Lloyd lost 3-2.
D. Duckes v. A. Stranders lost 5-4.
K. Ross v. J. Spillane lost 4-3.
A. Dixon v. N. Thomas won 5-4.
J. Mackinnon v. J. Tobert won 4-3.

Dixon, a newcomer from Cambridge, had a good win over N. Thomas and Mackinnon, also in his first Cup match, proved his worth.

We also lost a friendly match against C.E.M. at New Malden on November 12th, 4-1, Davison being the only winner.

On the 19th we played another friendly against I.C. at Royal Mid-Surrey, and went down 4½-1½, Dixon halving from Dormie three down.

Individually, Davison has been a regular member of the University first team and Dixon has also played occasionally.

The results that have been obtained this autumn are not indicative of the talent which there is in the side and we hope for a good run in the Hospital's Cup next year.

RUGGER REPORT

RESULTS—22nd November, 1969:

Bart's 1st XV 46, K.C.S. Old Boys 3
Bart's 'A' XV 35, K.C.S. Old Boys 3
Bart's 3rd XV 11, K.C.S. Old Boys 11
Bart's Wanderers 20, Harlow 3
Bart's Veterans — Old Paulians

1st XV—November 22nd, 1969:

In all a successful day, no Bart's team lost but regrettably the Brigands' match was cancelled due to a waterlogged ground.

Bart's started off in great style, the forwards being rampant in attack. After several assaults on the K.C.S. line, Bart's eventually broke

through with a try by Fairhurst, having picked the ball up from the back of a loose scrum. This was followed fairly soon with a try by Carroll, who was sent away by Smart with 20 yards to make. Cassidy was successful with the kick. May was by now beginning to get into the game and after several good runs was set up by Smart to score. Further tries in the first half were from Carroll and Fairhurst, and Cassidy was successful with four conversions. In all the first half produced some excellent rugby, the forwards winning and using good loose ball.

Score at half time Bart's 23, K.C.S. Nil

In the second half the three-quarters came into their own and broke through successfully many times. May on the right wing had some powerful runs, scoring two more tries. Cassidy managed a drop goal and Smart, playing a ubiquitous game, scored a try from a loose scrum. Yet again Fairhurst went over the line, having chipped ahead and re-taken to score. Cassidy was successful with all conversions. The backing up of the forwards, Britton and Fenton, leading well, enabled continuation of movement after the three-quarters had made their breaks.

Wednesday, 3rd December:

**BART'S v WESTMINSTER BANK
Bart's 57, Westminster 3**

On a Wednesday afternoon Bart's showed once again that they are capable of both dominating and scoring heavily in an open game, with the Wings being given many chances to run; May and Laidlow ran in for several tries.

The forwards were of sufficient stature and fitness to be able to give good loose ball, which was well used both in the half-backs and the three-quarters, Packer coming into the line usefully on several occasions.

Saturday, 6th December:

**BART'S v OLD ALLENYNIANS
Bart's 15, Old Alleynians 6**

This was a successful day for Bart's, beating Old Alleynians at all levels except for the Wanderers, who sustained a 3 nil defeat, though they had beaten various Old Alleynian teams three times previously this season.

Both the Brigands and the Thirds played with great endeavour and managed a victory apiece.

The 'A' XV having been defeated by Old Alleynians on a previous Saturday, gave a better account of themselves in a hard fought game, N. Findlay-Shirras making some useful breaks.

1st XV Report:

In the first ten minutes Bart's forwards played well and there were several continuous passing movements which culminated in a try by Lambert under the posts, which was converted by Cassidy. After this we were held by the Alleynians' pack, which came back very hard.

In the second half James went over for a

try, which was converted by Cassidy, and Cassidy himself went blind from a loose ruck and showed a magnificent turn of speed along with a dummy to score a try, which was left to May to convert.

STOP PRESS:

Saturday 13th December

Bart's 0, Old Askeans 14

DIARY OF EVENTS DURING FEBRUARY**February 3rd**

Rugger Cup Match.
Film Society at 9.15—Physiology Lecture Theatre, Charterhouse Square.

February 7th

Tennis and Sailing Club Hop. College Hall, Charterhouse Square.

February 10th, and February 17th

Film Society at 9.15—Physiology Lecture Theatre, Charterhouse Square.

February 11th

Lunchtime Talk. "New Joints for Old".
Illustrated Talk by Mr. A. W. F. Lettin—Consultant Orthopaedic Surgeon. Clinical Lecture Theatre, 1.20 p.m.

February 20th

Boat Club Ball. College Hall, Charterhouse Square. Double ticket—3 gns.

February 24th

Film Society at 9.15—Physiology Lecture Theatre, Charterhouse Square.

February 26th

Lunchtime Talk "The Computer in Medicine—Help or Hindrance?" Illustrated Talk by Mr. D. Franklin—Director of Department of Computing Sciences. Clinical Lecture Theatre, 1.20 p.m.

February 25th, 26th, and 27th

Drama Society production—"The Duchess of Malfi" by John Webster.

If any clubs or societies have events which they would like printed in the *Journal*, would they give details to the News Editor one month prior to the date of publication of the *Journal* for that month.

Guinness Pilgrims' Way Stroll

Saturday, 16th May. Further details later.

NURSES' REPORT

The S.N.A. held another Discotheque Evening in Gloucester Hall on Saturday, 29th November. The music was provided by Dave Grant and his Disco Group and the beer by the Wine Committee. Due to some technical hitches and lack of communications the arrival of the bar was delayed, however this eventually resolved itself and the "wine flowed free". The takings amounted to £70, £35 of which was profit. We only hope that this can be put to good use and that the S.N.A. members will be seen to benefit.

Many thanks to all those who helped with and supported the evening. We hope to have another one soon.

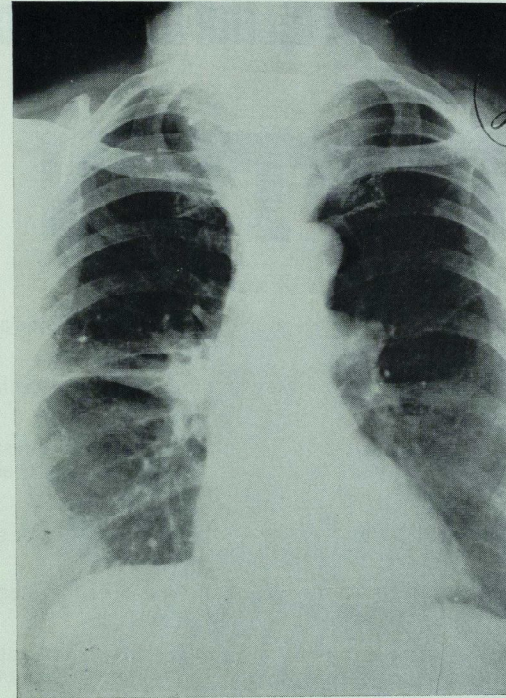
Elizabeth Hartle
Jennifer Marks
(S.N.A. Fund Raisers)

SPOT THE LESION

By N. J. C. Snell

The first of a monthly series.

Case History: The patient had been discharged cured after a long stay in a chest hospital. This X-ray was taken as a routine follow-up several years later. What three pathological features are present?



Answers: 1. calcified Tubercle—old case of pulmonary T.B.
2. thickened interlobular septum.
3. substernal thyroid. This was an incidental finding and was quite symptomless.
(Radiograph and history contributed by Dr. W. E. Snell.)

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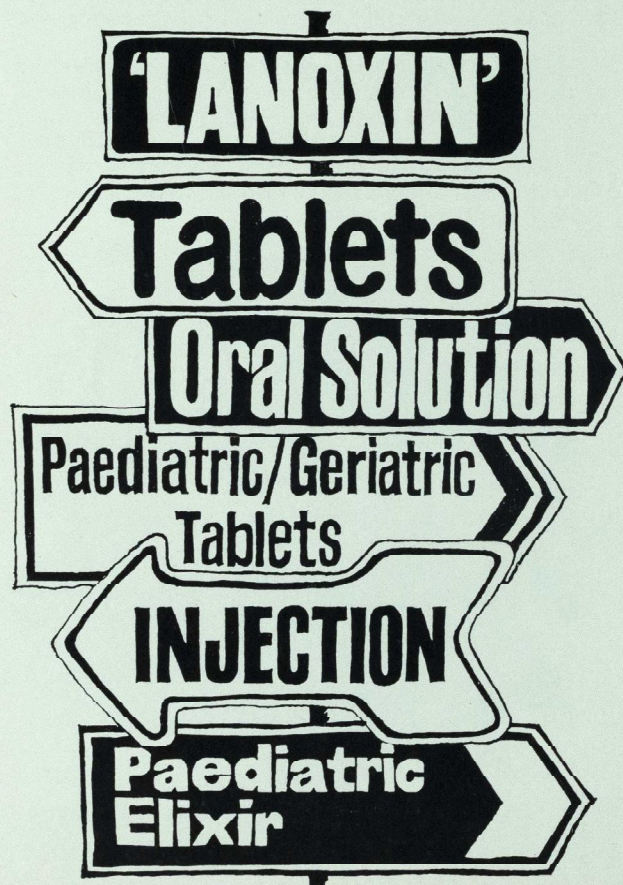
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Editorial

A larger page size has been adopted for the new *Journal*, the reasons being explained in the Managerial below.

The new page size is approximately one-third greater in area than the old style *Journal*. In an attempt to absorb and meet rising costs with the concomitant increase in material for publication, the idea of including the Contents within the design of the front cover has been put forward, gaining an extra one and one-third pages for material.

It is hoped that the present front cover will both please and provoke comment, and the *Journal* staff will be pleased to hear your views.

Managerial

We present the new-shape *Journal* and we hope that you will like it. We say shape, and not size, because the total type area for the thirty-two pages is the same as for the forty-eight pages of the old-shape *Journal*.

The new *Journal* requires as much paper as before, a little more coated paper for the cover than before, and the same amount of type-setting as before. However, since it is printed four pages at a time it can be produced in eight runs through the press; the old *Journal* required twelve runs, and the extra runs cost money.

Our printers have managed to absorb several increases in cost but since the last contract was drawn up three pay-rises have been awarded to type-setters, and the cost of paper has been increased twice. For the last twelve months we have been paying £275 a month for 2050 copies of the *Journal*; this would have risen to £330 a month starting with this issue. By changing to this new shape we have only to pay £282. We hope to be able to find the extra £84 a year, but £660 would have been impossible.

We considered changing from letterpress to offset photolithography. This is the method which the *British Medical Journal* has recently adopted—see page 6 of the issue of 3rd January, 1970. The only firm which made us a reasonable offer, however, gave us an estimate which was subject to revision after only three issues. Our new contract is binding for a year.

Our income last year was £4,372. This was derived principally from advertisements (£2,322) and subscriptions (£1,220). In addition, the Students' Union pays us £540 a year so that each of the 658 students receives a copy each month. We also sold £71 worth of Christmas cards left over from previous years. A dance held on a bad date showed a profit of less than a pound! The nurses on the *Journal* staff arranged a fashion show, and the balance of our income came from this and from *Journal* sales around the hospital.

We receive no grant whatsoever from either the Board of Governors or the Medical College.

We are the only medical student magazine in the country to appear every month—and we have done so since 1893. Some firms advertise only four times a year and this is where quarterly publications gain over us. We are also probably the only one which does not give 25% of its advertising revenue to an agency—unless such an agency could find us an extra four pages a month (which would mean losing four pages of matter) it would not be financially worthwhile.

Our expenditure for the year was £4,267. Of this amount, £4,085 was spent on blocks, on printing the *Journal* and on postage. £166 was spent on a typewriter, *Journal* posters, printed wrappers, photography, stationery and additional postage and the remaining £16 represents "bad debts" written off by the auditors.

We pay ourselves at the rate of an eighteen penny tea at our monthly meetings. There is also the pleasure derived from seeing our names in print each month. There are, however, many people connected with the *Journal* whose names do not appear on the title page.

Dr. Aldren Turner has been Chairman of the Publications Committee for the past few years, he is a fount of sound advice and in addition he is one of the two signatories on our cheques. Drs. Barrington-Ward and Crowther, and Mr. Harvey White are other valued members of the Committee. Mr. Thornton, Hospital Librarian, has prepared the index each year for longer than he would like to remember, and his assistants compile the lists of recent papers and collect announcements for us. Mr. Morris, the College Secretary, is always ready with advice on financial matters and has arranged for life-saving short term loans from the Students' Union on at least two occasions. The staff in Medical Records very kindly make the plates and address the wrappers each month. Ken plays an important part in receiving telephone messages for us. Nancy has sold many copies to the lay staff and she, and the ladies of the flower shop, Patients' Library and Nurses' P.O. have sold many pounds worth of Christmas cards for us. Finally, we have always found Messrs. Dramrite Printers most co-operative despite our dilatoriness in settling our accounts, and we look forward to our continued association with them.

Letters to the Editor

AWAY FROM BARTS

Department of Obstetrics and Gynaecology,
Williamson Lamoratory,
St. Bartholomew's Hospital, London, E.C.1.
Tel.: 01-606 7777 Ext. 384
12th January, 1970.

The Editor of *Bart's Journal*

Dear Sir,

The report on the Survey of teaching in peripheral or overseas hospitals in Paediatrics and Obstetrics is most interesting. In the Department of Obstetrics and Gynaecology we are keen to have a "feed back" of information from peripheral hospitals from both the teachers and the taught.

In the future, if a reduced Clinical Course is introduced as a result of the Todd recommendations, the University of London believe that all Undergraduates training in Obstetrics should be under the aegis of the Teaching Hospital Group. The General Professional Training would, of course, have to be based on Regional Board Hospitals. The present pattern of Obstetrics training may therefore be of limited duration.

The question and indeed the answers on the "time off" were intriguing, particularly in relation to Bart's, where some were "satisfied". Of course, no "time off" is allowed during the months of Midwifery Internship.

Yours sincerely,

C. N. HUDSON.

Announcements

Engagements

BRODRIBB—WOODHAMS—The engagement is announced between Dr. John Brodrigg and Miss Carolyn Woodhams.

BROWNE—CANSDALE—The engagement is announced between Dr. Derek Browne and Miss Esther Cansdale.

BULLOCK—HAYES—The engagement is announced between Mr. Peter John Bullock and Miss Edwina Margaret Hayes.

HILTON—PINOMAKI—The engagement is announced between Dr. Andrew Hilton and Neiti Marjut Pinomäki.

SMITH ROSSDALE—The engagement is announced between Mr. Clive Richard Smith and Miss Gina Jane Rossdale.

Births

KNOX—On December 22, to Susan (née Williams) and Andrew Knox, a daughter, Jane Susan Louise, sister for Sally and Clare.

REES—On January 1, to Dr. Mary (née Newbold) and Dr. David Rees, a daughter (Catherine Rachel).

Deaths

BUCHANAN—On November 8, 1969, Robert Laird Buchanan, B.M., B.Ch., D.Obst., R.C.O.G., F.F.A.R.C.S., aged 37. Qualified 1956.

PRINGLE—On December 8, Dr. Ernest George Pringle, M.D., aged 91. Qualified 1902.

SHAW—On December 10, 1969, Campbell Shaw, M.R.C.S., L.R.C.P., D.O.M.S., aged 73. Qualified 1920.

WOODS—On January 20, Dr. Leonard Heatley Woods, M.R.C.S., L.R.C.P. Qualified 1917.

Appointments

Royal College of Surgeons of England

Sir James Paterson Ross has been elected a member of the Court of Patrons of this College.

Royal College of Surgeons in Ireland

Sir Clifford Naunton Morgan became an Honorary Fellow of this College in October 1969.

THE OFFICIAL OPENING

By SIR THOMAS HOLMES SELLORS, D.M., F.R.C.S.,

President of the Royal College of Surgeons

on

Monday, 8th December, 1969

at 12.15 p.m. at Saint Bartholomew's Hospital

The Henry VIII Gateway

1. Introduction

In 1701 the Governors indicated their intention to rebuild the North Gate of the hospital.

On the 5th March, 1702 the following resolution was adopted:—

"Agreed with Edward Strong, junior, mason, to erect and build the front of this Hospital's North Gate in Smithfield with purbeck stone according to the model drawn by the said Edward Strong and approved of by the Governors appointed Viewers of the revenues of this Hospital for the sum of £550."

Edward Strong, junior, would appear to have been the son of Edward Strong and nephew of Thomas Strong who was the chief mason of Sir Christopher Wren. The Strong family came from Stayning, near Burford, where were quarries which contributed stone for the rebuilding of London and of St. Paul's Cathedral.

Edward Strong, junior, was born in 1676. He was employed on a lantern of St. Paul's in 1706 and was partner with his father in building part of Greenwich Palace (1698) and Blenheim (1705-1712). By himself he laid the marble pavement beneath the dome and in the cross aisles of St. Walbrook, St. Michael Royal, and a lantern of St. James, Garlickhythe.

The hospital is indebted to Gweneth Whitteridge, M.A., D.Phil. and Rupert Gunnis, C.V.O. for the information on the history of the Gateway and of the Masons employed.

Fabric Architect: James Knowles, F.R.I.B.A., F.R.I.C.S., A.M.T.P.I.

New Year's Honours List

Knight Bachelor

Charles Herbert Stuart-Harris, C.B.E., M.D., F.R.C.P.

C.B. (Military Division)

Major-General Keith Fielding Stephens, O.B.E., M.D., D.S., F.F.A.R.C.S.

C.B.E. (Civil Division)

Ronald George Gibson, O.B.E., LL.D., F.R.C.S., F.R.C.G.P.

O.B.E. (Civil Division)

Henry Frederick Hiscocks, M.B.B.S.

M.B.E. (Civil Division)

Irwin Arthur William Peck, M.B.B.S.

The Contractor who undertook the process of sand blast dry cleaning was Messrs. Peter Cox & Partners Ltd.

2. Address by Sir Thomas Holmes Sellors

This gathering can hardly be called an official "opening" but is a "phoenix"-like ceremony to mark the restoration of one of the most celebrated entrances in London. It is certainly a great privilege to me to have been asked to speak at this ceremony. Though not a member of Bart's I yield to none in my admiration of its work and tradition over the centuries.

The impression that anyone gains of a building is greatly influenced by its gate-way or entrance and, here, I think that we have something unique when we recall the generations of doctors, patients, nurses and students that have passed through its portals—it is part of the history of London and we now see it as it was over 250 years ago.

The gateway named after Henry VIII had something slightly ironic in the title. Rahere's foundations' revenues were appropriated at the dissolution of the monasteries by that monarch, who at the instance of Richard Gresham gave the first Royal Charter in 1544, almost as a consolation prize.

As with much else in this great City, fire has played a great part in rebuilding exercises. The 1666 episode played havoc with the hospital's city properties and revenues and five out of fifteen wards were closed down. To help the traders and the sick, slow rebuilding was started and in 1702 Edward Strong, the nephew of Christopher Wren's chief mason, was instructed to work out the gateway scheme at a cost of £550. But even in

the good old days things did not work out quite as was hoped and between £2,000 and £3,000 was spent.

The story of the building has been given by Dr. Gweneth Whitteridge, who is here today, and I quote much of her information, which contains delightful comments as to how the Hospital Porter had to see that the workmen did not "knock off" materials.

The gate-way emerged slowly and in 1703 a Mr. Crossfield and a Mr. Forster occupied a shop on each side with rooms over the gateway at quite a high rent. The tenants changed with the years and staff occupied the gate-way rooms, and finally the shops were demolished to give the present form.

One likes to feel that this building was almost part of "That mighty fleet of Wren with its topgallants and mainsails of stone" sweeping across the City. But time, storm and soot steadily took their toll and I doubt if many passers by stopped to gaze. Happily we are now seeing it in its former glory, thanks to the generosity of the directors of Ethicon. Mr. Leonard Bailey is an old friend and your past Curator of Instruments, John Ward, has had much to do with this gracious act.

I know that they have been thanked but I would

publicly like to express our appreciation and to let them know what this renovation means to the occupants; also to comment on the magnificent job the modern masons have done, under the direction of Messrs. Peter Cox.

I think that Harvey and Thomas Bodley would have approved, though they had left the Hospital some time before, and so would Vicary. The portraits round your lovely Great Hall indicate some of the names of the giants of the past who went to-and-fro through the archway: Radcliffe, Nourse, Mead, Pott, Abernethy, Lawrence, Paget, Butlin, Pitcairn, Ronald Ross, Bridges, D'Arcy Power, to name only a few. The giants of the present, and giants to come, still go through the gateway, a magnificent entrance to a magnificent building.

And one likes to think of James Gibbs and Hogarth and Dance coming in daily to complete their share in the shaping of Bart's as we now know it.

The traditions of this old Foundation, the gateway and the people who have passed through it for two and a half centuries are not only part of the history of a great hospital, but are part of the story of London and of Medicine.



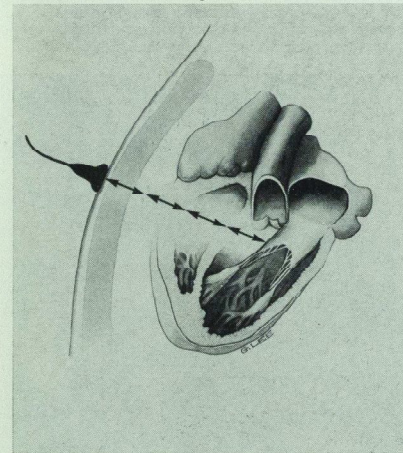
The use of an Echo Sounder in the study of Heart Disease

by James Fleming

Consultant Cardiologist to the United Sheffield Hospitals and the Sheffield Regional Hospital Board. formerly Senior Registrar to the Cardiac Department, St. Bartholomew's Hospital.

Most of us are familiar with the method used during the war for the detection of enemy submarines. A loud sound was sent into the water from the warship and this sound echoed back from the submarine, giving not only its position but also its distance—the further away the submarine the longer the echo took to reach the warship. A highly sophisticated electronic machine is now available which works on the same principle in the human body and we are using this machine at Bart's to record the position and movements of the structures of the heart. Good echoes can be obtained from the anterior leaflet of the mitral valve, the posterior wall of the left ventricle, the interventricular septum and the pericardium.

Fig. 1



In fig. 1 is shown the use of the machine in recording an echo from the anterior leaflet of the mitral valve. Impulses of sound are emitted from a crystal embedded in the small probe and this probe is pressed against the skin of the chest in the 4th intercostal space, close to the sternal edge. The sound waves used are of a very high frequency, 1 to 2 mega cycles, and are not heard by the human ear. The sound waves of this frequency are called "ultrasound" and hence the technique has been described as the diagnosis of heart disease using reflected ultrasound. The energy of the ultrasound waves required for our purposes is very low indeed and the patient neither hears nor feels anything except the pressure of the probe which is held by hand against the chest wall. The technique is

therefore without pain or danger to the patient which at once makes it very attractive.

One thousand impulses per second are emitted from the crystal, in the shape of a beam about the diameter of a needle. There is a gap after each impulse during which any echoes are received by the same crystal and fed back to the computer-like electronics of the machine. In the machine the distance of each structure giving an echo is automatically computed and these structures are shown on an oscilloscope, marked off in millimetres from the anterior chest wall. Any structure giving an echo will have its position recorded one thousand times per second so that any movement of the structure will be readily picked up.

In practice, the machine is simple to use after one becomes familiar with the function of the rows of control knobs and buttons. The manufacturers have succeeded in compressing the electronics into a case that can be taken to the patient's bedside on a small trolley, and only a few seconds warming up time are required after plugging in to the ordinary 250 volt mains. A thin smear of vaseline is applied to the patient's skin and the probe of the ultrasound machine is pressed against the skin with the vaseline helping to make a good sound contact between the probe and the skin of the chest wall. An electrocardiogram is recorded simultaneously with the ultrasound tracing and in this way the exact position of any structure giving an echo can be related to the phase of the cardiac cycle.

Obviously the echoes obtained will depend upon the position of the probe on the chest and the pathway of the beam. One begins in the fourth left intercostal space close to the sternal edge if the anterior leaflet of the mitral valve is required. Initially many echoes are obtained but with practice very soon it is possible to see the rapid flicking movements on the oscilloscope screen which represent the mitral valve movements. The probe is gently positioned and angled until these flicking movements are at their maximum and then further adjustments are made on the controls which suppress unwanted echoes from in front and from behind the desired echo. Usually this takes about five minutes altogether and when a clear moving signal is obtained this is photographed using a polaroid camera. Thus precise measurements both as to distance from the anterior chest wall and speed of movement of the anterior leaflet of the mitral valve can be made within ten minutes of approaching the patient (Fig. 2).

Already this technique is of proven value in the diagnosis of mitral stenosis. During diastole the normal mitral valve moves fairly rapidly to a semi-closed position. The rate of movement of the anterior leaflet of the mitral valve as recorded by ultrasound is always greater than 80mm. per second in the absence of mitral valve stenosis, and the slower the rate of movement

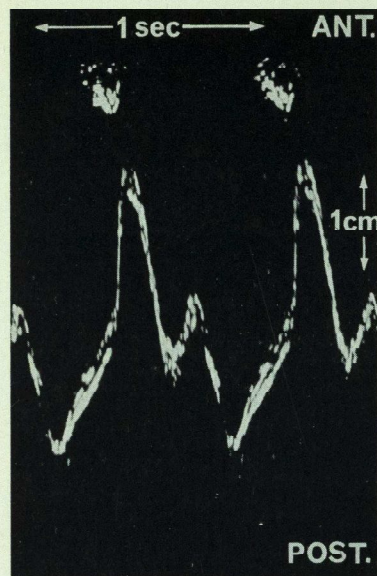


Fig. 2

the more severe is the stenosis. Thus this technique is of value in confirming or excluding the diagnosis of mitral stenosis when there is clinical doubt—patients with pulmonary hypertension for example in whom the murmur may at times be inaudible.

We have found further uses of reflected ultrasound in the study of the mitral valve. A calcified mitral valve gives a very strong echo, shown as a very dense line on our recordings, which moves little, as all normal mobility is lost due to the presence of the rigid calcium. By contrast, when the diagnosis has been proved at cardiac surgery to be rupture of the chordae tendineae of the mitral valve we have noted that the total amplitude of movement of the anterior leaflet on the ultrasound record was greater than normal. Thus one such patient was recorded as having a total amplitude of 4cm. to the movement of the anterior leaflet (normal being about 2.5cm.).

The diagnosis of left atrial myxoma has always been difficult in the past and most physicians have considered themselves fortunate if they have made the diagnosis before surgery. In the short time that ultrasound has been available at Bart's two cases of left atrial myxoma have been diagnosed. A left atrial myxoma prolapses into the mitral valve opening, thus coming to lie behind the anterior leaflet of the mitral valve. On the ultrasound tracing one picks up the movements of the anterior leaflet, as already described, but there is a persistent echo which is very strong and which arises just behind the anterior leaflet echo. In both of our recent cases this echo was well seen and both had

successful removal of the myxoma at Bart's, by Mr. Tubbs and Mr Hill

As already mentioned, clear echoes can be obtained from the posterior wall of the left ventricle and from the pericardium in this region. Normally the pericardium and the left ventricle are in close apposition, so that the ultrasound record merely shows one echo approaching the anterior chest during systole, as the left ventricle contracts and ejects its blood, and receding from the anterior chest wall in diastole as the left ventricle fills. When a pericardial effusion is present the posterior wall of the left ventricle becomes separated from the pericardium and two echoes are now obtained, one from the left ventricle as before, moving in its characteristic fashion, and one from the pericardium, scarcely moving at all (Fig. 3). The distance between the ventricle and the pericardium can be measured in centimetres and gives a good estimate of the size of the pericardial effusion. Some slight diagnostic trouble may be encountered if the echo from the spine is mistakenly assumed to arise from the pericardium. For this reason, when this technique is used for the diagnosis of a pericardial effusion it is best to record the movements of the anterior wall of the right ventricle in addition to recording the left ventricle. Again, in the presence of an effusion the anterior pericardium is seen as a stationary echo separated from the anterior wall of the right ventricle which moves regularly throughout the cardiac cycle as it contracts and fills.

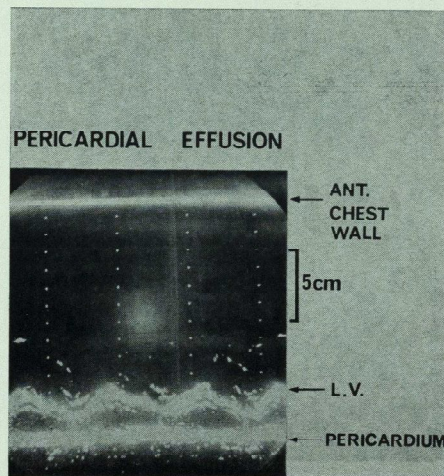


Fig. 3

In congenital heart disease some workers in the United States claim that diagnostic ultrasound is of value. For example they have been able to angle the probe to pick up the tricuspid valve and in cases of tricuspid atresia they have shown that the tricuspid valve does not move. So far we have been able to record the movements of the tricuspid valve in only

the occasional patient and we are having difficulty in obtaining good tracings of this valve.

The research possibilities of this tool are exciting, giving us, as it does, a means of recording the moment by moment movements of heart valves and heart chamber walls. There is one major difficulty, in that the sound impulses will not pass through lung tissue. Thus we are limited to placing the probe on the skin of the chest over the bare area of the heart, where there is no intervening lung tissue between the probe and the heart. Thus although one can map out the anterior and posterior walls of the left ventricle and the movements during the cardiac cycle from one or two angles a complete picture cannot be obtained. This is a pity, for if a complete diagram of the left ventricular cavity were obtained it would be possible to calculate the stroke volume from the difference in volume between systole and diastole, with no discomfort to the patient other than having a small probe placed against the chest wall. The advantages of this in such circumstances as acute coronary care would be enormous and there has been one report suggesting that quite a good approximation of the cardiac output can be made using the limited views of the left ventricular cavity which can be obtained. At Bart's we have been concerned with

the origin of the heart sounds and the old controversy of whether the heart sound arise from valve closure. Using reflected ultrasound recorded with the phonocardiogram in the same patient we were able to show that the mitral valve was not in the closed position at the time of the third heart sound and this is adduced as further evidence against the valve closure theory for the origin of heart sounds.

Here then is a new technique which is already playing a part in the diagnosis of heart disease as well as exciting considerable interest in its research possibilities. The electronic equipment is commercially available but is expensive, costing well over one thousand pounds. Fortunately the same technique has applications in ophthalmology for the detection of foreign bodies in the eye, in neurology for the detection of mid-line brain shifts, in obstetrics for the measurement of the foetal skull size and further uses will no doubt emerge. The outstanding advantage in the technique is that precise measurements can be made without any discomfort or danger to the patient. In 1969 many articles have appeared in the medical journals describing aspects of diagnostic ultrasound in the diagnosis of heart disease and it may be that one day the technique will be as familiar to us as X-rays are today.

Student Travel Abroad, 1970

This article has been compiled so as to show to students the wide choice of cheap and reliable travel available, and where to obtain further information.

Two organisations are explained in some detail and others are mentioned and should be followed up by the interested student, both authors of this article are willing to answer any enquiries.

Part I. By Marcus Navin

British Universities Student Travel Association (B.U.S.T.A.) is a member of the Student Air Travel Association (S.A.T.A.) which was created in 1969 to ease the load on individual student charter flight operators and to offer a complete charter flight service.

B.U.S.T.A. operates flights out of the United Kingdom and these and all S.A.T.A. flights can be bought at British Student Travel Centres. All full-time students between the ages of 16 and 30 are eligible, but they must hold an International Student Identity Card (cost six shillings, but if bought at a B.S.T.C. allows the student to obtain a voucher—value 10 shillings—which can be used on B.U.S.T.A. flights).

The scope and variety of flights and tours available are too numerous to mention, and are best explained on a seasonal basis. Flights (and trains) to and around Europe are available between March and October, with frequent one-way services as desired by the individual traveller, a list of a few of the many flight destinations is given below (prices are for one-way travel).

London to:

Athens	£21 0 0	Rome	£14 0 0
Barcelona	£12 0 0	Stockholm	£17 0 0
Dublin	£6 0 0	Tel-Aviv	£32 0 0
Dubrovnik	£16 0 0	Vienna	£12 10 0
Paris	£4 10 0		

Travel to Africa and the Far East have flights usually in June and early September (prices are for one-way travel).

London to:

Tunis	£19 0 0	June to September.
Nairobi	£65 0 0	June to September.
Bombay	£62 10 0	June to August.

For the World Exhibition (Expo '70) in Osaka this year, a round trip, open to all, has been organised costing £183 with alternatives for long or short stay. Travel is by air, but for the more adventurous, some of the return journey can be made on the Trans-Siberian Express.

Winter tours to Russia visiting Moscow, with tours to Central Asia and Siberia are operated between October and April.

Information on travel to North America (including Mexico) can be obtained from the British North America Club (B.U.N.A.C.) at:

157 Victoria Street, S.W.1.
Tel. 01-828 3577.

B.S.T.C., 231 Tottenham Court Road, W1E 4ZZ.
Tel. 01-637 1241.

Part 2. By Gillian Vanhegan

BRITISH UNIVERSITY SOCIETY OF ARTS

A year ago I started the search for economical flights to various parts of the world, where it is feasible to study Paediatrics. I approached B.U.S.A. after several months of enquiries to other organisations, as I was living under the illusion that they existed to aid Arts undergraduates only. However B.U.S.A. Constitution states "Membership is open to persons following a recognised course of study, beyond secondary education, in any branch of Arts or Science, and to groups carrying out research in any project covered by the provisions of the Constitution of the Society".

The annual subscription is only ten shillings, and this entitles the member to take any one of the charter flights offered by the Society; and even to apply to B.U.S.A. for financial aid, if he is going abroad to pursue a worthwhile project.

The provisional flight schedule for 1970 has just been published, the flight dates are too numerous for the purposes of this article, but the following is a general plan of the flights. (All figures quoted are for return fares; very few one-way flights are available).

London to:

New York	£56	June to September period.
New York	£70	March to June period.

There are also some flights to Toronto, Seattle and San Francisco.

Jamaica	£125	July to August only.
Barbados	£115	July to August only.



Malaysia/ Singapore	£130	Summer flights. February to June period.
Johannesburg	£169	Special Summer charter June to September.
Johannesburg	£148	One or two flights monthly throughout the year.
Nairobi	£125	Weekly concessionary fares available.
Bombay	£190	Special Summer three month charter flight.
New Delhi	£235	
Karachi	£190	
Bombay	£150	

This is not an entirely comprehensive list of flights, but I have tried to quote the ones, which seem to fit in best with our Medical course. I will willingly answer questions on other flight times and prices.

My flight in 1969 was to Johannesburg, but I know that all the other flights take the same pattern of superb organisation and comfort. B.U.S.A. had chartered a V.C. 10 from B.U.A., we were given the usual service of this airline, with the same number of meals etc. At Jan Smuts Airport, Johannesburg, a representative of the Organisation met us and gave us maps of the city and the country and other useful informative leaflets. All the non-medical students on the flight were found employment within a week of arrival. The Society is quite happy to transport Medical Students, although it is appreciated that they will have planned their own occupation in their country of destination.

Personally I can recommend South Africa for Paediatrics, especially with a few weeks at a Mission Hospital, where the practical experience and responsibility are unsurpassable.

B.U.S.A. is an economical and reliable organisation; a deposit is required on booking a flight, and full details of flight times and place of arrival along with the total fare are completed one month before take-off.

For reference:

B.U.S.A., 138-139 Abbey House,
2-8 Victoria Street, London, S.W.1.
Tel. 01-799 3568/9.

A Bart's contingent attending the Pilgrims Way Stroll Luncheon at the Guinness Brewery, Park Royal, last November. The date of this years Stroll is Saturday, 16th May.

Physical and Radiological Diagnosis

A monthly series by B. D. F. Grimaldi, in association with the Departments of Medical Illustration and Diagnostic Radiology

Number 2. Facies

This month's article illustrates the way in which changes in the facial characteristics may be suggestive of, or even diagnostic of systemic disease. Try your hand at diagnosis before looking at the captions.

Part One: Congenital Disorders.

No. 1 ACHONDROPLASIA.

This dominantly inherited disease involves a disorder of ossification in cartilage. It leads to disproportionate Dwarfism.

NOTE: Large head, with prominent forehead.

Saddle nose.

Thick lips, and protruding tongue in the early months.

No. 2 ALBINISM.

This is a disorder in Melanin formation, and involves a recessive type of inheritance.

NOTE: Fair skin and hair, particularly noticeable in this negro.

No. 3 AORTIC STENOSIS; SUPRAVALVAR TYPE

A rare anomaly, in which a circular ridge obstructs outflow immediately above the Aortic valve. It may be associated with Marfan's Syndrome, or the peculiar MONKEY FACIES shown here.

NOTE: Bushy eyebrows and Squint.

Flared nostrils, and coarse fleshy lips.

Thick head of hair.

No. 4 CRANIOSYNOSTOSIS.

Premature closure of one or more sutures in the skull, leads to deformity of the head, and, sometimes, raised intracranial pressure and Optic Atrophy. Here the Sagittal Suture has fused prematurely; leading to a long, narrow head: SCAPHOCEPHALLY.

No. 5 APERT'S SYNDROME.

This a particular form of Craniosynostosis in association with Syndactyly, and characteristic features.

NOTE: Beaked nose, and protruding lower lip.

Exophthalmos, often with External Strabismus.

No. 6 GARGOYLISM (HURLERS SYNDROME).

A disorder of mucopolysaccharide metabolism, associated with Dwarfism and mental retardation.

NOTE: Large skull with prominent Supraorbital ridges.

Flat nose and large tongue.

Coarse, grotesque features.

No. 7 HYPERTELORISM

Overdevelopment of the lesser wings of the Sphenoid bone, associated with mental deficiency.

NOTE: Increased distance between the pupils, and a broad root to the nose.

No. 8 LEPRECHAUNISM (DONOHUES' SYNDROME).

This is a very rare syndrome, in which the "ELFIN-LIKE" face is associated with Dwarfism, Diabetes, Hepatomegaly and Kidney defects.

NOTE: Big ears, and prominent wide-spaced eyes.

No. 9 MICROGNATHIA (Pierre ROBIN SYNDROME).
This involves hypoplasia of the mandible with a Cleft Palate (No. 10).

No. 11 MONGOLISM (DOWN'S SYNDROME).
Facial abnormalities in Mongolism include:
Eyes slanting upwards and outwards.
Prominent Epicanthic folds.
Strabismus or nystagmus.
"Brushfield's Spots"; white flecks on the Iris.
Protruding tongue, with transverse furrows in the older child (SCROTAL TONGUE).

No. 12 PROGERIA.
A rare type of Dwarfism of unknown cause, associated with premature senility. Arteriosclerosis may occur in early childhood leading to Myocardial Infarction in the 'teens.
NOTE: "Plucked Bird" appearance.

No. 13 STURGE-WEBER SYNDROME.
Association of Port-Wine Stain over Fifth-nerve distribution, with Subnormality and Epilepsy due to angiomas on the meninges.

No. 14 SYPHILIS (CONGENITAL).
NOTE: "Saddle-nose".

No. 15 THALASAEMIA.
In this familial disease, deficient synthesis of Adult-type haemoglobin leads to an haemolytic anaemia of variable severity. It is mainly found amongst Mediterranean races.
NOTE: Maxillary overgrowth due to Extramedullary RBC formation.
Resulting "Rabbit-Teeth".

Part two: Endocrine disorders.

No. 16 MYXOEDEMA.
NOTE: The face is coarse and puffy, particularly below the eyes.
The thick lips, and broad nose.
The hair is dry and thinning.

No. 17 CRETINISM.
NOTE: The eyes are wide-set with a flattened nose.
The thick lips, and protruding tongue.
The wrinkled brow.

No. 18 shows the appearance of the patient some time later, after administration of Thyroxin.

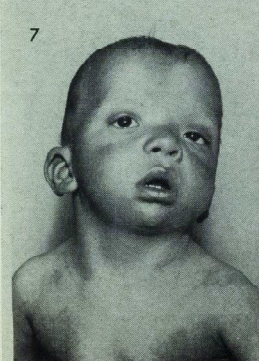
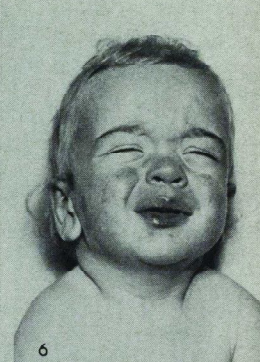
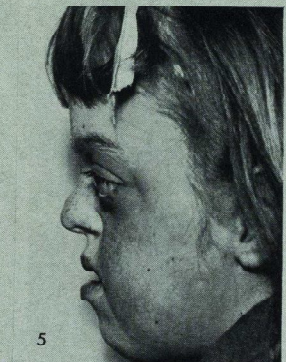
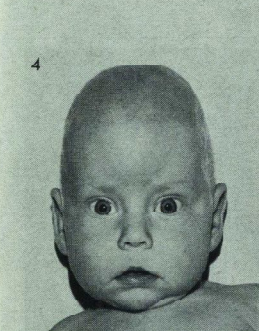
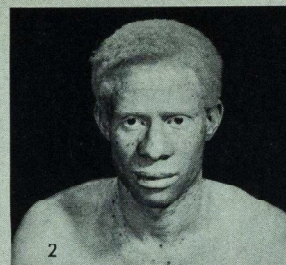
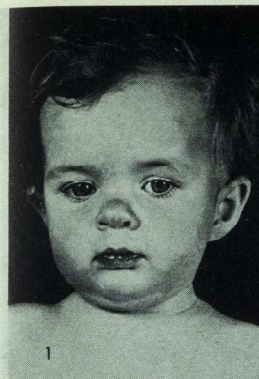
No. 19 ADDISON'S DISEASE.
NOTE: Excessive pigmentation of the skin, particularly marked over areas of friction or exposure to sunlight. This colouration extends onto the Oral mucous membranes.

No. 20 CUSHING'S SYNDROME.
NOTE: Obesity and Hirsutism in the face: "MOON-FACE".

No. 21 ADRENAL VIRILISM.
NOTE: The masculinisation, with Hirsutes and Acne. Often the hair is found to be receding at the temples.

No. 22 THYROTOXICOSIS.
NOTE: The prominent eyes and wide palpebral fissures.

No. 23 ACROMEGALY.
NOTE: Ears, nose and cheekbones are greatly enlarged.
The jaws project: PROGNATHISM.
Thick lips, with a large tongue.
Prominent ridges over the eyes.

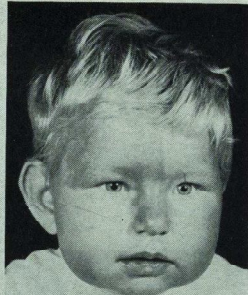




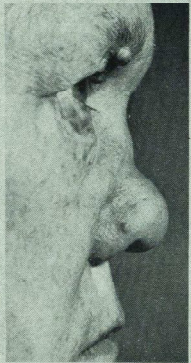
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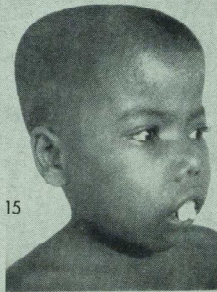
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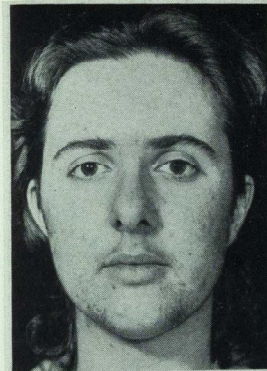
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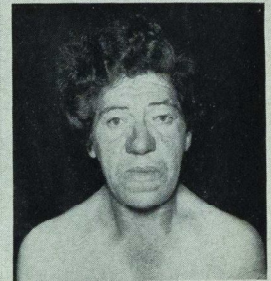
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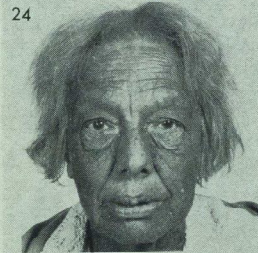
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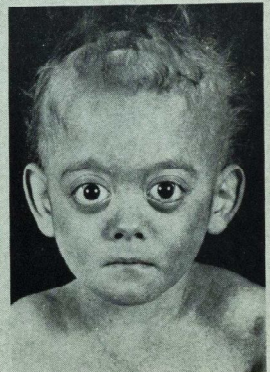
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Part three: Miscellaneous disorders.

No. 24 ACANTHOSIS NIGRICANS.

This is a rare disorder of skin pigmentation, which may be associated with internal malignancy, although it also occurs in a number of endocrine and other conditions. These include Diabetes, Myxoedema, Epilepsy and Mental deficiency. The pathogenesis is unknown.

NOTE: There is increased pigmentation in the skin. Usually this remains localised to flexural areas, but it often becomes more generalised, as here. The skin becomes thickened and warty, with exaggerated skin-creases.

No. 25 ADENOIDAL FACIES.

In children in which repeated upper respiratory tract infections have led to Adenoidal enlargement, "mouth-breathing" becomes established. This leads to the typical facies seen here.

NOTE: Narrow Nose, prominent Incisor teeth, and perpetually open mouth.

No. 26 BELL'S PALSY.

The seventh nerve may be injured by pressure from the blade during Forceps delivery, leading to the appearance seen here. Recovery is usually complete within a few weeks.

NOTE: The eye on the affected side cannot close, and its conjunctiva is often injected. The mouth is drawn over to the affected side.

No. 27 CAVERNOUS SINUS THROMBOSIS.

Septic thrombosis of the cavernous sinus follows infections of the face, particularly around the nose and mouth: the "Danger area of the face". The patient is acutely ill, with oedema of the eyelids and the root of the nose. There is some proptosis due to congestion of the orbital veins. The third, fourth and sixth cranial nerves run through the lateral wall of the sinus so Ophthalmoplegia and Ptosis may occur, as here.

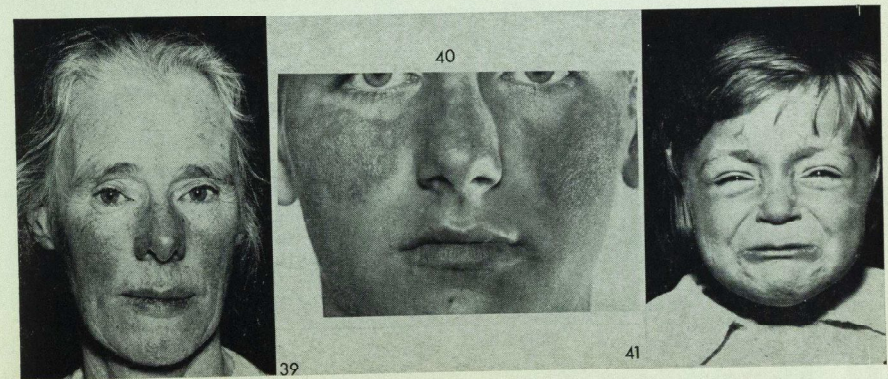
No. 28 CHLOASMA OF PREGNANCY.

NOTE: The patches of pigmentation on the forehead and around the mouth.

No. 29 HAND-SCHULLER-CHRISTIAN DISEASE.

This is a very rare disorder involving abnormal storage of Lipids in the cells of the Reticuloendothelial system. The condition is characterised by lesions in the bones, and Diabetes insipidus.

NOTE: Exophthalmos associated with increased intraorbital fat deposits.



No. 30 LEONTIASIS OSSEA.

A condition of hyperostosis of the skull bones, of unknown aetiology.

NOTE: The grotesque deformity of the Frontal bones.

No. 31 LIPODYSTROPHY.

A disease involving progressive wasting of the upper body. The cause is unknown. There is loss of fat from the affected regions.

NOTE: Hollow cheeks due to loss of facial fat.

No. 32 MELANCHOLIA.

This Facies is typical of a severe depressive mental illness. Prolonged misery leads to the characteristic fold of skin on the lateral third of the upper eyelid; VERAGUTH'S FOLD.

No. 33 MITRAL STENOSIS.

This photograph shows the dusky mauve MALAR FLUSH seen on the cheeks of patients with chronic low cardiac output. It is most common in patients with Mitral Stenosis complicated by pulmonary hypertension.

No. 34 MYASTHENIA GRAVIS.

NOTE: The drooping eyelids and expressionless face.

No. 35 ACUTE NEPHRITIS.

NOTE: The puffy face secondary to generalised fluid retention.

No. 36 NEUROBLASTOMA.

NOTE: Gross proptosis due to secondaries in the orbit from an abdominal neuroblastoma.

No. 37 PARKINSON'S DISEASE.

NOTE: The expressionless face and unblinking stare producing a false impression of idiocy.

No. 38 PERTUSSIS (WHOOPIING COUGH).

NOTE: Subconjunctival haemorrhages have occurred due to the paroxysms of coughing.

No. 39 POLYCYTHAEMIA RUBRA VERA.

NOTE: The florid complexion due to cyanosis, and telangiectases on the cheeks and nose.

No. 40 SYSTEMIC LUPUS ERYTHEMATOSUS.

This photograph shows the typical "Butterfly" distribution of the rash on the face.

No. 41 TETANUS.

NOTE: The RISUS SARDONICUS caused by spasm of the facial muscles, following infection with *Clostridium tetani*.

I would like to thank the Department of Medical Illustration of the Institute of Child Health, Great Ormond Street Hospital for Sick Children, for their help in preparation of this article.

Photos number 15, 25, 27 and 32 are reproduced from volume III and IV of SPOT DIAGNOSIS; Edited by The British Journal of Clinical Practice, and published by Arlington Books, price 15/- each.

Recent Papers by Barts' Men

- ALLAN, J. S., see TERRY, H. J., (and others).
BALME, H. Wykeham, see CAWLEY, M. I. D. (and others).
BEARD, M. E. J., (and others). L-Asparaginase in treatment of acute leukaemia and lymphosarcoma. *Brit. med. J.*, Jan. 24, 1970, pp. 191-195.
BIRDWOOD, G. Personal view. *Brit. med. J.*, Dec. 20, 1969, p. 740.
BOURNE, G. L., see RUOSS, C. F., and—.

- CAPENER, N. Mechanised man: biological considerations in accident prevention. *Physiotherapy*, 55, 1969, pp. 486-490.
*CASSON, F. R. C. The gamblers. *Mental Health*, Winter, 1969, pp. 15-19.
CATTELL, W. R., see FRY, I. Kelsey, and—.
CAWLEY, M. I. D., (and others). Uptake of P^{32} -labelled cyclophosphamide from arthritic knee joints. *Ann. rheum. Dis.*, 28, 1969, pp. 624-629.
COLTART, T. M. Laparoscopy in the diagnosis of tubal patency. *J. Obstet. Gynaec. Brit. Commonw.*, 77, 1970, pp. 69-71.

- *COTES, J. E. Factors relating to the aerobic capacity of 46 healthy British males and females, ages 18 to 28 years. *Proc. Roy. Soc. B.*, 1969, 174, pp. 91-114.
*— Relationships of oxygen consumption, ventilation and cardiac frequency to body weight during standardised submaximal exercises in normal subjects. *Ergonomics*, 12, 1969, pp. 415-427.
*— (and others). The response to submaximal exercise in adult females; relation to haemoglobin concentration. *J. Physiol. (Lond.)*, 203, 1969, pp. 79-80.
*CRAWHALL, J. C., (and others). The excretion of amino acids by cystinuric patients and their relatives. *Ann. Hum. Genet. Lond.*, 33, 1969, pp. 149-169.
CROWTHER, D., see BEARD, M. E. J., (and others).
*CURWEN, M. P., (and Brookes, B.). Health centres: facts and figures. *Lancet*, 2, 1969, pp. 945-948.
DALY, M. de Burgh, see JAMES, Jennifer E. Angell, and—.
*DE ALARCON, R., (and Carney, M. W. P.). Severe depressive mood changes following slow-release intramuscular fluphenazine injection. *Brit. med. J.*, 3, 1969, pp. 564-567.
DE MOWBRAY, R. R., (with others). Metabolic and clinical effects of glibenclamide. *Lancet*, Jan. 10, 1970, pp. 57-61.
DOBREE, J. H. Spatula for trabeculectomy. *Brit. J. Ophthalmol.*, 53, 1969, p. 861.
DUDENEY, T. P. Crohn's disease of the mouth. *Proc. Roy. Soc. Med.*, 62, 1969, p. 1237.
FAIRLEY, G. Hamilton, see BEARD, M. E. J., (and others).
FLAVELL, G. Bronchoscopy. *Brit. J. Hosp. Med.*, Jan. 1970, pp. 50-52.
FRY, I. Kelsey, and CATTELL, W. R. The IVP in renal failure. *Brit. J. Hosp. Med.*, 3, 1970, pp. 67-71.
*GARROD, L. P., and WATERWORTH, Pamela M. Tests of combined bactericidal action. *ACP (Association of Clinical Pathologists) Broadsheet*, 63, May 1969, pp. 1-9.
HADFIELD, G. J. Urological problems following treatment of ovarian carcinoma. *Brit. J. Urol.*, 41, 1969, pp. 676-681.
HILL, R. C., and TURNER, P. A comparison of codeine compound and "Saridone" in the pain of rheumatoid arthritis. *Brit. J. clin. Pract.*, 24, 1969, pp. 29-32.
*HOWELL, T. H. George Cheyne's essay of health and long life. *The Gerontologist*, 9, 1969, pp. 226-228.
*— Some terminal aspects of disease in old age: a clinical study of 300 patients. *J. Amer. Geriatrics Soc.*, 17, 1969, pp. 1034-1038.
HUBBLE, D. A historical review of British paediatrics. *Brit. J. med. Educ.*, 3, 1969, pp. 258-266.
HUNTER, R., see MACALPINE, Ida, and—.
*HURN, B. A. L., (and others). Insulin-binding antibody and hormone dosage in non-resistant diabetes. *Postgrad. med. J.*, Dec. 1969, Suppl., pp. 819-824.
JAMES, Jennifer E. Angell, and DALY, M. de Burgh. Nasal reflexes. *Proc. Roy. Soc. Med.*, 62, 1969, pp. 1287-1293.
JENKINS, J. S., (and others). Hypothalamic-pituitary-adrenal function after subarachnoid haemorrhage. *Brit. med. J.*, Dec. 20, 1969, pp. 707-709.
KEYNES, W. M., (and Caird, F. I.). Hypocalcaemic primary hyperparathyroidism. *Brit. med. J.*, Jan. 24, 1970, pp. 208-211.

- LACY, D., and PETTITT, A. Juliet. Sites of hormone production in the mammalian testis, and their significance in the control of male fertility. *Brit. Med. Bull.*, 26, 1970, pp. 87-91.
MACALISTER, Joan, see CAWLEY, M. I. D., (and others).
MACALPINE, Ida, and HUNTER, R. A. Daniel Oxenbridge, John Twysden and William Harvey. *J. Roy. Coll. Physic. Lond.*, 4, 1970, pp. 169-176.
*MCKERROW, C. B. The recognition of industrial pulmonary disease. *Trans. Soc. occup. Med.*, 19, 1969, pp. 84-90.
*MAINGOI, R. The partial gastrectomies for chronic peptic ulcer: Finochietto's modification of the Billroth I operation. *Brit. J. clin. Pract.*, 23, 1969, pp. 437-445.
— Operative injuries to the duct of Santorini. *Brit. J. clin. Pract.*, 24, 1970, pp. 1-2.
MALPAS, J. S., see BEARD, M. E. J., (and others).
*MUNRO, D. D. The relationship between percutaneous absorption and stratum corneum retention. *Brit. J. Derm.*, 81, Suppl. 4, 1969, pp. 92-97.
*MURLEY, R. S. A fresh look at venous thrombosis and pulmonary embolism. *Med. Centre J.*, 1969, No. 8, pp. 12-13.
*O'CONNELL, J. E. A. Anterolateral chordotomy for intractable pain in carcinoma of the rectum. *Proc. Roy. Soc. Med.*, 62, 1969, pp. 1223-1225.
PETTITT, A. Juliet, see LACY, D., and—.
PURKISS, P., see CRAWHALL, J. C., (and others).
ROBB-SMITH, A. H. T. Pathological lesions in surgically removed spleens. *Brit. J. Hosp. Med.*, 3, 1970, pp. 19-22.
RUOSS, C. F., and BOURNE, G. L. Incidence of toxoplasmosis in women at a London hospital. *J. clin. Pathol.*, 22, 1969, pp. 649-650.
RYAN, G. B., and SPECTOR, W. G. Natural selection of long-lived macrophages in experimental granulomata. *J. Pathol.*, 99, 1969, pp. 139-151.
SCOTT, Sir Ronald Bodley, see BEARD, M. E. J., (and others).
SPECTOR, W. G., see RYAN, G. B., and—.
STONE, J., see WILLIAMS, I. G., and—.
TAYLOR, G. W., see TERRY, H. J., (and others).
*TERRY, H. J., (and others). The effect of adding lumbar sympathectomy to reconstructive arterial surgery in the lower limb. *Brit. J. Surg.*, 57, 1970, pp. 51-55.
THOMAS, K. Laryngeal manifestations of Wegener's granuloma. *J. Laryn. Otol.*, 84, 1970, pp. 101-106.
THORNE, N. A comparative clinical assessment of a topical hydrocortisone preparation in dermatology. *Brit. J. clin. Pract.*, 23, 1969, pp. 519-523.
THOULD, A. K., see CAWLEY, M. I. D., (and others).
TURNER, P., see HILL, R. C., and—.
*WATERWORTH, Pamela M., (with others). A second clinical trial to compare two methods for pre-operative preparation of the large bowel. *Brit. J. Surg.*, 56, 1969, pp. 610-612.
—, see also GARROD, L. P., and—.
*WATKINS, Sylvia M., (and Moorhead, J. F.). The effect of cell crowding on the *in vitro* reactivity of normal and abnormal human lymphocytes. *Cell Tissue Kinetics*, 2, 1969, pp. 213-223.
WATTS, R. W. E., see CRAWHALL, J. C., (and others).
WILLIAMS, I. G., and STONE, J. Total mastectomy with axillary dissection and irradiation for mammary carcinoma. *Ann. Surg.*, 170, 1969, pp. 892-894.

WINNICOTT, D. W. Adolescent process and the need for personal confrontation. *Pediatrics*, 44, 1969, pp. 752-756.

WITTS, L. J. Surgical friends—Litchfield Lecture 1969. *Oxford Medical School Gazette*, 22, 1970, pp. 11-16.

*WYATT, A. P. Regional enteritis leading to carcinoma of the small bowel. *Gut*, 10, 1969, pp. 294-927.

YOUNG, E. P., see CRAWHALL, J. C., (and others).

* Reprints received and herewith gratefully acknowledged. Please address this material to the Librarian.

Nurses' Report

Salaries and pay claims for nurses are still a main point of conversation and the subject is wearing thin. Although many will disagree with me, I think it is about time the profession quietened down the militancy and used a little more tact.

On behalf of many Bart's nurses, I would like to thank several consultants for their public support for us in the past few months. We are sure that this did help to put pressure on various members of parliament.

The increase in salaries will be noticed particularly by student nurses, although I fear that board and lodging will be increased proportionately. Below is a plan of the increase of 15% from April 1st this year and a further 7% from April 1st, 1971.

PRESENT SALARY (before tax)

Student nurses aged under 25 years

1st year. £395 + £48 meal allowance = £443.
2nd year. £450 + £48 meal allowance = £498.
3rd year. £480 + £48 meal allowance = £528.

Student nurses aged over 25 year on entry

1st year. £517 + £48 meal allowance = £565.
2nd year. £544 + £48 meal allowance = £592.
3rd year. £571 + £48 meal allowance = £619.

Staff nurses £785-£985.

OFFERED SALARY.	Student Nurses	1st April, 1970	1st April, 1971
Aged 18		£489	£516
Aged 19		£540	£567
Aged 20		£570	£603
Aged over 21	1st year	£669	£696
	2nd year	£705	£730
	3rd year	£741	£774
	Staff Nurses	£891-£1,143	£945-£1,197

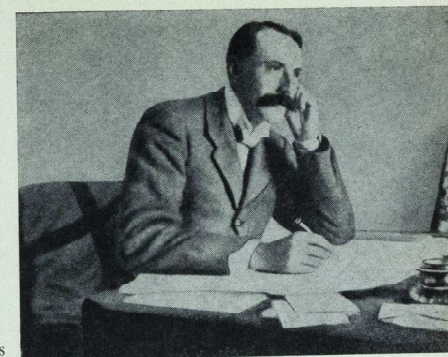
We do plea to the finance office that they will make our pay slips easier to interpret.

We also wish to thank Miss Jones and the Board of Governors for the Ball at Grosvenor House on January 23rd. Nearly everyone I have spoken to thoroughly enjoyed the evening and would be most disappointed should this annual talking-point be abandoned.

The Students Nurses' Association held its Annual General Meeting on January 28th. New officers were elected for the year. We wish to express our thanks to Su Dermitt, Sheila Wynne, Elizabeth Hartle, Jenny Marks and Caroline Catchpole for their continuous hard work during 1969. A cheque for £100 has been sent to Leukacimia Research as a result of money raised at the Christmas Bazaar and a dance. Let us hope that this year will be as successful both professionally and socially.

ROS ASPIDIN

THE DREAM OF GERONTIUS



The completion of 'Gerontius'
A friend arrived at Birchwood to find Elgar putting the last notes to a score, saying that the moment was historic, he took this snapshot. The work was GERONTIUS.

It may seem ambition bordering on folly that has led the Music Society to choose the *Dream of Gerontius* for its summer concert in Southwark Cathedral on June 3rd. The first performance of Elgar's gigantic work 70 years ago was an uneasy flop, both because Richter the conductor did not know it properly, and because the chorus had found it too difficult to learn in the time. Elgar was moodily depressed about the whole affair and told his friend Jaeger (Nimrod of the *Enigma Variations*): "I have worked hard for forty years and at the last, Providence denies me a decent hearing of my work: so I submit—I always said God was against art and I still believe it. Anything obscene or trivial is blessed in this world and has a reward—I ask for no reward—only to live and hear my work... I had my golf in good style yesterday and am not ill or pessimistic—don't think it, but I have allowed my heart to open once—it is now shut against every religious feeling and every soft, gentle impulse for ever." He was in the mood to write *Louse Deo!*, as he did on another occasion.

The failure of *Gerontius* was all the more galling, because Elgar knew it was his finest work to date. "This is the best of me", he wrote at the end of the score. He had thought about Cardinal Newman's poem for eleven years, since the time it came as a wedding present from the priest who married him in 1889. Strangely enough Newman himself had given a copy of *Gerontius* to Dvorák, who toyed with the idea of setting it for the Birmingham Festival of 1888. But the committee thought it "too catholic", and Dvorák played safe with a Requiem instead. Elgar was later to run into the same sort of trouble; but he stuck by the poem through thick and thin: "As to the Catholic side, of course it will frighten the Low church party but the poem must on no account be touched! Sacrilege and not to be thought of: them as don't like it can be damned in their own way—not ours." In 1902 the Worcester Three Choirs committee doubted whether the audience could take quite such a procession of saints, martyrs, monks, and confessors as appears in Newman's poem, and they insisted on moving Joseph and Mary into the wings so as to leave Christ more in the centre of the stage. But the blazing sincerity of Elgar's setting, the dramatic skill with which he marshals all the spiritual "pomp and circumstance" of the Roman Church, has long silenced such objections.

Cardinal Newman was one of the odder fish of the 19th century, and was described in extreme old age (he died in his 90th year) as "doubled up like a shrimp and walking with a stick longer than his doubled body." In the first part of his life all his intellectual subtlety, his slightly hallucinated fascination with history, his medieval delight in splitting theological hairs, had been concentrated on defending the Church of England. In 1845 he was so haunted by the question of Henry VIII's divorce that he slipped finally over to Rome. He took his poetry lightly enough; it was a pastime to be indulged in "while shaving, or lurching, slightly seasick, on the ocean." Of no great distinction, his verses say succinctly what they mean, and in the demons' chorus of *Gerontius*, growled out as the angel conducts the soul of the dead man to the judgment seat of God, there is a toughness and curt brutality in the language surprising for a cardinal. And this is where Elgar's vast orchestra, snarling and whining with incredible virtuosity, most brilliantly shows its paces. Elgar took a fiendish delight in the writing of "nick's chorus"; he gleefully enshrined in its notes, by means of his own musical cryptography, the names of all the people he disliked most.

But no description of those involved in the making of *Gerontius*, no analysis of the fevered death-bed atmosphere in Part I or the unearthly serenity in much of Part II can substitute for a complete hearing of the work. And no hearing of the work can substitute for the sheer physical excitement of taking part in it and striving oneself to climb this towering Everest of sound. *Gerontius* is arguably the greatest work of England's greatest composer, it is certainly the biggest undertaking of the Bart's Music Society and therefore deserves all possible support.

ROBERT ANDERSON

REVIEWS

Textbooks

Medical Embryology. Human Development—normal and abnormal. Second Edition. By Jan Langman, M.D., Ph.D. Published by E. & S. Livingstone, 1969.

The first edition of this book was reviewed in this journal, and highly recommended, in 1964. Since then it has been reprinted a number of times and has been translated into nine other languages. This second edition is larger by fifty-three pages but the concise character has not been lost; half of the increase is due to the inclusion of a new chapter on experimental embryology. The first edition was rather marred by the unsatisfactory treatment of a number of key topics but most of these deficiencies have now been rectified. The description of the fate of the aortic arch arteries, the relationship of the developing liver to a supposed ventral mesentery of the gut, and the development of the interventricular septum of the heart have greatly benefited from revision. The excellent line and stipple illustrations were an outstanding feature of the first edition; many have been further improved and a number of new ones added.

Despite the publication of a number of concise embryology textbooks in the last five years, Jan Langman's probably remains the one best suited to the practical needs of medical students.

O. J. LEWIS

"Review of Physiological Chemistry" by Harold A. Harper. Lange Medical Publications, 12th Edition, 1969, 564 pp.

This well known textbook of Biochemistry has been appearing in a new edition every two years (at least, since 1951). This means that it just manages to keep up to date with a subject which has evolved with amazing rapidity in the last decade.

On the whole, this is a very good and very comprehensive textbook. In particular, the chapters on intermediate metabolism and biological oxidation are excellent.

Biochemical aspects of clinical medicine and chemotherapy are constantly stressed.

Some chapters appear not to have been as extensively revised as others. Thus, the account of the chemistry of carbohydrates is rather old-fashioned and it is a pity that most of the formulae of sugars are given in the straight chain Fisher form (without an explanation of the convention of the Fisher projection) instead of the Haworth ring structures. The mental gymnastics required to go from one to the other are, to say the least, difficult. Fortunately, some ring formulae appear in the chapter on carbohydrate metabolism.

The diagrams are good but some show slight errors which better proof reading would have spotted.

The account of acid-base balance, always a difficult subject, is not helped by such loose phraseology as "acids, in the urine, are partially buffered by cation, largely sodium"! Also, the lavishly illustrated mech-

anism given for the production of ammonium ion in urine, in conditions of metabolic acidosis, is incorrect. Deamination of amino acids (or deamidation of glutamine) does not give rise to ammonia (alleged to then take up excess hydrogen ions) but, in all cases, to ammonium ions. However, as the carboxylate group on the carbon skeleton obtained after deamination of an amino acid will ultimately metabolise to a bicarbonate ion (not necessarily in the kidney!) the latter can contribute to the relief of acidosis, the resulting carbonic acid being eliminated at the lungs.

Still, these are minor flaws. "Harper" is still one of the best buys amongst the larger textbooks of biochemistry.

D. M. G. ARMSTRONG.

"Biochemistry" by S. P. Datta and J. H. Ottaway Bailliere, Tindall & Cassell, 2nd Edition, 1969, 446 pp.

Another favourite of students come 2nd M.B. time, now in its second edition. This is a far more compact and therefore less comprehensive textbook than Harper reviewed above.

The chapters on intermediate metabolism are not as good as in Harper. One and a half pages devoted to gluconeogenesis, in view of the importance of the subject (it is the only metabolic pathway which keeps us alive after some twelve hours of fasting), is a bit meagre. Protein metabolism is introduced with the concept of dynamic equilibrium of body protein: subsequently, thirteen pages are devoted to protein synthesis but not a single line is devoted to protein breakdown in the cell. Only if one turns to the chapter on Techniques does one meet the lysosomes (three lines with no mention of their function!).

The chapter on the biochemistry of blood, which includes acid balance, is thorough and lucid.

On the whole, a good (if partially unbalanced) revision text which should be supplemented by lecture notes.

D. M. G. ARMSTRONG.

"The Principles and Practice of Surgery for Nurses and Allied Professions" by D. F. Ellison Nash, F.R.C.S. Edward Arnold (Publishers) Ltd., 4th Edition, price 70s.

The writer had the pleasure of reviewing in 1955 the first edition of Mr. Nash's surgical textbook for nurses. Books written specially for nurses were not at that time very common, and those that existed tended to be written at a simple level for a rather unsophisticated audience. The advent of Mr. Nash's books changed that; he spoke to the nurse as to an educated colleague, taking it for granted that she would wish to know the reasons for the procedures she undertook, and to understand the principles of surgical technique. This textbook will always be popular in Mr. Nash's own hospital, and it is pleasant to realise, from the issue of the fourth edition, that it is equally popular among nurses elsewhere.

The fourth edition has many new illustrations and pictures, and turning to the subjects in which advance is rapid (such as in dialysis, and use of radioactive isotopes) one finds that these have been brought up to date. The general purpose of this work has not how-

ever been altered. This was to give the nurse enough background knowledge to enable her to grasp the principles on which surgical decisions on treatment and care are based. It is not for the nurse who hopes to acquire facts by heart, but for the student who asks why. The author presumes she will want to know about the organisation of the services of which she is part, and details of the equipment she is expected to use. Since his appeal is to the nurse student, it seems rather unlikely that it will prove equally attractive to the pupil nurse as the introduction suggests.

Mr. Nash has had a lifelong interest in medical education. We wish him well, and hope that he has many more new editions ahead of him.

THE PRINCIPAL TUTOR.

"Medical Terminology in Hospital Practice". A guide for all those engaged in professions allied to medicine. By Paul M. Davis. Published by William Heinemann Medical Books Ltd., price 30s.

This is a most useful contribution; it is what it sets out to be, an invaluable guide to "members of the nursing profession, members of the professions supplementary to medicine and the other paramedical professions". Every medical secretary should have access to this book.

It is divided into five parts: The first part introduces the reader to terms referring to some general aspects of medicine, to causes, classification, diagnosis and treatment of disease, and the names of personnel involved. Classification of common drugs and various branches of medicine and surgery are also explained. Part two deals with terms referring to general pathological processes, and Part three with infective diseases. The main bulk of the book is Part four which works its way through terms used in diseases of the various systems of the body. The fifth and last part deals with terms used in tropical disease, nutritional disorders, poisoning, etcetera.

This is an excellent book which will surely prove very popular.

IAN MCCOLL.

NON MEDICAL

The Magic Christian, by Terry Southern. Penguin Books, 4s.

The recent publication in revised form of Terry Southern's *The Magic Christian*, first published in 1959, to coincide with the release of the film of the same name will probably be a successful venture, but this will be in no way attributable to any literary merit.

The protagonist is an American trillionaire bachelor called Guy Grand, alias Grand Guy, whose sole delight in life appears to be the expenditure of enormous sums of money on practical jokes, the consequences of which require further sums to be spent in mollifying the authorities. The account of these pranks is interwoven with a description of a tea-party at Grand's large house attended by Guy, his two elderly aunts with whom he lives, Agnes and Esther, and a Miss Ginger Horton accompanied by her spoilt Pekingese, Bitty.

In each chapter, after a few paragraphs devoted to recounting bits of tea-party chit-chat, Southern launches into a description of Grand's many pranks. There is no connecting link between either parts of narrative, indeed

one wonders why he bothered with the tea-party at all.

We are told of the episode of the free offer of \$100,000 in a vat of boiling cow-dung, and of the boxing match which Grand turns into a pansy and boring charade. The particular prank which gives the book its name concerns the maiden voyage of a vast liner, *The Magic Christian*. It is difficult to envisage how, save with liberal interpretation, this adventure could have been made into a full-length feature film with two principal stars. Only by such interpretation could this book be made into an enjoyable form of entertainment.

R. J. WILLIS.

BOOKS RECEIVED

Books noticed here may be reviewed later.

1. *Anatomy and Physiology for Radiographers*—Warrick.
2. *The Treatment of Tropical Diseases* Jopling.
3. *Alcoholism Explained*—Dr. Lincoln Williams.
4. *English for Nurses*—Thomas and Thomas.
5. *Introduction to Nursing Bacteriology*—W. Broome.
6. *The Doctors Nurse Receptionist*—T. Crawford.
7. *The Diagnosis and Treatment of Diseases Affecting the Nervous System*—Frederick Lees. Has two volumes.
8. *Paediatric Nursing*—Duncombe and Weller.
9. *Personal Community Health*—W. Huntly.
10. *Infectious and Tropical Diseases*—Woodruff and Bell.

RESTAURANTS

Little Akropolis.

10 Charlotte St., W.1. 01-226 1787.

Open—Weekdays and Saturdays. Sometimes on Sundays.

The prices compare very favourably with other restaurants and here you pay for real Greek cooking. The service can be slow, but all patrons are well looked after. Specially recommended—Moussaka.

New Kebab House.

12 Charlotte St., W.1.

For a quick, hot, tasty kebab, this is the place to go. Excellent service, congenial atmosphere, decorations in the style of a Greek transport café and low prices. The Turkish coffee at 1s. 6d. is well worth it.

Schmidt's.

41 Charlotte St. W.1. 01-636 1223

Open—Weekdays and Saturdays until 10.30 p.m. Also open on Sundays.

Most of the dishes on the menu are German and are all very reasonably priced. Helpings are generous and to end a meal there is good wide selection of cheeses. The service, "when good is very, very good but when it is bad it is horrid". Both the food and the gorging crowds are always interesting and entertaining. The shop sells many mouth-watering pastries, cakes, chocolates and a large variety of sausages, cheeses and fish.

Pizza House.

56 Goode St., W.1. MUS. 9590.

Open—Weekdays and Saturdays, until 11.30 p.m. Also open on Sundays.

This is one of those restaurants where all the dishes are delicious and where one is truly spoilt for choice. Everything on the menu is excellent value for money and the service is always very good.

B. J. APPLEBY

Rodin Exhibition

Francois-Auguste-Rene Rodin was born in Paris on the 12th November, 1840 and died at Meudon in 1917. His life thus spanned a period which saw some of the greatest changes in Art, the development of Impressionism, the work of Van Gogh, Cezanne and Gauguin, and the cubist movement of Braque and Picasso. Rodin's own work can, if one wishes to "type it", best be called impressionist. His sculptures are modelled in terms of light and shade rather than with reference to volume and form; in other words, he used exactly the same principles as the impressionists used in their paintings. The play of light on the uneven surface of his sculptures, which results from this technique, serves to give the works a vitality and life-like quality, which is lacking in the smoothly-finished works of earlier sculptors.

An exhibition of Rodin's work has just opened at the Hayward Gallery and will be there until the 5th April. The exhibition contains some of the sculptor's finest works, such as "The Monument to Balzac", and innumerable smaller pieces representing the different stages in his development. The Hayward Gallery is an excellent setting and the works are well arranged and cleverly lit, so that, as well as each individual piece, each room taken as a whole is an impressive sight, with hunks of sparkling bronze standing out in the plain and simple surroundings of the Gallery.

The exhibition is arranged in eight sections—early, middle and late periods are represented, the most interesting of these probably being the late period, during which Rodin became fascinated with movement and did innumerable studies of dancers. Most of these are fantastically contorted, bronze miniatures taken, not from classical ballet, but from the "free dance" then in vogue, and epitomised by Isadora Duncan.

Also represented are his portraits, skillfully executed, but lacking the vitality of his other works, probably due to the fact that they were commissioned and had to please both the sitter and the general public. There is a section devoted to his drawings and paintings, which are interesting, the later ones being reminiscent of Matisse and the Fauves.

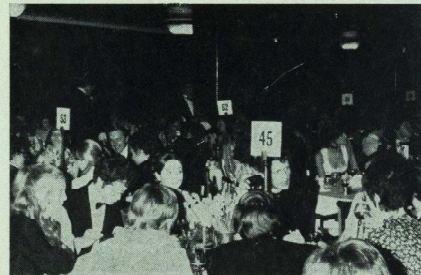
When faced with producing a major work, Rodin always did nude studies of his subjects, both miniature and full-size, before clothing them. In this way he hoped to achieve greater realism in their poses and a more life-like finished product. Miniatures of the clothed subject were also cast. Three examples of this technique are shown, "The Burgbers of Calais", "The Monument to Balzac", and "The Gates of Hell" and they form what is perhaps the most interesting part of the exhibition. The final "Burgbers of Calais" can be seen outside the Houses of Parliament. There is a photograph of "The Gates of Hell" and the completed "Monument to Balzac" is exhibited. Many of the preliminary works are shown and the development which leads up to the production of the final masterpiece can be followed.

C. J. HINDS.

Matron's Ball at the Grosvenor House Hotel W.1



January 1970



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In future it is proposed to hold similar competitions in alternate years



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Students may arrange to join before qualifying at a reduced subscription of £2.0.0 This may be paid up to three months after qualifying, although full cover is automatic from the date of provisional registration

Full details from

The Secretary H. A. Constable, M.R.C.S. I.R.C.P.
Medical Protection Society, 50, Hallam St., London, W.1.

SPORT

BART'S DIVING CLUB NITROGEN NARCOSIS RESEARCH

This August, the United London Hospitals' Diving Group carried out a series of experiments in the chilly waters of Oban, Scotland, to investigate the narcotic effects of breathing atmospheric air at depth. The experiment set out to measure the enhancing effects of cold and anxiety on nitrogen narcosis, a hitherto unexplored facet of this interesting, and topical, phenomenon in the light of diver performance in British waters, especially on industrial sites (such as drilling rigs). A six-strong team of divers from Bart's Diving Club formed a large part of the expedition (under the organisation of a Thomas's member), and we were guided by Dr. Peter Cole, Consultant Anaesthetist at Bart's. Psychological and Manual Dexterity tests were carried out at one hundred feet under standard conditions, and repeated, under "control" conditions, at ten feet. We wore a dry-type diving suit, specially modified to enable venipuncture while wearing it, and, more remarkably, to record excellent ECG tracings of the subject at depth. Dr. Cole performed the waterside venipunctures, and carried out blood centrifugation for plasma cortisol samples on the spot. These he is analysing in the anaesthetic laboratory, using spectrofluorimetric techniques developed in the Medical Unit at Bart's, to give a stress-response pattern for each of the subjects. We are very grateful to the Union at Bart's, who gave generously towards the considerable cost of equipment for the experiment, which gave us the preliminary experience essential to mounting an advanced extreme-depth experiment, along similar lines, but using oxy-helium mixtures, next year. The results of the experiment will be published shortly, when the normal steroid levels of the subjects have been determined and correlated with the test results. Anyone interested in aqua-lung diving who missed the training session now under way may be interested in joining in the New Year, and should contact Djalilah Pezeshghi, Senior 2nd MB.

TOM McEWEN.

SOCCER CLUB REPORT

Middlesex v Barts.

Barts started 1970 with a well deserved win at Middlesex. Despite the Christmas vacation everyone was reasonably fit as most of the team reported for training a few days before the start of the new term.

Fielding only nine men in the first 15 minutes (as two players arrived late because of mechanical trouble to their car) Bart's were in the Middlesex penalty area for most of the time and were unlucky not to take the lead on several occasions.

With the full eleven on the field a goal was inevitable. Schlesinger took a throw on the right to Skanderowicz who backheaded to the on-rushing Abbott. The link man flighted the ball into the middle for Jerreat, who made no mistake with a fierce drive.

The second half produced the same pattern with Barts constantly attacking. Barrison from the halfway line put Jerreat through on the left. The winger cut inside, eased his way past four players to slide the ball into the net giving the goalkeeper no chance to save.

Although the final score was only 2-0, Barts were unlucky not to have scored at least three more.

Westminster v Barts.

Inspired by the previous week's win Bart's went onto the field to face a powerful Westminster side which had up to now conceded only two points. Bart's quickly settled down and it wasn't long before Jerreat made a brilliant run down the left wing to put over a low centre which Schlesinger only had to guide home.

Despite this, Westminster came back and equalised minutes later with a lucky header from a goalmouth scramble.

After that, Westminster took the lead with a chipped shot which went into the top corner of the net.

In the second half Bart's produced what was undoubtedly the best forty-five minutes of football for a very long time. The defence was impenetrable, in particular the "twin destroyers" Wall and Barrison proved too strong for the Westminster flanks, and coupled with this, James Knight, Abbott and Gore sealed up the middle and Hull in goal was given little to do.

Bart's equalised from a corner which Jerreat forced home and with the score at level pegging the scene was set for a grandstand finish. With only a few minutes to go, the ball came out of defence to Schlesinger who made a final pass for Skanderowicz to run through and score.

Secretary.

A. SKANDEROWICZ,
Secretary.

SAILING CLUB

The Club once again has the problem of getting the boats in order. This work will be completed soon and we should be able to arrange some new fixtures.

The United Hospitals' Team Racing event for the Harvey Wright Golden Bowl was held in November, but had to be called off due to gales on the second day. We, as the holders of this trophy, have been asked to organise the event in early Spring.

At the Annual General Meeting of the United Hospitals' Sailing Club, Bruce Noble was elected as Assistant Secretary. This should greatly facilitate the participation of Bart's in United Hospitals' events.

Results of U.L. League Matches at the Welsh Harp:

Jan. 14th. Bart's v Imperial College:

Team: John Shaw Tony Williams
Brendan O'Farrell Alan M. Saygood

In the first race the Bart's team had a bad start and were never able to close the gap between the two teams.

In the second race Tony Williams and an I.C. boat were over the line at the start and had to go back. The other I.C. boat got away into the lead and John Shaw was unable to catch up, however he finished second with Tony Williams 3rd.

Result: Bart's lost.

Jan. 21st. Bart's v St. Thomas's:

Team: Tom Moore Roger Chapman
Brendan O'Farrell Viv Gillis

In the first race Bart's finished 1st and 4th. Tom Moore had a close tussle with St. Thomas's at the starting line but managed to pull away by the second mark and was then well in the lead for the rest of the race. Unfortunately Roger Chapman fell behind and was unable to catch up.

The second race was most exciting, with Roger Chapman pulling well ahead of the other boats just after the start. The St. Thomas's boats, working as a very close team, tried their best to push Tom Moore into last place, but each time they challenged him, he managed to shake them off and finished a good second.

This match was a particularly good win for Bart's, as the St. Thomas's team has been very strong for the last few years.

Result: Bart's won.

B. D. O'F.

SWIMMING CLUB REPORT

Last term we entered two teams for the United Hospitals' Water Polo League, playing generally one or two evenings per week at the St. Mary's Hospital pool. Our First Team had been promoted to the 1st. Division, and therefore we met with tougher opposition than we were accustomed to. This, and the fact that some of our more experienced players had left the Hospital, probably accounts for our lack of success in the League. However, we have some potentially very able newcomers and with practice and determination we should do better in this term's Inter-Collegiate League at the U.L.U. pool.

Our successes include a win in the Royal Free Invitation Free-Style Relay, and a series of victories in the Inter-Collegiate K.O. Competition, leading us into the Final against Guy's (AGAIN!!). We went no further; however, we celebrated the achievement with a superb Indian curry. The K.O. team was made up of:

P. Weir D. Shearer C. Fenn
P. Durey D. Davies N. Fairhurst
A. Frane C. van Heyningen

We are planning a tour to Devon at Easter.

RUGBY REPORTS

Bart's Hospital 1st XV v. Old Rutlishians

Saturday, 3rd January

This was Bart's first game after the Christmas rest and we commenced by playing good straightforward Rugby. The inclusion of Rees as hooker giving us a very definite edge in the tight. The return of K. McIntyre to the back row was also very noticeable. Some aspects of this game are probably best forgotten in that Bart's failed to gain the cohesion that one would expect from a pre-Cup side. The final score was, however, 28 v. 15 to Bart's.

Team: Fairhurst, Rees, Boatman, Carroll, Britton, McIntyre, Mason, Smart, Hill, Cassidy, Jefferson, Smith, Lambert, May, Packer.

Bart's Hospital 1st XV v. Aldershot Services

Saturday, 10th January

Bart's played an excellent game, their forwards appropriating a great deal of both tight and loose ball. The return of Lloyd to the front row was especially welcome. The running in the backs was very good, both Laidlow and Smart crossing the line three times each. The performance of the back row was especially commendable, with McIntyre and Smart very good in both attack and defence. Mason put in some excellent breaks at the base of the scrum. Packer playing at full back had little to do but came into the line successfully on several occasions. The final score was Bart's 41 v. Aldershot Services 3.

Team: Gilmore, Lloyd, Fairhurst, Carroll, Britton (Captain), McIntyre, Mason, Smart, Hill, Cassidy, Laidlow, Lambert, Smith, May, Packer.

Bart's Hospital 1st XV v. Oxford R.F.C.

Saturday, 24th January

The game started off at great pace and before Bart's knew where they were, a kick ahead, after switching the direction of play several times, gained Oxford 3 points. Bart's swung back into action, pinning Oxford in their own twenty-five and shortly Cassidy, with his first kick of the match, put a neat penalty over. Oxford came back hard and again, using the kick ahead, and switching play, scored another three points. Further pressure from Bart's gained another penalty from Cassidy. There followed some excellent play from Bart's, who, under the exhortations of their Captain, Mark Britton, strove and acquired some more tight and loose ball. An excellent move started by N. Packer, catching the ball outside his twenty-five; going on to link up with Carroll, who sent Laidlow off on a 40 yard run, to be picked up by McIntyre as he, Laidlow came inside, Boatman nearly going over to score. More Bart's pressure followed and finally a well deserved try came from a four-man line out. Mason took the ball and crashed through the centre, eventually feeding McIntyre, who sent Laidlow over. The conversion was kicked by Cassidy. Towards the end of the first half, Cassidy notched another good penalty.

In the second half Bart's in the lead by 14 points to six continued to exert pressure, using the ball well and refusing to be bogged down in the scrum game. Ten minutes of Oxford pressure in the middle of the second half was held off, Lambert being successful with at least one in three kicks to touch. Bart's added another try when Lambert going up the left wing set Carroll up on the blind to link up with Britton, who in turn sent McIntyre in under the posts. Cassidy again converted. After several minutes Bart's pressure was again rewarded when a heel against the head by Lloyd gave Cassidy the opportunity to drop a fine goal. Eleven minutes from the end Bart's were unlucky to lose Mason with concussion and a broken nose but held on well. Oxford added another three points.

Result: 1st XV 22 v. Oxford R.F.C. 9.

2nd XV: Bart's, under the leadership of Davies and inspired by Fenton and May, were unlucky to lose 9-6.

3rd XV: The Third XV notched up a good victory over the Hongkong and Shanghai Bank.

Veterans: The Veterans also won.

THE RIFLE CLUB

Bart's v. Whitbread's

Lost 446 to 465

On December 23rd, we had an away match at the Brewery range. Although apparently sober until after the shooting, our team of four—Paul Ciclitira, Mike Kymer, John Johnson and Mike Pembrey failed to match the skills of the Whitbread team. Perhaps we could not stand up to the cold range, being used to our sauna bath conditions in the hospital basement.

Whitbread's, as usual, were excellent hosts providing a very well lubricated buffet supper. I hope they are prepared for defeat at the return match here on March 3rd.

Postal Teams

Although off to an erratic start, the new year has brought great improvements to the scores of both teams. I hope this is maintained.

The range has been busy recently with many members returning to shoot after a year's absence. We now have over sixty club members—and we always welcome new faces, even if they haven't seen a rifle before.

Bisley practices will be starting soon—watch the noticeboards.

March 10th. Proposed date for students v. staff .22 match.

March 14th. Club Hop in College Hall. Volunteers wanted to work behind the bar—names to John Johnson.

Please bring your friends to the Hop.

RANGE TIMES. Tuesdays, Thursdays 4.30—6 p.m.
Wednesdays 1.30—4 p.m.

Range will be open at other times by arrangement with a range officer—see notice boards.

GARETH TUCKWELL.

WESSEX RAHERE CLUB

The Wessex Rahere Club held two successful dinners during 1969.

The Spring Dinner took place in Exeter at the Rougemont Hotel.

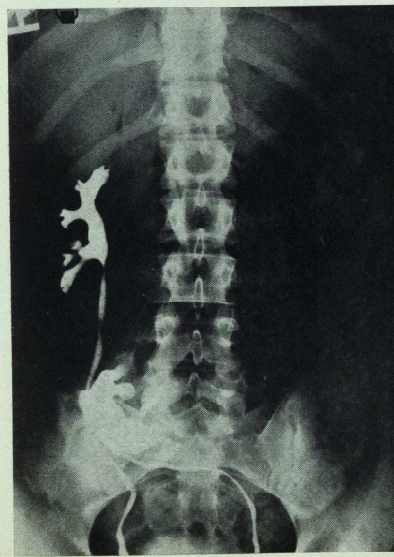
The Autumn Dinner was held at the Hole in the Wall Restaurant, Bath. This occasion was the 21st Anniversary of the Club and Dr. George Kersley, O.B.E., M.D., F.R.C.P., one of the founder members was present. The Guest of Honour Miss Rhona Jones, Matron at Bart's, spoke about modern nursing in the Hospital and the future role of the nurse. At the end of the Dinner the retiring Chairman Dr. Terry Glanvill presented the incoming Chairman Dr. Gordon Thompson with a Jewel of Office.

The Wessex Rahere Club covers the South West region of England and meets twice a year for a Dinner. Any Bartsmen moving to the South West should contact the Secretary, Dr. George Lloyd, Glen Hurst, Higher Downs Road, Babbacombe, Torquay, Devon.

IAN BAKER.

Spot The Lesion

By N. J. C. Snell



The patient presented with symptoms suggestive of acute appendicitis; he had severe colicky pains, with tenderness and guarding over the right iliac fossa, and he was nauseated. Appendicectomy was being considered, when the patient passed some blood stained urine.

An IVP was carried out: the plate is shown above.

1. What abnormality is visible on the X-ray?
2. What are the possible causes of the patient's pain?
3. What further investigations and treatment would you consider?

Case contributed by W. E. Snell, M.D., F.R.C.P.
Advice was kindly given by the Renal Unit.
episodes, nephrectomy should be considered.

1. Ectopic contralateral pelvic kidney—congenital abnormality. The renal pelvis is somewhat dilated, but the calyces are well cupped, and there is good renal function.
2. Possibilities hydronephrosis due to intermittent obstruction.
3. Plain X-ray—to eliminate renal calculus, MSSU culture and sensitivity. If there is infection the appropriate antibiotics are given, and a high fluid intake regime instituted. If there are recurrent episodes, nephrectomy should be considered.

ANSWERS:

DIARY OF EVENTS FOR MARCH

March 3rd

Film Society at 9.15. Physiology Lecture Theatre, Charterhouse Square.

March 7th

Swimming and Ladies' Clubs Hop. College Hall, Charterhouse Square.

March 10th

Lunchtime Talk. "The Matron's Role at Bart's—From the Middle Ages to Today". Talk by Dr. N. Kerling, Archivist. Clinical Lecture Theatre, 1.20. Exhibition in the Great Hall.

Bart's Music Society, Concert in the Great Hall at 7.45. Admission 4s. (wine included).

Film Society at 9.15. Physiology Lecture Theatre, Charterhouse Square.

March 11th

Wine Committee Smoker at 7.30. College Hall, Charterhouse Square.

March 12th

Wine Committee Smoker at 7.30. College Hall, Charterhouse Square.

March 13th

Wine Committee Smoker at 7.30. College Hall, Charterhouse Square.

March 14th

Rifle Club Hop. College Hall, Charterhouse Square.

March 17th

Film Society at 9.15. Physiology Lecture Theatre, Charterhouse Square.

March 18th

Pre-clinical term ends. (Summer Session begins 22nd April).

March 24th

Lunchtime Talk. Talk by Mr. J. W. Goody, Clerk to the Governors.

If any clubs or societies have events they would like printed in this column, would they give details to the News Editor one month prior to the date of publication of the *Journal* for that month.

NOTE

All material for the *May Journal* should reach the Editor, typed, no later than Tuesday, 24th March, 1970.

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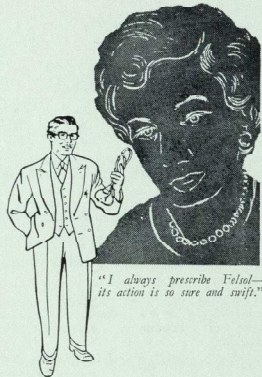
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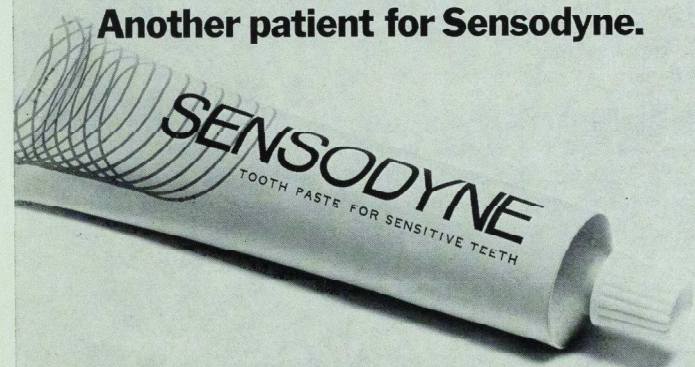
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Full details from

The Secretary H. A. Constable, M.R.C.S., L.R.C.P.,
Medical Protection Society, 50, Hallam St., London, W.1.

SAINT BARTHOLOMEW'S HOSPITAL JOURNAL

Journal Staff

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Editorial

A year or so ago the *Journal* carried an editorial entitled "Dirty Bart's" suggesting that it was high time that the more noticeable parts of the masonry were cleaned. Since then we have seen the cleaning of the Henry VIII gate, which now looks magnificent, and also (with less publicity) of the out-patients entrance; this last is much less impressive; it is blotchy, and looks oddly at variance with the surrounding stonework, instead of an integral part of the Hospital facade. Could not the money for this have been more gainfully employed in cleaning the curtain wall linking the Henry VIII gate with Surgery House? And surely money could be found to clean the whole of the Great Hall block, and the facades at least of the Gibb's East and West wings? The Great Hall is externally filthy, the stonework is crumbling, and deep grooves have been scored in the pillars by lorries entering the square (could they not use the Little Britain entrance?) Incidentally some of the delightful trompe l'oeil murals in the stairwell of the Great Hall are peeling badly, and have been for some time.

Of course, the Gibb's Wings and many other delightful parts of the hospital are due for demolition under the redevelopment plans (see the view day supplement 1967); but until this day dawns (which Heaven forbid) let us take pride in our buildings, the oldest and most beautiful of any London Hospital, and keep them clean and in good repair.

Letters to the Editor

HOUSE JOBS

Abernethian Room,
15th February, 1970.

The Editor, *St. Bartholomew's Hospital Journal*,
Dear Editor,

We would like to endorse the opinions concerning house jobs, expressed by the editorial and two letters in the February edition of this *Journal*.

We, the next generation of housemen, would like to stress the particular need for three changes to the present system of appointment to house jobs.

1. Increase in the number of Bart's circuit jobs.
2. Earlier announcement of jobs, so that those refused have adequate time to make alternative arrangements.
3. Free access to information of applications being made for particular jobs.

Yours faithfully,
The undersigned.

P. L. Alvey
Miss J. A. M. R. Almeyda
Miss H. S. Andrews
Miss B. C. Bailin
A. P. D. Bangay
P. G. Bartlett
Miss J. Begg
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P. Bowen-Roberts
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D. A. S. Lawrence
W. E. J. Leverton
B. Goldhill
P. J. Maddison
M. Madsen
J. Mackinnon
K. R. McIntyre
Mrs. P. J. J. Marsh
F. W. Martin
D. A. H. Matthews
D. K. Moynagh
P. B. K. Munden
M. W. Navin
A. J. Newman Taylor
C. J. Nixon
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J. H. Scarfe
J. F. Shaw
P. J. Simpson
J. S. Smythe
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Miss M. M. A. Stewart
D. R. Taylor
N. Thatcher
T. R. Tickner
J. S. M. Toms

K. C. J. Ho
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C. C. Hugh
C. G. E. Hunt
Miss A. J. J. Huskisson
G. N. L. Hyde
A. P. Isaac
R. D. James
C. A. N. Jarvis
A. J. Johnson
M. D. Johnson
N. Mel Johnson
R. M. Kahane
G. I. B. Kidd

H. R. Tubbs
J. H. Ussher
E. Vandyk
Mrs. G. M. Vanhegan
J. A. D. Vanhegan
Miss A. Wager
T. A. N. Waller
S. A. Whitehouse
C. G. Wickes
D. T. H. Williams
M. J. H. Williams
Mrs. C. Wilmshurst-Smith
J. M. Winner
M. A. Woolnough

The above 116 represent 92 per cent of the final year students at Bart's. Eight of these expressed reservations about one point or other.

THE DEAN REPLIES

20th February, 1970.

Dear Editor,

From the recent correspondence that has appeared in your columns it is evident there is a great deal of concern over the question of house appointments. At a recent meeting of the Teaching Committee Mr. Hill and I heard about this concern and undertook to outline details about house appointments and the procedure for selection. We had hoped to be allowed the courtesy of your columns to let students know about this.

In the interval, however, a sub-committee has been appointed by the Medical Council to consider this question and it is now due to report back both to the Medical Council and to the College Committee. It would seem wise, therefore, not to pre-empt the final decisions taken by these committees.

Perhaps I could add that the new recommendations will in all probability be enforced by the time of the next house appointments.

Yours faithfully,
J. S. MALPAS.

EYE CONSULTANTS

The Editor of *St. Bartholomew's Hospital Journal*
Dear Editor,

It seems worth recording in the *Hospital Journal* that during the last quarter of a century besides the two eminent eye consultants on the present Staff of the hospital Bart's men have been appointed to two out of the three Professorial Chairs of Ophthalmology in London; two are consultants at Moorfields Eye Hospital; the senior consultant posts at Oxford and Cambridge are held by Bart's men; and 18 others are or have been consultants at various provincial hospitals.

It is particularly remarkable that this feat has been achieved despite the endeavours of academic administrators so to amend the curriculum at Bart's that since 1945

the students' opportunity to be attracted to the precision of ophthalmic medicine, surgery and pathology have been drastically reduced to four 'voluntary' lectures and often less than 5 out-patient attendances. To my knowledge this is the least ophthalmic training given in the medical schools of the civilised world today.

H. B. STALLARD.

HOLIDAY CAMP—WITH A DIFFERENCE

Dear Editor,

I have been asked by the Suffolk branch of the British Red Cross to appeal for a few people to help run their annual holiday camp for the physically disabled in June this year.

The camp is at Hopton-on-Sea in Norfolk, and for one week (13th to 20th June) the owners reserve it exclusively for the Red Cross party. The guests are of all ages, and all have one thing in common—the inability to look after themselves. In general this is due to neurological disorders of one kind or another. For some of them this is the only occasion throughout the whole year that they are able to get out of their houses and meet other people.

I went to one of these camps a few years ago, and in spite of very little knowledge of medical or nursing problems I found it an enormously stimulating experience and came away greatly impressed by the work that the Red Cross do, particularly as it is an entirely voluntary organisation.

I hope some of your readers will be able to help with this worthy cause, and if any who are interested could contact me at College Hall I will gladly give further details. Incidentally, the cost of the week's stay is £2 and all travelling expenses are paid for.

GEOFF HYDE.
College Hall.

Announcements

Engagement

DAVIES—BROADBENT—The engagement is announced between Mr. R. A. Davies and Miss S. Broadbent.

Births

BAERSELMAN—On November 18, 1969, to Dr. Gillie (née Percival) and Sqn. Ldr. Jim Baerselman, a daughter (Kim), a sister for Jan.

DUDLEY—On February 16, to Dawn (née Russell) and Nicholas Dudley, F.R.C.S., a son (Bartholomew Nicholas), brother for James and Justine.

JUNIPER—On February 4, to Jane (née Griffiths) and Dr. Colin Juniper, a son, brother for Susan, Emma and Mark.

MCLEAN—On January 21, at Bart's, to Dr. and Mrs. I. E. D. McLean, a son.

Deaths

WILLIAMS—On February 7, Mr. Harry George Everard Williams, M.D., M.R.C.P., F.R.C.S.Ed., F.R.C.O.G., aged 77. Qualified 1917.

Bart's in the News

"The following article appeared under 'Point of View' on the Woman's Page of the Daily Telegraph on the 6th February 1970, and was written by the Deputy Editor of that page.

Bad luck in a way if you are knocked over, say, by a bus in London and carted off to one of the great teaching hospitals—say, Bart's. Wonderfully good luck in another way: for you will emerge from the anaesthetic, as if by magic, into an England which has elsewhere almost ceased to exist.

Here, as on some enchanted island, impervious to the decadent tide swirling all around, skill, knowledge and authority are still respected and obeyed. Cleanliness and order prevail; punctuality, regularity and discipline are firmly, though unobtrusively, maintained. The result of all this is, of course, happiness; not, as permissive drivellers nowadays would predict, frustration and misery.

Among the doctors and nurses you will find no shaking incoherent eye-rolling dropouts. The young doctors are short-haired, clean-nailed, friendly, competent, hard-working, humorous, sympathetic, unaffected, modest, thorough, jolly, beer-enjoying, conscientious—typically English in a way, alas, no longer typically English.

And the nurses are fresh and pink, polite, calm, quick, kind, cheerful, immaculate, feminine, meticulous, tidy, well-trained, gentle, tireless, selfless. All the virtues of the Victorian heroine are there, with unsqueamishness added for good measure.

How good it is to know that young doctors and nurses fall in love, marry and have issue! From this admirable stock, after inevitable catastrophe has overtaken all the rest, Britain may one day be repopulated, herself once more!"

WOLFE—On January 27, Lieutenant-Colonel Henry Laurence Wolfe, M.R.C.S., L.R.C.P., D.P.H., R.A.M.C. (Ret.), aged 58. Qualified 1936.

Appointments

Mr. C. A. C. Charlton, M.S. Lond., F.R.C.S. has been appointed consultant in genitourinary surgery to the East London hospital group.

Dr. C. D. Holdsworth, M.D., M.R.C.P., D.Obst. has been appointed consultant physician to Sheffield Royal Infirmary.

Change of Address

Dr. and Mrs. Grandage are now at 1, Douro Place, London, W 8

Mr. W. S. Shand is now at the Royal Berkshire Hospital, Reading, Berkshire.

Dr. D. A. D. Weir is now at Twillick, Boscastle, Cornwall.

Contact Dermatitis (Exogenous Eczema)

The term "dermatitis" indicates an inflammatory reaction of the skin and contact dermatitis indicates such a reaction caused by something in the external environment. The affected skin is eczematous and thus, is erythematous and may also show macules, papules, vesicles, and thickening as well as oedema.

Aetiology

1. *A primary irritant.* This is usually considered as being capable of giving rise to a response in almost anyone's skin provided it is in strong enough concentration and allowed to act for long enough. Strong alkalis and acids are strong primary irritants. Exposure to strong chromate solutions e.g. in the tanning or electroplating industry, may result in chrome ulcers of the skin. Soaps and detergents including "biological" detergents, diesel oil, petrol, thioglycollates (in permanent waves and depilatories)—may all give rise to an irritant contact dermatitis but are weaker primary irritants.

Dry skin is more vulnerable to contact dermatitis and is often a factor in housewife's dermatitis associated with the use of soap and detergents: these cleaning materials remove lipids from the skin and make chapped skin more dry.

2. *An allergen.* Here, the patient's skin is highly sensitive to some substance. The allergen is usually a chemical substance. Allergic contact dermatitis is a specific acquired hypersensitivity of the delayed type: it is mediated through a lymphocyte-borne antibody system. Allergens include nickel, rubber, epoxy resins, neomycin, framycetin, lipsticks, nail polish, matches, lanolin, chlorpromazine. It should be noted that many years of contact with a particular allergen may elapse before a person develops a contact dermatitis to this substance.

Atopic individuals are not more susceptible to allergic contact dermatitis but they are more likely to develop irritant dermatitis.

3. *Photosensitivity.* Some substances are transformed into primary irritants or allergens after exposure to ultraviolet or short-wave visible light. Such chemicals responsible for photo-dermatitis include coal tar, sulphonamides, germicides such as bithional and halogenated salicylanilides, and phenothiazine derivatives e.g. chlorpromazine, promethazine.

Apart from coal tar, these substances can cause contact dermatitis even in the absence of light exposure.

In 1961 and 1962 many cases of dermatitis occurred in Britain from use of toilet soap containing tetrachlorosalicylanilide, since withdrawn. However, Bowler (1968) has shown another germicide in current use, trichlorocarbanilide, to be a contact—and photo—sensitizer.

The history is important in the diagnosis of an allergic contact dermatitis. A history of relapse on exposure to the allergen and remission on removal is good evidence. Unfortunately, however, even if the patient is removed from the source of allergen his dermatitis may persist; it

becomes chronic. Allergens such as nickel and chromate are especially liable to induce chronicity. It is often difficult to distinguish between an irritant (toxic) dermatitis and an allergic dermatitis and allergy can sometimes be induced following a severe irritant reaction or by patch testing. It is unfortunate that once the skin is sensitised to one substance it is more vulnerable to other contacts.

As a general rule, children are less likely to develop allergic dermatitis than adults although irritant dermatitis is common.

Varieties of lesion and histology. The basic response to a contact substance is redness of the skin due to dilatation of superficial dermal capillaries. Loss of serum into the skin resulting in oedema or blister formation may follow. Histology reveals a perivascular lymphocytic infiltration, vasodilatation, and epidermal intercellular oedema (spongiosis). Although smears of the base of allergic vesicles may have a diagnostic increase in the number of basophils present (Shelley 1967), in practice, this is not usually of great help in distinguishing an allergic from an irritant dermatitis.

Patch testing. This is a method of specifically testing the patients in order to determine the cause of a contact dermatitis. Testing is usually limited to substances suspected after a careful history e.g. nickel, formalin, hair dye, leaves. A control patch must always be used. Patch testing should not be carried out in the presence of generalised eruptions since a positive reaction might result in a flare-up of the eruption. It is also important to dilute the testing substances sufficiently and with a proper vehicle, so that the testing material is not a primary irritant. There is general agreement regarding suitable concentrations of substances to use in patch tests in order to detect allergy.

The object of the patch test is to produce in miniature the original eruption. The material in question is applied to the skin of the back (usually) with some adhesive dressing and is removed at 48 hours and the skin observed; the site is again observed at 96 hours for delayed reactions. The dressing is removed before 48 hours if there is intense itching at a patch test site. Patch testing of patients receiving systemic corticosteroids does not significantly interfere with test results.

In our own department, over the period 1968-69, the most common substances to which patients were found to be allergic were in order of frequency, rubber compounds, nickel sulphate, dichromate, neomycin, and formalin.

Allergic contact dermatitis and some allergens. The eruption begins at the point of contact with the causative agent. In most cases, the eruption is first seen on the exposed part of the body. Eruption on the backs of the hands and anterior surfaces of the wrists should lead to an enquiry regarding occupation, contacts at work and the nature of hobbies whilst at home.

After a variable time acute localised eruptions tend to spread to new areas producing a secondary sensitisation eruption, even without additional exposure to the causal

agent, the distribution is usually symmetrical, and may be extensive.

Cosmetic dermatitis. Reactions may occur to constituents of hair and nail preparations, lipsticks, eye make-up, deodorants, antiperspirants, perfumes, etc. The presence of dermatitis on eyelids and sides of neck often typifies sensitivity to nail polish.

Cosmetics contain not only the active constituents but often dyes, perfumes and preservatives, any of which can give rise to a contact dermatitis. Azo dyes are replacing cosin-type dyes in lipsticks nowadays.

Paraphenylenediamine is responsible for most cases of hair-dye dermatitis and can also be the cause of clothing dermatitis. The para-grouping is found in some common local anaesthetics (e.g. procaine), sulphonamides, and some antihistamines and topical use of all these medications should be discouraged as they commonly cause dermatitis. Moreover, cross-sensitisation of one to the others is frequent.

Metal dermatitis. A dermatitis beginning on the ring finger, around the wrist, over ear lobes, under a suspender (Fig. 1) or down the middle of the back and sharply localised to one or more of these areas is almost certain to denote a sensitivity to nickel (or occasionally to cobalt) in metallic contacts at these sites. Sweating and pressure are important in the production of a nickel dermatitis.

Contact dermatitis from precious metals such as gold is rare.

Clothing dermatitis. When the initial eruption is widespread over the covered parts of the body it is often caused by some component of clothing, or it may be due to soap.

Clothing dermatitis is not usually caused by sensitivity to the fabric fibres themselves but due to sensitivity to nickel in buckles, clasps and zips, formalin-resins in crease-resistant fibres, anthraquinone or azo dyes used on synthetic fibres or furs, or chemicals used in processing leather or rubber.

Sensitivity to dyes in nylon socks, stockings or tights may result in an eruption on the dorsa of the feet and in the popliteal areas. The inner thighs may be involved in the case of stockings and tights. When the dorsa of the feet only are involved a shoe dermatitis may be simulated.

Formalin dermatitis. This can follow the wearing of drip-dry shirts; here with sweating urea-formaldehyde and melamine-formaldehyde break down producing formalin.

Patch tests with formaldehyde serve as a guide to textile dermatitis from finishes containing formaldehyde resins. Such resins are also used in industry in glues and plastics. Formalin may be contacted in its use as a preservative, disinfectant, and as a local application in certain skin conditions, e.g. plantar warts.

Chromate sensitivity can occur in cement workers, ink makers, through contact with leather, and in work using cutting oils.

Shoe dermatitis tends to be symmetrical sparing the toe webs and nails. Shoes normally have an upper (often lined with linen or paper) and a sole. The upper is commonly leather which is chrome or vegetable tanned and the sole is generally made of rubber or vegetable-tanned leather. Sensitivity to leather may indicate chrome sensitivity or sensitivity to some unknown allergen in vegetable tanned leather, and rubber sole sensitivity is usually due to a rubber accelerator, mercaptobenzthiazole (MBT). Leather

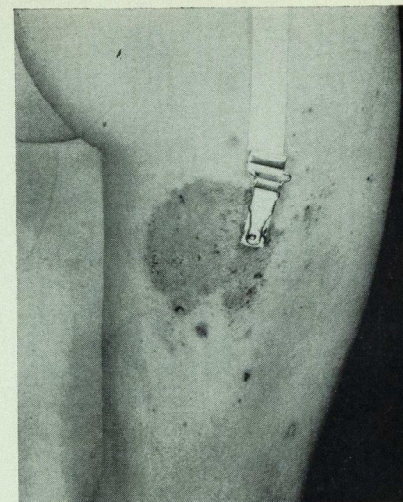


FIGURE 1. Nickel Contact Dermatitis.

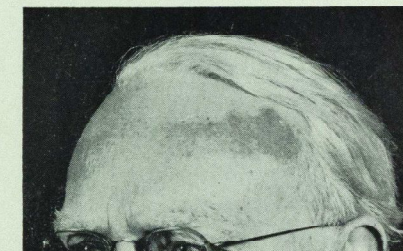


FIGURE 2. Leather Hatband Dermatitis.



FIGURE 3. Contact Dermatitis due to Rubber Gloves.

hatband dermatitis (Fig. 2) may be due to chromate in leather or other allergens.

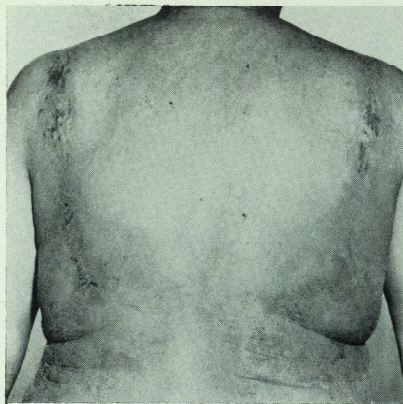


FIGURE 4. Contact Dermatitis due to Rubber in a Brassiere.

Rubber dermatitis. Some accelerators and anti-oxidants used in the rubber industry are potent skin sensitizers. They may be found in gloves (Fig. 3), footwear, brassieres, girdles and condoms, and rubber dermatitis is commonly due to an accelerator, in particular, a benzthiazole or a thiuram derivative. Dermatitis from Spandex yarn in brassieres (Fig. 4) and corsets is usually due to MRT.

Antibiotic and antiseptic dermatitis. Neomycin can worsen a blepharitis (Fig. 5), a chronic otitis externa or a varicose eczema by giving rise to allergic contact dermatitis - often the worsening effect is slow to appear because of the habit of prescribing topical corticosteroids with antibiotics. Framycetin is closely related to neomycin and often cross-sensitises. It is recommended that neomycin should not be prescribed in ointments or under occlusive dressings because the risk of inducing sensitisation is significantly less in creams, lotions or powders (Hjorth and Thomsen 1968). It should be mentioned here that reactions to topical applications such as creams and ointments may sometimes be due to constituents of the bases or preservatives rather than the main constituent.

Contact dermatitis to ampicillin and other penicillins occurs and nurses handling these drugs and streptomycin, may develop such a dermatitis.

Iodine, chloroxylenol, and cetrimide solution, as well as hexachlorophene occasionally can cause dermatitis.

Plant, match, and adhesive dermatitis. The commonest cause of plant dermatitis in England is *Primula* species particularly *P. obconica* (Fig. 6). This is a popular house plant introduced to Britain from China and the allergic dermatitis following contact with these plants is often acute and affects the face, neck, arms and hands. Typical cases have red blotches and linear blisters over forearms and hands. The allergen is contained in hairs on leaves, stems and flowers. *Chrysanthemum* may also give rise to dermatitis which is often more chronic than *primula* dermatitis. *Tulip* and *Narcissus* bulb dermatitis affect fingertips.



FIGURE 5. Contact Dermatitis due to Neomycin.



FIGURE 6. *Primula Obconica* A Common Cause of Plant Dermatitis.

Contact dermatitis to timbers e.g. Khaya woods from East Africa, may occur in furniture workers. Lichens, consisting of a fungus and alga in symbiosis, are seen commonly on roofs, walls, and trees, and can cause a dermatitis.

Dogger Bank itch is a dermatitis due to a seaweed-like organism, *Aleyonidium gelatinosum*, the sea-chervil, and it is prevalent among trawlermen.

Allergy to phosphorus sesquisulphide in the heads of "strike anywhere" matches may present at many sites e.g. localised contact dermatitis, usually of the thigh in men (adjacent to pockets where matches may be kept), otitis externa (matches used to clean out ears). There is no p.sesquisulphide in safety matches (Ive 1967).

Allergic sticking plaster reactions may be due to a resin, colophony, or to terpenes.

Treatment of contact dermatitis.

1. Remove suspected allergens or irritants from the environment. Stop the patient scratching as this tends to spread the eruption and may produce secondary infection.
2. Use a soap substitute such as Emulsifying Ointment, B.P.
3. Treat moist eruptions with Calamine Lotion, B.P. or 2% aluminium acetate lotion.
4. Local corticosteroid applications such as Hydrocortisone Cream, B.P.C. or Betamethasone Valerate Cream, B.P.C. are useful anti pruritic and anti-inflammatory preparations.
5. Oral antihistamines may be useful.
6. A short course of systemic corticosteroids or corticotrophin may be indicated in a severe contact dermatitis.
7. Consider a change of occupation if contact with a known causal agent cannot be avoided.
8. Commercial substances causing an allergic contact dermatitis in a sufficient number of contacts are usually withdrawn by the manufacturers. Workers in industry are protected in various ways e.g. gloves, masks, goggles, aprons, ventilation, so that sensitising chemicals are not brought into skin contact.

REFERENCES

- BOWYER, A. (1968) Photosensitivity to Trichlorcarbanilide. *Contact Dermatitis Newsletter* Lond. 4, 59.
- HJORTH, N. and THOMSEN, K. (1968) Differences in the Sensitising Capacity of Neomycin in Creams and in Ointments. *Brit. J. Derm.* 80, 163.
- IVE, F. A. (1967) Studies in Contact Dermatitis. XXI Matches. *Trans. St. John's Hosp. Derm. Soc.* 53, 135.
- SHELLEY, W. B. (1967) The Patch Test. *J.A.M.A.* 200, 874.

I am most grateful to the Dept. of Medical Illustration of St. Bartholomew's Hospital for preparing the illustrations.

JULIAN VERBOV, M.B., M.R.C.P.,
Senior Registrar,
Department of Dermatology

Boat Club Ball 1970

The rumours that three new boats with gold-plated oars are being purchased by the Boat Club following gigantic profits at this year's Annual Ball, were yesterday denied by a Club Official.

Perhaps that is an exaggeration, for a Ball should really be judged solely on the criterion of enjoyment, and since most people enjoyed themselves, it may be deemed successful.

The Beachcombers are a well polished, versatile group who have the rare ability to sense the mood of the dancers. Pat Venables and Toad Discotheque played the classic golden oldies which bring back lazy memories of past triumphs and disasters as well as a clever blend of more trendy releases. The jazz group were good while they lasted and the inevitable steel band thumped away happily.

The transformation of the foyer into a planetarium may not have pleased those who bumped their heads on arrival, but it was nevertheless a notable achievement. The charming period street scene replaced the recreation room's gloom and the bar became heaven and hell. However, candles and silent films do not make the A.R. become a cosy bistro.

The theatre-belts (of Ward Show fame) for the Cabaret sang a selection of lyrics of their own concoction which related to several members of the hospital staff, with George Blackledge in a variety of roles, some of them highly enviable and David Baker on the piano. Is this bawdy, raw humour with in-jokes the best choice of cabaret, with a 50% female audience and the large number of preclinicals who came to the Ball, unaware of the in-jokes and what about those at the back of the sardine-packed-audience (a common feature of Bart's Balls) who could neither hear, nor hardly breathe?

The food hamper (a Boat Club first) are the greatest stroke of genius since the invention of the plate and were once again excellent.

Thanks to all those members of the Boat Club who put so much effort into the preparation of the Ball. Although it did not have the zing and vitality of last year's, the question still remains, why did we all enjoy it so much.

OUR CORRESPONDENTS.

Nurses' Report

Following a fruitful opinion survey conducted on the patients, the Market and Opinion Research International have produced a questionnaire which all nurses are asked to complete; the subject is hospital conditions (with special reference to food and dining facilities). The results are eagerly expected. On the subject of food, the new 'Pay as you Eat' scheme for nurse's meals is being implemented on April 1st; its advent is being greeted with mixed feelings, but our correspondent assures us that the nursing staff will not fade away visibly.

At the recent A.G.M. of the S.N.A. a completely new committee was elected which is as follows:—

President	Miss R. M. Jones
Chairman	Virginia Phillips
Secretary	Rosalind Aspdin
Treasurer	Mary Fagan
other members	Jane Goldsworthy Christine Mellor

Gill Russell
Hilary Jones
Pru Coles
Erika Stevenson

How many people know that Bart's S.N.A. is the largest in the country?

Since receiving the report in the March Journal, the arrangements for the increases in nurses' salary have been altered so that one increase of 20% will apply. The date for the increase has been altered from April 1st to May 1st and recent reports suggest that the increase may in fact not come into force until even later in the year. However, whatever date for the increase is finally decided it will be backdated to April 1st 1970.

Until such time as
synthetic ACTH is produced
ACTHAR GEL
offers greater clinical benefits
than steroid therapy

NEW published evidence¹
demonstrates the clinical value
of high dosage

Acthar Gel
therapy

In an acute episode of bronchospasm which has failed to respond to conventional bronchodilator therapy two intramuscular injections of 200 units of Acthar Gel at a 72 hour interval can control the exacerbation and obviate the need for steroids.

After the initial response of the bronchospasm to one injection lasting up to 72 hours or more, 5 of the 12 patients required only one further injection of 200 i.u. of corticotrophin (Acthar Gel) before discharge from hospital, without requiring steroid therapy in any form.

80 NEW STRENGTH FOR LOW VOLUME INJECTION
Only Acthar Gel is available as an 80 i.u. solution which enables 200 units to be given in 2.5 ml.
units per ml. — convenient for doctor and patient



FULL INFORMATION IS AVAILABLE ON REQUEST

Reference: 1. Thorax (1969) 4:415

ARMOUR PHARMACEUTICAL COMPANY LIMITED EASTBOURNE SUSSEX JA64/AC/9



Gastroenterology Supplement

Introduction

The following four articles in this issue of the *Journal* and the two which will appear in the next volume together make up a supplement on various aspects of gastroenterology. The articles are not interrelated, but they do attempt to bring together, in a review form, some of the present fields of research in various parts of the hospital.

1. Intestinal handling of fluid and electrolytes by Gordon Sladen.
2. The relationship of Crohn's Disease to Sarcoidosis by N. H. Dyer and J. M. T. Willoughby.
3. The myenteric plexus and gut motility by Barbara Smith.
4. Disturbances of Bile Acid metabolism by Michael Clark.

Next Month:

- Mr. A. Edwards: Vascular abnormalities of the gastrointestinal tract.
Dr. R. Zeegan: Portal Systemic Encephalopathy.

The *Journal* would like to thank the Governors of the Hospital and the Medical College for their respective grants towards the Gastroenterology Feature in this issue.

No. 1 Intestinal Handling of Fluid and Electrolytes

An approach to the pathogenesis of fluid diarrhoea

by Dr. Gordon Sladen

The intestine handles large amounts of water and electrolytes, and disturbances of this function can result in severe diarrhoea and gross alterations of fluid, electrolyte and acid-base balance. The purpose of this article is to review what is known about intestinal absorption of water and the major intestinal electrolytes (Na^+ , K^+ , Cl^- and HCO_3^-) in health and in certain disease states and to discuss possible mechanisms of fluid diarrhoea production.

Approximately 9 litres of water and over 1,000 mEq Na^+ enter the upper intestinal tract in the course of 24 hours, coming mainly from the upper gut secretions poured out in response to each meal (Table I). Fluid and electrolyte losses in normal stools are, however, very small and the absorbing capacity of the intestine is enormous. Comparison of these losses in normal subjects and those with permanent ileostomy suggests that the small gut is the major site of absorption (Table II). Indeed, the colon in 24 hours absorbs only a few hundred ml. of water and 40-50 mEq of Na^+ and secretes small amounts of K^+ . The role of the different regions of the gastrointestinal tract will now be considered in turn.

Stomach and Duodenum

The stomach does not absorb water or electrolytes at all although isotopic exchange of labelled Na and water can occur. In this paper only net absorption from the lumen will be discussed.

By contrast, the duodenal mucosa is a very permeable structure and large movements of water and electrolytes can occur. Such movement may occur in both directions, usually in response to osmotic and concentration gradients between blood and luminal fluid. Relatively slow gastric emptying and duodenal equilibration means that the upper jejunum is normally "protected" from the rapid influx of non-isotonic solutions. Hunt and his colleagues have amassed a considerable body of evidence to support the concept that "osmoreceptors" in the duodenal mucosa regulate the rate of gastric emptying accordingly (Elias,

TABLE I. Approximate mean 24 hour input and losses of fluid and cations in the gastrointestinal tract of normal adults. From Wilson, 1962.

Input	Water	Sodium	Potassium
	ml.	m. eq.	m. eq.
1. Diet	1,500	150	40
2. Gastrointestinal Secretions	7,500	1,000	40
Output			
Faeces	150	10	20

TABLE II. Approximate mean 24 hour losses of fluid and cations in subjects with established ileostomy compared with normals. Ileostomy data from Kanaghinis, *et al.* (1963).

Water ml.	Faecal Loss	Ileostomy Loss
	ml.	m. eq.
Sodium m.eq.	150-200	400-500
Potassium m.eq.	10	60
	20	13

et al. 1968). Normally, therefore, after meals jejunal contents are isotonic and the major osmotically active solutes are Na^+ , Cl^- and HCO_3^- , irrespective of the nature of the meal (Fordtran and Ingelfinger, 1968). The products of digestion of carbohydrate and protein contribute relatively small amounts of osmotically active solute to the luminal contents.

If this gastroduodenal mechanism is impaired, as after various types of gastric surgery, then large volumes of hypertonic solution may enter the upper jejunum. This is not because gastric contents are normally hypertonic after meals; in fact the opposite is true. It is probably because the action of trypsin and amylase is extremely

rapid and high local concentrations of small saccharides and peptides can develop in the lumen in these circumstances. The jejunal mucosa is also very permeable to the bulk flow of water in response to osmotic gradients and large volumes of water may enter the upper intestine. This is a possible mechanism for the fluid diarrhoea that may occur in patients with the dumping syndrome and the syndrome can certainly be simulated by infusing hypertonic solutions directly into the jejunum of normal subjects (Sessions, *et al.*, 1962). However, other factors undoubtedly contribute to the pathogenesis of dumping and many questions remain unanswered. The characteristic episodic fluid diarrhoea of some patients after vagotomy is an altogether different clinical syndrome and is quite unexplained.

Rapid gastric emptying may occur in untreated thyrotoxicosis (Holdsworth and Besser, 1968) and may be an important factor in producing both fluid diarrhoea and mild steatorrhea. Intestinal transit is probably very rapid and contact time for absorption thereby reduced, but there is very little direct evidence to support this.

An excessively high rate of gastroduodenal secretion could theoretically be responsible for fluid diarrhoea, if the absorptive capacity of the intestine were exceeded. In the Zollinger-Ellison syndrome, excessive gastrin-stimulated production of acid and fluid is often associated with fluid diarrhoea. Apart from the increased fluid load per se, the low luminal pH may affect absorption, as will be discussed later. There is no known comparable syndrome of excessive bile or pancreatic secretion. However, a syndrome of pancreatic tumour and severe fluid diarrhoea is recognised, analogous to the Zollinger-Ellison syndrome, but not associated with gastric hypersecretion (Matsunoto, *et al.*, 1966). No hormone has been identified as yet, but it is tempting to postulate that pancreozymin or secretin might be responsible.

Jejunum

The jejunum is probably the major site of intestinal absorption of fluid and electrolytes. The intubation studies of Borgstrom, *et al.* (1957) suggested that the bulk of absorption of fluid was performed by the proximal 100 cm or so of intestine (equivalent to the proximal one third to one half of its length). In spite of the fact that jejunal contents consist largely of saline, the jejunum is virtually unable to absorb an isotonic solution of sodium chloride perfused through it at rates of 10-20 ml per minute (Figure 1), a rate that is probably in the physiological range after meals. Indeed saline is a very effective purge. However, small concentrations of glucose markedly stimulate the absorption of water and NaCl. A similar effect is shown by galactose (derived from the milk sugar, lactose) and maltose (the normal disaccharide end-product of starch hydrolysis), but not by the monosaccharide fructose (derived mainly from cane-sugar or sucrose)—Figure 2. Glucose and galactose share a common efficient transport mechanism, but fructose has a separate less efficient system. Therefore, there must be some specific coupling between the transport mechanism of glucose and that of Na⁺ and water. The effect of maltose supports the concept that jejunal absorption of Na⁺ and water is directly promoted by the absorption of the end products of luminal digestion. This must be very important in the body economy of fluid and Na⁺ after meals. There is some evidence, from animal studies, that certain amino-acids may have a similar stimulant effect.

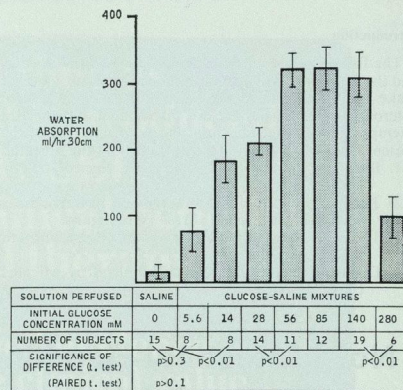


FIGURE 1. Effect of glucose on mean water absorption rates from a series of isotonic glucose-saline solutions perfused at 20 ml per minute through a 30 cm segment of upper jejunum in normal subjects, using a double-lumen tube. Bars indicate ± 1 S.E. of mean. From Sladen and Dawson (1969).

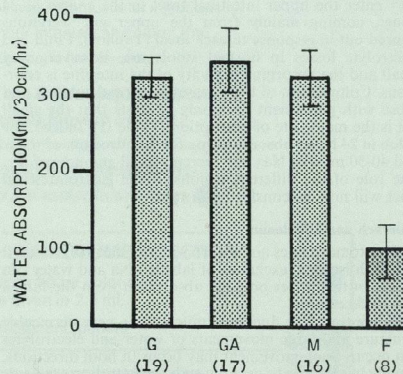


FIGURE 2. Mean water absorption rates from a series of isotonic sugar-saline mixtures, containing 2.5% sugar. G=glucose. GA=galactose. M=maltose. F=fructose. Bracketed numbers are the number of individuals studied. Bars indicate ± 1 S.E. of mean. Solutions perfused at 20 ml per minute through a 30 cm segment of upper jejunum in normal subjects using a double-lumen tube.

This important jejunal function is disturbed in a variety of pathological situations.

1. Adult coeliac disease. In untreated cases there is a curious dissociation between the absorption of sugars and water. Even if glucose is absorbed, albeit less well than normally, the jejunal mucosa secretes water, Na⁺ and Cl⁻ into the lumen (Fordtran, *et al.*, 1967). The explanation for this is uncertain, but it clearly cannot be simply related to the reduction in surface area. In spite of this, patients with coeliac disease do not usually suffer from fluid diarrhoea and there is some evidence to suggest that the absorptive capacity of the ileum for Na⁺ and water is increased (Schedl and Clifton, 1963).

2. Specific malabsorption syndromes. These may be associated with fluid diarrhoea, as in patients with disaccharidase deficiency or in the very rare cases of monosaccharide malabsorption. The unabsorbed sugar interferes with water and Na⁺ by virtue of its osmotic effect. This retains an appropriate volume of fluid in the small gut lumen, which passes on to the colon where the mucosal absorptive capacity may be overwhelmed. This is also the probable mechanism underlying the various types of "osmotic diarrhoea", for example that induced by magnesium sulphate and by lactulose (an unabsorbed disaccharide used in the treatment of hepatic pre-coma).

3. Cholera. This is the most dramatic and extreme example of jejunal mishandling of fluid and electrolytes. Massive quantities of fluid and sodium enter the intestinal lumen, predominantly through the jejunal mucosa. Yet this mucosa is almost normal histologically: the jejunal capacity to absorb glucose and certain other solutes is unimpaired: and, surprisingly, the coupling mechanism between sugar absorption and that of Na⁺ and water is intact. This has found important therapeutic application, in that net stool losses can be dramatically reduced by perfusing the upper intestine with various isotonic sugar-containing solutions (Figure 3). Glucose and galactose-containing solutions are remarkably effective, whereas fructose-containing solutions and simple electrolyte mixtures are ineffective. This agrees exactly with the physiological observations already discussed, and provides useful treatment in parts of the world where large volumes of sterile solutions for intravenous use are not readily available. It remains to be seen whether such treatment can ameliorate other types of severe fluid diarrhoea. An essential prerequisite would be an intact jejunal mechanism for absorbing sugar. For example, in acute infective gastroenteritis in infants there may be reversible malabsorption of glucose (Torres-Pinedo, *et al.*, 1966) and oro-gastric infusion therapy of this type would probably aggravate the condition.

Another important physiological function of the jejunum is the absorption of HCO₃⁻. Bile and pancreatic juice are bicarbonate-rich and alkaline, but the upper jejunum absorbs bicarbonate avidly and lowers the pH of luminal contents to less than 7.0. Mid-jejunal contents after a meal normally contain negligible amounts of bicarbonate (Figure 4). Furthermore, bicarbonate ions stimulate the absorption of water and Na⁺, both directly and by raising the luminal pH. Jejunal absorption of Na⁺ is markedly stimulated by small increases of luminal pH, at least in animal studies. The clinical significance of this is uncertain, but it may provide another explanation for the fluid diarrhoea of the Zollinger-Ellison syndrome, which is associated with a very low jejunal pH.

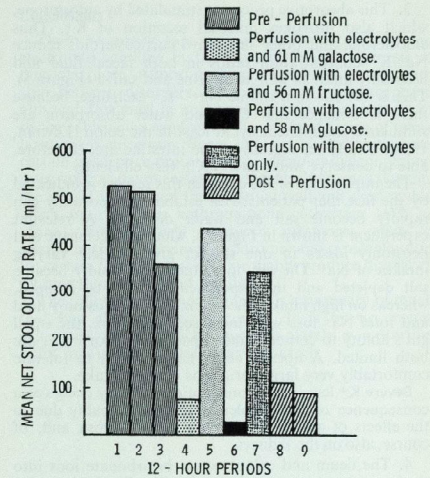


FIGURE 3. Effects of upper intestinal perfusion with various isotonic solutions on the mean stool flow in consecutive 12-hour periods during the course of an acute attack of cholera in a single patient. From Hirschhorn, *et al.* (1968).

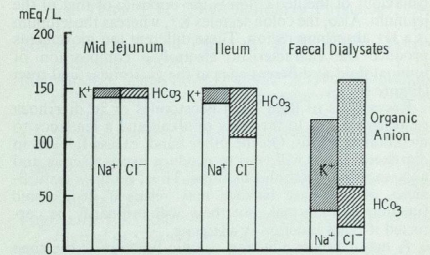


FIGURE 4. Composite ionograms showing typical composition of fluid sampled at mid-jejunum and ileum and of faecal fluid. Faecal data from Wrong, *et al.* (1965). Other data from Fordtran and Ingelfinger (1968).

Ileum and Colon

These regions handle fluid and electrolytes quite differently from the jejunum—

1. Absorption of Na⁺, Cl⁻ and water occurs independently of the presence in the lumen of sugars, amino acids or bicarbonate. Of course normally these substances will have been absorbed almost completely by the jejunum.

2. Electrolyte absorption is very efficient, in the sense that Na⁺ and Cl⁻ can be absorbed against very large concentration gradients. For example, these ions can be absorbed even if the luminal concentration is less than 40 mM NaCl. The jejunum, by contrast, cannot absorb from concentrations less than about 100 mM NaCl, even in the presence of glucose.

3. This absorptive process is stimulated by aldosterone, which also provokes mucosal secretion of K^+ . Thus aldosterone and other salt-active corticosteroids reduce Na^+/K^+ concentration ratios in both faecal fluid and ileostomy fluid, as well as in urine and saliva (Figure 5). This is not due to a simple Na^+-K^+ exchange, because there is evidence that Cl^- and water absorption are stimulated simultaneously, at least in the colon (Levitan, 1967). The lower regions of the intestine are, therefore, able to conserve water and $NaCl$ very efficiently.

The importance of the colon in this respect is indicated by the fact that patients with established ileostomy can rapidly become salt and water depleted. A relevant experiment is shown in Figure 6, which depicts urine and ileostomy losses in one subject given widely varying intakes of Na^+ . On very low intakes he rapidly became salt depleted and the experiment had to be stopped, whereas on high intakes the volume of the ileostomy fluid and total Na^+ loss were increased. Therefore, the small gut's ability to conserve and capacity to absorb Na_2 are both limited. A normal colon enables man to tolerate comfortably very large variations of Na^+ intake.

Severe K^+ loss in ileostomy patients usually occurs as a consequence of Na^+ depletion and is probably due to the effects of aldosterone on the ileal mucosa and, of course, also on the kidneys.

4. The ileum and colon secrete bicarbonate ions into the lumen in apparent exchange for Cl^- . Since Cl^- is also absorbed with Na^+ as the major obligatory anion, it follows that chloride conservation is especially avid in this part of the gut. This is the explanation for the hyperchloraemic acidosis which may follow operations to divert the urinary stream into the colon. In this respect the behaviour of the ileo-colon is the opposite of that of the jejunum. Also, the colon secretes K^+ , whereas the jejunum is a K^+ absorbing region. These different ion movements produce the characteristic electrolyte composition of luminal fluid at different sites in the gastrointestinal tract (Figure 4).

Excess loss of fluid from ileostomies or in diarrhoea represents a loss to the body of alkali and a tendency to metabolic acidosis. On the other hand, excess K^+ loss in diarrhoeal states will tend to produce hypokalaemia and an associated metabolic alkalosis. Thus, complex disturbances of acid-base balance may result if ileo-colonic function is abnormal, but these will ordinarily be corrected if renal function is adequate.

A major factor affecting colonic function is the time available for absorption. Small intestinal contents reach the caecum 1-4 hours after leaving the stomach and the colon has 24 hours or more, in which to perform its function of water and salt conservation. The rate of transit greatly affects this function and, if the rate of stool flow exceeds 3 litres in 24 hours, small intestinal contents will pass through the colon virtually unchanged. Indeed irrespective of the cause of the diarrhoea, sodium loss from the gut is roughly proportional to the rate of fluid loss, whereas potassium losses are relatively small and constant (Figure 7). Why then is hypokalaemia such a characteristic feature of chronic diarrhoeal states? In the case of certain mucus-secreting tumours of the large bowel the mucus contains very high concentrations of K^+ . In other disorders (for example, chronic laxative abuse) it is very likely that aldosteronism secondary to chronic Na^+ depletion is responsible, producing increased K^+ loss from gut and kidney. If so, the correct treatment should be to replace Na^+ rather than K^+ .

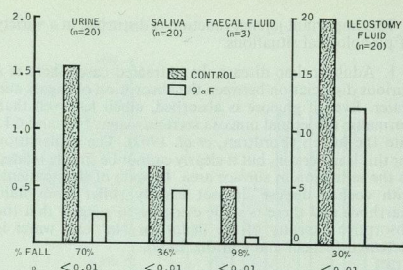


FIGURE 5. Effects of 9-fluorohydrocortisone on sodium/potassium concentration ratios in several biological fluids in man. Faecal fluid obtained by *in vivo* dialysis (Wrong, *et al.*, 1961). Other data obtained from Goulston, *et al.* (1963). n=number of subjects studied. Significance values obtained by Student's test on paired differences.

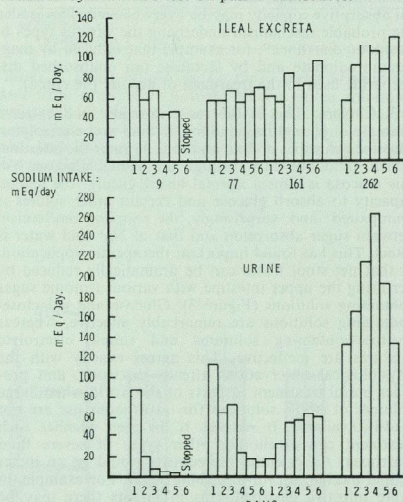


FIGURE 6. A study of daily sodium excretion in 1 subject with an established ileostomy. Four study periods on different daily sodium intakes. From Kramer (1966).

There are few known specific disorders of the ileo-colonic handling of fluid and electrolytes.

1. Extensive inflammatory disease, such as ulcerative colitis and Crohn's disease, is usually associated with a non-specific malabsorption of Na^+ , Cl^- , and water.

2. Bile salts in the colonic lumen can produce secretion of Na^+ and water instead of absorption and this can be prevented by the binding of the bile salts to the resin cholestyramine. The ileum is the major site of bile-salt reabsorption (refer to M. L. Clark's paper in the same issue), and, if this is resected or by-passed surgically, bile-salts can enter the colon in large amounts. This is believed to be responsible for the fluid diarrhoea seen in such pat-

ients and the symptoms may respond to cholestyramine treatment.

3. The very rare disorder known as familial chloride diarrhoea appears to be caused by a specific defect in the ileo-colonic handling of Cl^- and HCO_3^- . In this condition, large volumes of Cl^- -rich stool are associated with severe metabolic alkalosis and hypokalaemia. Very few cases have been studied in detail.

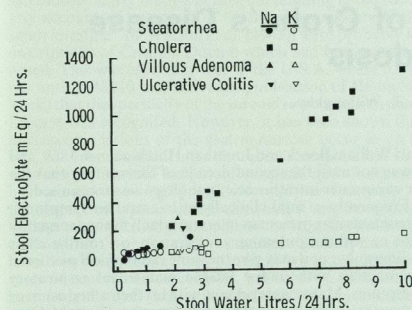


FIGURE 7. Relationship between daily losses of cations and fluid in a variety of diarrhoeal states. Data obtained from various sources. Figure taken from Fordtran and Dietschy (1966).

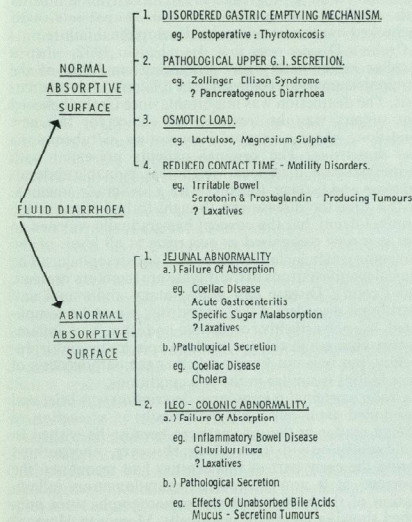


FIGURE 8. Summary—scheme for the various mechanisms which may lead to the development of fluid diarrhoea.

Conclusions

There are many gaps in our knowledge of fluid and electrolyte handling by the gut and the pathogenesis of fluid diarrhoea. Almost nothing is known of the relationship between disorders of motility and malabsorption, although this must be at the root of at least most cases of the irritable colon syndrome. The mode of action of many laxatives is uncertain. Some may interfere directly with certain absorptive processes (e.g. phenolphthalein derivatives, such as oxyphenisatin), whereas others may damage the neural plexuses of the intestinal wall and presumably affect motility (e.g. anthraquinone cathartics, such as senna). Endogenously produced substances, such as serotonin (in the carcinoid syndrome) and prostaglandins (in certain thyroid tumours), probably produce diarrhoea by directly affecting gut motility.

The following scheme (Figure 8) is a summary of much that has already been discussed. It is by no means exhaustive and should be regarded merely as a starting point for further discussion and research.

References

- BORGSTROM, B., DAHLQVIST, A., LUNDH, G. and SJOVALL, J. (1957) *Journal of Clinical Investigation*, 36, 1521.
- ELIAS, B., GIBSON, G. J., GREENWOOD, L. F., HUNT, J. N. and TRIPP, J. H. (1968) *Journal of Physiology*, 194, 317.
- FORDTRAN, J. S. and DIETSCHY, J. M. (1966) *Gastroenterology*, 50, 263.
- FORDTRAN, J. S. and INGELFINGER, F. J. (1968) *Handbook of Physiology*, Section 6—Alimentary Canal, Volume 3—Intestinal Absorption, p. 1457. Edited by C. F. Code. American Physiological Society, Washington, D.C.
- FORDTRAN, J. S., RECTOR, F. C., LOCKLEAR, T. W. and EWTON, M. F. (1967) *Journal of Clinical Investigation*, 46, 287.
- FORDTRAN, J. S., RECTOR, F. C. and CARTER, N. W. (1968) *Journal of Clinical Investigation*, 47, 884.
- GOULSTON, K., HARRISON, D. D. and SKYRING, A. P. (1963) *Lancet*, II, 541.
- HIRSCHHORN, N., KINZIE, J. L., SACHAR, D. B., NORTHROP, R. S., TAYLOR, J. O., AHMAD, S. Z. and PHILLIPS, R. A. (1968) *New England Journal of Medicine*, 279, 176.
- HOLDSWORTH, C. D. and BESSER, G. M. (1968) *Lancet*, II, 700.
- KANAGHIS, T., LUBRAN, M. and COGHILL, N. F. (1963) *Gut*, 4, 322.
- KRAMER, P. (1966) *Journal of Clinical Investigation*, 45, 1710.
- LEVITAN, R. (1967) *Journal of Laboratory and Clinical Medicine*, 69, 558.
- MATSUMOTO, K. K., PETER, J. B., SCHULTZE, R. G., HAKIM, A. A. and FRANCK, P. T. (1966) *Gastroenterology*, 50, 231.
- SCHEDL, H. P. and CLIFTON, J. A. (1963) *Nature*, 199, 1264.
- SESSIONS, R. T., REYNOLDS, V. H., FERGUSON, J. L. and SCOTT, H. W. (1962) *Surgery*, 52, 266.

SLADEN, G. E. and DAWSON, A. M. (1969) *Clinical Science*, 36, 119.

TORRES-PINEDO, R., RIVERA, C. L. and FERNANDES, S. (1966) *Journal of Clinical Investigation*, 45, 1916.

WILSON, T. H. (1962) *Intestinal Absorption*. W. B. Saunders Co., Philadelphia and London. p. 134.

WRONG, O., MORRISON, R. B. I. and HURST, P. E. (1961) *Lancet*, I, 1208.

Two additional review articles recommended for further reading.

FORDTRAN, J. S. (1967) *Federation Proceedings*, 26, 1405.

SHIELDS, R. (1968) *Scottish Medical Journal*, 13, 122.

No. 2 The Relationship of Crohn's Disease to Sarcoidosis

by N. H. Dyer and J. M. T. Willoughby.

It is now 30 years since Professor Hadfield, working in the Pathology Department of this hospital, produced the first accurate description of the histological features of Crohn's Disease. He recognised that the pathological changes began in the submucosa and that the earliest and most specific change was lymphadenoid hyperplasia, with the formation of non-caseating epithelioid granulomata. Infiltration by chronic inflammatory cells, mostly lymphocytes and plasma cells, was secondary and non-specific but capable of swamping the granulomata, for the cases in which these were few or seemingly absent were also characterised by the most extensive inflammatory infiltration. He confirmed earlier observations that the granulomata were very similar to those occurring in sarcoidosis, and speculated on the possibility of a relation between the two diseases. However, sporadic investigations over the years along these lines have proved disappointing. At the same time progress in the understanding of the pathogenesis of Crohn's Disease has been minimal and the condition has remained refractory to treatment. In these circumstances we think that it would be helpful to re-examine the evidence for a connection with sarcoidosis hoping to determine whether the analogy is still worth pursuing or whether progress would be better served by its abandonment.

The "sarcoid" granuloma closely resembles the tubercle, forming a discrete focus of large, pale, macrophage-like "epithelioid" cells clustered within a narrow rim of lymphocytes. Frequently one or more giant cells of Langhans type, with multiple peripheral nuclei, occupy the centre of the granuloma. Either epithelioid or giant cells may contain inclusions, such as the laminated crystalline collections of metabolic debris known as "Schaumann bodies" or the star-shaped "asteroid bodies". Many, but by no means all, true tubercles are distinguished from this basic pattern by the presence of acid-fast bacilli and the special form of central necrosis known as caseation. However, in beryllium disease and certain fungal reactions, such as Farmer's Lung, the granulomata are closely similar to those of sarcoidosis. The same may often be said of those seen in Crohn's Disease, though here there is a greater variation in size and shape and a tendency to looser aggregation of the epithelioid cells. In over a quarter of cases these cells infiltrate the submucosa in a disorganised manner that has given rise to the term "diffuse granulomatous inflammation".

Of all the disorders mentioned above only sarcoidosis and Crohn's Disease remain of unknown aetiology. Sarcoidosis was first described as a skin disease independently by

Carl William Boeck and Jonathan Hutchinson in 1869, and it was not until the second decade of this century that the far commoner intrathoracic pathology was recognised.

Frequently so mild clinically as to cause no symptoms, sarcoidosis may present as bilateral hilar lymphadenopathy with or without pulmonary infiltration, on routine chest radiography; or it may give the same radiological picture in conjunction with undue fatigue and trivial respiratory symptoms. Many cases present with erythema nodosum or polyarthritides, and some degree of superficial lymphadenopathy is common. The natural history is generally one of spontaneous resolution, often complete within six months to two years, though treatment with steroids may be needed to minimize the effect of certain dangerous complications, such as uveitis and hypercalcaemia. Deaths attributable to sarcoidosis are rare, occurring mainly in those whose pulmonary disease progresses to extensive hyaline fibrosis with resulting cor pulmonale, and in patients with unchecked hypercalcaemia who develop renal failure.

Crohn's Disease was first described in 1932, when a peculiar inflammatory and strictureing condition of the terminal ileum was recognised to be different from tuberculosis. The distinction was important, since Crohn believed that surgery was the treatment of choice for this new condition, whereas surgical intervention in tuberculosis was disastrous. The original patients presented with abdominal pain, diarrhoea, weight loss, palpable abdominal mass and fistulae, together with a low-grade anaemia. At this time the disease was thought to be limited to the terminal ileum, but the concept has gradually widened so that it is now recognised as occurring at all levels of the alimentary tract, including the mouth and oesophagus. The clinical manifestations of the disease are therefore protean, and Crohn's Disease can mimic many abdominal and nutritional disorders. Like sarcoidosis, it may be complicated by polyarthritides, erythema nodosum and inflammatory changes in the eye, such as episcleritis and iridocyclitis, but it is not known whether the pathogenesis of these lesions is similar in the two conditions.

Crohn's original microscopic description was brief and mentioned giant-cells only incidentally as a reaction to foreign matter in the gut, perhaps because he wished to avoid confusion with tuberculosis. However, other authors during the early part of this century had recognised the existence of a non-tuberculous granulomatous inflammation of the bowel, and microphotographs were published showing Langhans giant-cells. Moreover, Homans and Hass (1933) described two cases of ileitis, one of whom had sarcoid-like granulomata; and they suggested that

there might be two forms of the disease: granulomatous, i.e. analogous to sarcoidosis, and non-specific. This suggestion has been taken up by several other authors over the years, but no-one has been able to demonstrate any difference in the clinical features and natural history of patients with different histological forms of Crohn's Disease. Our own observations tend to confirm that there is no difference clinically or in the result of skin tests.

It appears that involvement of the bowel is rare in sarcoidosis. Early reports of this, culminating in the scholarly account of two cases of "isolated sarcoidosis of the small intestine" by Watson *et al.* (1945), were probably all descriptions of Crohn's Disease which had been misdiagnosed. This was especially true in the U.S.A. where it was not until 1948 (10 years after the publication of Hadfield's work) that the specificity of the sarcoid resection in Crohn's Disease was recognised. However, it has been shown that microscopic lesions of the gastric mucosa occur in up to 10% of cases of typical intra-thoracic sarcoidosis and very occasionally sarcoid lesions of stomach and duodenum have presented clinically with ulceration and stenosis. In the absence of typical disease elsewhere it may be difficult to determine whether granuloma of the stomach should be called Crohn's or sarcoid—or neither. Sarcoid tubercles have been described in the appendix in one or two reported cases of generalised sarcoidosis, but otherwise there have been no really well-substantiated claims for clinical sarcoidosis of the distal small bowel or large bowel.

In their epidemiology, as in their clinical features, the two conditions display contrasting patterns. While Crohn's Disease is rare in Negroes, sarcoidosis in the United States occurs far more frequently and more floridly in Negroes than in Caucasians. Among Caucasians, Crohn's Disease occurs with disproportionate frequency in Jews, but sarcoidosis shows no such tendency. Crohn's Disease is found somewhat more often in males in the United States (this situation being, however, reversed in British series), while there is a clear preponderance of females with sarcoidosis everywhere. Both conditions have an appreciable familial incidence, yet only once have they appeared together in a family.

Boeck (1916) was the first to note that patients with sarcoidosis, whose lesions so closely resembled tuberculosis under the microscope, were apparently even less reactive than normal subjects to intracutaneous injections of tuberculin. Since that time it has become well recognised that sarcoid patients show relative allergy to antigens, such as extracts of *Candida* and mumps virus, or chemical agents, such as 2,4-dinitrochlorobenzene (DNCB), to which the subject previously exposed may be expected to respond with a cell-mediated (delayed) hypersensitivity reaction. The same characteristic has been sought in patients with Crohn's Disease. From figures given by Blackburn, Hadfield and Hunt (1939) it appears that about 50% of cases failed to respond to 10 units of old tuberculin, a small dose, but one which might have been expected to elicit a reaction in a higher proportion of the general population in the days before streptomycin. Phear obtained similar results in 1959, Fletcher and Hinton (1967), however, incorporated a sex-and-age-matched control group in their study and concluded that tuberculin reactivity in Crohn's Disease showed no significant difference from that of an equivalent section of the normal population. Binder, Spiro and Thayer (1966) tested the reaction of patients with Crohn's Disease to oidiomycin (*Candida* extract) and to trichophyton and mumps virus extracts, and again found a normal pattern. By contrast, Verrier Jones *et al.* (1969)

were able to induce hypersensitivity to DNEB in all their normal controls but in only 60% of patients with Crohn's Disease. Two-thirds of the patients who did not react to DNCB also failed to develop delayed hypersensitivity to 100 units of old tuberculin, while only one-third of those reacting to DNCB were negative to tuberculin. Preliminary results of a survey in which we have taken part suggest that, while Crohn's patients as a group do not differ significantly from the general population in respect of the proportion reacting to tuberculin, energy may be more complete in individual patients classified as 'non-reactors' than in their unaffected counterparts. Positive reactions to *Candida* extract were obtained with approximately normal frequency.

Another characteristic of 80-90% of patients with active sarcoidosis is that they respond to the intracutaneous injection of a particulate suspension of sarcoid tissue by developing a lesion with typical sarcoid histology. Kveim (1941) was the first to give a comprehensive account of this reaction, although six years earlier Williams and Nickerson (1935) had injected a preparation of sarcoid tissue into four patients with the diagnosis of sarcoidosis, and noted in all of them an inflammatory skin reaction which did not occur in normal controls. The clinical features they described for these patients are enough to make it virtually certain that two of them in fact suffered from Crohn's Disease. Until recently the only documented attempts to repeat this observation were in a few small groups of patients, and none of the 39 cases so tested gave a positive reaction. We have been co-operating in a similar study dealing mainly with cases of clinically active Crohn's Disease (Mitchell *et al.* 1969), and have obtained 50% positive reactions in our first 48 patients. The difference between our results and those of previous workers might be explained by differences in the antigens used, but our antigen had already been shown to be specific for sarcoidosis, and we have since used another which gives the same pattern of reactivity in our patients.

The clinical and epidemiological objections to considering Crohn's Disease and sarcoidosis different aspects of a single entity are virtually unanswerable at present. Furthermore, if there is any depression of delayed hypersensitivity in Crohn's Disease it is either less intense or more selective than that found in sarcoidosis, although the alternative explanation that the term "Crohn's Disease" covers a multitude of entities, one of which is very close to sarcoidosis and the others unconnected, is an attractive one. It should also be emphasized that typical and even florid sarcoidosis may occur in an individual who has no defect of delayed hypersensitivity. Moreover the finding of a positive Kveim test in Crohn's Disease questions whether any of the obvious differences between Crohn's Disease and sarcoidosis can rule out a pathogenetic relationship between them. It will now be necessary to study pathological material from patients with Crohn's Disease, both to find a skin test of diagnostic value and to develop the concept of cross-reactivity with sarcoidosis. Despite intensive physical and chemical analysis the active principle of Kveim material, and its relation to the aetiology of sarcoidosis, has not yet been identified; and this may well be an essential preliminary to investigations of the pathogenesis of both sarcoidosis and Crohn's Disease by induction of experimental disease in animals.

An important related approach has already been made by Mitchell and Rees (1969) who have succeeded in transmitting sarcoidosis to mice by injection of human material. The similarities that we have described between Crohn's

Disease and sarcoidosis suggest that a similar experiment with Crohn's material would be worth performing, and if the transmission of Crohn's Disease could be achieved, not only would there be a clearer understanding of the relationship between the two conditions, but the whole question of an infectious agent as the cause of Crohn's Disease would be re-opened.

References

- BINDER, H. J., SPIRO, H. M., THAYER, W. R. Delayed Hypersensitivity in Regional Enteritis and Ulcerative Colitis. *Amer. J. dig. Dis.* 1966, *11*, 572.
 BLACKBURN, G., HADFIELD, G., HUNT, A. H. Regional Ileitis. *St. Bartholomew's Hospital. Rep.* 1939, *72*, 181.
 BOECK, C. Nochmals zur Klinik und zur Stellung des benignen Miliar-Lupoids. *Arch. Derm. Syph., Wien*, 1916, *121*, 707.
 CROHN, B. B., GINZBURG, L., OPPENHEIMER, G. D. Regional Ileitis, A Pathologic and Clinical Entity. *J.A.M.A.* 1932, *99*, 1323.
 FLETCHER, J., HINTON, J. M. Tuberculin Sensitivity in

Crohn's Disease. A controlled Study. *Lancet* 1967, *2*, 753.

- HADFIELD, G. The Primary Histological Lesion of Regional Ileitis. *Lancet*, 1939, *2*, 773.
 HOMANS, J., HASS, G. M. Regional Ileitis: A Clinical, Not a Pathological Entity. *New Eng. J. Med.* 1933, *209*, 1315.
 KVEIM, A. En Ny og Spesifik Kutan-reaksjon ved Boecks Sarcoid. *Nord. Med.* 1941, *9*, 169.
 MITCHELL, D. N., CANNON, P., DYER, N. H., HINSON, K. F. W., WILLOUGHBY, J. M. T. The Kveim Test in Crohn's Disease. *Lancet* 1969, *2*, 571.
 MITCHELL, D. N., REES, R. J. W. A Transmissible Agent from Sarcoid Tissue. *Lancet* 1969, *2*, 81.
 PHEAR, D. N. The Relation between Regional Ileitis and Sarcoidosis. *Lancet* 1958, *2*, 1250.
 VERRIER-JONES, J., HOUSLEY, J., ASHURST, P. M., HAWKINS, C. F. Development of Delayed Hypersensitivity to DNCB in Patients with Crohn's Disease. *Gut* 1969, *10*, 52.
 WATSON, C. J., RIGLER, L. G., WANGENSTEEN, O. H., MCCARTNEY, J. S. Isolated Sarcoidosis of the small intestine simulating non-specific ileo-jejunitis. *Gastroenterology* 1945, *4*, 30.
 WILLIAMS, R. H., NICKERSON, D. A. Skin Reactions in Sarcoid. *Proc. Soc. exp. Biol. Med.* 1935, *33*, 403.

No. 3 The Myenteric Plexus and Gut Motility

by Dr. BARBARA SMITH.

Physiology and Anatomy

The smooth muscle in the wall of the alimentary tract exhibits two different types of movement. One, known as segmentation, is myogenic and not dependent on nervous control. It consists of irregular contractions whose main function is to mix the gut contents and to present a varying surface to the mucosa for absorption. The second type, which is much less frequent, consists of regular contraction and dilatation occurring in such a manner that the bolus is propelled analwards, usually for only a short distance. This movement is under the control of the myenteric plexus which lies between the two muscle coats. If this plexus is destroyed or is congenitally absent, onward propulsion either fails altogether or is very limited. If the bolus remains in a given segment which is continually being refilled from above, the pressure within that segment rises and it is stretched. This is a stimulus to the myogenic movement of segmentation and in the small intestine produces marked haborborymi. Another secondary effect of the smooth muscle denervation is gross hypertrophy. This muscle thickening is far greater than that seen behind an organic obstruction and its aetiology may be twofold. The hypersegmentation could result in a simple work hypertrophy and there is also some evidence that denervated smooth muscle hypertrophies, whereas of course denervated skeletal muscle atrophies.

Anatomically the myenteric plexus consists of a rather geometrical nerve fibre network with ganglia at the points of junction. The ganglia contain neurones of two types distinguished by their affinity for silver salts, argyrophil and argyrophobe. The argyrophobe cells are the most numerous, they are strongly cholinergic and give branches

to the muscle fibres (fig. 1). The argyrophil cells are few and give branches only to other neurones, either in the same or adjacent ganglia. Axons from argyrophil cells do not leave the plexus. From these anatomical observations it seems probable that the function of the argyrophobe cells is to produce the acetyl choline which fixes the muscle fibres, whereas that of the argyrophil cells is to coordinate this

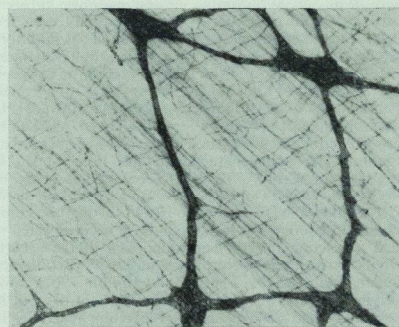


FIGURE 1. A cholinesterase preparation of the myenteric plexus of a normal rabbit. The neurones are represented by rings as the nuclei do not stain. The nerves supplying the muscle fibres are seen on this type of preparation but they are not argyrophil.

activity in such a way that propulsion occurs. Loss of argyrophil cells alone can thus produce the same clinical effect as total neuronal fall-out and the two types of cells cannot be distinguished on standard histological preparations.

When examining the plexus histologically in man it is necessary to cut thick sections parallel to the plexus and not transverse to the lumen. In this way alterations in the anatomy of the plexus, variations in the neuronal and Schwann cell population and changes in the morphology of nerve cells and axons can be seen and there is no undue sampling error. One large 100 μ section cut parallel to the gut wall, shows as much plexus as 200 μ sections cut transverse to it.

Chagas' Disease

Chagas' disease is due to destruction of the myenteric plexus by the *Trypanosoma cruzi*. It occurs mainly in South America where there are 7 million cases, but it is seen in the southern United States and occasionally in Europe, although it is not of course acquired there. It is important because we know its basic pathology and it can be used as a pattern for other conditions which do occur in Europe and whose mode of production is less well understood. Achalasia of the cardia, hypertrophic pyloric stenosis, megaduodenum and megacolon all occur in Chagas' disease.

Achalasia of the Cardia

Achalasia of the cardia is a condition which comes on in middle life and affects the sexes equally. Clinically it presents as dysphagia and a feeling that food is sticking behind the sternum.

In the early stages of the condition there is no physical obstruction. The dysphagia is the result of the failure of the gastro-oesophageal segment to relax in response to stretch and rise of pressure in the ampulla. This reflex is lost because the nervous pathways transmitting it are destroyed in the same way as the knee-jerk is lost if the posterior roots are divided. The oesophagus will empty under gravity if the column of fluid within it is high enough to overcome the resistance of the contracted segment. As a result of the denervation, the muscle coats both in the body of the oesophagus and at the sphincter hypertrophy and this makes the clinical condition worse. Eventually the ballooned thick-walled oesophagus becomes J-shaped and by kinking, presents a physical obstruction to the passage of food.

Histologically all the argyrophil and most of the argyrophobe cells are lost from the myenteric plexus in both the body of the oesophagus and in the gastro-oesophageal segment. The ganglia are replaced by Schwann cells among which surviving extrinsic sympathetic fibres can be seen (figs. 2 & 3). One or two cases have been reported, probably early ones, in which there have been lymphocytes present in the ganglia but in most cases the pathologist is only looking at scars of a previous insult from which little can be gleaned of its aetiology.

Hypertrophic pyloric stenosis

In the normal individual the pyloric canal is open most of the time. It fills with gastric contents largely by gravity and then contracts as a single unit squirting half its contents into the duodenum and half back into the stomach. Reflux is prevented not entirely by pyloric closure but also by the fact that brisk duodenal peristalsis sweeps away the bolus immediately. The pylorus thus acts as a gastric emptying

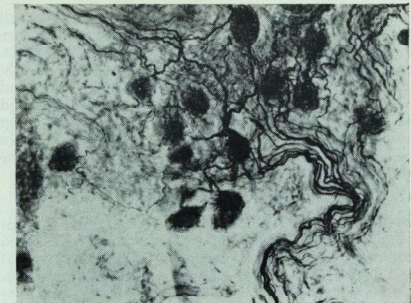


FIGURE 2. A myenteric ganglion from normal oesophagus. The neurones in this region are globular and the thick, even parasympathetic fibres can be seen. Silver preparation.

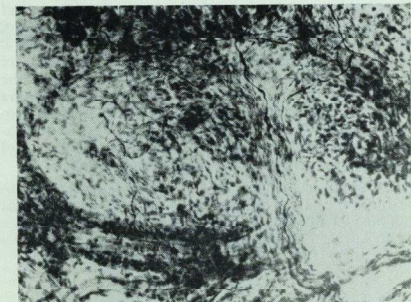


FIGURE 3. A myenteric ganglion from the oesophagus of a patient with achalasia of the cardia. All the argyrophil cells have gone and the ganglion is replaced by Schwann cells and debris. The residual varicose nerve fibres are sympathetic. Silver preparation.

pump. The stomach will empty without it or it would not be possible to do a gastrectomy, but the issuing stoma must be large.

Hypertrophic pyloric stenosis usually presents at the age of about 3-4 weeks. Babies who are going to develop the condition have a pylorus of normal calibre at birth. Over the first few weeks of life the muscle of the pyloric canal thickens, probably because it is denervated and obstruction occurs. Histologically the pylorus contains no argyrophil cells although standard histological preparations are normal.

Enteromegaly

Lesions of the myenteric plexus occurring in the small intestine may be congenital or acquired. The former are usually in the proximal bowel producing megaduodenum. Acquired lesions are uncommon but they can cause sub-acute intestinal obstruction for which the surgeon can find no cause at laparotomy. The affected segment is dilated and enormously thickened feeling almost wooden on palpation. The contents of the loop are stagnant and therefore become infested with bacteria. It is thus a variety of the blind-loop syndrome and may cause malabsorption.

Hirschsprung's disease

This is a congenital condition in which a distal segment of large bowel of varying length is thick-walled and contracted. Above this is a segment which is thick-walled and dilated. If the distal segment is long the clinical presentation is of intestinal obstruction coming on soon after birth, if shorter, it is of a child with a pot-belly and wasted buttocks and if very short, as an adult with intractable constipation.

The distal contracted segment has no neurones and the myenteric plexus is replaced by a network of unmyelinated nerve trunks (figs. 4 and 5). A number of single nerve fibres can be seen in the muscle coats which have been shown to be adrenergic. They are probably extrinsic sympathetic fibres which would normally have terminated around myenteric neurones but in their absence have grown on. The proximal dilated portion has no normal myenteric plexus either. The unmyelinated fibre trunks which are seen lower down are still present although some of the axons are fragmented. A few abnormal neurones are present which are dark and mis-shapen and have no processes (fig. 6). Above all, where attempts at plexus formation are seen, the anatomical connections are incorrect and therefore it cannot be functioning normally (fig. 7).

The symptoms of Hirschsprung's disease would seem to be due to the partial obstruction of the contracted segment combined with peristaltic failure above, so that there is not enough drive to force the solid faeces through the constriction.

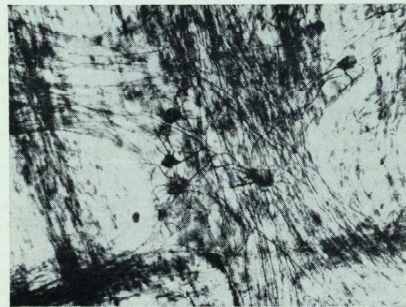


FIGURE 4. A myenteric ganglion from normal colon. The neurones are multipolar and some are multi-axonal. This is not seen in the central nervous system. Silver preparation.

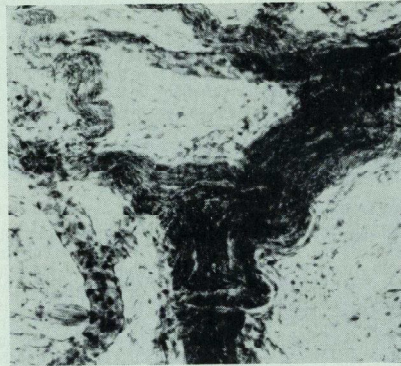


FIGURE 5. A section from the myenteric plexus region of a patient with Hirschsprung's disease. The plexus is replaced by a network of unmyelinated nerve trunks and there are no neurones. Silver preparation.

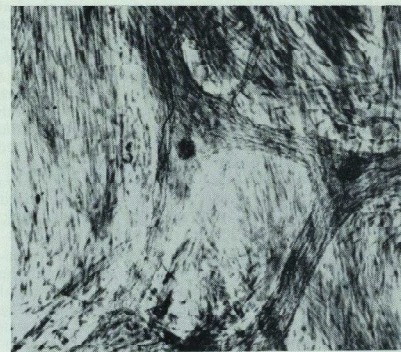


FIGURE 6. The myenteric plexus from the dilated segment of the colon of a patient with Hirschsprung's disease. Poorly formed neurones are appearing in the angles of the unmyelinated trunks. Silver preparation.

Organic constipation

Constipation is such a common symptom, nearly all of it functional, that it is very difficult clinically to sort out the very small number of cases in which the cause is due to myenteric plexus damage. They do, however, occur and some help in the diagnosis can be obtained from physiological studies, particularly of ano-rectal reflexes. Histologically they show loss of argyrophil cells, Schwannosis and occasionally an inflammatory reaction in the plexus.



FIGURE 7. The myenteric plexus from the dilated segment of the colon of a patient with Hirschsprung's disease. The plexus is irregular and untidy and a retraction ball is present. Silver preparation.

No. 4 Disturbances of Bile Acid Metabolism

by MICHAEL CLARK.

Bile Salt Metabolism

Bile acids formed from cholesterol in the liver are normally excreted in bile as a peptide conjugate of glycine or taurine. These bile acid conjugates, the bile salts, are more soluble in the acid pH normally found in the upper small intestine. In man the glycine conjugate predominates over its taurine counterpart (3:1). The bile acids synthesised in the liver are the primary bile acids and in most species these consist mainly of the trihydroxy acid cholic acid and the dihydroxy acid chenodeoxycholic acid (Fig. 1).

Following excretion of the bile salts into the gut at least 95% are reabsorbed. Investigations to date including those in man show that absorption of bile salts occurs primarily in the ileum by an active transport system which is specific for the conjugated bile salts. Normally in the small intestine very little unconjugated bile acids are present, the small amount that is together with a small percentage of conjugated bile salts can also be absorbed by passive diffusion in the jejunum. Thus only a small proportion of the conjugated bile salts that are excreted in bile are unabsorbed in the small intestine and pass into the caecum. In the large intestine bacterial hydrolysis of the peptide bond as well as dehydroxylation of the steroid nucleus occurs. These secondary bile salts that are formed consist of unconjugated and conjugated deoxycholic acid as well as the insoluble monohydroxy acid lithocholic acid (Fig. 1). Two thirds of the bile acids that reach the colon are reabsorbed; colonic absorption is slow due to the formation of insoluble metabolites, binding with particulate matter and the lack of an active transport system. Thus only a very small proportion of the bile salt pool is excreted in the faeces.

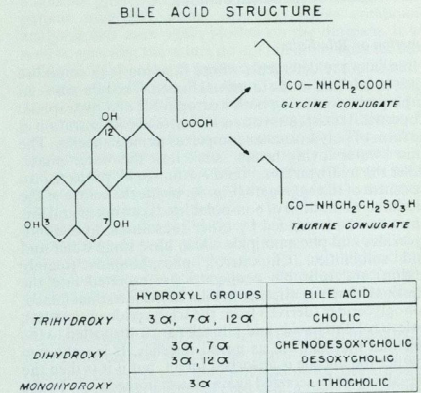


Fig. 1. The bile salt structure.

Following absorption the bile salts are returned to the liver (entero-hepatic circulation) where they are reconstituted as necessary and once again excreted into the bile (Fig. 2). This effective reabsorption means that a bile salt pool of 3,000 mgm/day can be circulated 6-8 times daily according to the nature of the diet, with a synthesis of less than 300 mgm/day to compensate for faecal loss.

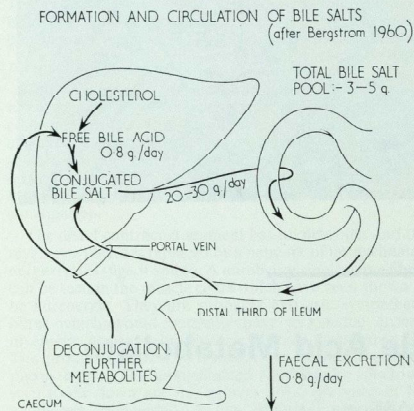


Fig. 2. The formation and circulation of bile salts (enterohepatic circulation).

Function of Bile Salts

Bile salts are detergents whose function is to solubilise lipids in bile and in the intestinal lumen. The bile salt is an amphipath, possessing both hydrophobic and hydrophilic properties. It exists above a certain critical concentration in the form of polymolecular complexes termed micelles. The ionic "water loving heads" stick into the water phase, whilst the hydrocarbon, "lipid loving back" projects into the centre of the aggregate (Fig. 3). Inside the centre of the micelle solubilisation of non-polar lipids can occur and this centre can be expanded by other substances, like monoglycerides and phospholipids which have some water and lipid solubilities. Cholesterol, phospholipids (mainly lecithin) and bilirubin conjugates are excreted into the intestinal lumen as micelles in bile. In the intestinal lumen, monoglycerides (derived from the triglyceride in the diet), cholesterol, fatty acids and bile salts are transported to the intestinal mucosal cell as mixed micelles. It is unknown whether the micelle is absorbed intact, but if it is then the bile salts must be secreted again almost immediately by the absorptive cell. The upper jejunum is the site of lipid absorption but as stated earlier the bile salt itself is absorbed mainly in the ileum.

With this brief review of bile salt metabolism and function we are now in a position to study the various clinical syndromes that have been ascribed to bile salt abnormalities.

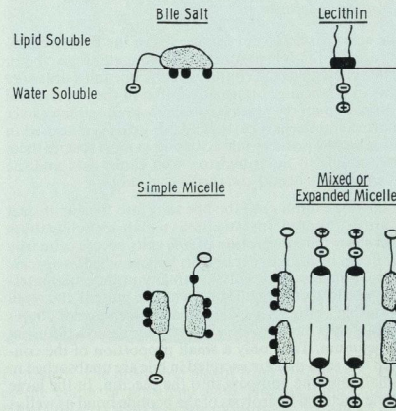
- Disturbances of bile salt function can be divided into:—
1. A failure of excretion of bile itself.
 2. Decrease in reabsorption of bile salts, this then lead-

ing to a decreased bile salt pool and also to the passage of bile salts into the colon.

3. The alteration of bile salts by bacteria and finally
4. The role of bile salts in the production of gall stones.

It has been recognised for many years that biliary obstruction where no bile is excreted leads to steatorrhoea. This steatorrhoea is due to the lack of bile salts in the intestinal lumen with the consequence that mixed micelles are not formed and hence dietary lipids are not in a physical form in which they can easily be absorbed. It should be pointed out that although some absorption of fatty acids takes place in the absence of bile salts, non-polar lipids such as cholesterol, vitamin D, K and E are not absorbed to any appreciable extent. It is therefore essential that these vitamins be given parentally or as a water soluble analogue in long standing biliary obstruction. Since the bile acids are not excreted they accumulate in the blood and later they are deposited in the skin. It is the presence of these bile acids in the skin which produces the pruritus of chronic biliary obstruction.

As discussed bile salts are normally very efficiently reabsorbed, but when the ileum is diseased (as in Crohn's disease) or if it has been removed bile salts are not reabsorbed completely and consequently the bile salt pool is depleted. It has been shown that hepatic synthesis of bile acids can compensate for up to a 20% loss of bile acids in the faeces, after this synthesis falls behind and the bile salt pool is reduced. A consequence of this loss of bile salts is a decreased concentration in the upper jejunum (normally 2-10mM) with impairment of micelle formation and hence steatorrhoea. A similar effect to ileal resection can be achieved by orally administering mannitol or by the drug cholestyramine. Mannitol produces diarrhoea with



(After SMALL, 1967.)

FIGURE 3. Schematic representation of bile salt and phospholipid (lecithin) molecules, as they would lie at an oil-water interface. A simple micelle, composed of two bile salt molecules, is shown together with a mixed phospholipid-bile salt micelle.

greatly increased transit time and thus less time for absorption. Cholestyramine is a resin which binds bile salts in such a way that they are unavailable to the transport system. Both of these agents therefore reduce the bile salt pool in a similar way to ileal resection. Cholestyramine has been used in the treatment of chronic obstructive jaundice where pruritus is severe, the bile salts that are excreted in the bile are sequestered and unavailable for absorption and recirculation. Cholestyramine has also been used to lower serum cholesterol since by increasing bile acid excretion it promotes cholesterol degradation to bile acids with a consequent lowering of the serum cholesterol which although partly overcome by increased synthesis it is not entirely so.

In addition to lowering the jejunal concentration of bile salts ilectomy means that more bile salts are passed into the colon for excretion. In the colon bile salts both conjugated and unconjugated have been shown to promote sodium and water secretion, this being one of the causes of the diarrhoea seen when the ileum is diseased or has been removed. Cholestyramine, which binds bile salts, prevents this effect on the colonic mucosa and so it can be logically used as a treatment for this diarrhoea. By its action however it further promotes bile acid excretion and so any accompanying steatorrhoea may be made worse. In practice it has been found that patients with diarrhoea and a faecal fat of less than 20 G per day benefit, while those with a faecal fat greater than 20 G usually increase their steatorrhoea to an extent that their symptoms are worse. The free bile salts that are produced in the colon are partially absorbed giving rise to high blood levels of free bile acids. In experimental animals feeding lithocholic acid has been found to produce both cholelithiasis and liver damage, whether this is important in human disease is unknown.

The third common clinical entity associated with bile salt derangement is due to bacterial overgrowth of the small intestine. Normally the small intestine is relatively sterile although it has now been recognised that during food ingestion mouth bacteria are frequently carried down into the upper bowel. In a number of disease states particularly with associated blind loops and jejunal diverticula, an overgrowth of bacteria occurs often with anaerobic organisms. A number of these organisms and especially bacteroides are capable of deconjugating and dehydroxylating bile salts so that free bile acids such as deoxycholate are produced. Originally it was thought that these free bile acids had a direct toxic effect on the intestinal mucosa thereby producing steatorrhoea. The more recent evidence however seems to suggest that it is the reduction in the conjugated bile salts, as a result of bacterial hydrolysis, rather than the presence of free bile acids which is the significant factor. The steatorrhoea that is found in these patients can therefore be prevented by the use of antibiotics to sterilise the upper gut. Unfortunately in many cases recolonisation of the upper gut occurs as soon as the antibiotics are stopped and the symptoms then recur.

It is the last and possibly the most common of all the conditions that the role of bile salts is most controversial. As stated earlier it has now been clearly established that bile salts are necessary to solubilise cholesterol and other water insoluble substances in bile. Lecithin helps to some extent but on their own phospholipids are not able to keep cholesterol in solution in bile. The relationship between the solubilities of these compounds can be represented on the three sides of a triangular co-ordinate diagram.

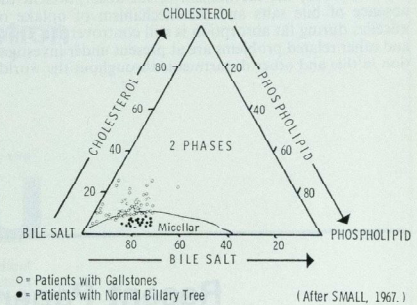


FIGURE 4. Phase diagram showing composition of bile taken from normal subjects and bile taken from patients with cholesterol gallstones O.

If various concentrations of all three are plotted in this way it can be shown that critical levels of each are required for a micellar phase to be present. If bile is taken from the biliary tree of normal individuals and the concentrations of cholesterol, phospholipids and bile salts measured they can be plotted on this type of phase diagram (Fig. 4). In a patient with normal bile it has been found that the values for each substance falls in the area which constitutes a micellar phase. On the other hand, if bile is taken from a patient with gall stones and the above compounds analysed and once again plotted on the diagram, it will now be seen that the values do not fall in the micellar zone, rather they fall into a two phase zone where crystallisation of cholesterol occurs. This therefore in physical terms is an explanation for the precipitation of cholesterol in bile. Unfortunately to extend this knowledge into a theory for the causation of gall stones is unjustified. The changes described above may be only a secondary phenomena due to the presence of the stones themselves and even if they are not we still have no knowledge as to what precipitates these changes. It is possible that bacteria alter the permeability of the gallbladder wall, thereby affecting the reabsorption of water and hence the concentration of the other constituents. To summarise then, although a change in the concentration of bile salts will produce precipitation of cholesterol this still does not explain the cause of gall stones.

In conclusion, much has been learned about bile salts and their function over the last few years. Knowledge of their chemical structure and their physical properties are essential to the understanding of their role in pathological situations. The role of these agents in producing steatorrhoea in biliary obstruction and ilectomised patients is well established. The role of bacteria in producing deconjugation has not however been finally resolved. In patients with blind loops it seems clear that the concentration of conjugated bile salts intraluminally varies considerably throughout the day so that data consisting of only one measurement, often fasting, must be viewed with caution. The way in which changes in bile salt concentration are produced, possibly bringing about gall stone formation, is

still under investigation. Finally much physiological data is still needed, the mechanism of fat absorption in the absence of bile salts and the mechanism of uptake of micelles during fat absorption is still controversial. These and other related problems are at present under investigation in this and other departments throughout the world.

Review articles suitable for further reading:

1. HOFMANN, A. F. and SMALL, D. M. Detergent properties of bile salts: Correlation with physiological function. *Ann. Rev. Medicine*, 1967, 18, 333.
2. HOFMANN, A. F. Clinical implications of physicochemical studies in bile salts. *Gastroenterology*, 1965, 48, 484.
3. HOFMANN, A. F. A physicochemical approach to the intraluminal phase of fat absorption. *Gastroenterology*, 1966, 50, 56.
4. HEATON, K. W. The importance of keeping bile salts in their place. *Gut*, 1969, 10, 857.

Recent Papers by Bart's Men

- BRODRIBB, A. J. M. Vertebral aneurysm in a case of Ehlers-Danlos syndrome. *Brit. J. Surg.*, 57, 1970, pp. 148-151.
- BUCK, A. C. and COOKE, E. Mary. The fate of ingested *Pseudomonas aeruginosa* in normal persons. *J. med. Microbiol.*, 2, 1969, pp. 521-525.
- CHALSIKEY, L. J. Aneurysm of the posterior tibial artery due to tibial osteochondroma. *Brit. J. Surg.*, 57, 1970, pp. 151-154.
- CHAMBERLAIN, D., (and Leinbach, R.). Electrical pacing in heart block complicating acute myocardial infarction. *Brit. Heart J.*, 32, 1970, pp. 2-5.
- COOKE, E. Mary. *see* BUCK, A. C., and—
- DAWSON, A. M., *see* EDWARDS, A. J., and others.
- DOBREE, J. H. Simple diabetic retinopathy. Evolution of the lesions and therapeutic considerations. *Brit. J. Ophthalmol.*, 54, 1970, pp. 1-10.
- , *see also* TAYLOR, Enid, and—
- EDWARDS, A. J., and others. Experience with coeliac axis compression syndrome. *Brit. med. J.*, Feb. 7, 1970, pp. 342-345.
- FLEMING, J. S. Saccular aneurysms of left ventricle. *Brit. Heart J.*, 32, 1970, pp. 76-80.
- GREENWOOD, D. and O'GRADY, F. A comparison of the effects of ampicillin on *Escherichia coli* and *Proteus mirabilis*. *J. med. Microbiol.*, 2, 1969, pp. 435-441.
- HAMILTON, J. D., *see* EDWARDS, A. J., and others.
- HAVARD, C. W. H., (and others). Adrenal function in hypothyroidism. *Brit. med. J.*, February 7, 1970, pp. 337-339.
- *HECTOR, Winifred E. Closed-circuit television for schools of nursing. *Nursing Times*, Jan. 29, 1970, pp. 136-138.
- *HUDSON, C. N. Acquired fistulae between the intestine and the vagina. *Ann. Roy. Coll. Surg.*, 46, 1970, pp. 20-40.
- HUNTER, R., and others. Impaired glucose tolerance: a late effect of insulin shock treatment. *Brit. med. J.*, Feb. 21, 1970, pp. 465-468.
- HURN, B. A. L., *see* HUNTER, R., and others.
- KERSLEY, G. D. Long-term use of allopurinol in the treatment of gout. *Ann. rheum. Dis.*, 29, 1970, pp. 89-92.
- KNILL-JONES, R. P., (with others). Controlled trial of amantadine hydrochloride in Parkinson's disease. *Lancet*, Feb. 7, 1970, pp. 259-262.

NICOL, W. D., *see* EDWARDS, A. J., and others.

O'GRADY, F., *see* GREENWOOD, D., and—

*PARKER, R., and others. The quantitative determination of hypoxanthine and xanthine ('Oxypurines') in skeletal muscle from two patients with congenital xanthine oxidase deficiency (xanthinuria). *Biochem. J.*, 116, 1970, pp. 317-318.

*SIMON, G. Radiology and chronic airways obstruction. In McLaren, J. W., Ed., *Modern Trends in Diagnostic Radiology* 4, 1970, pp. 21-38.

SNEDDON, W., *see* PARKER, R., and others.

SPECTOR, W. G., *see* WILLOUGHBY, D. A., and—

TAYLOR, Enid, and DOBREE, J. H. Proliferative diabetic retinopathy. *Brit. J. Ophthalmol.*, 54, 1970, pp. 11-18.

TAYLOR, G. W., *see* EDWARDS, A. J., and others.

THROWER, W. R. Aggression in horses. *Proc. Roy. Soc. Med.*, 63, 1970, pp. 163-167.

*TODD, I. P., (and others). Chagas disease of the colon and rectum. *Gut*, 10, 1969, pp. 1009-1014.

*VERBOV, J. Contact dermatitis from Miranols. *Trans. St. Johns Hosp. Derm. Soc.*, 55, 1969, pp. 192-195.

*WATSON, B. W. Urat-1: Instrument for crushing calculi in the urinary bladder by electro-hydraulics. *Bio-med. Engineering*, Jan., 1970, pp. 21-22.

WATTS, R. W. E., *see* PARKER, R., and others.

*WILLOUGHBY, D. A., and SPECTOR, W. G. The effect of some immunosuppressive agents on the inflammatory response in rats. *Excerpta Medica International Congress Series No. 188. Proceedings of an International Symposium—Inflammation Biochemistry and Drug Interaction—Como, Italy, 11-13 October, 1968*, pp. 29-33.

*—, (and others). A study of the anti-inflammatory action of pyridinolcarbamate (Anginin). *Excerpta Medica International Congress Series No. 201. Proceedings of the First International Symposium on atherogenesis, thrombogenesis and pyridinolcarbamate treatment, Tokyo, 19-22 May, 1969*, pp. 133-142.

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A Brief Sojourn on the Amazon

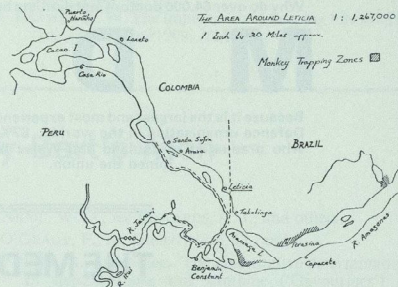
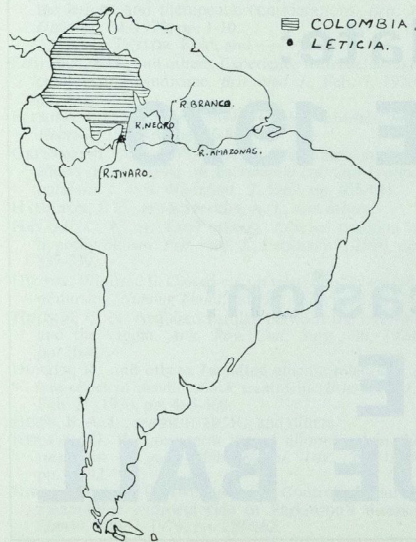
By David Gundry

THE SCENE.

During the months of July and August of 1968 we did our thing on the Amazon. Before I am expelled from the denizens of St. Bartholomew's for unprofessional conduct, I should add that 'we' were four medical students and a singing botanist escaping from the Ivory towers and exam-ridden atmosphere of Cambridge. What better thing to do than to chase monkeys in the jungle on the banks of the Amazon where Colombia extends her territory to meet that of Peru and Brazil?

Our 'raison d'être' was the study of atherosclerosis in Squirrel Monkeys, made possible by the absence of a death penalty for the murder of these animals. In order to become sponsorable we gave ourselves the grand title of Cambridge Medical Expedition to Colombia, had some paper heading and a prospectus printed, and gained four patrons to put their name to the project and by so doing to lend a much needed air of responsibility to the venture. By these means we were able to raise money and free transport from Manchester to Venezuela on a luxurious Shell oil tanker. Our transport from Venezuela to our destination on the Amazon at Leticia was less peaceful as we struggled from plane to plane, each one more primitive than the last.

On arrival at Leticia we sheltered from the rain for a while, but feeling that more was expected of us than this we spurred to action and contacted the animal trader and local 'king', an American by the name of Mike Tsalickis. We



negotiated a working agreement with Mike, who, in return for the green backs for which he revealed a marked predilection, provided us with a room for the laboratory, a canoe and guide for our botanist, and the use of his boats, boatmen and an interpreter to enable us to make contact with the monkey trappers down river in Brazil.

Squirrel monkeys are trapped in large numbers by the river people and are exported to the United States where they have become very popular in medical research. The greatest numbers are caught in the dry season which occurs during the period from July to September. During July and August we made trips down into Brazil to contact the trappers and collect monkeys, which owing to the time limitations of the study had to be in our hands within four hours of capture, tranquilized and maintained in this state during the trip back to our laboratory, where we could take the blood samples we required. These trips would last from two to three days, the nights being spent in houses of the river people. We worked in the laboratory dissecting the animals, and managed by various devious means to make several journeys to Indian villages on the main river and some of the major tributaries, to reconstruct a dilapidated house on the island of Santa Sofia where huge numbers of Squirrel monkeys are breeding, and therefore provide an excellent population for study, and finally to study the human fauna which became very active on all the numerous fiestas which commemorate events of great national local or personal importance. Like... any excuse will do!

THE RIVER.

During our stay on the Amazon we got to know a stretch of the river for about forty miles above and below Leticia, in addition to exploring a thirty mile stretch of the Jivari, the largest tributary in the area. The Amazon in this region is between half and one mile in width, providing the only open space in the middle of the forest. The depth of the



River Traders

river is also variable, safe navigation requiring a great degree of skill in the dry season when sand banks shift their position from year to year, and the level of the water may fall over a foot in one day. With skill and attention the Root Line sea-going steamers are able to travel all the way to Iquitos in Peru, a further five hundred miles above Leticia, while we on the other hand, managed to ground our canoe in what appeared to be mid-stream.

We were initially most impressed by the speed with which the thick brown water was flowing. It surged past at such a rate that we had to allow over twice as much time to travel upstream as we required to cover the same distance on the way down.

The boat which we used for most of our time on the Amazon was a heavy fifteen foot canoe which had obviously been built many years before and was well past its prime. It had been carved out of a single tree trunk, and leaked rapidly despite emergency repairs and hole-plugging with mud, matchsticks and a patent butter-toilet paper corking compound. Following our initial alarm at the leaks when they first made their presence felt, we soon became accustomed to the continuous bailing. On the monkey trapping voyages we used one of Mike's more powerful craft.

The Amazon is notorious for the violence of its storms. They creep up on the unsuspecting boatman, in a few minutes shredding his sails and drenching him and his belongings.

The day might be clearer than usual or have a slight haze about it, a gentle breeze would ruffle the surface of the water. A slight condensation of mist can be seen ahead of one which passes unnoticed by the novice, but sounds a note of warning in the ear of the more experienced boatman, who will then put into the bank and seek what cover he can. Assuming that one goes back to one's book or to the examination of the bank for bird life, one may be stirred to look up again as the wind drops suddenly, and now a dark mass obscures both the river and its banks where trees are writhing and the water appears as if turned to beaten surf on a beach. Should one still fail to heed the signs one deserves the sousing which will surely come for now it is a matter of moments. A few enormous rain-drops herald the arrival of the storm which is only too obvious now. The boat shudders as if struck by a hammer and is caught in the twisting violence of the waves, which having no order, attack from all sides at once, lifting the bow to allow a wave to surge over the stern, tipping from one side

to give access from the other. Visibility is cut to a few yards as the rain pours solidly down, then suddenly you are out of it and the wall of water recedes down the river leaving you rocking in its wake, too dazed to take stock immediately of the damage that has been done.

The abundance of animal life in any one place is inversely proportional to the density of human habitation. One imagines that the jungle teems with a great profusion of screeching, screaming hissing, clicking wild life, all potentially dangerous, which threatens and makes demands on the fortitude of the intrepid explorer. Reality, as usual, confounds the expectations. The primeval forest is most noted for its quietude, animals slinking off unheard and no doubt in hopes of being unseen. This state of quietness demands a rather different form of courage, to do rather more with oneself than the jungle enclosing one.

In the more accessible secondary forest near the river bank, light is not a solitary shaft piercing the gloom to illustrate a small spindly seedling bravely puffing out its leaves, but a ubiquitous element making the undergrowth rife in competition. The continuous hum of insect activity forms a background with here and there the staccato crackle and screech of parrots and parakeets which adorn the high forest canopy with points of brilliant emerald and red.

We observed only five species of monkey in the wild of which the Squirrel Monkey was by far the most common. A further three species were represented in the cages of Mike's zoo. Although present in almost every area we visited, the Squirrel Monkey (*Saimiri Sciureus*) is a shy animal and difficult to study in the towering trees of the main forest. We were fortunate to be able to study them on Santa Sofia, an island of about six square miles area, where the monkeys were concentrated in more than average numbers owing to protection from trapping and the provision of banana plantations. We had always to bear in mind the fact that this constituted a semi-natural environment.

SQUIRREL MONKEYS.

Saimiri live, travel and feed in groups which may vary in size from a dozen to several hundred individuals of all ages. They spend the night in secluded parts of the island, sleeping huddled together on branches far from the forest floor. As dawn approaches the curfew is broken and with it the silence as a neighbour whose proximity is welcome in the cold of the night now is vociferously challenged and forced to move on to another branch away from his senior. When disturbances have been re-established, and superficial fleas and parasites summarily expelled by means of scratching, the infants are given the first suck. The group then moves off in the direction of the banana patch, using the same path over the same branches as it had used for the previous month. Progress is rapid and little time is wasted on inessentials. The males lead the way pausing only to lick the water drops from leaves as they pass.

On arrival at the feeding area the group splits up, several monkeys converging on the same tree as they set about the most important task for the time of the year. While foraging the monkeys emit a range of vocalisation related to their level of arousal and the proximity of other monkeys. The predominant sound heard as the group of monkeys disperses over a feeding area is the high pitch contact chirp 'che che' interspersed with harsher staccato 'chuck chuck' noises serving to maintain spatial separation. As the animals move about the banana tree fronds picking ripe



Woolly Monkey.

bananas and wastefully casting away half-eaten remnants, these gentle noises may change to a threatening 'churr' as two foragers, intent upon the same choice specimen come face to face. The dominant animal will win and usually without contact they move apart, the 'churr' replaced now by 'chuck' returning to 'che'.

Other common vocalisations involve the infants which for most of the time are carried on their mother's back, nursed from this position and reassured by quiet 'purring' noises (not unlike those emitted by cats) as the mother negligently leaps after the rest of the group. As the infant gets older it may stray from the mother and on finding itself lost utters a long whistling note of unmistakable fear which then changes to a very short alarm peep. When there is danger in the form of hawks, fish-eagles or snakes, a loud continuous 'yapp' is initiated by one animal and, depending on the status of the initiator it may be taken up by the rest of the group. The cry has obvious survival value since it alerts the monkeys within the area and so focuses attention on the danger, which may then be attacked or avoided.

When they have begun their foraging soon after dawn at 6.00 am, the monkeys progress slowly through the trees, and if the fruit is plentiful, as it is during the dry season, their hunger abates and the level of social interchange rises. Some juveniles descend to the ground to 'play', an activity which involves wrestling while others move away to indulge their palates on more exotic delicacies. If the temperature is high and they feel reasonably secure, some adults may lie out along branches in a characteristically languid pose until midday, when the feeding activity becomes more intense and the cycle begins again.

Feeding is delayed or disrupted by rain, which the monkeys dislike intensely and attempt to avoid at all costs, by huddling together under the broad leaves of trees. From time to time a juvenile may be ejected from a particular huddle and flee through the torrents to the accompaniment of strident screeches.

Towards sunset foraging becomes more desultory and the larger males and females begin to move off in the direction of their lodge, taking the same path as they used in the morning. Huddling in their sub-groups again they move closer together with the growing cold, and vocalisation is reduced except for the occasional outburst which must accompany some outrageous behaviour not fitting in a neighbour. For a time after sunset they remain easily rousable by any extraneous disturbance and at once the characteristic alarm cry goes up.

In Bogota the tourist brochures tell in glowing terms of the Tigrillo, Armadillo, Ant-eaters, Capybara, wild pigs,

etc. leading the gullible to believe that the forest around Leticia is teeming with these fascinating animals, and one has only to look out of one's comfortable hotel window to be able to see them all. Sadly, this is far from the truth, and we were only able to see most of these animals in the confines of the zoo.

OTHER WILD LIFE.

Apart from the monkeys, the only animals which were at all common in the region we explored were the pink porpoises. We saw these animals on many occasions, leaping with glistening curved backs at the mouth of some tributary and uttering strange snorts as they surfaced.

Among the reptiles that we came across were the ubiquitous lizards including impressive green iguanas, alligators or Cayman, the turtles (fast becoming rare owing to the mass collection of eggs) and magnificent snakes including the deadly Bushmaster and the enigmatic Anaconda with its glassy stare. With the exception of the lizards, none of these reptiles could be classed as common, and yet again we have to admit that we only saw the snakes in captivity although they certainly lived very near to Leticia. The Cayman, of which there are three common types on the Amazon, are surprisingly shy creatures, and this rather than their real scarcity may explain why we saw them so rarely. An outboard motor gives plenty of warning to any living thing, and especially to a reptile which spends much of its time partially submerged, not only admirably equipped, but also well placed for the detection of under-water vibrations. During the day they could occasionally be seen slipping quietly into the river way ahead of our boat, or observed lazing on the bank early in the morning. They could be seen most easily at night 'by the light of the silvery moon' or a torch. Scanning the mud bank with a torch from a canoe paddled quietly against the current, one's attention would be drawn to two small red spots, glowing like embers fanned by the wind. Keeping the torch beam trained on these points, one could approach close enough to see that these unblinking lights were separated by a snout and two black nostrils. Any sharp sound would cause the lights to go out in a swirl of water, but with care one could gingerly wade through the mud and being careful not to disrupt the beam of light, could get into such a position as to be able to grab the dazzled reptile behind the head. In this way we were able to capture and examine several Cayman, all of which, modesty forces us to add, were small. Occasionally, the alluring eyes turned out to be those of a fat toad croaking pathetically at the moon.

Of the wild life on the Amazon the birds constituted the richest and most varied group. Apart from the parakeets and parrots already mentioned we were also impressed by the range of falcons and other birds of prey including the fish-eagles and the ubiquitous vultures. Among the small birds around Leticia, the fly-catchers and water-wagtails were most common, displaying their yellow markings to good advantage from telegraph poles. On the main river we frequently came across three different species of terns, and on the quieter less busy creeks we were able to see herons of the grey and white varieties, and several species of fish-catchers which would sit on posts by the river, or on fallen stumps being gone suddenly, to dart swiftly across the surface of the water. A few Macaws were kept as pets and would soon make their presence known to any visitor, by ruffling their brilliant red and blue feathers, and uttering staccato squawks, which could pass for obscenities in any language.

Apart from the animal life, the Amazonian jungle itself deserves mention. Along the river the trees are not generally or conspicuously aged since all the forest is secondary in nature, having been levelled on one or more occasions. All the land has been cultivated at some time but is rapidly reclaimed by the jungle, the houses become infiltrated and are destroyed very soon after they are abandoned. The occasional giant of a tree gnarled and craggy, crawling with creepers and overgrown with orchids was rare enough to draw comment, often being used as a landmark. Along some of the larger tributaries huge trees were more common, towering over the impenetrable wall of vegetation on top of the mud bank, able to grow here where light is not restricted. Paths in secondary forest soon became overgrown unless in constant use, but in this darker primaeval forest the undergrowth is more sparse.

On a few occasions we penetrated into what may be called Primaeval Forest. Here, trees reaching a great height are the rule, each giant holding sway over a large area of ground where no comparable tree is to be found. The undergrowth is less dense, but here walking is made difficult by the multiplicity of aerial roots and of creepers. Flowers are not in evidence because they do not thrive in heavy darkness.

In describing the primaeval forest one cannot improve on an account given by Henry Bates in his 'Naturalist on the Amazon', written in the middle of the last century:

"We often read in books of travels, of the silence and gloom of the Brazilian forests. They are realities, and the impression deepens on a longer acquaintance. The few sounds of birds are of the pensive or mysterious character which intensifies the feeling of solitude rather than imparts a sense of life and cheerfulness. Sometimes, in the midst of the stillness, a sudden yell or scream will startle one; this



Our House on Santa Sofia.

comes from some defenceless fruit-eating animal, which is pounced upon by a tiger-cat or stealthy boa-constrictor. In the still hours of midday, a sudden crash will be heard resounding afar through the wilderness, as some great bough or entire tree falls to the ground. There are, besides, many sounds which it is impossible to account for Sometimes a sound is heard like the clang of an iron bar against a hard hollow tree, or a piercing cry rends the air; these are not repeated and the succeeding silence tends to heighten the unpleasant impression that they make on the mind. With the native it is always the Curupira, the wild man, or the spirit of the forest, which produces all noises they are unable to explain."

Little has changed in the form of the forest, or in the effect it has on the imagination since Bates so aptly described it in 1848.

No account of the Amazon could leave out the sun. In this region sunsets and sunrises are inseparably linked with the river, if only for the simple reason that it comprises the only open space in which they can be watched. Almost every evening the whole sky becomes a kaleidoscope of colour centred about the disappearing sun. Reds merge into oranges, oranges into yellows, yellows into blue with flecks of gold or green. Rarely was the sky completely clear. There was usually just enough cloud to add weird shapes and patterns to the overall effect. It soon became an evening ritual to try and 'make' the sunset; to sit for a few minutes and watch the wonderful display of colour.

The beauty of sunrises lay in other elements; their merit was more in mysticism than in magnificence. A silver light would grow above the early morning mist which hung like a pall on the river and clung to the tree tops in steamy wisps. Then the pale orb quite suddenly would rise, and give colour to the varied landscape.

11th DECENNIAL CLUB

The 35th Annual Dinner of the 11th Decennial Club will take place in the Great Hall of St. Bartholomew's Hospital on Friday 19th June, 1970 at 7 p.m. for 7.30 p.m. Mr. H. B. Stallard will, at last, be in the chair and it is hoped that there will be a good attendance to support him.



The Amazonian Jungle.

The Duchess of Malfi



"A politician is the devil's quilted anvil. He fashions all sins on him, and the blows are never heard. He may work in a lady's chamber as here for proof."

"The Duchess of Malfi" by John Webster was presented by Bart's Drama in the Charterhouse Gym on February 25, 26, and 27—and thoroughly enjoyable it was too. Although the Gym is by no means an ideal setting for a play in winter, because of its poor heating (so much so that those who had reserved seats in the front of the audience were provided with blankets!), it did allow a certain freedom of space for the stage design team, that would not have been possible in the more conventional Gloucester Hall. Paul Swain and his team took full advantage of this to produce by far the best set that I have seen at Bart's—suitably suggestive of the Borgia-type period of the play, with a vivid colour-scheme of orange, black and white.

Given such an excellent set on which to enact the tragedy, the cast had a good start and they took full advantage of it. From the outset Ian Young's booming Antonio set a pace which never let up throughout the play as the deeds became darker and dirtier.

Webster's subject is death and disease at the head of a state and the play illustrates this with a plot in which 2 wicked brothers, one a duke and one a Cardinal, take the life of their virtuous sister, the widowed Duchess, for marrying a second time. Their motivation, of course, was their material gain, if the Duchess should die childless. So far so good, but this Machiavellian tragedy would probably not still be performed 350 years after being written, had it not been for the character Bosola, paid assassin to the brothers. This melancholy fellow is gradually overcome by horror of the deeds he has to perform and eventually manages to salvage some nobility for his death amongst the carnage of the last ten minutes of the play. The part was played superbly by Jolyon Oxley, who used his tremendous vocal abilities to full effect—he was particularly memorable in the scene in which the Duchess is tortured and murdered. This found Kate Walker at her best, too—such a difficult scene, as she resists grotesque tortures, and finally dies nobly.

Another player worthy of special mention was Robert Robertson, whose portrayal of Duke Ferdinand was

consistently interesting, and played with enormous gusto, if not over-subtle in his rantings. George Blackledge looked and sounded the part as the wicked Cardinal. What rather spoils his performance, however, was that he had such a twinkle in his eye and was so obviously enjoying himself in his part, that one half-expected him to break into a song-and-dance routine when left alone on the stage! The strength in depth of the cast was most impressive, so that even in the small parts there were no weak links.

Sarah Rowntree played both her widely different roles as an old lady and seductress with equal distinction and Barbara Appleby was a very spirited waiting-woman. The performance of the madman in the first murder scene was suitably horrific.

Nick Whyte's production was efficient and not overdone, but why did he allow the sound-effects team to mar the production with their unhappy mixture of periodic music, Stockhausen and home-made plink-plonk music? This apart, however, the play was a credit to all concerned, and a pleasure to watch.

BOB Le QUESNE.

The Zoo Story: Barts Drama wins the U.L.U. one-Act play Festival



From right to left: George Blackledge, Joleyn Oxley and James Griffiths.

Even before the first night of the U.L.U. one-act play festival, I was convinced that Bart's Drama would do well. I had seen the rehearsals of 'The Zoo Story' and been impressed not only with the acting potential of James Griffiths and George Blackledge, but also with Jolyon Oxley's grasp of the play. As it turned out, my optimism was by no means ill-founded for, as every Bart's student must know by now, we won the trophy for the best production. It was a marvellous achievement, not only because Bart's Drama has never before won the award, but also because it emphasises the enthusiasm and ability which the Drama Society is fortunate in possessing at the

moment. Apart from surviving every year on a Student's Union grant which compares unfavourably with that of most other College Societies, there is the continual problem of staging the plays. This year's major production, for example, took place in the gymnasium—cleverly modified, no doubt, but still far from an ideal solution.

Be that as it may, I am not here primarily to crusade. 'The Zoo Story' fortunately needed neither money nor space to put on. It is a complex play that says a great deal—too much perhaps—in forty minutes. Ostensibly it concerns a chance meeting between two men; Peter, content and well-adjusted, and Jerry, friendless and hopelessly inadequate. As their conversation begins to take shape, we feel more and more uneasy about Jerry's motives, his personality, indeed his very sanity. Their curious discussion twists in so many directions that in a short time they learn an extraordinary amount about each other, and we with them. At one stage we are convinced that Jerry must be a homicidal psychopath; in fact he is nothing as spectacular. Merely a lonely maladjusted New Yorker whose miserable madness has passed the point of no return.

We have all seen James Griffiths do funny things—Pat Ubu, Pat (in 'The Hostage'), Bart's Fair, and Ward Shows galore. I suspect that the part of Jerry was very new territory for him; schizophrenics aren't usually funny. He pulled out all the stops, being shrewd, coquettish, wistful, vicious and pathetic by turns. The best compliment I can pay him is to say that his performance was as fresh and unpredictable as if I had never seen him act before. He extended himself more than ever with this virtuoso part, and was justly awarded with the prize for the best actor of the festival. As for George Blackledge, whose Peter was an exemplary piece of supporting acting, I can only say that he performed a difficult task exceptionally well; one's eyes were usually on Jerry, as they were meant to be, but this in itself is a tribute to George's skill in creating a relatively inconspicuous but ever-present backdrop.

It may seem odd that two people should need a third to direct them, but the change that took place after Jolyon Oxley had agreed to take charge was enormous. Any director worth his salt must commit himself to a particular interpretation and not sit on the fence; preferably he must understand the play, and further, he must be able to coax his actors into doing what he feels to be necessary. Jolyon can do all of these things, and it stuck out a mile. I cannot do better than reiterate the words of another reviewer in these pages: Bart's Drama is a force to be reckoned with.

JEFFREY TOBIAS.

REVIEWS

TEXTBOOKS

Taber's Cyclopedic Medical Dictionary, Fifth Edition, Illustrated. Published by F. A. Davis Co., U.S.A. & Blackwell Scientific Publications, Oxford, 75/-.

This is the eleventh edition of this well known cyclopedic medical dictionary. Over the past thirty years more than two million copies have been sold throughout the world. This edition includes five hundred and fifty new entries, thousands of changes and the removal of out-dated terms. There are newly revised tables on blood components, deciduous teeth and desirable weights for men and women, etcetera. The format and thumb index make it easy to handle, and the brief etymological notes will give further

interest to those who enjoy this subject. Medical students should possess a medical dictionary from the outset of their career, and this one is ideal for content, size and price.

I. McCOLL.

Surgical Nursing, Eighth Edition revised by Peggy Sporne. Nurses' Aids Series Paper Cover 16/-, Hard Cover 24/-.

This new edition of Surgical Nursing upholds the standards of the book previously written by Miss K. F. Armstrong and Miss N. Jamieson and it would be hoped that it will be afforded the same honour of being published by the English Language Book Society for use by emergent nations. It has always been widely read by British nurses.

The presentation is clear and the diagrams, all of which are new, clarify the text. All the chapters are short, easy to read and impart useful facts for the nurse to know and concepts for her to understand. Therefore this book provides a basic and comprehensive knowledge of general surgical nursing.

Although written with the 1962 syllabus in view it will serve the 1969 syllabus just as well when theory and practice will be closer related in a clinical learning situation.

C. M. WAKELING.

NON-MEDICAL

Mary, Queen of Scots, by Antonia Fraser. Published by Weidenfeld and Nicolson, 84/-.

This is a literary giant of a book from that very talented family, the Longfords. From the notes on the cover, Lady Antonia Fraser spent four years researching into this enigmatic character, Mary Queen of Scots, and the result is a masterpiece of compulsive reading.

Mary is traced from her very happy childhood days spent in France, through her marriage to the fifteen-year old Dauphin to become Queen of France at sixteen, only to be widowed two years later. Her return to the land of her birth after an absence of thirteen years, and her troubles and struggles with John Knox and the early Protestantism of unruly Scotland, she being a zealous but broad minded Catholic, gives one an insight into religious views and the power that religion yielded in those days.

Her marriage to Lord Darnley, his suspicious death, her subsequent marriage to Darnley's suspected murderer Bothwell, Mary's subsequent imprisonment at the hands of Queen Elizabeth, and then her execution at the age of forty-four, are a remarkable story, and are told with a wonderful sense of history, and obvious sympathy for Mary herself, by Antonia Fraser. But this sympathy is not allowed to cloud all facets of Mary's character.

This book should remain an authoritative account of Mary's life for many years. Let us hope that Antonia Fraser will put pen to paper again soon.

Although the cost of this book may seem high, it is beautifully produced and would be a very worthy addition to anyone's bookshelf.

Thoroughly recommended.

RICHARD WILLIS.

The Facts of Life, Richard Gordon. Heinemann, London, 1969, price 35/-.

A book recently acquired by the Medical College Library, to add to the shelves already filled with his books and their translations donated by the author, is Richard Gordon's new novel "The Facts of Life".

Richard Gordon writes in the first person as Dr. Ann Sheriff (no mean achievement), a gynaecologist well on the

way to the top when she is crippled by rheumatoid arthritis, which is partly psychological, following the break-up of her marriage to a consultant surgeon.

Taking refuge from life in the dark corners of a laboratory she turns to research in oral contraception. Reading of a new "pill" that only needs to be taken once a month, named cyclova, she asks for samples from the huge drug firm that manufactures them. These she tests on volunteers in her family clinic (the teaching hospital forbade the word "planning"). Using a stain she herself invented Ann finds immature white cells in the blood of one woman out of the sixty who tested the drug. Reporting her findings to the drug company she is disbelieved and ignored. So begins her long struggle, against many obstacles, to stop the manufacture of cyclova and thus prevent a world-wide epidemic of leukemia. However, she reckons without the power of the drug company which puts her career in jeopardy and threatens her whole secure existence.

Complicating her life still further is the man with whom she lives but who is not free to marry her.

Banned by South Africa for being "too sexy" this book is to be highly recommended for anyone who likes light, easy, entertaining reading without being drawn into the foreseeable hilarity of the "Doctor" books. The hackneyed phrase "I couldn't put it down" really does apply here.

AMANDA BUCK

RECORDS

The National Youth Orchestra of Great Britain. M.F.P. Cost 14/8.

SIDE ONE: 1) Overture "Le Corsair" Berlioz. 2) Scherzo Capriccioso Dvorak. Conducted by Oivén Fjelstad.

SIDE TWO: 1) Academic Festival Overture Brahms. 2) Trumpet Concerto Hummel (soloist—Paul Ringham). Conducted by Rudolf Schwarz.

The pieces of music on this record were recorded during live performances given by the National Youth Orchestra of Great Britain at the Fairfield Halls, Croydon. Side One was recorded in August 1968 and side two a year later. The fact that the concerts were recorded live does not detract from the performances of the works. It is true that applause is not a usual ingredient of a record of classical music and of course the orchestra is not able to re-record any part of the music that is not one hundred percent, but the fact that the pieces were recorded live gives the performance a certain freshness and spirit that is not always captured in studio recordings. The quality of the recording itself is not affected the concert hall itself being described by Leopold Stokowski as acoustically one of the finest in Europe.

The National Youth Orchestra was founded in 1947 by Dame Ruth Rarlton and its aim is to give outstanding young musicians, whose ages vary between 11 and 19 and none of whom are full-time music students, an opportunity of working together as an orchestra under eminent conductors. About 750 children apply for an audition each year and of the 40 chosen all show outstanding talent and potential in their individual instruments. Thus the orchestra consists of the cream of all the young musically talented in the country.

The Corsair-Berlioz

This overture is one of the finest of Berlioz's eight overtures. The music owes its origin to a novel by Fennimore Cooper entitled "The Red Rover", and not as is generally supposed (and erroneously stated on the record cover) to the epic poem by Byron. Berlioz drew freely on sketches that had been abandoned and turned out a work

that entirely captured the mood and flavour of the title. Berlioz himself was very fond of the trombone as an instrument and these are well in evidence in this work and brought to the fore in this performance by Fjelstad. This is a good account of the work.

Scherzo Capriccioso—Dvorak

This piece is typical of Dvorak's music—a very tuneful melody with opening calls for the brass section. This work needs a large orchestra and is not easy to play. While lacking the technical brilliance of a large orchestra the N.Y. Orchestra do extremely well to maintain a lilting and light performance of the work.

Academic Festival Overture—Brahms

This work was written when Brahms was at the zenith of his powers. It contains a number of well-remembered tunes which, in this record, are closely woven together to produce a very satisfying performance.

Trumpet Concerto—Hummel

This concerto is not often played nowadays but on this record is well played by Paul Ringham and the N.Y. Orchestra. The style is very Mozartian; not very surprising as Hummel was taught by Mozart for two years. The style is formal. The first movement presents the usual format of the main theme played twice but separated by the development but there is no cadenza. The slow movement runs straight into the third movement—a rondo—and in both of these the soloist shows a high degree of technical ability. A very satisfying performance.

The price of this record is 14/6, and as such the record is worth buying. It is not usual to have such a mixed bag of works on one record and therefore this record gives an ideal opportunity to obtain these works without having to buy them in combination with symphonies, etc.

RICHARD MOODY.

The Wonderful World of Reggae. MFP 1355 (stereo). Cost 14/8d. Playing time 32 mins.

This L.P. is typical of the music that has recently been the rage with the so-called skinheads and teeny-boppers, but is no disguise for the fact that basically it is the blue beat music of the West Indies. Their communities have, for many years, adapted this style and made it popular throughout England, to such an extent, that they have their own "hit parade" charts.

Most of the recent reggae chart successes are contained in this L.P., played, not by the original performers, but by an unknown collection of musicians. Unlike some L.P.s of hit records by unknown groups, the performances on this L.P. have in no way detracted from the original recordings. This may be because both the arrangements and the musicians' playing are good, but I felt that the main cause of success was the simplicity of the music itself.

The fact that this style is in vogue with a particular group of people does not mean that its appeal is limited only to them. It is happy and pleasant enough to satisfy everyone, good for listening and dancing to, and, therefore, should be included in any selection of party music.

My main criticism is that the playing order of the individual numbers as given on the record sleeve is totally inaccurate; this is irritating. Nevertheless the L.P. is good value for money. The actual playing order is:

SIDE ONE: Wonderful World, Beautiful People; Return to Diango; 007; Liquidator; Hot Potato; It Mek.
SIDE TWO: My Boy Lollipop; Israelites; Dollar in the Teeth; Persuador; Long Shot Kick the Bucket.

I would especially recommend 007, Israelites, It Mek, and Long Shot Kick the Bucket.

M. C. WHITE.

SPORT

BOAT CLUB

At present the senior members of the club are still training away from their Alma Mater; S. Scott is to be congratulated on stroking the winning UL trial eight, and is now in the new Purple boat; P. Featherstone, A. Hammer and J. Close are in the Tyrian crew; N. Snell is at Thames R. C.; and D. Edwards at Quintin.

The junior eight has been training twice a week this term despite their lack of reserves and of a permanent cox. The only event they have competed in this term was the London R. C. Colleges regatta, where they entered the 2nd eights event.

The water on the day was so bad that several crews sank, and we were relieved to receive a row-over against Exeter, Oxford, who failed to arrive. For the semi-final against I.C. II and Wadhams I we were kept waiting at the start for 2 hours in freezing conditions for no apparent reason, and when finally started had little enthusiasm left. Nonetheless we beat I. C. by four lengths, and lost to the Wadhams 1st VIII by only ½ length. Wadhams therefore went into the final, but incensed by the appalling conditions and organisation, we left without waiting for the final result.

The weather is now quite pleasant and there are still vacancies for oarsmen and coxes, regardless of ability.

N. J. C. SNELL.

SKI CLUB

This year for the first time a London intercollegiate ski race was organised, and was held on Feb. 22nd at Aviemore, Invernesshire. Eight teams completed on the 30 gate giant slalom set on the steep slopes of the Cairngorm; the winners—Barts.

The team consisted of Tony Lipscomb, Chris Trower, and Nigel Finlay-Shirras. The chief rivals were I.S.F. who had a Swiss student and a Persian racer in their team, and I.C. whose squad included two British skiers.

In the difficult conditions which prevailed throughout the race, Lipscomb put in a fast time of 39.1 secs.

Trower went next for Barts and was going well until the penultimate gate, where disaster struck—he finished in 46 secs.

Finlay-Shirras saved the day by a powerful run of 44.6 secs. to beat the LSE team by 0.5 sec. So Barts swept the board, winning not only the team prize, but also the individual result.

Results: 1. TEAM 1. Barts 2. LSE 3. I.C.
2. INDIVIDUAL 1. A. Lipscomb
2. B. Walthrop (Guys)
3. A. Benk (LSE)
6. N. Finlay-Shirras
9. C. Trower

Congratulations to C. Trower, who has been elected President of the ULU Sports Council.

JUDO CLUB (Lent Term)

The judo club has had a successful term so far. Of the four matches fought we have won three. The one we lost was against Cambridge University and so was hardly surprising as they have a strong club. However it was encouraging because we fought a technically superior side and were only defeated by one contest. The other three matches were also against stronger sides on paper and we were fortunate to win. This was mainly due to the efforts of Adrian Ruddle who has won consistently with a new technique learnt last term and now used with considerable effect, and Mark Podkolinski who has fought technically superior opponents each time and won.

The King's match was useful in that their coach offered to come along on Thursdays and give us some tuition. He, in fact, came along the following Thursday and proved a welcome encouragement. It was useful to have his new ideas and the discipline of a coach, as he made us work hard!

Results:

v Cambridge University	away	lost 30-40
v University College	away	won 35-25
v West Ham Techn.		won 30-20
v King's College		won 30-20
v Chelsea	cancelled	
v Royal Vets	to be played.	

For the whole season won 5, lost 2.

HUGH JONES.

THE RIFLE CLUB

Spoon Shoot

Simon Crocker made the highest score of the evening with 97. This was only his second shoot in the last nine months!

John Reckless scored 88 and with this just won the spoon for the best first shot of the year.

Gillian Prestwich had little opposition from others of the fair sex. She got a good 93. None the less it was encouraging to see three brave nurses come along and try their skill—remember to wear trousers next time!

Dinner

This was held at the Cock Tavern who provided their usual good service and an excellent meal. Although large quantities of alcohol were consumed with the meal, the evening predictably ended at the White Hart.

Many thanks to our president for all the post-prandial drinks and to John Johnson for organising such an enjoyable evening.

GARETH TUCKWELL.
Captain.

SAILING CLUB

Since the last report the three Firefly dinghys we have at the Welsh Harp have been brought up to top sailing condition, and a start has been made on repairing the Enterprise at Burnham on Crouch.

The University of London now has a fine club-house at

the Welsh Harp, the facilities of which include spacious changing rooms, showers, a bar and a small boathouse. This should make an outing on the Harp much more pleasant in the future, and we hope that the people who were put off sailing by the sight of the old club-house will give it another try.

Any member of the Hospital may use the Barts boats so long as one of the Club officials is satisfied that he or she can handle a boat safely.

Beginners and less experienced sailors can always go sailing as crews.

There is a Firefly booking book at the Porters desk in College Hall. When lockers are available at the club-house the sails will be left there, and you will have to obtain the key.

Please leave the boats as you would hope to find them, that is with all equipment present and the cover correctly and securely tied on. Make sure it is a Barts cover.

Any damage to the boats or loss of equipment should be reported immediately.

Any member of the Medical College may join the United Hospitals Sailing Club by paying a small subscription. The Club owns two 19 ft. "Squib" keel boats and an Enterprise dinghy, which are kept at Burnham on Crouch. The Club-house at Burnham has dormitory accommodation for Members who wish to stay overnight. Members of U.H.S.C. are associate members of the Royal Burnham Yacht Club which entitles them to use the bar facilities and their basement discotheque "the Snake pit".

Anybody interested in sailing at the Welsh Harp or at Burnham should contact Brendan O'Farrell at College Hall—or Bruce Noble at the Hospital Cloak-room.

RACING

Due to fog, ice, and on one occasion the non-arrival of the opposition we only sailed one U.L. League Match during the last month.

18th February Barts v St. Mary's Hospital Lost
Tom Moore J. Charles
Bruce Noble Vivien Gillis

In the first race we had a third and a fourth.

During the last beat of the Second race Tom Moore had a very close fight with Phil Slatter of St. Mary's, the latter slipping into the lead a few yards from the last mark and crossing the line first. We therefore finished Second and Fourth.

B. D. O'FARRELL.

RUGBY CLUB

Bart's Hospital v. Kenilworth

Saturday, 31st January

Bart's won by 14 to 3, having secured all their points in the first half. These came from Laidlow anticipating the bounce of the ball and running in to score. The rest of the points were secured by Cassidy, who contributed a penalty, a drop goal, a try and a conversion, his try being particularly good, looping around a scissors in the centre to take the ball on the burst and score. In the second half Bart's became preoccupied with some of the finer points of the game as Kenilworth tried to batter through. Kenilworth added a penalty goal.

Bart's Hospital v. U.C.H.

Tuesday, 3rd February

2nd. Round of Hospital Cup.

Bart's won 64 - Nil.

As Hospital Cup wins go, it was an impressive victory. Team: Packer, Laidlow, Jefferson, Lambert, Smith, Cassidy, Heslip, Fairhurst, Lloyd, Rees, Carroll, Britton (Captain), McIntyre, Smart, Fenton.

Bart's Hospital v. Old Merchant Taylors

Saturday, 7th February

Perhaps a hangover from the previous Cup victory—though this is inexcusable, prevented Bart's from gaining sufficient possession to dominate the game. We failed in the line-outs and the scrums and allowed the loose ball to be killed wantonly. A distinct lack of endeavour prevailed and we ended up losing by 14 - 9.

A.15 Cup

Wednesday, 11th February

Bart's were paired against St. Georges 'A' and the game was played at Chiselhurst. Bart's took some time gathering momentum though in the earlier stages Elliot playing on the left-wing forced his way over for a try. Bart's continued to be slow to the loose ball and to recovery in defence. However, in the second half they began to play with more endeavour. Elliot ran in for another try, Weller, Findlay-Shirras and James also scored. Bart's had a certain aggression in the second half which was missing previously, the drives in the scrums coming quickly. In the line-out Aitken at the front and James at the back were both impressive. May kicked well and ran with great determination. Some dangerous situations were saved by Gerner at full back. Hill and Letchworth looked a more than competent pair of half-backs. The final score was Bart's 27 to George's Nil.

Team: Gerner, May, Weller, Findlay-Shirras, Elliot, (Duckham), Letchworth, Hill, Aitken, Rowlands, Fowler, Barriatt, Cooper, Allen, Davies (Captain), James.

Hospital Cup Semi-Final—Bart's Hospital v. Westminster

Barts kicked off with a strong wind behind them, and soon established themselves in the Westminster 25. Cassidy was unlucky to hit the post with an early penalty; this was the general trend of goal kicks. Over-eagerness accounted for Barts' lack of tries in the early stages of the game, but the abundance of good ball was put to good use in the last ten minutes of the first half, both Smith and Mason scoring. There were several efforts which went close: Lambert crossed the line only to fumble the touch-down, while Mason was held off as was Smith in the corner.

The pattern of the game in the first half was set by the possession which the Barts pack acquired, Britton and Fairhurst totally dominating the front of the line-out. It was from a heel against the head, contrived by Lloyd and Rees, that Heslip broke to set Mason's try up. Score at half-time; Barts 6 Westminster 0.

The wind was now in Westminster's favour, enabling them to make sorties into the Barts half but on our side the tactical kicking of Heslip gained valuable ground; Cassidy's kicks too were now hanging sufficiently for the centres to follow them up.

Whilst working the blind side from the set pieces Heslip gave Laidlow some room to run, which he did with great determination. Smith also went well and was close to scoring on more than one occasion. It was from another of a

seemingly infinite series of loose balls that Lambert cut through the Westminster defence, only to be halted short of the line; luckily Carroll was on hand to make the touch-down.

Westminster hit back with a try by Lewis from a line-out, and another from Rutter after a break from Phillips; Packer nearly saved the score with a crunching tackle on Phillips who however managed his pass. Cassidy landed a late penalty for Barts.

Final score: Barts 12, Westminster 6.

The critics said that the score should have been more, and that opportunities were wasted; however, Barts succeeded in winning which is the important thing. Throughout the game we contained the Westminster in their own half. McIntyre and Smart killing any opposition moves quickly.

Once again we now face Guys in the final, on March 18th.

CROSS-COUNTRY CLUB

Wed. 14th January v Royal Veterinary College and N. Bucks Tech. College at Potters Bar. 5½ mls.

Our first match of the term resulted in our being placed second in this triangular fixture. Throughout the race the R.V.C. packed well and although good runs were recorded by J. Brooks and D. Pinkard the rest of the team could not provide the necessary support to win the race.

1. J. Newcombe	R.V.C.	28m. 55s.
2. J. Brooks	Barts	29m. 27s.
4. D. Pinkard	"	31m. 36s.
7. R. Moody	"	32m. 56s.
9. M. Page	"	33m. 56s.
10. R. Miller	"	34m. 30s.
12. P. Taylor	"	35m. 36s.
14. H. Glennie	"	37m. 13s.
15. P. Acres	"	37m. 44s.

1. R.V.C. 33pts. 2. Barts 44pts. 3. N. Bucks. 74pts.
Wed. 21st January v U.L. League at Trent Park.
5½ mls.

The whole team ran well at this fixture to gain the highest position we have occupied in this race for a long period of time. J. Brooks ran well to finish 14th only 2 secs. behind the 11th man home. R. Moody improved by 10 places over his previous league results this winter. Good support was provided by M. Page and R. Miller and we finished 7th overall.

14. J. Brooks	29m. 47s.
32. D. Pinkard	31m. 51s.
39. R. Moody	32m. 09s.
66. R. Miller	33m. 46s.
75. M. Page	34m. 10s.
95. H. Glennie	35m. 49s.
96. P. Taylor	35m. 32s.
106. D. Wainstead	36m. 46s.
132. W. Glenister	40m. 26s.

145 finished.

Sat. 24th January v University College Open 5 ml. race. Parliament Hill Fields.

Another very good performance by the team to finish 11th out of 26 teams who numbered some of the best Universities and P.E. Colleges in the country.

We were the 2nd London University College home beating such giants as Imperial College and University College.

27. J. Brooks	28m. 51s.
50. R. Tiner	30m. 20s.
75. D. Pinkard	31m. 15s.
76. R. Moody	31m. 17s.
102. R. Miller	32m. 17s.

170 ran. Barts 11th/26.

Wed. 28th January v Imperial College I & II
Royal Veterinary College.
University College.
3 mls. Hyde Park.

This race was used by all teams as a warm up for the I.C. Relay to be held over the same course in February. Again the Bart's teams ran well to finish 2nd. J. Brooks managed to better 5 minute miling to finish 2nd in 14m. 51s. R. Moody ran well to finish 7th and D. Pinkard was 9th.

2. J. Brooks	14m. 51s.
7. R. Moody	15m. 45s.
9. D. Pinkard	16m. 06s.
14. P. Taylor	17m. 07s.
15. R. Miller	17m. 12s.
17. P. Acres	17m. 37s.

1. I.C. 1st team 38pts. 2. Barts 64pts. 3. U.C./R.V.C. combo 101pts. 4. I.C. 2nd team 118pts.

Wed. 4th February v Middlesex H. Relay 4x2½ mls. Regent's Park.

A thrilling race resulted in a close win for Barts over arch-rivals St. Georges H. by 16 sec. R. Moody finished the first leg in 2nd place to hand over to R. Miller who although overtaken by Middlesex Hosp. managed to take a minute out of Charing X. and keep us second. D. Pinkard ran a solid 3rd leg to pass Middlesex H. but himself was overtaken by Charing X. Georges were beginning to gain ground. On the final leg J. Brooks ran very well to overtake Charing X and hold off St. Georges H's Challenge.

The Barts 2nd team pushed St. Mary's H. into 6th place. A' team: R. Moody 12.41 'B' team: B. Campbell 13.57
R. Miller 12.52 H. Glennie 13.15
D. Pinkard 12.02 P. Taylor 13.21
J. Brooks 11.25 P. Acres 13.33

Wed. 11th February v Sussex University—Brighton 5 mls.

Over a very tough 5 ml. course on the South Downs Barts were narrowly beaten by Sussex. Unfortunately Dave Pinkard was not able to run for us in this match and therefore we were severely handicapped from the start. John Brooks ran his usual solid race to finish second and Bob Miller had a very good run to come 6th.

2. J. Brooks	28m. 15s.
5. R. Moody	30m. 34s.
6. R. Miller	30m. 41s.
11. M. Page	32m. 00s.
12. H. Glennie	32m. 16s.
15. P. Taylor	34m. 15s.
16. B. Campbell	34m. 50s.

Sat. 14th February v Imperial College. Hyde Park. Relay 6x3 mls.

D. Pinkard ran the 1st leg for Barts and brought us home in 60th position. R. Moody had a good run on the second leg to gain 5 places. On the third leg J. Brooks had an extremely good run to finish in 36th position—our highest during the race. R. Miller, H. Glennie and M. Page all did well and we finally finished 52nd out of 100 teams competing.

D. Pinkard 15.45 R. Moody 15.46 J. Brooks 14.40
 R. Miller 16.15 H. Glennie 17.15 M. Page 16.45
 Wed. 18th February v Selwyn College Road Relay
 4 x 2.5 mls. Cambridge.

A reasonable performance by the team to finish 10th out of 23 teams.

D. Pinkard 12m. 50s. R. Miller 13m. 38s.
 R. Moody 12m. 58s. J. Brooks 12m. 22s.

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Spot The Lesion

By N. J. C. Snell

The X-ray is of a patient under treatment at a chest hospital;

1. What condition is present?
2. What is the cause of this condition? (clue; the X-ray was taken in 1951).
3. What does the arrowed line represent? Is it of any significance?

(X-ray from the collection of Dr. W. E. Snell.)
 significance.
 3. This is an Azygos lobe, a fairly common developmental anomaly of the lung. It is of no pathological significance.
 advent of modern drug therapy.
 2. This is an artificially induced pneumothorax, an old treatment for Tuberculosis, now obsolete since the advent of modern drug therapy.
 1. Right-sided Pneumothorax.

ANSWERS:

DIARY OF EVENTS FOR APRIL

April 4th
 Golf Club Hop. College Hall, Charterhouse Square.

April 11th
 Bart's Physiotherapy Charity Ball in aid of Spina Bifida at the Hilton. Dancing from 8 p.m. to 2 a.m. to Russ Henderson's Steel Band and Claude Cavallotti's Orchestra. Dinner and Tombola. Dress Black Tie. Tickets £6 obtainable from the Physiotherapy Department.

April 14th
 Bart's Film "Viva Maria". Physiology Lecture Theatre, Charterhouse Square at 9.15 p.m.

April 17th
 Wine Committee Expedition leaves for Paris for the France v England Rugby Match.

April 18th
 Squash and Athletic Club Hop. Charterhouse Square.

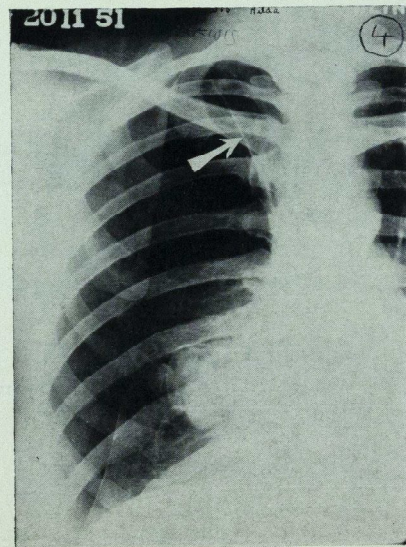
April 21st
 Bart's Film "Alfie". Physiology Lecture Theatre, Charterhouse Square.

April 22nd
 Preclinical Summer Session begins.

April 28th
 Bart's Film "Interlude". Physiology Lecture Theatre, Charterhouse Square.

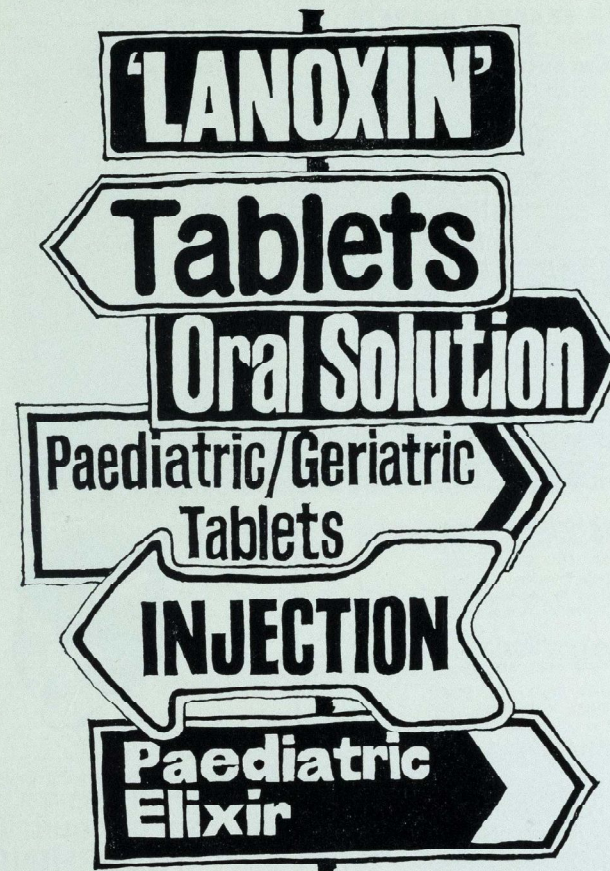
April 30th
 Rahere Ensemble Recital in the Great Hall.

NOTE. All material for the June Journal should reach the Editor, TYPED, no later than 28th April, 1970.



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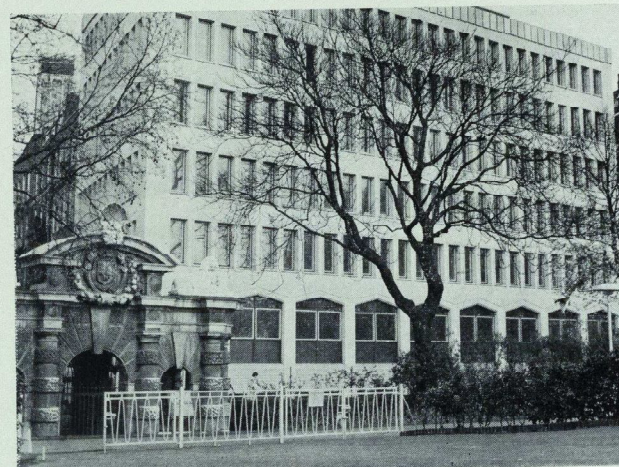
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(President: Mr. George Ellis)

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Attractions to occupy your time between 10 p.m. and 5 a.m. will be:-

THE HARMONY GRASS

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The Alan Elsdon Jazz Band

The Playground

The Nightingales Steel Band

The Hawaiian Beachcombers

Discotheque & Full Light Show

Surprise Cabaret at 12.30 a.m.

Additionally the bars will be open until 4 a.m., the barbeque will be available all night with breakfast at 4.30 a.m.

Double Tickets: 6 guineas (Students 5 guineas)

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I apply for tickets at 5 guineas/6 guineas and enclose a cheque made out to St. Bartholomew's Hospital Students Union and crossed "Bar Account" and enclose a stamped addressed envelope.

SAINT BARTHOLOMEW'S HOSPITAL JOURNAL

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Mike Goldsmith

Editorial

Medical students on the whole receive a good press, perhaps due to the apathy about which so much is heard. The L.S.E. are condemned—and rightly so—for their anti-social behaviour and wilful damage to property. Yet they are acting in support of ideals in which they believe, and thus surely deserve more sympathy than the perpetrators of the senseless behaviour at Bart's and Guys in recent weeks.

Students of Medicine have an image—a pre-war legacy, revived mainly by the "Doctor" films—as an irresponsible but hearty group of fine young lads, free to desecrate public and private property and inconvenience others, as long as it is all in "fun." The replacement of this image by a more mature counterpart is long overdue, and is not hastened by recent events.

The wilful damage to Guys and Bart's has been increasing during the last few years. This year the bills are said to be running at £500 for clearing up Bart's, £800 for Guys and £400 for the Richmond ground.

Who foots the bill? Is it the Student Union? and if so, why should we subsidise an irresponsible and immature minority? Can other sports competing in events of similar standing also organise vandalism at the homes of their opponents and get the Student Union to pay? Or will the Hospital pay? Either way, one can immediately think of numerous better ways in which to spend £1,700.

It is only the minority who enjoy this behaviour. The Guys students taking 2nd M.B. and those at Bart's studying for M.B. Path, certainly did not enjoy the disturbances. No more does it appeal to one to be woken at 3 a.m. by some (Bart's) buffoon screaming down the loudspeakers.

By all means let those involved indulge in pranks at the opposition's expense—provided they do not disturb those who are not concerned and do not cause stupid and unnecessary damage. There are subtler ways of demonstrating our superiority than kidnapping "hostages" and parading them at breakfast, a most embarrassing performance reminiscent of incidents at primary schools and also very annoying to the majority of residents who were not involved and to whom breakfast was refused.

Please, let the Student Union come out and actively discourage this behaviour, rather than encouraging it. Let us have no more subsidised vandalism.