some time managed to penetrate the Bart's defence once more. The final goal for Bart's was scored by J. Hartley. We owe part of our success in this match to our supporters who cheered valiantly from the sideline.

Team: I. Tomkins; J. Tufft; T. Coates; J. Hall, B. Barnard, E. Knight, J. Arnold, J. Hartley, S. Minns, J. Chambers, J. Swallow. Umpire: S. Weekes.

Bart's v. Reading University. Saturday, February 7th. Lost 1-8.

This was a unique match for the captain made history by baring her knees, and came into midfield. Perhaps she felt her team was getting out of control! C. Lloyd in goal resisted the frequent Reading attacks well, for who could have stopped these bullet-like shots from the Reading forwards.
Team: C. Lloyd, S. Cotton, T. Coates, M. Childe, I. Tomkins (capt.), E. Knight, J. Arnold, J. Hartley, V. Nash, S. Minns, A Sinclair.

Bart's v. Royal Holloway College. Wednesday, February 18th. Away. Drew 3-3.

On a fine sunny afternoon after a long train journey to one of the far-flung colleges of London University, the Bart's team slowly came to life. But they never looked like winning, and only scraped home with a draw in the last minute. The forwards. lacked the penetrating powers of their opponents. On one occasion, however, J. Hartley and S. Minns combined well together to secure a good goal.
Team: I. Tomkins, J. Angell James. T. Coates, E. Knight, J. Hall, M. Childe, J. Arnold, J. Hartley, V. Nash, S. Minns, M. Goodchild.

BRIDGE

We must start by congratulating Denis Gray, Secretary of the Bart's Bridge Club on the splendid performance in the *Observer* Christmas Bridge Competition in which he won a second prize.

The strangest things can happen at other tables to one's own in a Duplicate Pairs Competition. Look carefully at the following hand.

S. A 10 9
H. J 6
D. J 3
C. A K J 8 6 3
North

South
S. K 3 2
H. K 9 4 3 2
D. K Q 6
C. 7 2

This ordinary collection was played by South in 3 NT, and it looks a good contract, with five club tricks, two diamonds, two spades and perhaps a heart or a sixth club for overtricks. The two of diamonds was led and won by South's Queen. Trick two was a finesse of the Club Jack, and East showed out discarding a large heart. With the club suit now yielding only three certain tricks, South led the Jack of Hearts off the table, and East hopped up with the Ace, and led a small diamond. The Jack was allowed to win on the table and declarer returned to his own hand to lead another small Club and drag one of West's three high cards (Q 10 9) out of her. East dropped a diamond. The small heart was played from dummy and on the King, West discarded a Spade. Now declarer crossed to dummy with the Ace of Spades, dropping West's Jack of Spades, and led the 6 of Clubs, so that West after casting her two Diamonds had to lead from Q. 5 of Clubs into A. 8 on the table. Nine tricks!

If you look more closely, you will notice that the defence can beat this contract quite easily in the following ways: (1) If West discards a diamond or a Club on the King of Hearts she will have a Spade to lead to her partner when she is in on the Clubs; (2) If East does not discard her fourth Diamond on the second round of Clubs she will overtake her partner's last Diamond in the end play and be able to cash a good Heart; (3) Most brilliant if West instead of cashing her Ace and another Diamond leads the small one, throwing South into his own hand with the King to lead a Heart to East's good Hearts and Spade.

It is therefore with some (well-hidden) pleasure that you reach for the score sheet to find only one entry on it, which reads, 3 NT by South made with an overtrick. When you reach the table where this monstrosity took place, you find that the West chair was occupied by an International Master whose play you have always greatly admired, and so you ask politely what happened.

" Quite easy " he said " I led a Spade which gave him three Spade tricks for a start." I cannot help feeling that that was not his only error, but I didn't ask any more questions.

G.F.A.

BOOK REVIEWS

DISEASES OF WOMEN BY TEN TEACHERS. 10th Edition, by E. W. Roques, J. Beattie, & A. J. Wrigley. **Published by Edward Arnold.** Price 36s. pp. 556.

This new edition of a very popular book should retain its predecessors well-deserved place in the student's book shelves. The presentation and style are admirable and the facts are most easily assimilated from what does not pretend to be a detailed work on the subject.

There are several additions to the book in the revised chapters on prolapse, gynaecological operations and tuberculous salpingitis. It is perhaps unfortunate that in the latter chapter the stated daily dose of PAS is 4 grams which can have little therapeutic effect, the normal dosage in anti-tuberculous therapy being at least 12 grams daily.

The large number of errors in proof-reading which occur notably carcuncle (p. 190) vulsellum (p. 309 and 311), Broders's (p. 545) are regrettable. Perhaps the most reprehensible error occurs however in the spelling of Krantz (p. 517) which is spelt Krautz. If any name is given in any context especially when it dignifies the hearer, some effort should be made to spell it correctly.

Nevertheless this book successfully achieves its object and will therefore be a welcome addition to the undergraduate books in this subject.

M.L.P.

ST. BARTHOLOMEW'S HOSPITAL JOURNAL

Vol. LXIII **MAY, 1959** **No. 5**

EDITORIAL

It is a common-place axiom that the most widely held assumptions are false. For instance, nearly all medical students hold that their subject is much more complicated and difficult than it used to be. Textbooks grow larger almost as fast as they rise in price, new drugs, procedures and even diseases are introduced every year. Medical knowledge seems to increase in a geometrical progression. This may be a depressing thought to the medical student about to enter the examination hall, but such thoughts should be banished, for, in spite of temporary setbacks, such as the discovery of electrolytes, the study and practice of medicine is far easier than it used to be.

To illustrate this, imagine the student witch-doctor taking his finals. What a plight ! He enters the mud-hut for his " long case " armed only with an ornate mask to hide his terrified face. He sees that the patient is ill, but like the doctor in this country a hundred or two hundred years ago, he has no method of examining him, no instruments to help, and no real treatment to offer him. Like the doctors of long ago were, the young witch-doctor will have been instructed for several years and will have had to study the art of medicine assidiously, but nearly everything he has had to learn will be nonsense. Compare his situation with that of his fortunate modern successor, who has been taught how to elicit a history and conduct a physical examination along logical lines, and who has a large and varied armamentarium of instruments to assist him, tape measures, specula, spatulae, proctoscopes, patella hammers, to mention only a few aids to examination unknown in less civilised days.

The qualified doctor is in an even more fortunate position. He can suggest numberless pathological tests, X-ray, encephalographic and many other investigations. If even this scientific onslaught fails to establish the diagnosis, the patient can be referred to the special departments. The nature of the patient's illness at last discovered, treatment can begin, and it is an extraordinary fact that there is hardly a disease which is treated in the same way as it was treated years ago, and in many cases extraordinary that such treatments should have been advocated.

We are, in fact, very lucky to have our jobs made so easy by the remarkable advances in thinking and knowledge in the last hundred years. Let us not be too complacent, however, for doubtless in fifty years time our own age will appear as one of relative ignorance and darkness.

CALENDAR

MAY

Sat. 2—Dr. E. R. Cullinan on duty.
Mr. J. P. Hosford on duty.
Mr. C. Langton Hewer on duty.

Tues. 5—Abernethian Society. Sir Vivian Fuchs.

Sat. 9—Medical and Surgical Units on duty.
Mr. G. H. Ellis on duty.

Thur. 4—Abernethian Society. Dr. E. B. Strauss, "The Anatomy of Treachery."

Sat. 16—Dr. R. Bodley Scott on duty.
Mr. A. H. Hunt on duty.
Mr. F. T. Evans on duty.

Sat. 23—Dr. A. W. Spence on duty.
Mr. C. Naunton Morgan on duty.
Mr. R. A. Bowen on duty.

Sat. 30—Dr. G. Hayward on duty.
Mr. A. W. Badenoch on duty.
Mr. R. W. Ballantine on duty.
Sports Day.

Abernethian Society

On Tuesday, March 10th, Professor P. C. Thonemann honoured us by addressing the Abernethian Society. This very distinguished Australian, who directs research on the "Zeta" project at Harwell, spoke in a manner clear to the uninitiated, but still informative to those who have a basic grasp of nuclear physics. One was struck by his modesty and the pains he took to describe the progress in similar projects elsewhere. Of great interest were the techniques used in the measurement of high temperatures, and much of interest on this topic was brought out at question time. It was a most enlightening evening, and well deserved the very large audience which appeared.

Transatlantic Visitors

On April 15th, four American and one Canadian Orthopaedic Surgeons visited the Hospital and Medical College. The day was spent in a series of informal clinical demonstrations. During the lunch interval they saw an exhibition of Historical and Pathological Specimens from the Museum, illustrating the contribution to orthopaedic surgery made by past Bart's men, including Percivall Pott, Abernethy and Paget.

This exhibition remained open for the remainder of the day and throughout the next, during which time it entertained an enlightened a considerable number of students.

Hospitals Symphony Orchestra

The orchestra performed on St. Patrick's day in the Duke's Hall at the Royal Academy. The active interest displayed by the medical profession in music is rather greater than is generally believed : the orchestra is of a considerable size (supported by no small Barts. contingent) and includes a wide range of talent (both medically and musically). The body of sound which results is full and abounding with an enthusiasm which tends to suppress some of the finer and more delicate turns of phrase. However, for this evening the orchestra was considerably augmented by professional musicians and while this may be considered an advisable precaution to be taken before an amateur orchestra undertakes to perform in public, it was justifiably resented by those medics asked to retire at the penultimate rehearsal.

Two major works were performed. In the first half, Mozart's Sinfonia Concertante (in E Flat, K 364) for violin and viola (Stephen Staryck and John Underwood) was played with an admirable lightness and accuracy by a rather reduced orchestra, and although the commencement of the last movement was perhaps lacking in the liveliness it demands, the work was an outstanding success.

During the second half of the concert, Symphony No. 5½ by the American, Don Gillis (written in 1947), brought cheers from the audience. The titles of some of the movements (Spiritual ?, Scherzophrenia, Frolicsome Finale) are suggestive of the nature of this "jazz symphony" whose

atmosphere was well displayed by some excellent work by the clarinets. It is a difficult work to play, and there was considerable fumbling, but its character was not missed, and certainly enjoyed by orchestra and audience alike.

Part of Walton's arrangement of Bach's music for the ballet "The Wise Virgins" — perhaps not so well known, but nevertheless deeply satisfying — formed the introduction to the concert. Rossini's overture to "The Barber of Seville", and Johann Strauss's very popular "Radetzky March" completed the programme. David Bateman conducted elegantly but perhaps not firmly enough, but during the preceding weeks he shaped the orchestra into its present fine fettle. The popularity and success of the occasion may be judged by the very considerable size of the audience.

P. J. W.

ANNOUNCEMENTS

Engagements

BENCH—WILLSON.—The engagement is announced between Dr. John T. Bench and Jacqueline Willson.

DURRANT—TUFFT.—The engagement is announced between Keith Durrant and Jill Tufft.

MULCAHY—WILLIAMSON.—The engagement is announced between Dr. Desmond Mulcahy and Jill Margaret Williamson.

Marriages

GOODWIN—BRUCE.—On March 14th, Dr. Charles Stewart Goodwin to Jean Elizabeth Bruce.

ROLES—DONALDSON.—On March 7th, at St. Bartholomew-the-Great, Nicholas Crosbie Roles to Wendy Donaldson.

Births

GLENISTER.—On March 4th, to Monique, wife of Dr. T. W. A. Glenister, a fourth son (Ian Simon).

LIPMAN COHEN.—On March 13th, to Joyce Hilary, wife of Dr. Eric Lipman Cohen, a daughter (Deborah Lucy).

MCKINNA.—On March 16th, to Marilyn and Alan McKinna, a son (Charles Andrew).

STEEL.—On March 12th, to Rosamond, wife of Dr. Peter Steel, a daughter, sister for John and Sarah.

WADDY.—On March 5th, to Mary, wife of Dr. G. W. Waddy, a son (Simon Granville).

Deaths

BULL.—On March 2nd, Dr. George Vernon Bull, aged 86. Qualified 1899.

CLINDENING.—On March 23rd, Dr. Frederick Talbot Driffield Clindening, in his 100th year. Qualified 1894.

COOK.—On February 8th, Dr. Joseph Basil Cook, aged 81. Qualified 1902.

GIBSON.—On March 6th, William Robert Gibson. F.R.C.S., D.P.H., aged 87. Qualified 1896.

HAMILL.—On March 4th, Dr. Philip Hamill, aged 75. Qualified 1910

MOREL.—On March 25th, Mervyn Philip Morel, F.R.C.S., aged 51. Qualified 1933.

NOTICES

Changes of Address

Dr. W. Norman Taylor,
c/o White Row,
Beckington, Bath.
Formerly of World Health Organisation, Nigeria.

Mr. J. E. R. McDonagh,
Park Gate,
Onehouse,
Nr. Stowmarket, Suffolk.
Late of 42 Wimpole Street, W.1.

Forthcoming Lecture

The next lecture on General Practice will be given by Dr. T. O. McKane, at 12 noon on Friday, June 5th.

A CASE OF BILATERAL ACOUSTIC NERVE TUMOURS

by J. A. McKinna

The Acoustic Nerve tumour is one of the more common space occupying lesions which may occur in the posterior cranial fossa. It is a benign lesion which has presented a challenge to neurosurgeons for the past sixty years. Because of its situation on the course of the eighth cranial nerve between the brain-stem and the internal auditory meatus, this tumour presents a logical diagnostic and surgical problem. In addition to reporting this case of a girl from whom bilateral acoustic nerve tumours have been removed (an almost unique occurrence) it seems worthwhile also to describe the tumour itself.

Case Report

In April 1954, Miss A. H. was referred to Mr. J. E. A. O'Connell. She was 16 years old and she complained of deafness and tinnitus in both ears. This had started eighteen months previously in the left ear and been noticed in the right six months later. P.H. She was born with a squint in the left eye, for which she had two unsuccessful operations at the age of 14 years. When she was 7 she had a left otitis media with perforation of the drum. F.H. : She was the eldest child of four, her parents were healthy and there was no family history of ear disease or neurofibromatosis.

Examination at that time revealed a quiet, deaf girl who lip-read well. She was of slight build and heart, lungs and abdomen were normal. Apart from several small pigmented spots on her body, she had three neurofibromata — flat, tender pigmented nodules about 1 cm. in diameter — two on the chest and one on the right loin.

Neurological examination : there was 0.5 cm. proptosis of the left eye (non-pulsatile). The visual acuity was normal on the right but reduced on the left (6/18 and J6). Fields were full and there was no papilloedema. The left external rectus was completely paralysed (this was the congenital squint with an associated amblyopia). The left pupil reacted sluggishly and there was a diminution of upward gaze on that side, i.e. slight impairment of third nerve function. There was reduced sensibility on the left side of the face supplied by the first division of the fifth nerve and impaired left corneal sensation. There was a slight peripheral left facial weakness. The left ear was totally deaf and there was a small, old clean perforation of the left drum. With the right ear she could just hear a conversational voice at a distance of two feet. Caloric responses were absent on the left and very poor on the right. The IXth to XIIth cranial nerves were normal as was examination of spinal motor, sensory and reflex function. Nystagmus was present, being horizontal in both directions with the coarser phase apparent on looking to the right. There was ataxia of the left arm, her gait was ataxic with veering to the left. Romberg's test was positive — to the left. *Skull X-ray* showed enlargement of the left internal auditory meatus and erosion of the petrous pyramid. Figure 1.

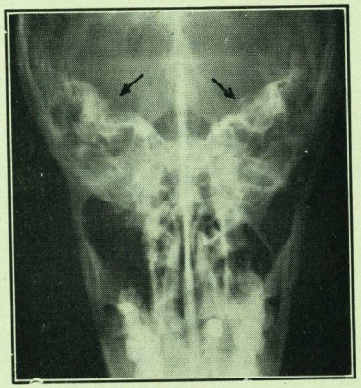

Fig. 1

X-ray (1954) *showing the erosion of the petrous bones pre-operatively, especially on the left* (*Towne's view*).

A probable diagnosis of bilateral acoustic nerve tumours was made, the one on the left side causing most of the signs. On 17th May, 1954 a unilateral left sub-occipital craniectomy was performed. Two meningiomas were found in relation to the lateral sinus and excised (one with considerable difficulty because of its intimate connections with the vessel wall). Cerebellar uncapping revealed a tumour in the left cerebello-pontine angle. During its removal it was

noticed to be partly cystic. Towards the end of the dissection the VIIth and VIIIth cranial nerves were seen and sacrificed. The eroded internal meatus was cauterised to rid it of all tumour. After closure of the dura and the myo-plastic flap, tarsorraphy was carried out. Histologically the tumour was a typical acoustic neurinoma.

Apart from a complete left facial palsy her post-operative recovery was good. Her ataxia soon improved and a month later she had a second operation : a left facio-hypoglossal anastomosis in the neck. When discharged five weeks later the wounds had healed well and the decompression was flat. The left third signs had disappeared but sensation in all three divisions of the left trigeminal nerve was impaired. Ataxia was less but there was still some dysmetria of the left arm. She remained well with little change in the signs. The facio-hypoglossal anastomosis showed good result after eighteen months and the eye-lids were divided. Figure 2.

Fig 2

1955 *photo of patient showing her teeth and demonstrating the left facial palsy.*

However, the deafness of her right ear slowly worsened and by February 1958, this deterioration had been noticeable to her for about six months. For four to five months she had frontal headaches night and morning for two months these had been bilateral. She had no visual disturbances or vomiting, only she did complain of anorexia and weight loss. She had tinnitus still — " like an air-raid siren " — and since the last operation, she had a poor sense of taste on the left side of her tongue. *Examination* revealed that she had lost weight. In the right sub-occipital skin there was a small tender neurofibroma.

Neurological examination : There was bilateral low-grade papilloedema with no change in the visual acuity or the full fields. The proptosis and external rectus palsy of the left eye were the same and again there were signs of left third nerve paresis similar to the pre-operative state in 1954. There was impairment of sensibility in all divisions of the left fifth nerve and in the lower two divisions on the right. Corneal sensation was present but neither reflex was brisk. There was no right facial weakness and the left side of the face had some tone and movement as a result of the facial nerve anastomosis (with atrophy of the left side of the tongue). There was complete bilateral deafness. Horizontal nystagmus was present. Finger-nose testing was slow but accurate, but there was bilateral dysdiadochokinesis, more of the left hand than the right. She walked on a broad base deviating to the right and Romberg's test was strongly positive. Caloric tests were not done. Spinal motor, sensory and reflex examination were normal.

Skull X-rays showed osteoporosis of the dorsum sellae—evidence of raised intra-cranial pressure—and there was increased erosion of the right internal acoustic meatus since 1954 but, some re-ossification on the left side. Prior to a further operation, the presence of any intra-cranial tumour, other than a right cerebello-pontine angle one, was excluded by air ventriculography. This also demonstrated an internal hydrocephalus.

Operation : On March 7th, 1958, a right sub-occipital craniectomy was performed. Uncapping the cerebellum revealed a large tumour. Its anterior pole penetrated the tentorial foramen and the main body of the tumour deeply excavated the pons, medulla and cerebellum. As on the left the facial nerve had to be sacrificed during removal of the tumour. A right-sided tarsorraphy had been done prior to the operation.

Within eighteen hours of operation her respirations became embarrassed and stridulous. This preceded a collapse of the lower lobe of the left lung, and thirty hours after operation a tracheostomy was carried out.

Immediately her airway improved, and management of the tracheo-bronchial secretions, which she had been unable to cough up, became possible. She had a patchy pneumonia of the left lung for some time. However, she started getting up in nine days and, after three and a half weeks, the tracheostomy tube was removed. Her convalescence was prolonged and difficult—the main problems being the ingestion of food and fluids. For the first two weeks after operation she was fed only by nasal stomach tube. Because of the facial palsies and the impairment of IXth and Xth nerve function (due to post-operative oedema) she had considerable difficulty in coughing and swallowing. Later when she became able to take semi-solids fairly easily she complained that her sense of taste was poor. Three months elapsed before she was eating and drinking adequately—a time which was full of considerable nursing persuasion and encouragement from the physiotherapists and the speech therapists. Her gait became steadier and the left-handed dysmetria receded. In the four months following her discharge from Hill End in June she had put on 1½ stone in weight. She still had some dysphagia but her speech, gait and co-ordination were progressing and are still doing so. Mr. O'Connell is considering the possibility of facio-accessory anastomosis on the right side to provide some tone to the right side of her face.

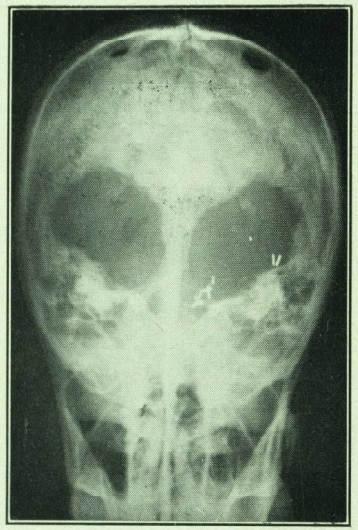

Fig. 3

X-ray (1958) *showing improvement on the left and deterioration on the right petrous bone, and showing the left sub-occipital craniectomy.*

Historical

The two earliest descriptions of Acoustic Tumours are usually ascribed to Sandifort in 1711 (Leyden) and to Charles Bell in 1830. Bell's clinical description was accompanied by post-mortem findings correlating the signs with the pathology. In 1917 Harvey Cushing published his classical monograph on the subject based on his own personal experience of thirty verified cases, and a similar number of supposed, but unverified, ones. He described the slowly growing tumour progressively producing certain symptoms and signs. These seemed to appear in such a consistent chronological order that he put it forward as being one of the cardinal diagnostic features of the tumour. Briefly these are :—

1. Auditory and vestibular disturbances.
2. Occipito-frontal head pains, with sub-occipital discomfort and tenderness.
3. Cerebellar disturbances.
4. Involvement of the adjacent cranial nerves.
5. Raised intra-cranial pressure and papilloedema.
6. Dysarthria, dysphagia and, eventually, cerebellar and respiratory crises.

Although certain workers agree with Cushing about this order (incidentally, on which did not hold entirely true in all his own cases), more recent work suggests that as a chronological order, it is not as important as Cushing suggests. This is based on analyses of nearly 150 cases of Walter Dandy's at Johns Hopkins Hospital (Revilla), and of a similar number in this country (Edwards and Paterson).

Sex Age and Side Incidence

From all the series reviewed slightly more females are involved, approximately in the ratio of 60% to 40%. There is little difference between the numbers occurring on each side. Both Cushing and Dandy have stressed that these tumours are rarely seen in the first two decades of life and that they occur most commonly between the ages of twenty-five and sixty. Some however do occur in the younger age groups (the youngest recorded being a girl of 8½) and this is especially true of bilateral tumours or of those unilateral ones which are associated with multiple neuro-fibromatosis (von Recklinghausen's disease). Bilateral tumours are uncommon but two of Dandy's cases were sisters in a family in whom these tumours seemed to be inherited as a Mendelian dominant "characteristic". In five generations of this one family, 35 out of 217 members on the maternal side — with an equal sex incidence — died about five years after the onset of bilateral deafness. Fifteen of these also became blind but none had evidence of neurofibromatosis elsewhere.

Symptoms and Signs

In nearly all cases the first symptoms of the tumour are related to the eighth cranial nerve. By the time that a patient is seen, maybe from three to five years after the onset of the initial symptoms there is always a history of partial or complete deafness of one ear. Frequently it is associated with tinnitus : usually described as a whistling noise or like the sound of escaping steam.

Less commonly the patient complains of "giddiness" or "dizziness", most often related to sudden head movements and sometimes associated with nausea. "Giddiness" means a legion of different sensations to different people but it is worthwhile remembering Gowers' description of vertigo : ". . . any movement or sense of movement, either in the individual himself or in external objects, that involves a defect, real or seeming, in the equilibrium of the body." This early mild vertigo of the patient with an acoustic neurinoma is probably vestibular in origin, being a response of the imbalance between a normal vestibular nerve and the poorly functioning one on the side of the tumour. Later in the development of the tumour a more severe vertigo appears in combination with ataxia and is almost certainly due to pressure on the cerebellar peduncle.

In most cases first examination reveals some degree of deafness on one side and in half of them this is complete. However caloric tests reveal gross impairment or complete absence of vestibular function in about four-fifths of the cases.

The next most commonly affected structure is the trigeminal nerve. Half of all patients have sensory symptoms, usually of numbness and paraesthesiae on the side of the face (the same side as the tumour). Rarely (but not once in Cushing's first series) is there a complaint of paroxysmal trigeminal pain simulating "*tic doloureux*". Although examination of some patients reveals a weakness of the muscles of mastication, this fact has invariably escaped their notice. The most accurate sign of impairment of trigeminal sensory function is the corneal reflex. In 90% of cases the corneal sensation is reduced ipsilaterally ; in 50% it is completely absent. In a smaller proportion there is some loss of sensibility to pin-prick or to light touch on the face.

Headaches are most frequently frontal but they seem to be unrelated to the presence or absence of raised inta-cranial pressure. Less often these are sub-occipital or occipital and associated with tenderness at the back of the neck or behind the ear.

The first symptoms which relate to cerebellar dysfunction are of instability of gait but, if only one is concerned it is much more often the arm than the leg which is objectively ataxic. It seems that patients are more aware of clumsy ataxia of their legs than of any fine loss of control in the movements of their arms or hands. These symptoms and signs are mainly ipsilateral — though they may be contralateral or even bilateral ; these latter phenomena being caused by a shift of the mid-line in the posterior fossa. However the most common sign of cerebellar involvement — found in 90% of subjects — is nystagmus. In 50% this is horizontal only : characteristically this is a bilateral horizontal nystagmus with its slower coarser phase appearing towards the side of the tumour on looking to that side. The remainder have vertical or oscillatory nystagmus.

Between 20% to 30% of patients complain of diplopia. In the main this is due to an ipsilateral sixth nerve palsy ; this is often a false localising sign and may be related to a rise in intra-cranial pressure and an alteration of the normal anatomical relations at the tentorial foramen. As the rise in pressure continues there may be further oculomotor palsies and visual difficulties in company with the development of papilloedema. The consequent internal hydrocephalus may be associated with mental and personality changes.

However, before these effects take place the tumour exerts pressure on its nearest ranial nerve "neighbour". It may seem at paradox that trigeminal function is impaired before that of the facial nerve when one remembers the similarity and proximity of

course of the seventh and eighth cranial nerves. In spite of this symptoms are rare and are of loss of ability to taste rather than of facial weakness. About half of all cases show a peripheral weakness of the facial nerve which is rarely severe.

Involvement of the lower cranial nerves are uncommon until late in the development of the tumour. Dysphagia and dysarthria are rare symptoms but the signs of palatal or vocal cord pareses occur slightly more frequently. Pyramidal signs occur in only 10% to 20% of cases. This also seems unusual bearing in mind the proximity of all these structures. Later there are the final consequences of raised intra-cranial pressure (as already

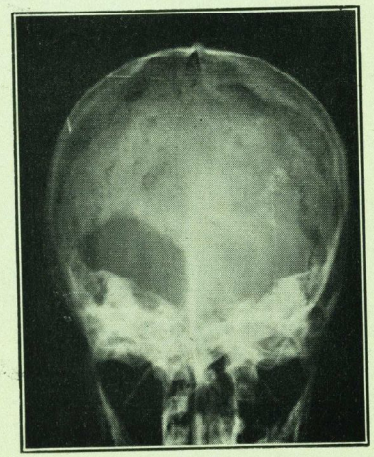

Fig. 4

Post-operative Towne's view showing the bilateral sub-occipital craniectomy.

mentioned) which, in the untreated case, culminate in coma and death.

Special Investigations

Skull X-rays. Certain views are taken which may show enlargement of the internal auditory meatus and erosion of the petrous temporal bone. Absence of these findings does not indicate the absence of a tumour but, positive results may clinch the diagnosis in a difficult case. Long standing raised intra-cranial pressure may be evidenced by destruction of the dorsum sellae and the posterior clinoids. Contrast X-rays — air studies or arteriograms — are rarely necessary. Fig. 4.

Electro-encephalography is of doubtful use in the localisation of posterior fossa tumours. *Audiometry* will reveal quantitative details of the deafness and *Caloric tests* must be carried out to estimate the impairment of vestibular function (Care must be taken in examination of the external meatus and the ear drum to exclude obstruction or local pathology).

Lumbar puncture in these cases is associated with a considerable risk — a risk of "coning" either at the foramen magnum due to the size and presence of the tumour in the posterior fossa, or at the tentorial opening because of raised intra-cranial pressure. If lumbar puncture is performed the C.S.F. is clear and usually colourless. It is sometimes slightly xanthochromic when the protein content is very high; this is always raised: commonly between 50 and 200 mgm. per 100 ml. and sometimes well above these levels. Normally there is no change in the cells or other constituents of the fluid.

Differential Diagnosis

Many other tumours occur in the posterior fossa, the common ones being meningiomas, gliomas and the secondary tumours from primary sites elsewhere in the body. The meningioma of the cerebello-pontine angle presents a similar picture but, it is one in which the hearing loss occurs later, adjacent cranial nerves are involved more frequently and more severly, the average age (45) is higher and X-ray changes are rare.

Cerebellar tumours give rise to the changes of raised intra-cranial pressure sooner and with less evidence of cranial nerve signs. Gliomas of the cerebellum and the pons tend to occur in younger age groups and the former have a rapid onset of symptoms. On the other hand brain-stem tumours show extensive cranial nerve involvement and long tract signs, which are often bilateral.

Bilateral acoustic tumours may be present but it must be remembered that bilateral cerebellar and trigeminal signs may be caused by a unilateral tumour alone or in association with other neurofibromata.

Chronic otitis media may lead either to a localised cystic arachnoiditis in the angle mimicking the tumour, or else to a posterior fossa abscess which will act as an acute space-occupying lesion. Auditory conditions which must be borne in mind are otosclerosis and Meniere's disease. The former is a condition, possibly hereditary, occurring in the years of 40 to 60. Examination reveals a (progressive) inner ear deafness which is associated with a minimum of vertigo and

none of the other features of the acoustic nerve tumour. Menieres disease is characterised by sudden bouts of vertigo, nausea and vomiting, and tinnitus — all accentuated by postural changes. Examination may reveal slight hearing loss but the vestibular responses are nearly always normal or even hyperactive.

Pathology

When the anatomy of the area is recalled, it will be understood that the tumour is situated on the postero-superior border of the petrous temporal bone, lying over the internal auditory meatus and between it and the pons and upper medulla. It is anterior to the cerebellar hemisphere and inferior to the tentorium. Over its surface run branches of the basilar artery and large veins which mainly run into the sigmoid sinus. The eighth cranial nerve may be seen entering the inner aspect of the tumour but its peripheral part is always masked by the presence of tumour in the internal meatus. The facial nerve is stretched across the anterior surface and the fifth nerve is also distorted by this part of the growth. Around its inferior pole the, ninth, tenth and eleventh nerves may be stretched to some extent. The cerebellum and the brain-stem are pushed to the other side of the posterior fossa. When the tumour is large the cerebellar tonsils are pushed down into the foramen magnum. The petrous bone, especially at the internal meatus, is often eroded by the tumour. Hydrocephalus and dilatation of the floor of the third ventricle causes the erosion of the dorsum sellae.

Macroscopically these are encapsulated tumours, usually round or oval but sometimes lobulated. Most vary from 1 to 5 cm. in diameter and the posterior aspect is often clothed by an arachnoid cyst. Parts are yellow, soft and buttery and others are of brown firm tissue. Some areas are cystic Histologically there are two characteristic types of cell: (*a*) dense masses of long bipolar cells with elongated nuclei — these making up the fibrous parts of the tumour and which are separated by (*b*) a loose-meshed reticulum of cells with rounded nuclei. The origins of the tumour are still not certain but it is thought that the elongated cells are derived from Schwann sheath cells whilst the reticular cells are of glial origin. The doubts about pathology and histogenesis have caused confusion of terminology. Neurinoma, neurofibroma and neuroma have all been used as well as the tumour of the cerebello-pontine angle. It is important to note that "neuroma" is an unsatisfactory term since it commonly denotes the scar developing at the cut end of a peripheral nerve.

Operation

This is the only treatment and prior to Cushing's heroic advances most results had been very depressing — in 1906, Sir Victor Horsley had spoken of his operative mortality of 60% — 70%. Cushing regarded total excision as an unlikely event but he developed the intra-capsular enucleation of the tumour via an adequate (bilateral) approach. In other words his operation was a decompressive manoeuvre: a general posterior fossa decompression by means of the sub-occipital craniectomy and a local tumour decompression by removal of its nucleus. That enucleation with the finger of the brain-spoon was a lethal procedure was well noted by Dandy who described the now classical, unilateral operation. This is through a vertical paramedian incision and a wide unilateral sub-occipital craniectomy. Drainage of the lateral ventricle is carried out through a separate burr-hole and after reflection of the dura the lateral one-third of the cerebellar hemisphere is excised ("uncapping"). This allows exposure of the tumour with a minimum of traction on the cerebellar peduncle and much less post-operative cerebellar dysfunction. Electro-cautery and suction are used to enucleate the tumour and then the capsule is painstakingly dissected from the surrounding brain-stem, cranial nerves and from within the meatus. Aiming at complete cure, this procedure rarely allows preservation of the facial nerve. Tarsorraphy is a necessary accompaniment of the operation in view of the complete facial palsy and the absent or reduced corneal sensation.

In Dandy's own series the operative mortality figures dropped from 22% to 6.5% when he first used this new technique and eventually the overall mortality dropped to about 2.5%. Post-operative deaths commonly occur in the first 48 hours. There are four main causes:

(1) Direct trauma to the brain-stem.
(2) Interference with the brain-stem and cerebellar blood supply.
(3) Respiratory crises—aspiration pneumonia due to inefficient coughing and swallowing as a result of operative trauma to the lower cranial nerves; or pulmonary embolism.

(4) Meningitis as a later complication (sometimes with a C.S.F. fistula)

Following successful post-operative convalescence the best means of overcoming the facial palsy is by facio-hypoglossal anastomosis in the neck, although some surgeons favour facio-accessory anastomosis. Dandy operated on six cases of bilateral nerve tumours — of these, there is evidence of only one having survived removal of both tumours. In another six cases mentioned by Pool, three have made good recoveries after total removal on one side and incomplete removal on the other.

Conclusion

The acoustic nerve tumour remains a lesion which presents diagnostic and therapeutic difficulties. The diagnosis is not easy in patients between the ages of 40 and 60. In these people, mild deafness with or without tinnitus, and occasional giddiness and headache are symptoms which are easily ascribed to the " processes of ageing " and to benign aural conditions (real or imaginary) by a busy practitioner. This, together with the insidious development of the clinical picture, produces some delay between onset and diagnosis and eventual treatment. By then raised intra-cranial pressure is a feature weighing considerably against operative success, apart from local factors in the posterior fossa. On examination the cardinal features are deafness associated with cerebellar dysfunction and trigeminal sensory loss. In other words, a triad of deafness, nystagmus and reduced (or absent) corneal reflex should at once suggest the presence of an acoustic nerve tumour. As an example is the case reported of a girl, now 21 years old, who has had bilateral tumours successfully removed in the past five years.

(My thanks are due to Mr. O'Connell for permission to report this case and for his help and encouragement throughout its preparation).

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PHYSIOLOGY BEFORE WILLIAM HARVEY

by John R. Brown and John L. Thornton

The term " physiology " has undergone many changes in inference, and originally implied an enquiry into nature. Later it came to include the normal structure and function of the human subject, but the functional aspect was very theoretical, and frequently the older usage persisted. For example, William Duncan's *Physiologica* of 1651 contains a section devoted to metals and precious stones. With the growth of experimental science the division between structure and function has widened, and in recent years " physiology " has become limited to knowledge gained by scientific means of the normal functioning of organisms, or their constituent parts.

The development of scientific method might be considered to be a product of Greek civilization, but there are records of more ancient civilizations that included an extensive knowledge of medicine. China, Babylonia, Assyria, and India, for example, were advanced in medical matters at very early dates, but we have little available evidence from which to glean facts. Egypt, however, has bequeathed to us several medical papyri, and we possess practical evidence of anatomical knowledge in ancient Egypt in the form of mummies. The Edwin Smith surgical papyrus was probably written in the sixteenth century B.C., and refers to the pulsation of vessels in various parts of the body. The Papyrus Ebers (1500 B.C.) describes the pulsation of the heart in the precordial areas, and introduces for the first time the concept that the heart is the most important organ in the body, the seat of the intelligence and of the emotions. So great was the importance placed on this organ that in ancient Egypt the bodies were always preserved with the heart in situ. This concept was maintained by Hippocrates, who considered that the heart, being a strong muscular organ, was immune to injury and disease. The left ventricle was the seat of intelligence and understanding. Aristotle regarded the heart as the seat of the soul, the seat of vitality, and the source of the blood.

About 530 B.C. Pythagoras settled in Croton, a Dorian colony in Sicily, and from his teachings arose the Sicillian school of medicine. He introduced a regular system of dietetics, and instructed his pupils in the theory of medicine. Pythagoras also studied arithmetic and its application to weights and measures. From this school came Alcmaeon (*c.* 500 B.C.), who constructed a positive basis for medical science founded upon animal experimentation. He discovered the optic nerves and the tube leading from the middle ear, later to be re-discovered by Eustachius. His theory of vision suggested that sight was the result of the lachrymal secretions, and that the eye contained fire, for a blow upon the eye causes flashes of light. Alcmaeon also considered that all the organs of sensation were somehow or other connected to the brain, in that when the brain is agitated paralysis of sensation results. Furthermore, that the brain was the governing faculty of the body.

Important for his influence on later physiological thought is Empedocles of Agrigentum, Sicily. He postulated that the heart is the seat of the innate heat of the body, and the centre of the blood vascular system through which the innate heat, or "essential factor of life", is distributed to the body. In ancient philosophy, life was considered to be derived from a special abstract quality, the Pneuma, of which Empedocles regarded the heart as the source. It is to him that we owe the origin of the doctrine of " the fours". He considered that throughout nature there were two dominant characteristics of Opposition and of Affinity. All matter consisted of four elements, Fire and Water, Earth and Air, and exhibited these two dominant characters. These were in opposition or alliance to one another; Water opposes Fire, but is allied to Earth. In addition to the four elements there were four Primary Qualities, Heat and Cold, Moisture and Dryness. At that time and for several centuries later medical philosophy was based upon the interaction of these elements and qualities, to which Hippocrates added the four

Humours. These ideas persisted into the Middle Ages, when they became the doctrine of the physical and physiological fours.

One of the last members of the Sicilian school, Diogenes of Apollonia, was greatly influenced by the pneumatic theory elaborated by Empedocles, and made extensive investigations into the blood vascular system. He described the vena cava with its main branches.

Until the advent of Hippocrates (*c.* 460-*c.* 370 B.C.) the pursuit of medical enquiry was largely philosophical, with very little experimentation. Hippocrates freed medicine from speculation, mysticism and superstition. The Hippocratic Method may be considered simply as follows: Observe the facts: Be sceptical of the marvellous: Hesitate to theorise beyond the facts, but be eager to generalise from actual experience. The Hippocratic method is amply demonstrated in his investigation of epilepsy, the "sacred disease". In his book, *On the nature of man*, Hippocrates states that the body is composed of four humours, Blood, Phlegm, Yellow Bile, and Black Bile. In health these are combined in the correct proportions, disease resulting from the preponderance of one of them. The humours are related to the four qualities and elements.

From about the fourth century B.C. Athens became the main centre of the medical sciences, and it was there that Aristotle, a pupil of Plato, founded the Peripatetic School of medicine. This was so called because Aristotle had a garden in Athens known as the Lyceum, and there he taught his pupils as he walked around. Plato taught that the heart was the organ which set the blood in motion, and he was the first man to name the great vessel of the body as the Aorta. But it is with Aristotle that we are concerned as the great codifier of ancient science, on whom all subsequent biological development, including that of modern times, is based. He laid the basis of organic evolution in his teaching concerning the "Scala natura". Aristotle developed coherent theories of generation and heredity, and contributed greatly to comparative anatomy. Although he was an excellent naturalist, he did not have the same affinity for physiology. He made no proper distinction between arteries and veins, and failed to connect the organs of sense with the brain, a structure which played only a minor role in Aristotelian physiology. He considered that the brain acted as the cooling system of the heart by the secretion of Phlegm.

Concerning generation. The material substance of the developing embryo is contributed by the female, but is passive. The male, by giving the principle of life, the soul or "Phyche", contributes the essential generative agency. Since the soul is of itself not material, it is therefore theoretically unnecessary for anything material to pass from the male to the female. The essential contribution of the male is not matter, but form and principle. Two thousand years later, Harvey in his *De generatione*, 1651, shared the same view. Modern studies in fact show that under certain circumstances parthenogenesis can take place.

On the circulation. To Aristotle it was manifest that warmth is inherent to life, and that when warmth departs, life does likewise. He reasoned that in some way or other life is dependent on the food we eat and the air we breath, and he set himself the task of blending these principles into a rational system of physiology, one compatible with the vascular system as he knew it. The heart covered by the pericardium consisted of three chambers, the right and the left ventricles and the left auricle. Up to the time of Harvey it was convenient to consider the heart functionally as the right and left ventricles, with the auricles as convenient antechambers. Aristotle considered the right auricle as the meeting place of the great vessels, the superior and inferior venae cavae. Upon intestinal absorption, food becomes "Plasma", which is carried via the veins to the right side of the heart, and via the arteries to the left side. Under the heating influence of the heart the plasma becomes blood. The heat induces expansion of the blood, lifting up the walls of the ventricles and giving rise to pulsation. Simultaneously it causes expansion of the lung, and as a result air from the lung passes down the pulmonary vessels to cool the heart, following which the lungs and thorax collapse coincident with systole. The blood, endowed with the heat from the heart, is then distributed throughout the body. His description of the action of the heart is as that of a bellows, not of a pump.

The writings of Aristotle indicate that his observations were generally accurate, and one wonders why he did not notice the discrepancy between the pulse and the respiration rates. Had he done so his theory on the action of the heart would have been untenable. Aristotle had no conception of the circulation other than as a system of irrigation. He did, however, realise that there are two types of blood, that on the right side of the heart being more abundant and less pure than the blood on the left side.

On the death of Alexander the Great the chief centre of medical learning moved to Alexandria, where it prospered under the Ptolemics. It was there that anatomy and physiology became recognised disciplines under Herophilus of Chalcedon and Erasistratus of Chios respectively. The writings of these authors have been lost, and it is fortunate that something of what they achieved has been recorded in the works of Galen.

Herophilus on the Nervous System. Contrary to Aristotle, Herophilus placed the brain above the heart in importance; he distinguished between the cerebrum and the cerebellum, and commented on the cavities of the brain. He considered that locomotion was under the voluntary control of the nervous system, and appreciated the presence of a "nervous pathway" by which sensation reached the brain. Herophilus was thus one of the first to distinguish between sensory and motor nerves, later elaborated by Galen. Herophilus taught that the lung has a natural tendency to dilate and contract, and that its function is to receive fresh air from outside, to distribute it throughout the body, then to withdraw and finally expel it. He called the pulmonary artery the "arterial vein," a term that was to persist until the time of Harvey.

On the Circulation. Herophilus distinguished between arteries and veins, and held that the arteries contained blood, the pulse being involuntary since it arose from the contraction and dilatation of the arteries, as the result of impulses from the heart, which alone possessed the necessary motive power. He determined the pulse rate by the use of the water-clock (*clepsydra*), and distinguished between several pulse characteristics, e.g. the crawling "formicating" pulse, and the capering pulse. In his treatise on the pulse, Herophilus described four principal characteristics; size, frequency, strength and rhythm.

Often called the "Father of Physiology", Erasistratus was a contemporary of Herophilus at Alexandria. He was essentially a rationalist, and professed himself free of all mysticism. He had an objection to all hidden causes save on "Physics", which to him was "Nature". Erasistratus could not dismiss entirely the creative force, but attempted to reduce its activities to their simple terms. To his contemporaries he was a reactionary. For example, they considered that digestion was a process akin to cooking, the chief or only agent being the innate heat of the body. Erasistratus rejected this theory, preferring a mechanical process, the food being ground by the muscular action of the stomach, aided by the "pneuma" which entered the stomach via the arteries, and not along with the food itself. A similar controversy took place among physiologists in the seventeenth and eighteenth centuries. When digestion was complete chylos passed from the stomach and intestines to the liver, where it was transformed into blood.

The Physiological System of Erasistratus. The physiology of Erasistratus was based upon the observation that every tissue and organ of the body contained a threefold system of arteries, veins and nerves, which were considered to be hollow. The whole was built upon the existence of "Pneuma". In opposition to the teaching of Aristotle, he considered that there was no "innate breath" in the body, and that the pneuma was derived from outside the body. Pneuma was necessary to life, and must be of a certain density otherwise suffocation would result. Erasistratus remarks that the inhalation of the vapour produced by pouring water on charcoal causes suffocation. Blood was formed in the liver from "chylos", a product of digestion, the biliary contents being separated and passed into the bile duct. The blood reached the right ventricle via the vena cava. The pneuma, on reaching the left ventricle via the pulmonary vein and the left auricle, was changed into a special kind of pneuma, "Vital Spirit", which was sent to various parts of the body by arteries. Erasistratus considered the heart as a pump. In diastole, pneuma was drawn into the left ventricle and blood into the right ventricle, and expelled during systole. The heart actively dilated and contracted by its own innate force, the arteries being passively dilated by the stream of vital spirit being forced into them. The vital spirit which reached the brain was transformed into the ventricles into the "Animal

Spirit", which then passed down the hollow nerves, causing expansion of the muscles, which resulted in muscular contraction and sensation. Erasistratus described how the semilunar valves acted, and the fact that the function of the bicuspid valve was to prevent the vital spirit leaving the heart save via the aorta, in the same way in which the tricuspid valve prevented the regurgitation of blood.

Every tissue was considered to be made up of a network of arteries, veins and nerves carrying blood for nourishment, and two types of pneuma necessary for sensation and movement. These structures divided and subdivided until their size was beyond the limits of vision. The final orifices of the arteries and veins Erasistratus regarded as synanastomoses, and he considered that under abnormal circumstances

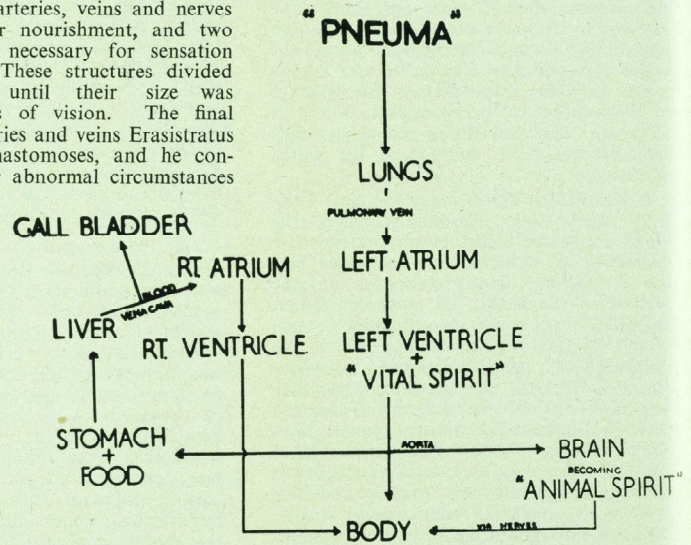

Fig. 1. *The Physiological System of Erasistratus.*

there was a communication between them through which blood might pass. He knew that blood came from a cut artery, which fact contradicts his assumption that the arteries are filled with the vital spirit. However, he explained the presence of blood as the immediate passage of blood across the synanastomosis when the artery is opened. It may be said that Erasistratus came near to the discovery of the circulation of the blood, but it should be appreciated that he considered that there was no connection in the heart between the arteries and veins. Since both "vital spirit" and blood were used up in the body there appeared to be no need for a circulation. (Fig. 1).

Of the many ancient schools of medicine perhaps, with the Hippocratic school, we owe most to the Eclectic School, which denoted philosophers who selected from various systems such opinions and principles as they judged to be sound and rational. In other words, an "eclectic" is one who, recognising an element of truth in all systems, collects a newer and fuller one out of the whole. Such was Claudius Galen born at Pergamon in 130 A.D. At this period there was a great interest in anatomy and dissection, not with the view of advancing scientific knowledge, but to provide recreation and amusement for the patrician classes. There were many medical texts available, but most were spurious. The rulers of those days were ardent collectors, and as a result of the demand many forgeries were passed off as genuine. In this way many of the Hippocratic texts were mutilated. Galen made critical surveys of the writings available at his time, and it is indeed due to him that we have any knowledge of the work of many of the previous writers.

At the time of Galen's pupillage it was considered that the left side of the heart and the arteries contained blood (a specialised form of air); the blood vessels (true to Hippocratic doctrine) arose in the head; the voice was said to be produced by the heart; the function of the kidney as a secreting organ was not known; and the knowledge of the function of the lungs was

where Erasistratus had left it nearly three hundred years before. At the age of eighteen Galen commenced the study of medicine under Satyrus, a keen anatomist at Pergamon. Then Galen journeyed some fifty miles south to Smyrna to study under Pleops, who taught him the basis of experimental medicine, encouraging him to write his first treatise on "The muscles of the thorax and the lung." Galen left Smyrna for Corinth, and later went to Alexandria where the library from his home town was then housed. He returned to Pergamon in 157 A.D. and was appointed to the School of Gladiators. Moving to Rome in 162 A.D., he lectured in a public theatre, and performed experiments on animals before large audiences. Galen was an experimenter, and did not believe that which he could not see or feel. Although he used the texts of his predecessors he did not quote that which he had not verified.

On the Circulation. Chyle derived from the products of digestion in the intestine is conveyed via the portal system to the liver. Here it is endowed with the vital spirit to become blood. In this Galen's ideas are the same as those of Erasistratus, and he considered that on reaching the vena cava the blood divides into two streams, upwards and downwards. The upper stream again divides into two flowing to the head and to the right ventricle. That entering the right ventricle receives the benefit of the innate heat of the heart, some purification is effected and "sooty fumes or excreta" pass via the pulmonary artery to the lungs, and are voided in expiration. This blood also provides for the nutrition of the lungs themselves. A small portion of the blood in the right ventricle passes through pores in the interventricular septum to the left ventricle, where it mixes with air drawn in from the lungs via the pulmonary vein during diastole. There, under the influence of the innate heat of the heart it becomes transformed into "vital spirit". The thermal equilibrium of the heart is maintained by the cooling inflow of air from the lungs. That portion of the blood reaching the brain is transformed into "animal spirit", which is carried away from the brain by means of the hollow nerves. The animal spirit subserves sensation and motion.

Galen was convinced of the terminal anastomoses and is said to have demonstrated their presence by draining away all the blood from a single artery. He indicated the presence of pulmonary anastomoses in that he thought that the small amount of blood brought to the lungs via the pulmonary artery found its way directly into the pulmonary veins, and thence to the left ventricle. He proved experimentally that the arteries do not contain air (as believed by Aristotle), but blood. With regard to the circulation Galen thought that the blood just ebbed and flowed, undergoing a constant process of purification. He demonstrated that the heart continues to beat for a considerable period after the rest of the body is quiescent following a high section of the spinal cord, and from this observation he concluded that the heart has an intrinsic pulsatile force within its own structure. This anticipated the work of Arthur Keith and Martin Flack in 1907 on the sinu auricular node. As an example of Galen's experimental methods, he gives details of exposure of the heart leaving the parietal pleura intact so that respiration may be preserved.

On the Nervous System. Galen carried out extensive investigations on the structure and function of the spinal cord, some of his observations being as follows: Longitudinal section of the cord does not give rise to muscular paralysis; complete section of the cord causes muscular paralysis and complete loss of sensation from both sides of the body; hemisection of the cord causes paralysis on the side of the excision.

On Respiration. In all animals the diaphragm is used for respiration of small amplitude. When the need for deeper respiration arises, as in exertion or in fever, or when the heat of the surrounding environment is increased, the animal is compelled to use its intercostal muscles as well as the diaphragm. In his experiments on respiration Galen studied the action of the phrenic nerve, section of which he remarked "considerably diminished movement of the lower part of the thorax", at the same time remarking on the increased activity of the accessory muscles of the neck. He traced the origins of the phrenic nerve, and described the course of the recurrent laryngeal nerve, noting that section of this nerve produced loss of voice. Galen investigated the phenomena of pneumothorax, and in one experiment placed a bag over an excision in the chest wall, noting that air was forced into the bag on expiration and withdrawn on inspiration.

On Digestion. The stomach did not act mechanically as Erasistratus had suggested, but was quiescent during digestion, the pyloric sphincter being closed. On the termination of digestion the latter opens and the digested food passes on into the intestine.

On the Urinary System. Galen observed that the ureters are set obliquely into the bladder wall, such provision being made by nature so that it would be impossible for the urine to return to the kidneys, no matter how full the bladder might become. He worked out the nerve supply and vascular system of the bladder, describing its sphincter muscle. In his experiments on the formation of the urine he tightly bandaged the ureters, and noticed that no urine escaped into the bladder, but that the ureters above the bandages were swollen. Galen considered that the human body may be examined from two aspects, philosophical and descriptive. He considered that all structures in the body had been formed by the Creator for a known and intelligible purpose: "Nature makes nought in vain". Galen's doctrine made a particular appeal to the Christian point of view, which is probably why his writings have been preserved in larger quantities than have those of other pagan writers. So much influence did Galen have on medical thought, that although he contributed much to the knowledge of physiology, blind obedience to certain of his writings containing fundamental errors retarded the progress of medical science for many centuries. For example, his concept of the movement of the blood, which assumed communication across the interventricular septum, was regarded as accurate even after the time of Vesalius. As a further illustration of the supposed infallibility of Galen, John Geymer was in 1559 fined by the College of Physicians for openly doubting his teachings, and Geymer was not admitted to the College until he publicly recanted.

It is to be regretted that the seed sown by Galen should have remained infertile for such a lengthy period. The rise of Christianity with its insistance on spiritual matters did nothing to help medical science, and the practical spirit of the Roman Empire was not calculated to advance pure science. The downfall of the Empire, and the Barbarian invasions heralded the advance of the Dark Ages. During this period the Arabian school of medicine was founded at Baghdad under the Caliphate, and is particularly noteworthy for its number of translations into Arabic of the earlier classical writings. Of this period al-Qurashi and Avicenna are of special interest to physiologists.

Avicenna was born at Karmisan, near Bokhara in 980 A.D., and wrote his first book on medicine at the age of twenty-one. The most famous of his writings was called the *Canon of medicine*, which was for long regarded as an infallible oracle. Avicenna considered that the pulse arose from the motion imparted to the veins during respiration. In his commentary on Avicenna's *Canon* al-Qurashi denied the presence of the invisible pores in the interventricular septum, as suggested by Galen, and considered that the blood was refined in the right ventricle by the heat of the heart, thence rising up the pulmonary artery into the lungs. A small amount of this blood, the fraction that was most highly refined, penetrated the ramification of the pulmonary vein mixed with air to enter the left ventricle together with more air from the lungs, being transformed into the "Vital Spirit." Al-Qurashi's comments on the pulmonary circulation antedate those of Servetus by several centuries.

In the Dark Ages little was added to medical knowledge that had not been established in the previous centuries. However, it is of interest to make brief reference to the medical and physiological speculations of those times. In St. John's College, Oxford, exists an eleventh century manuscript by Bryteferd, Monk of Ramsey, in which he writes of the four seasons of the year, the four qualities, the four humours. This follows the teaching of the School of Salerno, the whole being built up into the concept of the Physiological and Physical Fours, e.g. Blood rules the right; Red bile the right, also the gall bladder; Black bile the left, including the spleen; Phlegm, part to the head and part to the urinary bladder; Blood escapes via the nose; Red bile via the ears; Black bile via the eyes; Phlegm via the mouth. There were four tissues: bones, nerves, vessels, and flesh; four natural processes: eating, drinking, generation, and sleeping; four parts of the body: head, chest, belly and bladder. Spring was the enemy of the head; summer the chest; autumn the belly; winter the bladder. There were many other concepts of a similar nature all derived by analogy.

Following the period of the Dark Ages came the Renaissance, the fostering of the

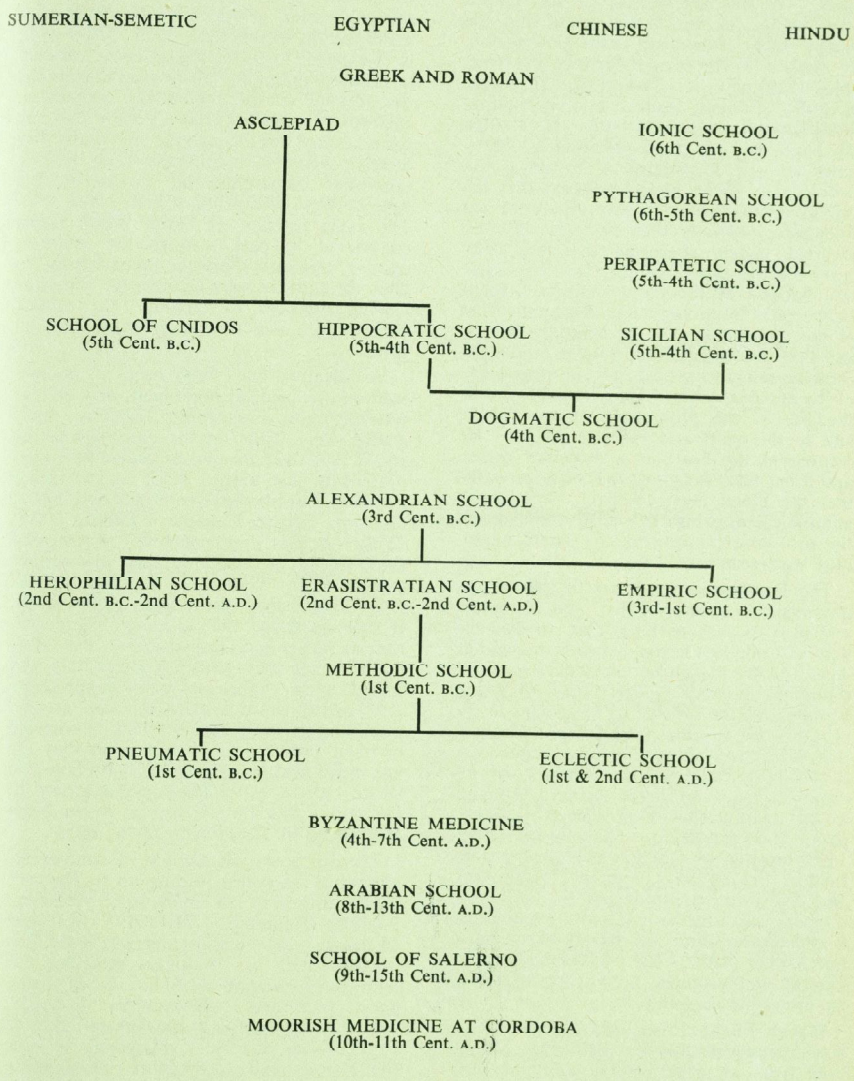

Fig. 2

Early Schools of Medicine.

humanities and the formation of the universities. It was the period of the revival of learning, the search for truth, and the escape from mysticism and superstition. To such a world came Leonardo da Vinci (1452-1519) who, in addition to many other scientific activities, made over one hundred dissections of the human body. He studied the heart, the eyes, and particularly contributed to our knowledge of myology and neurology. Galen had considered that the crystalline lens was the seat of vision, but Leonardo, realising that the lens gave an inverted image, suggested that the optic nerve was the visual receptor. He also studied the reaction of the pupil to light. While Leonardo's physiology was essentially that of the Galenic school, he carefully investigated the movement of the muscles, and made contributions to the anatomy and physiology of the nervous system. He gave considerable thought to the physiology of the foetus, and to the heart and vascular system. He recognised the heart as a muscular organ, and it has been suggested that he appreciated that the blood must circulate. Leonardo's anatomical drawings are superb, and reflect the profound thoughts of a brilliant anatomist and scientist.

The Renaissance gave rise to the scholar physicians, Linacre, Caius and Rabelais, and it is to such as these that we owe the debt of bridging the gap between the Middle Ages and the beginnings of modern scientific thought. William Gilbert (1544-1603) was President of the College of Physicians in the year his *De magnete* (1600) was published; this originated modern deductive methods. It has been suggested that Gilbert, by his example, helped to direct Harvey's thoughts to the investigation of problems by experiment and deduction. Sanctorius (1561-1636) inspired by Gallileo at Padua was the founder of the physiology of metabolism, and described a thermometer for taking the temperature of the human body. He invented a pulsometer, and conducted experiments on changes in the weight of the body under varying circumstances, proving loss of weight by insensible perspiration.

Robert Fludd (1574-1637), a mystic and a Rosicrucian, studied the pathology of the lung from an experimental point of view and is said to have been among the first to measure the temperature of the body with a "thermometer". Michael Servetus (1511-1553), scholar and physician, published in 1553 his *Christianissimi restitutio*, which contained certain "heretical" ideas, for the publication of which he was burned at the stake on October 27, 1553. This work is of interest to physiologists as he casually introduced among the theological discussions his account of the pulmonary circulation. Instead of accepting Galen's view that the main passage was through the interventricular septum, Servetus maintained that a more important communication existed in the lung between the primary artery and vein. The same fraction of blood which Galen considered to pass through the interventricular septum, Servetus maintained to filter through the new channel for the same Galenic purpose of coming into contact with the air, and thus originating the vital spirit.

Venesection had long been a popular method of medical treatment, and in the sixteenth and seventeenth centuries many studies were made on the functions of the veins. Amatus Lusitanus described the valves present in the azygos vein, and evidence indicates that his discovery antedated that of Giovanni Battista Canano of Ferrara (1515-1579). It was concerning the presence of these valves that Lusitanus came into serious conflict with Vesalius. Jacobus Sylvius (1478-1555) also described these valves. It may be stated that although many anatomists recognised the presence of the valves in the veins, they were not adequately described until Fabricius of Aquapendente (1537-1619) wrote his *De venarum ostiolis*, published in 1603. Canano had commented on their presence to Vesalius, but they are not mentioned in *De fabrica*. Fabricius also wrote on the physiology and anatomy of the uterus and the foetus, his views being expounded in *De formatu foetu*, 1600.

There is a certain amount of controversy regarding the events leading up to Harvey's demonstration of the circulation. Matthaeus Realdus Columbus (1516-1559), who was at Padua with Vesalius and succeeded him in the Chair of Anatomy, described the pulmonary circulation in his *De re anatomica*, published posthumously in 1559. This was very similar to the description given by Servetus, and it is interesting to note that Harvey refers to the work of Columbus, but had no knowledge of that by Servetus. Caesalpinus (1519-1603) was the first to use the term "circulation". He wrote that the blood flows from the vena cava to the right

heart, thence through the pulmonary artery and vein into the left heart, and finally through the arteries to the entire body. However, there is no evidence that his ideas were based upon experiment; they were rather the result of theorising. Ceasalpinus did, however, appreciate the fact that there were anastomatic connections between arteries and veins.

The age of physiological speculation was passing, and with the advent of William Harvey experimental physiology was to arise as a basic science.

CHRONOLOGICA PHYSIOLOGICA UP TO HARVEY

		School of Medicine or University
580-489 B.C.	Pythagorus of Samos	
c. 490-430 B.C.	Empedocles of Agrigentum	Pythagorean
c. 500 B.C.	Alcmaeon of Crotona	,,
c. 470 B.C.	Aegimios of Elis	,,
c. 460-*c.* 370 B.C.	Hippocrates	
c. 430 B.C.	Diogenes of Apollonia	Pythagorean
384-322 B.C.	Aristotle	Peripatetic
380-286 B.C.	Theophrastus of Eresos	,,
c. 300 B.C.	Herophilus	Alexandrian
c. 310-250 B.C.	Erasistratus	,,
c. 100 A.D.	Rufus of Ephesus	Pneumatic
130-200 A.D.	Galen	Eclectic
c. 450 A.D.	Nemesius, Bishop of Emesa (Syria)	
980-1037	Avicenna	Arabian
965-1038	Alhazan	,,
1193-1280	Albertus Magnus	Salernitanian
c. 1210-1288	Al-Qurashi	Arabian
1214-1294	Roger Bacon	Oxford
c. 1276-1326	Mundinus de Luzzi	Bologna
1452-1519	Leonardo da Vinci	
1460-1524	Thomas Linacre	Oxford
1478-1555	Jacobus Sylvius	Paris
1493-1541	Paracelsus	Basle
1497-1558	Jean Fernel	Paris
1511-1553	Michael Servetus	Paris
1511-1568	Amatus Lusitanus	Salamanca
1514-1564	Andreas Vesalius	Padua
1515-1579	Giovanni Battista Canano	Ferrara
1516-1559	Realdus Columbus	Padua
1519-1603	Andreas Caesalpinus	Pisa & Rome
1520-1574	Bartolommaeus Eustachius	Rome
1523-1562	Fallopius	Padua
b. 1530	Leonardus Betallus	
1530-1589	Julius Caesar Arantius	Bologna
1534-1600	Volcher Coiter	Groningen
1537-1619	Fabricius ab Aquapedente	Padua
1544-1603	William Gilbert	Cambridge
1561-1636	Sanctorius	Padua
1564-1622	Galileo Galilei	Pisa, Padua & Florence

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LETTERS TO THE EDITOR

The Editor,
St. Bartholomew's Hospital Journal,
London, E.C.1.

Sir,

We would like to draw the attention of your readers who are graduates of the University of London and members of Convocation, to the next ordinary meeting of Convocation, which is at 6 p.m. on Tuesday, May 12th, at the Senate House, Malet Street, W.C.1. As the Guest Speaker at that meeting will be Dr. C. F. Harris, the Vice-Chancellor, and as the title of his address is "Problems of Medical Education," we feel he should have the support of London medical graduates, and graduates from Bart's in particular.

Further, may we take this opportunity to urge London medical graduates who have not joined Convocation to do so by applying to the Registration Officer, University of London, Senate House, Malet Street, W.C.1., for the appropriate form of application and returning the completed form to him with a fee of One Pound.

May we also appeal to members of Convocation to attend its meetings as often as possible?

Yours faithfully,
BASIL HUME, *Senator.*
HENRY BUNJE,
A. J. M. REESE,
NAPIER THORNE, *Members,*
Standing Committee of Convocation.

61 Harley Street,
London, W.1.

A SEQUENCE OF EVENTS

by **Trevor H. Howell, F.R.C.P.Ed.**

The study of medical text-books, although necessary for passing examinations, is not altogether adequate as a preparation for practice. The student is liable to acquire a number of pictures of diseases as separate entities. The literature gives little indication that the presence of one form of pathology may modify the signs and symptoms of another. Nor does there exist an adequate presentation of the topic of "complications". The present system of medical education provides the young doctor with a series of transverse sections of disease. He rarely, therefore, has the opportunity to follow a patient's illness through from start to finish. Hence, the view provided by a longitudinal section of disease, over several months, is missed. A recent enquiry into the conditions complicating cerebral thrombosis provided some interesting examples of this longitudinal view of disease. It was felt that the whole story of one case might, perhaps, be illuminating.

Martha A. was a widow, living in a first-floor flat. Owing to rheumatic pains in her knees, she found getting up and down stairs troublesome. Since she was 78 years old, her doctor referred her to a Geriatric Out-patient Clinic for treatment. A diagnosis of osteoarthritis of the knees, complicated with hypertension, was made. The old lady responded well to physiotherapy and improved considerably.

One day, however, the physician observed a change in the lady's gait. Instead of the usual slight limp, there was a definite dragging of the left leg. This suggested a possible upper motor neurone lesion, probably due to cerebral thrombosis. Neurological examination confirmed this: the left plantar was of Babinski type. With appropriate treatment, Mrs. A. again improved but continued to attend the Clinic as an out-patient. A Home Help was provided by the local Welfare Department to assist with housework and shopping, thus allowing the patient to maintain her independence.

After a time, Mrs. A. was missed at the Clinic and letters of enquiry to her flat were not answered. Contact with her general practitioner revealed that she had suffered another stroke and had been admitted to a near-by general hospital.

About a year later, the Almoner from this same hospital wrote to the Physician of the Geriatric Unit, asking if a "chronic sick" patient could be transferred to his wards. On arrival, the case turned out to be none other than Mrs. A. She was now helpless, bedfast and incontinent; having been kept in bed without any attempt at rehabilitation for twelve months. Both plantars were extensor, the blood pressure had dropped to 150/90; there was oedema of the ankles and a chronic urinary tract infection was present. When this infection was eradicated by treatment with antibiotics, most of the incontinence disappeared. A course of physiotherapy and remedial exercises was started. The patient soon became fit to sit out of bed in a chair.

Gradually, she learnt to stand and to walk again. But, just as plans were being made for Mrs. A. to go to a convalescent home, she had an attack of upper abdominal pain. With the aid of a barium meal, a diagnosis of hiatus hernia was established and suitable treatment was instituted. Three weeks later, the patient left hospital, without pain and fully mobile.

Mrs. A. was now considered to fall into the category of "frail ambulant" cases. She remained under supervision at the convalescent home for nine months, living a comfortable, but limited existence. One day, however, there was another attack of abdominal pain and she was re-admitted to the wards of the parent Geriatric Unit. A provisional diagnosis of cholecystitis was made on clinical grounds. Later, the type of pain seemed to alter. It had some association with food and intermittent attacks of vomiting made their appearance for the first time. Before a further barium meal could be performed, the patient suddenly showed haematemesis and melaena. She collapsed and died quickly, in spite of blood transfusion.

By this time, the case sheets of Mrs. A. contained a number of different diagnoses. It was therefore decided to ask permission for autopsy, since the case was one of great clinical interest.

At post mortem, the body was that of a plump old woman. Fluid was present in both pleural sacs. The lungs showed basal congestion and oedema, with patchy bronchopneumonia. The heart weighed 380 g. The wall of the right ventricle was thin and had much fatty infiltration. The left ventricle was normal, apart from the mitral and aortic valves, which were atheromatous. The coronary arteries were narrowed by patchy calcification The aorta showed considerable calcification below the arch and patches of ante mortem clot were found in places. There was an ovarian cyst, containing mucinous fluid The uterus was the size of a cricket ball, with a degenerating pale fibroid tumour. The spleen was soft and pale, weighing 108 g. The kidneys (160 g each), showed slight cortical scarring with little arterial thickening.

Examination of the brain showed two areas of pigmental softening adjacent to each lenticular nucleus. The knee joint had osteoarthritis with loss of cartilage and some articular lipping.

As expected, the stomach revealed a hiatus hernia. The duodenum was bound by adhesions to the gall bladder, which was full of calculi. In the first part was an ulcer the size of a thumb nail, which had eroded a large artery. The remainder of the gut was full of blackened faeces, some of which were lodged in diverticula of the descending colon.

Here, indeed, was a baker's dozen of different pathological findings. While some of the conditions had been diagnosed during life, there were others which had given no clinical signs. The stiffness of the knees which was the original presenting symptom had been succeeded by other complaints, one after another. This sequence of events is not uncommon in the elderly, whose tendency to multiple pathology must always be remembered.

SPORTS NEWS

VIEWPOINT

Now that summer is upon us, we can at last relax and survey the results of sporting activities during the winter and spring.

Pride of place must surely go to the Ladies' Hockey team, who won the Hospitals' Cup for the sixth successive year. To ensure their success, they treated the astonished residents at Charterhouse to occasional glimpses of road-running, tactics and femininity. Congratulations to Miss Tomkins and her team.

Much has been written about the Rugger team in the past months, and we need only say that they have added much to the sporting prestige of this hospital.

The performances of the Soccer team have been encouraging, but in contrast to this, the Hockey Club have met with little success. It was depressing to see the latter struggling to avoid the monotonous cancellations of the 2nd XI fixtures. Surely the club deserves more support from its playing members.

RUGBY CLUB

Cup Final

St. Barts v St. Marys. Played at Richmond on Wednesday, March 18th. Result: Match Drawn 6—6.

For the second time in three years, Barts had reached the final of the Hospitals Cup. After great wins over Guy's and St. Thomas's, it seemed that this was to be our year at last. The pre-match activities at Richmond were no less enthusiastic than usual, but they left *The Times* correspondent with little to criticize. Percy was escorted to a position of honour behind one of the goal-posts, and indeed he seemed the only impassive spectator throughout the afternoon. Both teams were at full strength, the ground was firm, and the weather too cold for the spectators' comfort.

Mary's kicked off and caught the defence napping. However, the ball was scrambled in to touch close to the Barts line. A forward rush relieved the immediate pressure, but from the ensuing scrum on the Barts ten-yard line, MacKenzie was caught off-side, and Leete kicked a fine penalty to put Mary's in the lead. Barts retaliated strongly and encamped in the Mary's 25. Their forwards repeatedly hurled the ball out to Rees Davies, who tried desparately to find a gap in the defence. This held firm until B. Richards sent a long pass from the base of the scrum to J. Stevens who dropped a goal and equalised the scores. Soon after this, Rees Davies received a kick above the eye and had to leave the field. This disorganised the Barts attack, as neither Philips nor Bamford were at home in the outside-half position.

Play was fast and furious as both sides strove to score. Penningon failed with two long penalty attempts, before Lute took a second kick at goal after

The Bart's pack about to get the ball once more from the line out, W. P. Boladz reaching for it.

a Barts forward had been penalised for off-side. Once again this sailed between the posts to give Mary's a three point lead at half-time.

In the second half, Bart's completely dominated the play. Boladz and Harries won the ball from the line-outs with monotonous regularity, well supported by prop-forwards B. O. Thomas and Pennington. Rees Davies returned with one eye completely closed by strapping, but although he returned to his regular position, he was badly handicapped. As a result, the threequarters never moved smoothly enough to open up gaps in the powerful Mary's mid-field defence.

At last Bart's equalised from a great penalty kick by Pennington, and when MacKenzie broke right up to the Mary's posts, it seemed thatBart's must score the deciding try. However he was not backed up, and a great chance went begging.

Mary's broke away in the last few minutes, and almost scored after a long kick-ahead, but Halls somehow managed to get back and save the dangerous situation.

So a draw resulted, with most people feeling that Barts deserved to have won. Their pack had played superbly, but scoring opportunities were not taken.

Team : A. P. Ross ; G. J. Halls, J. Stevens, J. K. Bamford, R. M. Philips ; R. R. Davies, B. Richards ; B. O. Thomas, J. W. Hamilton (Capt.), J. H. Pennington ; W. P. Boladz, M. L. Harries ; D. A. Richards, L. R. Thomas, J. C. MacKenzie.

St. Barts v St. Mary's. Played at Richmond. Wed. Mar. 25th

With five players injured after the previous battle, Barts were reluctant to replay at such an early date. However all protests were overruled by the U.H. Committee. Barts fielded the same team as before, thanks mainly to valiant efforts by the Orthopaedic department.

In contrast to the first game, the weather was sunny with a stiff breeze blowing across the field. There were no demonstrations before the match and the crowd seemed more subdued than previously, as if realizing that a do-or-die effort by Barts was in the offing.

Pennington kicked-off into the sun, and gained touch well inside the Mary's half. Barts gained possession from the ensuing line-out, and Bamford grub-kicked up to the line. The defence cleared the danger, but were repeatedly tested by diagonal kicks of all varieties. This was the Barts plan of attack, based on the strength of wings Halls and Philips. However, the Mary's pack covered well and full-back Pavier remained cool under great pressure. On one occasion, Philips gathered a kick-ahead just short of the Mary's line but was well held. His inside pass was a little to high and a great chance was missed.

Then a loose maul on the half-way line resulted in the Mary's scrum-half gaining possession. He broke clear and sent outside-half Spreule away on a deceptive run. He drew the covering defence and sent Leete in to score an unconverted try. Soon after this, Leete almost increased the score with a penalty kick that was disallowed after one of the linesmen had raised his flag.

Barts were still gaining possession in the tight, but the Mary's back row were harrassing Rees Davies unmercifully. Halls was unlucky not to score when he was chasing a kick-ahead but was obstructed at the vital moment.

There was no further score at half-time.

After the interval, the standard of play deteriorated. Mary's were holding their own in the line-outs and their three-quarters, with more room in which to move, looked dangerous on many occasions. However the tackling was generally good and neither side could take advantage of the repeated changes in territorial superiority. Pennington was desperately unlucky when his penalty attempt to equalise, hit an upright and came back into play. Just as the Final whistle was about to blow, a quick break by the Mary's scrum-half sent Spreule over for an unconverted try. This was indeed a sad end and fifteen weary Barts players applauded Mary's off the pitch.

Once again, we failed at the last hurdle, but we failed with honour. In the replay, we lost to the better team on the day.

J. Hamilton was an outstanding leader who brought out the best in his fine pack of forwards. In this game, Rees Davies had obviously not fully recovered from his eye injury, and was unable to produce his top form, but his defensive kicking was quite invaluable.

Team : A. P. Ross, G. J. Halls, J. Stevens, J. K. Bamford, R. M. Philips ; R. R. Davies, B. Richards ; B. O. Thomas, J. W. Hamilton (Capt.), J. H. Pennington, W. P. Boladz, M. L. Harris; D. A. Richards, L. R. Thomas, J. C. Mackenzie.

Inter Firm Seven-a-Side Competition

This was played at Chislehurst on Saturday April 4th, and in glorious sunshine, spectators and players had a most enjoyable afternoon.

More teams than usual had entered this year, and it appeared that the Finalist's, Kids and Second-Year Preclinicals had the most powerful teams. However, later results did not altogether support this assessment. The Finalists met and were narrowly beaten by the Kids VII in the second round. The Preclinicals won both their matches and went into the Final without having been really tested. In the other Semi-final, the "Midder and Gynae" VII surprised everyone by trouncing the Kids VII.

While the teams concerned were resting before the Final, the Registrars played the Housemen in the traditional annual fixture. Both teams were at full strength, though it might be whispered that certain recent finalists seemed to be approaching consultant status at an indecent speed. Play was both exciting and amusing, with Mr. Kingsmill-Moore surprising us with the fastest turn of speed seen during the whole afternoon. In the end the Registrars triumphed by 11 pts. to 3.

The Final of the Sevens Competition was played at a good pace. The Pre-clinicals were quickly ten points up after spectacular tries from Perry and Boladz. The Midder VII began to settle down, and reduced the arrears with a try by Constable. Just before the interval, a further try by Boladz put the Preclinicals ahead by 13 pts. to 3.

The heat began to tell in the second half, but the Preclinicals scored two further tries through J. Stevens, P. Watkinson again kicking the conversions

A late try by Alder kept the game alive, but the Final whistle came, and the Preclinicals retained the Cup, winning by 23 pts. to 8.

A feature of the afternoon was the fine refereeing of Jock Dowie and Bob Davies, who must have finished as the most tired men on the ground.

The lady spectators were entertained to a most enjoyable dance later in the evening, joined at this stage by a coach-load of charming nurses.

HOCKEY REPORT

1st XI v Past Bart's on March 8th. Chislehurst. Won 4—0.

After a succession of losses, we came up against less fit opposition in this match. Played in very slippery conditions it was soon obvious that our speed was going to be the main factor, though control was difficult. P. J. Kingsley, returned from duty with his county, scored three goals in the first half, and one in the second, but we should have scored more. Dr. J. B. Nichols looked as if he had been playing regularly throughout the season, and but for him our score would have been much greater.

As usual in this match, though regretably not at others, there was a large crowd of supporters of all ages and the occasion was enjoyed by all.

Next season the match will be played on Saturday, November 21st, and any former Bart's players interested should contact Dr. Geoffrey Hirst, 138 Brigstock Road, Thornton Heath, Surrey, to whom all thanks are due for his continued organisation, and to him and his team for their hospitality.

Team : A. J. Gordon, M. J. Defrates, J. Harrison, D. S. Wright, K. MacKenzie Ross, P. Bennett; C. A. McNeill, P. Caine, D. N. C. Glover, D. Godwin, P. J. Kingsley.

1st XI v Oxted on March 14th. Chislehurst. Won 5—1.

Once again Bart's was always on top, but in spite of the space we were allowed and our superior speed, we did not score as often as we should have done. After a number of missed chances by several forwards, Kingsley opened the scoring, and Robertson and Glover added further goals in the first half. Far from improving as a result of our advantage, we appeared to be overcome by our unaccustomed tally, and play deteriorated in the second half to back-yard standard. Oxted scored from a long corner, and towards the end of the half Bart's decided to earn their jug of beer. Wright,who had moved into the forward line, went through to score, and Robertson, making up for a lapse just before, it a good goal from a narrow angle.

This was an easy match, and until passing and shooting improve drastically, we cannot hope to defeat good opposition.

Team : A. J. Gordon, H. Walker, J. Harrison ; D. S. Wright, K. McKenzie Ross, P. Bennett ; P. Caine, P. J. Kingsley, D. N. C. Glover, A. Chant, A. Robertson.

Inter-Hospitals Six-a-Side Competition. Cobham, March 22nd.

This was a remarkable achievement. The competition was arranged in three groups of four teams, each of which played other. The group winners tossed to see who should go straight to the final.

We hardly dared hope to repeat last year's performance, when we won the competition, but in fact we

came very near it. St. Thomas's quite confident of reversing last year's decision, were sorely discomforted. They opened the scoring as a result of a defensive error, but were never in the game afterwards. Drinkwater scored once and then again from a beautifully angled shot, and a good goal by Glover had to be disallowed as the umpire had blown for a short corner. In the second half Bart's held on fiercely to keep their opponents out at all costs. Three minutes from the time Wright, making a sally to the opposition circle, fell and sprained his ankle. In spite of this Bart's held on without difficulty and deserved their victory.

Wright was unable to play after this and his place was very ably taken by a Westminster occasional player, the President's offer to stand in thus being appreciated but not taken up. We were thankful for his support and that of Mrs. Jayes who had come over in spite of the inclement weather.

Defensive slips were frequent in our next game and we turned three goals down. A pep talk from Drinkwater had the desired effect however, and he led the way with two goals. Kingsley then picked up a good pass and made no mistake, and just before the end, Glover took a pass at full stretch and put the ball just inside the post. The next match was much less tiring. Drinkwater scored thrice and Glover and Kingsley once each. We went to tea exhausted but well satisfied. Our luck was out however, and we had to play in the semi-final. U.C.H. attacked from the start, but could not score. Then Glover broke away to score. From then until near the end Bart's were on top, but then two defensive errors occured and the U.C.H. centre-forward was too good not to take full advantage of them and so we lost 2—1.

In the final an exhausted U.C.H. were no match for a well-rested Charing Cross I team.

Although we did not win the competition it was a considerable achievement to win the hardest section of the draw, and to come so near retaining our title.

Team : M. J. Defrates, D. S. Wright (Capt.), D. Godwin ; P. Drinkwater, D. N. C. Glover, P. J. Kingsley.

Results : Beat St. Thomas's 2—1.
Beat Westminster 4—3.
Beat Charing Cross II 5—0.
Semi-final. Lost to U.C.H. 2—1.

If the passing and shooting had been of this standard throughout the season we should undoubtedly have been much more successful in first eleven matches. We hope for fresh blood from Cambridge next year (we had none this season) and as so many preclinicals are now playing, we can hope for better things to come.

The second eleven looked good to start with, but there was too little support and most games had to be cancelled as a result. Apat from one disastrous game in which thirteen goals were scored against them, the team played quite well. Against London II in the junior cup we won very convincingly 5—0, and only went down to Guy's II 2—0 in a close and well-fought game.

Results : 1st XI. Won 3, Drawn 3, Lost 16.
Goals : For 36, Against 74.
2nd XI. Won 2, Lost 4.
Goals : For 9, Against 25.

D.S.W.

Vicarage Club XI, 6. Ladies' Hockey Club, 2.

Not since the Lambeth Conference have so many ecclesiastical gentlemen gathered together with such singleness of purpose. In little else, however, did the Vicarage of Bart's resemble their venerable counterparts of Westminster—and even their purpose was doubtful !

The motley crew who took the field against the Ladies' Hockey Team at Chislehurst on March 4th looked fierce, but each one was willing to admit to being just a little scared ! At least five of the players were wielding " bats, racquets or clubs "—as they variously called their weapons—for the first time. The goalkeeper had only played on ice before, since at Princeton, field hockey is " just a girl's game." Not so over here, as he soon learnt to his cost. He really shouldn't have played in gum boots —ankles are so vulnerable !

The Vicars obviously believe in the not-so-old adage—" If you want to get ahead, get a hat." Deerstalker, so'wester, salmon-fisher, Alpine and just plain woolly—all made their appearance, and were so much admired that they were later stolen.

Play may be described as fast, furious and sometimes just horrid. The Vicars may have been rough at times, but the Ladies were rougher. Many times a good man was seen to bite the dust after a crafty twist of a stick or a gentle prod at a shin. To say that the inside right was surprised when he scored the first goal for the Vicars would be an understatement—he was flabbergasted—he'd never played before ! When he scored again, later in the game, he was No. 1 hero.

Half-time was reached with the score 3—0, and the clerics, though in the lead, looked much the worse for the fast pace of the game. A few suggestions for improving the game were put forward, most were rejected immediately, but it is difficult to find an argument against play with both sides of the stick—what can one say, when the Vicar in question had been using both sides of his to good advantage during the first half ?

The second half was started with only eight Vicars on the field. The other three, we must assume, were having a prayer-meeting in the pavilion, for they certainly re-appeared a short time later spiritually refreshed ! By this time the Ladies had nearly scored twice, and were attacking furiously—storming the opposition's open goal incessantly. The goal, however, was soon filled by a worthy gentleman wearing a goalkeeper's pad around his manly chest and brandishing an open umbrella. What's a girl to do ? This one scored a goal !

With the score at 3—2 to the Vicars, the ladies were really out for blood, and several times it seemed inevitable that they would score again, but time and again the ball was cleared upfield by fair means or foul.

How the game eventually finished at 6—2 is difficult to describe. Suffice it to say that during the last ten minutes a set scrum on the twenty-five was called for, to settle a dispute in front of the Ladies' goal. The final whistle blew just as it seemed certain that the Vicars would score again.

After the game bruises were examined, some in private, some in public, and it was generally assessed that the Vicars had come off much the worst. In fact, it was a Pyrrhic victory !

Miss Tomkins is chaired off the field after the Cup Final.

LADIES HOCKEY CLUB

Bart's v. Royal Free Hospital—Saturday, March 14th. Final of the Hospital Cup. Won 3—1.

The game started slowly, and for the first ten minutes the play was uninspiring and confined to midfield. For the next few minutes, the Royal Free emerged as the more promising side, with the first dangerous attacks on their goal, which were fortunately aborted by the Bart's goalie, I. Tomkins, after the defence had been defeated several times. At this stage in the game, Bart's were much the slower of the two sides, but the repeated attempts at goal by the Royal Free forwards gradually stirred them into greater activity, and the forwards were given their first chance to score. Royal Free continued to attack, and their efforts were rewarded by a goal, the ball finding its way into the net after a scrummage in the goalmouth. This finally stimulated the whole of the Bart's team, which gradually emerged as the more skilfull and determined side. Time and again, J. Swallow took the ball down the left wing, but the forwards seemed unable to penetrate the hard-working Royal Free defence and make the score even. Towards the end of the first half, however, centre forward S. Minns, a welcome newcomer to the Bart's team, scored a well deserved equaliser, making the score 1—1.

Bart's had the edge on play during the whole of the second half, with the halves backing up well, and the forwards repeatedly pressing on the goal, urged on considerably by the cheers from the spectators on the sideline. Momentary anxiety flashed through the atmosphere when the ball appeared in the Bart's goal, but this was disallowed, as the ball had not been touched within the circle. A good pass across the circle laid the way for the second Bart's goal, which was brilliantly scored by J. Chambers, while S. Minns scored again to bring the final score to 3—1, a well deserved victory.

The Shield was presented to the Captain of the team, I. Tomkins, by Mr. D. F. Ellison Nash, the President of the United Hospital's Womens' Hockey Club. Others present watching the match, included Professor A. Wormall, Mr. B. Hume, Dr. M. Blunt and Dr. H. Lehmann. The team would like to thank them very much for their continued and active support.

Team: I Tomkins (capt.), J. Tufft, T. Coates, M. Childe, J. Hall, E. Knight, J. Arnold, J. Hartley, S. Minns, J. Chambers, J. Swallow.

Sat. Feb. 28th. v. King's College. Home. Lost 2—5.

This should have been a fast open game, for the pitch was in excellent condition. The Barts defence tended to muddle each other throughout the game and on occasions stood waiting for the ball rather than running to intercept a pass. Defence still get drawn to the site of play, leaving their opposing forwards free to shoot when they receive the ball. Too often the goalkeeper is the only remaining line of defence, and unfortunately she is far from unpenetratable.

S. Cotton made her debut as a forward and adapted her play well. In the 2nd half S. S. Minns moved from C.F. to R.I. and was far more useful, obviously

her style is very curbed in the middle of the field. As usual J. Swallow played well on the L. W. The other forwards would do well to notice how she receives the ball while on the run, and continues to control the ball when moving at speed.

Goals : J. Swallow (1). J. Chambers (2).
Team : I Tomkins (Capt.); J. Tufft; T. Coates; M. Childe; J. Hall; E. Knight; J. Arnold; S. Minns; S. Cotton; J. Chambers and J. Swallow.

The Editor,
St. Bartholomew's Hospital Journal.

Sir,

As you will know, the St. Bartholomew's Hospital Women's Hockey Club have most gracefully carried off the Inter-Hospital's Shield for the sixth successive year. Mr. C. K. Vartan tells us that the Swimming Club had an equal run of success, for they won the Water Polo Cup from 1929 to 1934 inclusive, but we have not heard of any other rivals for what may well constitute a record. May we, therefore, through the courtesy of your columns, appeal to club secretaries, or other individuals who may possibly remember similar consecutive victories, to state their claims.

Yours sincerely,
MICHAEL J. BLUNT
A. WORMALL

Departments of Anatomy and Biochemistry,
Medical College of St. Bartholomew's Hospital,
Charterhouse Square,
E.C.1.

WOMEN'S LACROSSE CLUB

London University Inter-Collegiate Tournament.
March 14th at Motspur Park.

v Queen Elizabeth College. Draw 0—0.
v Guy's Hospital. Won 4—1.
v. Bedford College. Lost 2—3.
v King's College. Won 2—1.

Final Result :

Q.E.C. 6 points, 8 goals.
Bedford 6 points, 8 goals.
Barts. 5 points, 8 goals.

In a replay Bedford had a 2—0 win against Queen Elizabeth College.

The Women's Lacrosse Club formed at the beginning of the season by popular demand, put up a very encouraging performance in the London University Inter-collegiate Tournament on Saturday, March 14th.

Playing their first match on a full sized pitch, the team held their first opponents, Queen Elizabeth College, to a draw. This was a scrappy game, but the defences played extremely well and it was due to them that Queen Elizabeth College were unable to break through.

The second match against Bedford was more difficult ; for although we had four shots at goal in the second half and play was mostly at our end of the field, their stickwork was superior and their teamwork more co-ordinated, which combined to give them a close victory. As play continued the team gained confidence, and the standard improved.

Proving their ability, the team won their next two

matches — against Guy's Hospital and King's College.

Throughout the Tournament the Defences played very well ; and of the Attacks, P. Aldis and J. Pitt were outstanding.

Team : S. Ducker (Capt.), J. Anderson, R. Benison, J. Pitt, A. Kark, P. Aldis, C. Telfer, D. Layton, A. Clarke, S. Whittaker, C. Lloyd, S. Williams.

(J. Dacie, S. Barber, E. Langford also played this season).

As the Women's Lacrossse Club was only formed in October of last year, this season has inevitably been rather devoid of fixtures. Of the three fixtures that were arranged for this term, two were cancelled by our opponents. However, in spite of these disappointments we have been very grateful for the encouragement that has been given by members of the Staff of the College and Hospital.

Our thanks are also due to the support given to us by the Student's Union and Mr. White at Chislehurst, who has given us a pitch of our own, where we have been able to play one match and to practice. With more matches next year, we hope to make fuller use of the pitch and also the potential ability of the players.

We very much hope that the encouraging result of the Tournament is merely a foresight of things to come.

BOOK REVIEWS

MEDICAL LABORATORY INVESTIGATIONS. By Ian Dawson, M.A., M.D., M.R.C.P., and William Goldie, M.A., M.B., F.R.C.P., F.R.C.P. (Edinburgh). London. Butterworth and Co. (Publishers) Ltd., 1958. pp. 260. 35*s*.

Professor Pulvertaft of Westminster Hospital Medical School points out in the foreword to this book that expansion in the field of clinical pathology has been so rapid that no doctor qualified more than ten years ago can have received basic instruction as a student on investigations and their interpretation — which are now in daily use. The purpose of this book is to help everyone who has to request or interpret a laboratory investigation. The authors are a happily matched pair, one of them being a reader in Pathology in the University of London and an honorary Consultant Pathologist at Westminster Hospital ; the other a Senior Consultant at a National Health Service Hospital and a part-time lecturer in Pathology at the University of Leeds. They should have come across a very wide variety of demands for information and types of question needing an answer. Perhaps the most useful feature is the number of tables giving, e.g., common causes of leucocytosis, a schematic representation of blood coagulation, findings in the cerebro-spinal fluid in various diseases, investigations on faeces, and so forth. There is instruction on the collection of specimens, on how to fill out a request form, on the despatch of specimens, including postal regulations. The range of normal values and, what is particularly important, errors inherent in the examinations of specimens in general, and of any method in particular, are defined. Lastly, the nature of the reports on specimens is considered in detail.

Not all of the problems are answered completely satisfactorily. For instance, if one wants to know the normal values for radio-active iodine uptake and protein-bound iodine level no figures are given and there is merely a brief description of each test of about 30 words, and the information that the investigation can only be carried out in very few laboratories, but on the other hand, descriptions of estimations of other endocrine gland functions are most informative.

Perhaps the authors may wish to correct in their next edition the statement that cholinesterase level is raised in liver disease.

There is a valuable section on the procedure after the death of a patient, and how to deal with stillbirths.

This will be a most useful addition to the armamentarium of all those who want to use the Pathology Department to the best mutual advantage.

H. L.

AN INTRODUCTION TO PATHOLOGY. By G. Payling Wright. Longmans. 45*s*. pp. 660.

This is the third edition of this excellent book, and the fact that there have been only two years since the book's first appearance in 1950 when neither a new edition nor an impression have failed to appear, testifies to its success and popularity.

Many students have found this book most interesting and informative reading and a very sound *introduction* to pathology. This book is no substitute for the manuals of Pathology wherein are found the more minute details of the subject. However this book is a most excellent preparation before delving into such manuals or tackling the literature on the newer aspects of the subject. In this new edition some of the references to the older literature have been supplanted by more recent references.

ST. BARTHOLOMEW'S HOSPITAL JOURNAL

Vol. LXIII JUNE, 1959 No. 6

EDITORIAL

Among the many new sciences to flower in recent years is that of advertising. To persuade the public to buy their products or to swallow their ideas, the manufacturers and ideologists no longer rely on intuition to find the best methods of persuasion. They read Freud and influence us through our ids, egos and super-egos. They conduct large-scale sociological investigations into our motivations. They apply the work of Pavlov as though we were salivating dogs. They know what they are doing, and we buy their products and often accept their ideas. We often complain of advertising methods, but should we, when it is we who are acting like susceptible automatons?

Advertising is, as everyone knows, a bad word in the medical profession. But is there not a case for more advertising in this field? A large number of people will buy "X's medicine" for the relief of 'flu, constipation, disseminated sclerosis and rheumatic pains, no matter what its constituents are, if it is well and widely advertised. What is more, they will feel much better for it, and come back for another dose. Now, if doctors, hospitals and various forms of medical treatment could be advertised in the same way, would it not be an excellent thing. If so much faith can be engendered by so small a thing as "X's medicine," how much more could be produced on behalf of modern medical practice. And faith is often lacking, even where it would help most. For instance, many cancers would come to hospital earlier if patients knew what to look for and put their trust in modern treatment.

This is a false argument, though. For if the medical profession were to advertise itself, it would lose as much respect as it would gain publicity. It is much better to allow the present system to remain, whereby the achievements of the profession are gratuitously advertised on the most colossal scale by all the mass means of communication. Undoubtedly more good comes from this sort of publicity than from any actually sponsored by the profession itself. The prestige, to take an example, not only of the individuals concerned, not only of the hospital concerned, but of the whole of British surgery, has been raised by the recent visit of a party of heart surgeons to Russia. Similarly, in the recent well-publicised operation at this hospital. It is irrelevant to say that names of people should not be mentioned in these cases. The public wants names, the journalists are going to get hold of the names if they are withheld, so they should be given, in the sensible way in which they were in the bulletins issued from Barts.

Let us not shrink from making public outstanding achievements in medicine, but rather, while avoiding the methods used by the advertising men, see that as many as possible know of, and understand, these achievements.

CALENDAR

June

Sat. 6—Dr. E. R. Cullinan on duty
Mr. J. P. Hosford on duty
Mr. C. Langton Hewer on duty

Sat. 13—Medical and Surgical Units on duty
Mr. G. H. Ellis on duty

Sat. 20—Dr. R. Bodley Scott on duty
Mr. A. H. Hunt on duty
Mr. F. T. Evans on duty

Sat. 27—Dr. A. W. Spence on duty
Mr. C. Naunton Morgan on duty
Mr. R. A. Bowen on duty

July

Sat. 4—Dr. G. W. Hayward on duty
Mr. A. W. Badenoch on duty
Mr. R. W. Ballantine on duty

Sat. 11—Dr. E. R. Cullinan on duty
Mr. J. P. Hosford on duty
Mr. C. Langton Hewer on duty

★ ★ ★

Fifty Years Ago

The *Journal* of June, 1909, was a special number to commemorate the opening of the new Pathological Block by the Lord Mayor of London on May 7th. "The ceremony was marked by the attendance of a large number of visitors, and the subsequent function of Tea in the Square, enlivened by the music of a first-class band, proved very enjoyable."

The ceremony consisted of a tour of inspection of the new block by the Lord Mayor, Sir George Wyatt Truscott, and the sheriffs, followed by speeches in the Great Hall. Lord Sandhurst, the treasurer, first addressed the large audience. He spoke of the long association between the hospital and the city, and of how the new Pathological Building would "increase the usefulness of this Hospital to the citizens of London, and to the world beyond the City."

The Lord Mayor, in reply, thanked Lord Sandhurst very much for the address. He went on to say how notable had been the advances in medicine in the preceding years, and how he hoped this advance would be maintained in the new building; in particular that a cure would be found for "that dire disease which appears to be increasing in our midst—that of cancer." He ended by congratulating his old friend, Mr. I'Anson "on the beautiful building he has given us. If there is one thing that is desirable it is a light building. Well, there is not a dark corner in the Block, and I am sure that microbes and bacteria are going to have a very bad time of it."

On the next pages of the *Journal* is a description of the new Pathological Department. The writer remarks that to many it will appear unduly large. But he justifies its size by listing its facilities, including the electric clock in the hall, "from which all the other clocks in the building are also actuated. A brief study of its mechanism may be commended to all and sundry, as a pleasurable and instructive occupation for a part of the luncheon hour." The author of this description then takes the reader on a tour of the new block, ending with a short peroration hoping that the increased facilities and staff would lead to "a steady growth in the good work done in the department, both in the ordinary routine of hospital work and teaching, and in research." A hope that has surely been fulfilled.

★ ★ ★

Other items in the *Journal* of fifty years ago include a reference to the departure of four French pupil nurses who had had two months residence in the hospital, and were to be followed by four more.

The Treasurer's report for 1908 disclosed a loss in the financial year of £12,000. Indeed, such was the financial difficulty of the hospital at this time that there was talk of closing half the beds.

Athletics enthusiasts may be interested to know that at Sports Day on June 19th, 1909, the mile was won by T. H. Just (scr.) in 5m. 14s. and the half mile by A. Abrahams (rec. 40 yds.) in 2m. 9s. The Obstacle Race was won by M. Maclaren. It is a great pity that the latter event has been dropped from present-day Sports Days.

The Film Society

Alfred Hitchcock has long ceased to be a British director. However, he did more than anyone else to establish the British cinema internationally in the thirties, and then departed for Hollywood. The most consistently cold-blooded and successful of thriller directors, Hitchcock has always played blandly and insolently with the nerves of his audience. In the uneasy thirties, *The Man Who Knew Too Much*, *The Thirty-nine Steps* and *The Lady Vanishes* established Hitchcock as *the* British director. There was no need to look for concealed symbolism beneath the surface of these fast political thrillers. However, his technique was not immediately accepted in this country, and he was lost to Hollywood in 1940. However, today it seems that new techniques are at last being accepted, especially with the free hand possible in the emergence of independent companies. The success of *Room at the Top* may very well be a renaissance in the apathetic and soulless British cinema seen since the war, created by the "established" ideas of the older directors and producers.

Rear Window, shown on Monday, May 4th, finds Hitchcock once again playing with our nerves.

First, a vista of flats, with their inhabitants each living in their own little world. The camera moves discreetly from one little world to the next—the ageing ballet dancer still surrounded by her admirers, the young romantic song writer, the married and the single. All this as seen through the eyes of a dare-devil magazine photographer, played by James Stewart, recovering from a broken leg. Hitchcock soon subtly hints that something may be wrong in one of the flats. The tension builds up, and soon it seems possible that a woman has been murdered. Then, at the climax, Stewart is confronted by the murderer in his room. Here was one of the scenes which Hitchcock has always delighted in.

The film moves rather slowly at times in the opening sequences. There is some amusing backchat with a cool heroine, played by Grace Kelly, who also supplies the amorous interludes with the rather unwilling James Stewart.

For many years now Hitchcock has briefly appeared in his own films, and it would be interesting to know how many of the audience noticed his fleeting appearance in *Rear Window*.

D.E.B.

ANNOUNCEMENTS

Marriages

FREEMAN—CROCKETT.—On April 3rd, Peter Freeman, F.R.C.S., to Daphne Crockett.

WOOD—ADDISON.—On April 14th, Christopher Bryan Somerset Wood to Mary Margaret Addison.

Births

ADAM.—On April 10th, to Valerie, wife of Dr. Robert M. Adam, a son (Robert Travers).

ARMSTRONG.—On April 17th, to Sylvia, wife of Dr. P. L. McN. Armstrong, a daughter.

HADLEY.—On March 27th, to Patricia and Dr. Dunstan Hadley, a son.

HAVARD.—On April 17th, to Mhairi and Dr. Cyril William Holmes Havard, a daughter (Susan), sister to Mark and John.

MIDDLETON.—On April 9th, to Jeanne and Dr. George Middleton, a second son.

SAMRAH.—On March 26th, to Margaret Josephine and Maurice Edward Samrah, M.B., B.S., F.F.A.R.C.S., a son (Paul Edward Marshall).

THOMPSON.—On April 14th, at Hiranpur Mission Hospital, Bihar, India, to Helen, wife of Dr. Bryan Thompson, a daughter.

Deaths

ANDREW.—On April 25th, Dr. John Andrew. Qualified 1916.

ASHTON.—On March 31st, Dr. Dan Royd Ashton. Qualified 1933.

EDDISON.—On April 12th, Dr. Francis Ryalls Eddison, aged 85. Qualified 1898.

EVANS.—On April 12th, Dr. Myrddin J. Evans. Qualified 1928.

THOMAS.—On April 6th, Dr. Robert John Percy Thomas, aged 79. Qualified 1903.

NOTICES

Appointments

ROYAL COLLEGE OF SURGEONS.—Prof. A. J. E. Cave has been elected a Fellow of the College without examination.
Dr. E. F. Scowen has been appointed Imperial Cancer Research Fund Lecturer for 1960.

UNIVERSITY OF LONDON.—Dr. C. F. Harris has been re-elected Vice-Chancellor of London University from September 1st for the university year 1959-60.

UNIVERSITY OF TORONTO.—Dr. John R. Brown has been appointed Professor of Physiological Hygiene at the University of Toronto.

Changes of Address

SURG. LT. R. A. BUGLER, R.N.,
6 Nasmith Close,
Gosport.

DR. P. C. COLLYNS,
Flat 2,
Fairfield Mansions,
2 Rockleaze,
Bristol, 9.

1959 PRIZE WINNERS

Brackenbury Scholarship in Surgery :
D. J. Tooby.

Brackenbury Scholarship in Medicine :
D. J. Tooby.

Skynner Prize : J. D. Parkes.

Walsham Prize : D. J. Tooby.

Mathews Duncan Medal and Prize :
M. J. L. Patterson.

Burrows Prize : J. D. Parkes.

Willett Medal : D. J. Tooby.

Roxburgh Prize : M. Janosi.

Kirkes Prize : G. M. Besser, R. W. Cleave. (medal not awarded).

The outstanding feat of D. J. Tooby in winning both the Surgical and Medical Brackenbury's has previously only been performed by M. B. McIlroy in 1944 and C. M. Fletcher in 1939. Mr. Tooby was not permitted to take up both scholarships, and chose that in Medicine.

THE TREATMENT OF BASAL CELLED CARCINOMA OF THE EYELID, SURGERY OR IRRADIATION

by H. B. Stallard

IS IT BETTER to excise adequately and graft an eyelid affected by a basal-celled carcinoma or to irradiate the neoplasm?

For a quarter of a century the majority of authors of standard surgical text books have written in favour of irradiation and even in the larger works, intended for post-graduates, there is a notable absence of comment about the serious ocular complications which may follow irradiation. I am aware that in an eye department we see more of the disasters and less of the successes of radiotherapy and so may acquire a disproportionate idea of the incidence of success and failure. Nevertheless the misfortunes of irradiation, when these happen, are so grave and lasting that due consideration should be given to the advantages of surgical excision.

It is only proper and fair to state that the incidence of post-irradiation mishaps in the hands of skilled radiotherapists, such as those in this hospital, are now much less frequent and less severe than in the past. (The illustrations in this paper of the more serious complications are of patients treated elsewhere than here.)

An important pathological feature of the three types of basal-celled carcinoma, the hypertrophic, cicatrizing and ulcerating (or circumscribed, early infiltrating and infiltrating) which favours surgical treatment is the fact that penetration in depth is slow, its infiltration being delayed by fascia and muscle. The spread of the neoplasm is more rapid on the surface than in depth. In 98.4 per cent of cases this neoplasm affects the head and neck and in 68.3 per cent it is within the "mask" area bounded by lines drawn from the auricles to the supra-orbital margins and to the angles of the mouth.

The Literature. The case for irradiation has been stated by so eminent an authority as Sir Stanford Cade (Malignant Disease and its Treatment by Radium. Vol. 4. John Wright. 1952), who states "With very few exceptions, the majority of authors in England, on the Continent and in the United States agree that radiation has proved of such value that it has displaced most other methods in the treatment of rodent ulcer." Roy Ward, Brit. Med. Jl. (1930). 2, 511, also considers that radium is the method of choice. In the Index of Treatment by Sir Robert Hutchinson. 13th ed. John Wright. Bristol. 1948, it is recommended that "malignant neoplasms of the eyelids should be treated by radium or X-rays because of the deformity caused by excision." Ian Aird (A Companion in Surgical Studies. 2nd ed. Livingstone. 1957), comments that "the rodent ulcer can be depended upon to disappear by X-ray treatment." C. F. W. Illingworth, Short Textbook of Surgery, 6th ed. Churchill. London. 1955, advises "treatment in most cases by radium, a surface plaque. If radium is not available excise." Bailey and Love, Short Practice of Surgery. 10th ed. H. K. Lewis. London. 1956, recommend early excision in one chapter of their book but on p. 708 state "If the ulcer occurs on the face this line of treatment (excision) is not advised as an unsightly scar may result. The application of a radium plaque is recommended." However, in Essentials of Modern Surgery. Handfield Jones and Porritt. 5th ed. Livingstone. 1957, comment that "excision of the neoplasm is the best treatment."

Such teaching, the majority in favour of irradiation, together with the pleasant co-operation and willingness of radiotherapists to treat these patients, and their undoubtedly good results in a fair percentage of cases has lead increasingly to the diversion of these patients with affected eyelids from the eye surgeon to the radiotherapeutic department.

It has been argued in favour of radiotherapy that the patient does not require admission to a hospital bed and may be treated as an out-patient. Whilst this is true no comment is made about the subsequent attendance in the eye department for

months, and often with a long stay in hospital, for the treatment of intratractable post-irradiation complications which are uneconomic in loss of time, suffering and ultimate disability.

Biopsy. A point of particular difficulty before irradiation treatment concerns an adequate histological diagnosis for the cellular structure of the tumour varies in different patients and some types are less favourable for irradiation than others. Such is often unobtainable from a biopsy which does not traverse the whole length of the neoplasm and its full depth. Moreover, the disturbance effected by a biopsy is often dangerous. This being so it is reasonable to excise the neoplasm widely (an excisional biopsy) and to reconstruct the defect by grafting. The general surgical books, presumably mindful of the scars made by grosser suturing, stress the deformity after surgical attention, an accusation unjustified by the results which follow careful reconstructive technique. Obviously such work should not be attempted in the out-patient minor operating theatre for it requires careful planning, appropriate operating theatre conditions, small instruments of exquisite perfection and the technical skill of a pair of hands accustomed to miniature surgery.

My experience, contrary to the opinion expressed in some text books, is that recurrence after adequate surgery is quite rare whereas this is not so after irradiation.

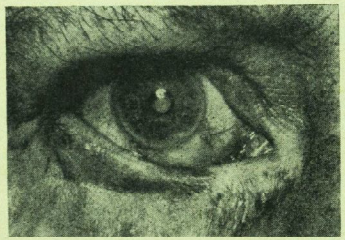


Fig. 1. E.S. Irradiation of basal-celled carcinoma at right medial canthus. Painful scar. Cicatricial ectropion, occlusion of lacrimal canaliculi and lacrimal sac. Keratinization of bulbar conjunctiva, superficial punctate keratitis and irradiation cataract.

Other advantages of surgery are the quick healing, generally the graft has a 100 per cent take, the comfort of the eyelid after the first dressing, and in most cases the lid functions well. After irradiation there may occur late ocular complications such as

Fig. 2. Irradiation of basal-celled carcinoma at left lower lid. Chronic post-irradiation ulcer.

Fig. 3. Post-irradiation coloboma of over half of the right upper lid.

superficial punctate keratitis, complicated glaucoma, iridocyclitis and cataract, painful irradiation scars and cicatricial ectropion (Fig. 1), Necrotic ulcers (Fig. 2). A full thickness necrosis of part or whole of an eyelid (Fig. 3) telangiectasis, skin atrophy, keratinization of conjunctiva and epilation which may follow irradiation.

Although a basal-celled carcinoma at the medial canthus may necessitate excision of the lower lacrimal canaliculus and punctum surgical reconstruction of tear drainage may be achieved either by a transplantation of the upper canaliculus and punctum or by an anastomosis of the mobilized fundus of the lacrimal sac with the conjunctiva in

Fig. 4. The appearance of basal-celled carcinoma in the left lower lid after irradiation for sycosis. The eye is aphakic (post-irradiation cataract). The skin of the entire face was thin, atrophic, inelastic, had telangiectases and multiple carcinomata.

flank such a protective device. The destruction of the neoplasm by irradiation is often a matter of doubt for the histological features of some make these less responsive to irradiation than others. Besides local recurrences from undestroyed cells, irradiation may excite neoplastic formations in the adjacent skin (Fig. 4), and so damage the blood supply as to make the reconstruction of the area more difficult. A free graft is embarrassed by poor blood supply from its irradiated base. Because of this vascular deficiency it is sometimes necessary to use a pedicle graft to replace a refractory ulcer in the centre of an irradiation scar which has also caused some local distortion of the eyelids. So the odds are in favour of adequate surgical excision and reconstruction of the defect by grafts. If the neoplasm has invaded bone, as it may in a neglected growth at the lateral canthus, the affected bone must be resected with a 5 mm. clear margin. In such a case

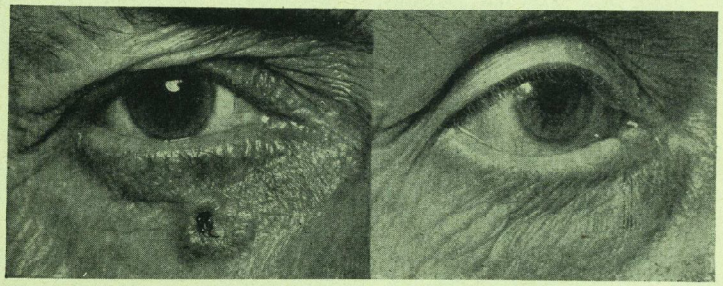


Fig. 5. A. Basal-celled carcinoma right lower lid. B. After excision and full thickness graft.

the lacus lacrimalis (Stallard's operation) whereas irradiation at the medial canthus occludes upper and lower canaliculi and the sac, and moreover the irradiated tissues around the sac doom to failure any attempt to effect a grafted drainage canal between the conjunctival sac and the nose.

It is impossible always to achieve adequate protection of the lens by a lead contact mould, set in the conjunctival sac, for X-rays fired either obliquely or transversely at a neoplasm involving a canthus may out-

skin cover by sliding adjacent flaps is preferred to the application of a free skin graft.

PRINCIPLES OF SURGICAL RECONSTRUCTION AFTER EXCISION

(1) Excision. Reconstruction with free skin graft

If the neoplasm has proliferated well above the skin surface, has not infiltrated deeply and its margin is at least 4 mm. clear of the lid margin (Fig. 5A) excision up to the lid margin, 5 mm. wide elsewhere and

through the orbicularis muscle down to the tarsal plate is generally adequate. The adjacent orbicularis muscle is mobilized and sutured to the anterior surface of the tarsal plate with a few interrupted sutures of 20 day 4/0 chromic catgut. An exact pattern of the skin defect is made with oil silk and a full thickness free skin graft

Fig. 6. Basal-celled carcinoma involving lower lid margin.

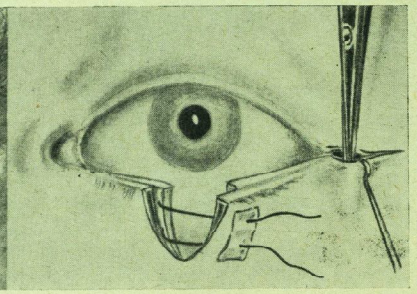


Fig. 7. Full thickness excision of one-third or less of the eyelid. Closure is aided by orbicularis myotomy at the lateral canthus and Wheeler's halving operation of the lid margin.

is cut from the redundant skin of the upper lid in the elderly in the case of grafts 2 × 1 cm. and from the retro-auricular skin when the patient is middle-aged and the defect is larger than 2 × 1 cm.

The sutures uniting the edge of the graft to the adjacent lid skin are left long and when suturing is complete these are carried over a moulded spindle of flavine wool and tied. A pressure dressing is applied.

Donor eyelid skin tones in perfectly and retro-auricular skin carefully chosen does likewise (Fig. 5B).

(2) Closure of a small full-thickness defect by mobilization and sliding. Wheeler's halving of lid margin

When the lid margin is involved in the neoplasm or the latter has infiltrated deeply and less than one-third of the length of the eye is involved (Fig. 6) either a triangular or quadrilateral excision of the full-thickness of the lid is indicated. The defect is closed by sliding the lateral part of the lid towards the medial edge after performing a vertical myotomy of the orbicularis muscle below the lateral canthus (Fig. 7), and lateral canthotomy. The opposed edges of the lid coloboma are halved by splitting the "grey line" and excising a triangle from each, the base being at the lid margin, the anterior consisting of skin and orbicularis muscle and the posterior of tarsal plate and palpebral conjunctiva. One or two mattress sutures (Fig. 7) traverse these to effect apposition. This halving prevents a vertical notch at the site of union on the lid margin.

(3) Reconstruction of large full-thickness defect by a mucosal-lined bridge pedicle

When more than one-third of the lid margin and deeper tissues of the lid are involved in the neoplasm then almost total, or indeed total, excision is indicated. Such extensive reconstruction of the lower lid is less formidable than the upper.

Lower lid reconstruction

After excision of most or all of the lower lid the upper lid margin is freshened as for tarsorrhaphy and is sutured to the skin and muscle edge of the defect. A "delayed" bridge pedicle of skin of the upper lid is now raised and lined either with a free buccal mucuous membrane graft or conjunctiva excised from the upper fornix of appropriate size, the bridge pedicle is temporarily replaced, a strip of oil silk

Fig. 8. Total loss of left lower lid. A. Upper lid margin sutured to cheek. "Delayed" bridge pedicle in upper lid lined by buccal mucosa. B. One week later, tarsorrhaphy separating the mucosal lining from the orbicularis muscle of the upper lid. (Fig. 8.) severed, "bridge" pedicle transposed to form new lower lid, skin defect in upper lid filled by full thickness skin graft.

pedicle from the upper lid is swung down and sutured into the lower lid defect, and

Fig. 9. Result. Eyelids open and closed.

A week later the temporary tarsorrhaphy is divided and the mucosal lined bridge to enhance its blood supply and to assist in maintaining its desired position its upper

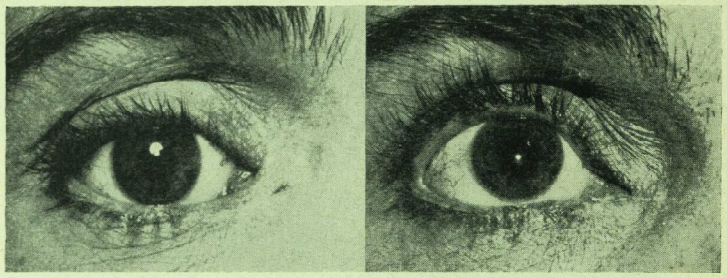


Fig. 10. A. Basal-celled carcinoma involving medial canthus. B. After excision of neoplasm and reconstruction with mucosal lined skin pedicle from upper lid.

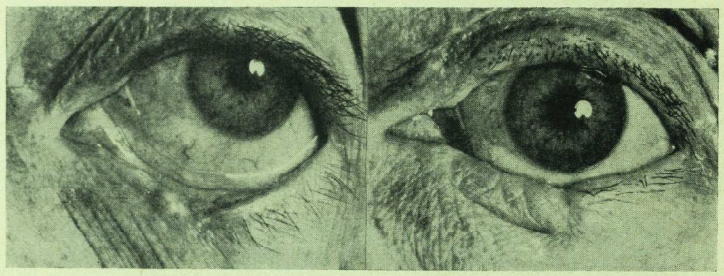


Fig. 11. A. Infiltrative type of basal-celled carcinoma of the right medial canthus. B. The neoplasm has been widely excised with the lower canaliculus. The defect has been filled by a pedicle from the upper lid lined with a conjunctival graft. (The central notch in the lid margin requires a small plastic procedure for its elimination.)

edge is sutured to the raw surface of the upper lid margin prepared for the tarsorrhaphy.

Into the skin defect of the upper lid at the site of the bridge pedicle a full-thickness free skin graft is placed. When the mucosal-lined bridge pedicle has been in place for two months the tarsorrhaphy is severed and the ends of the pedicle trimmed and replaced in the upper lid (Fig. 9A & B).

Full thickness reconstruction of (a) medial and (b) lateral halves of the lower eyelid

The neoplasm is widely excised. In the case of the medial canthus this involves the sacrifice of the lower lacrimal punctum and canaliculus (Fig. 10A and B). If the epiphora is troublesome at a later date either transplantation of the upper canaliculus or the opened fundus of the lacrimal sac into the lacus lacrimalis is tried in an attempt to re-establish the drainage of tears.

The upper lid margin is freshened and sutured to the inferior edge of the lower lid defect. A delayed skin pedicle lined by mucosa of appropriate size is cut in the upper lid.

One week later the tarsorrhaphy is severed and the mucosal lined pedicle is swung down into position to fill the defect and to give improved support at the canthus. (Fig. 10B and Figs. 11A and B.)

Upper lid reconstruction

When the neoplasm has infiltrated deeply into more than one-third of the upper lid

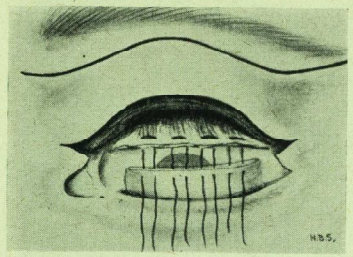


Fig. 12. Drawing to show surgical steps in the reconstruction of the upper lid. Splitting of lower lid in grey line, mobilization of tarsal plate and palpebral conjunctiva which is sutured to frill of conjunctiva in upper fornix and to levator palpebrae superioris. A bridge pedicle of skin and orbicularis muscle is raised from the skin below the eyebrow.

and the lid margin is affected adequately wide excision presents a more serious reconstructive problem than in the case of the lower lid.

If possible the upper rim of the tarsal plate with the insertion of the levator palpebra superioris is conserved and at any rate this muscle must be identified and held in three or four "whip" sutures of 20 day 4/0 chromic catgut. The conjunctiva of the upper fornix is undermined and mobilized to turn down with the remains of the tarsus.

The grey line of the lower lid margin is split and the line of cleavage made down to the level of the lower fornix. The lower tarsal plate and palpebral conjunctiva, thus separated, are then mobilized by vertical cuts at the medial and lateral ends of the plate which is now brought up and sutured with 20 day 4/0 chromic catgut to the lower margin of the remains of the upper tarsal plate (Fig. 12). The eye is thus covered with conjunctiva.

A bridge pedicle of orbicularis muscle 1.5-2 cm. wide is now dissected from the peri-orbital part of this muscle and is brought down to cover the tarsal plate to which it is anchored by a few interrupted catgut sutures.

It may be possible to bring down a bridge pedicle of skin from just below the orbital margin and to suture this to the everted raw surface of the lower lid margin. Into the skin defect whence this bridge pedicle has been taken a full thickness free post-auricular skin graft is placed. (Figs. 13A and B.)

Two to three months later the tarsorrhaphy is opened, the lower margin of the tarsal plate of the lower lid is cut along its full length and is united by fine silk mattress sutures to the lower margin of the upper lid skin.

The conjunctiva of the lower fornix should be in good position for suture to the lower lid margin by mattress sutures of fine silk.

Epilogue

Figs. 14A and B and 15A and B show comparable hypertrophic basal-celled carcinoma in two patients that shown in Fig. 14A and B was treated with perfection by Dr. A. Jones, M.D., M.R.C.P., in our Radiotherapeutic

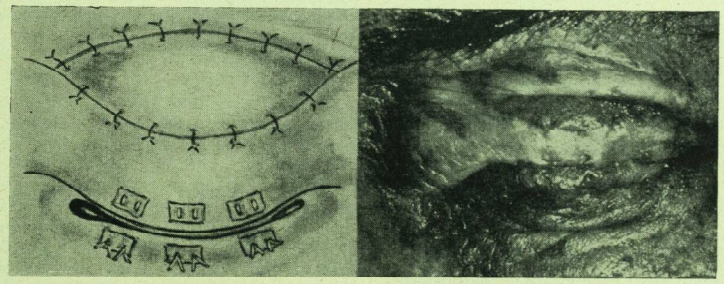


Fig. 13. A. Drawing to show bridge pedicle of skin and orbicularis brought down and sutured to lid margin. Skin defect at donor site of bridge pedicle is filled with a full thickness post-auricular skin graft. B. Photograph eight days after operation.

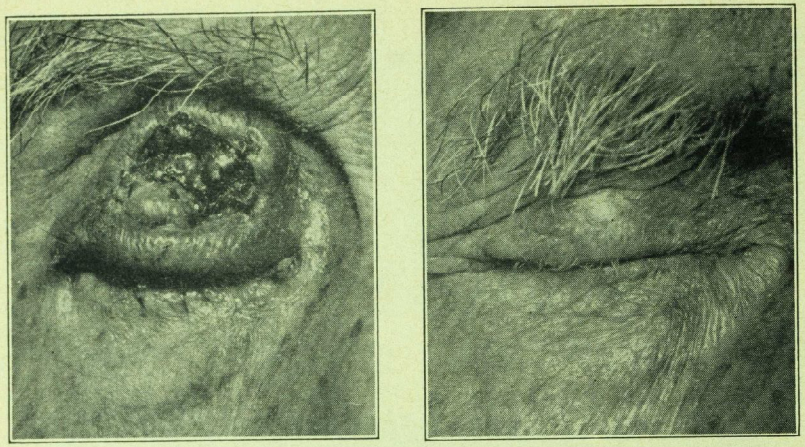
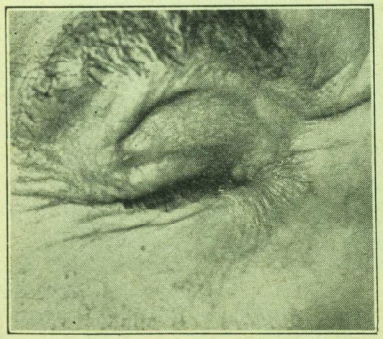
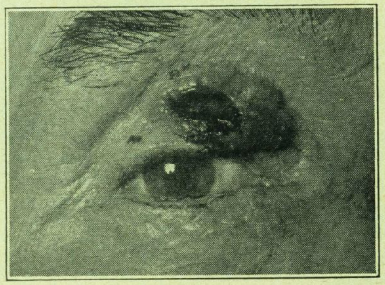


Fig. 14. A. Hypertrophic basal-celled carcinoma upper lid. B. After irradiation.





carcinoma upper lid. B. Three months after surgical excision and full thickness post-auricular graft.

Fig. 15. A. Hypertrophic basal-celled

department, an admirable cosmetic and functional result. Fig. 15B shows in the other patient the effect three months after wide surgical excision with a free skin graft to most of the upper lid placed over a transposed band of orbicularis muscle. The function of the eyelid is opening and closure is quite normal. In fact, the only apparent anatomical difference between the result of these two methods of treatment is that the one has the thin atrophic irradiated skin and the other has a free full thickness skin graft lying on a

continued on page 159

ASSESSMENT OF ADRENAL ACTIVITY IN HEALTH AND DISEASE

by A. M. Robinson

The increasing requests for the estimation of 17-ketosteroids, 17-ketogenic steroids and 17-hydroxycorticosteroids, make it necessary to provide a simple account of the origin of these steroids and the use of their estimation in medical practice.

Androgens

The androgens are compounds which cause development of the male sex organs and secondary sex characteristics (e.g. the capon's comb which is commonly used for biological testing). They are C_{19} steroids with no side chain at C_{-17} and have oxygen substituents at C_{-3} and C_{-17}. There is a carbonyl group at C_{-17}. They are known as 17-keto or 17-oxosteroids.

The principal 17-ketosteroids found in human urine are androsterone, etiocholanolone and dehydroisoandrosterone, and although many other more highly oxygenated steroids have been isolated, they are usually present in small amounts, and do not make any considerable contribution to the total ketosteroids in normal subjects.

Source of Androgens in Urine

(*a*) *Adrenal Cortex*

The 17-ketosteroids excreted in human urine are mainly derived from the adrenal cortex. This is clearly shown from the fact that persons suffering from complete Addison's disease excrete little or no 17-ketosteroids, while women suffering from masculinisation as a result of adrenal hyperactivity may excrete greatly increased amounts of 17-ketosteroids (Callow, 1939).

(*b*) *Testis*

The interstitial tissue of the testes has been shown to elaborate an androgenic hormone testosterone, of which the metabolic products are androsterone and etiocholanolone, and these substances contribute to the total 17-ketosteroids in male subjects. About 5 mg. 17-ketosteroids per day may be of testicular origin. Further proof for this is provided by the great excess of 17-ketosteroids shown in certain cases of interstitial cell tumours (Venning, E. H., Hoffman, M. M. and Brown, J. S. L. (1942)), and by the fact that cryptorchid males and males suffering from damage to the interstitial tissue of the testes show values which are lower than the average for their sex and more nearly approximate to the female levels of excretion.

(*c*) *Ovary*

Androgenic material has been demonstrated in some ovarian tissue, but if any elaboration of androgenic material occurs in the human ovaries it can for all practical purposes be ignored, as bilateral oophorectomy in women does not result in a measureable fall in 17-kerosteroid excretion.

Adrenal Cortical Hormones

In additional to elaborating 17-ketosteroids the cortex of the adrenal produces a number of steroid hormones which are essential for the maintenance of life, and which may be involved in the metabolism of water and electrolytes, of carbohydrates, and of proteins. Deficiency or excess of these hormones produces a variety of metabolic disturbances.

More than thirty different adrenal steroids have been isolated, of which many are biologically inactive. The active and nearly all the inactive adrenal steroids are C_{21} steroids, nearly all have a highly oxidised side chain at C_{-17} and all the active compounds have a Δ^4-3-ketone group, e.g. cortisone and corticosterone. Many of these C_{21} steroids have an oxygen atom at C_{-11}, and at one time they were classified on the basis of the presence or absence of this C_{-11} oxygen atom, thus glucocorticoids, which are most active in carbohydrate metabolism, all had the oxygen atom at C_{-11}, while the mineral corticoids, which are most active in relation to salt and water metabolism, had no oxygen atom at C_{-11}. The discovery, however, of aldosterone (electrocortin) a very active mineral corticoid with an oxygen atom at C_{-11} makes this generalisation incorrect.

Chemical Determination of Urinary 17-Ketosteroids

Urinary 17-ketosteroids are excreted mainly as glucuronides and sulphates, and methods for their estimation involve the splitting of these conjugates by the use of acids or enzymes.

For isolation studies the use of enzymes is preferred, but it is costly and time consuming. For routine total 17-ketosteroid assays, acid hydrolysis is satisfactory. The main disadvantage of the use of strong mineral acid, the formation of artefacts due to dehydration and substitution, does not affect the final total assay of the 17-ketone group, although it affects the chemical nature of the steroids making up this total figure.

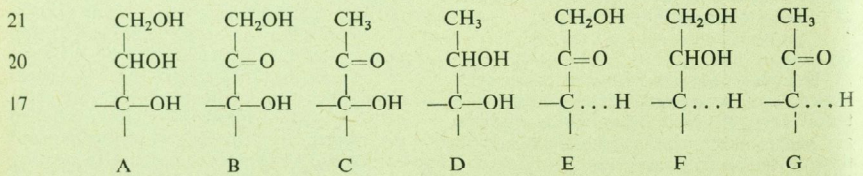
The method most generally used in this country and routinely in this hospital for the estimation of 17-ketosteroid excretion is the standard M.R.C. method.

The method is based on the Callow modification of the Zimmermann reaction (1938) and, in my experience, is the most satisfactory and reproducible procedure available.

For the purpose of evaluating any reported results, it is necessary to know the method used and the normal values obtained.

Chemical Determination of Urinary Adrenal Cortical Hormones

The chemical determination of adrenal cortical hormones is a more complicated process than the measurement of 17-ketosteroids owing to the variations which occur in the side chain at C_{17}. As many as seven types of two carbon side chains at C_{17} may be present.



The seven types of two carbon side chains

These side chains react specifically to different methods of assay, and there is no method available which will estimate accurately all the variants.

Most of the chemical methods involve the same general principles, the use of acid or enzymes for the hydrolysis of the urinary corticoids (excreted as sulphates or glucuronides) followed by extraction of the hydrolysed urine with suitable organic solvents. Estimations may be carried out on this crude extract, or further purifications may be introduced.

Criticism can be levelled at either procedure. When the estimations are carried out on the crude extract they are relatively non-specific, but when purification processes are introduced unless they are very carefully controlled they may lead to the loss of some of the steroids which are very labile to heat or changes of pH. This makes the assessment of the results obtained in different laboratories difficult, but when due consideration is given to the limitations of a method, many of them are sufficiently accurate for most clinical purposes.

In addition to group estimations, individual corticosteroids can be estimated after complicated and time-consuming procedures, and it is only by the use of such procedures that any genuine advance in our knowledge can take place. It is hoped, however, that in time these methods may become sufficiently simplified for routine medical practice, but at the present time to obtain any insight into the adrenal activity of patients we have to be satisfied with use of one or more relatively unspecific methods.

The chemical methods which have received most general acceptance for the estimation of corticosteroids in urine are summarised below.

Reducing Methods

Talbot, Saltzman, Wixom and Wolfe (1945) and Heard and Sobel (1946) devised methods based on the reduction of cupric ions and phosphomolybdic acid by corticosteroids possessing a reducing group in the molecule. In the copper method the reducing group is the α-ketol group (B & E) and in the phosphomolybdic method the reaction is given by this α-ketol group and/or by the $\alpha:\beta$ unsaturated-3-ketone group.

Oxidation Methods

A method using periodic acid for the estimation of urinary corticoids was reported by Loewenstein, B. E., Corcoran, A. C. and Page, I. H. (1946) and developed by Daughaday, W. H., Jaffett and Williams, R. H. (1948) and Marrian, G. F. and co-workers (1950, 1953).

This method was based on the fact that the 20:21 α ketols and glycols (A, B, E, F) when treated with periodic acid released formaldehyde and the estimation of this served as a measure of steroids possessing this side chain in the urinary extract (formaldehydogenic steroids). Cox, R. I. (1952) has developed a similar method for the 17:20-diols not carrying an hydroxyl group at C_{21} which on treatment with periodate yield acetaldehyde (hence acetaldehydogenic steroids).

N.B.—Where a value for glucocorticoids is found in the literature it probably refers to an estimation by a reducing or oxidation method of the water soluble portion of the urinary extract.

Chromogenic Method. Porter Silber

The most widely used of the chromogenic methods is that developed by Porter, C. C., Silber, R. H. (1950).

This method is based upon the yellow colour obtained by the addition of phenylhydrazine and sulphuric acid to solutions of steroids having a dihydroxy acetone grouping (B). These authors claim that the test is specific for this grouping, this is true when adequate purification of the urinary extract is carried out, but some laboratories do not exercise sufficient care in these purification processes and then the reaction is anything but specific.

Care must also be taken to avoid the administration to the patient of certain drugs and foods during the test which interfere with the reaction, e.g. paraldehyde, quinine, sulphamethazine, sulphadiazine, ascorbic acid, spinach and various vegetables.

During the last few years the estimation of *17-ketogenic steroids and 17-hydroxycorticosteroids* by a method developed by Norymberski and his co-workers (Brooks, C. J. W. and Norymberski, J. K., 1953; Appleby, J. I., Gibson, G., Norymberski, J. K. and Stubbs, R. D., 1955; Norymberski and Stubbs, R. D., 1956) has been the accepted procedure in many hospital laboratories in this country. These methods have the advantage that they can be carried out on a small aliquot of a 24 hour collection of urine, and no tediuos extraction and processing of the extract is required.

When urine containing urinary corticoids with structure A, B and D are treated with sodium bismuthate selective oxidative fission of the corticosteroidal side chain takes place, and the steroid residue is left as 17-ketosteroid, hence the name ketogenic steroids is applied to A, B and D.

Type C is unaffected by treatment with sodium bismuthate, but if urine containing this is treated with sodium borohydride, the 20 C=0 group is reduced to 20 CH.OH it then becomes type D and can be satisfactorily oxidised with sodium bismuthate to 17-ketosteroids and together with A, B and D, constitute the 17-hydroxycorticosteroids.

In practice in most normal persons the agreement between the values for 17-ketogenic and 17-hydroxycorticosteroids are within the experimental limits of either assay.

17-ketosteroid Levels in Normal Subjects

Children

Up to the age of 5-6 years, both girls and boys show an extremely low excretion of 17-ketosteroids, less than 1 mg./day (usually 0.25-0.5 mg.). From 6-7 years, a relatively rapid increase in urinary 17-ketosteroids occurs, and between the ages of 10-12 years, the statistical divergences between the sexes can be detected. Adult levels are not reached until adolescence is complete.

Men and Women

To establish the range and mean values for 17-ketosteroids in normal subjects, specimens of urine were provided by students, laboratory staff and their friends. The only standard of normality demanded was that the subject should be in good health, performing a

normal day's work, and not suffering from a known endocrine disorder. With this proviso, our results are summarised below :—

A group of 133 male subjects (20-40 years) gave a mean excretion of 14.1mg./day (variation 2-27 mg.), a total of 204 males (20-70 years) gave a mean excretion of 12.5 mg.

A group of 54 women (18-40 years) gave a mean excretion of 10.6 mg./day (variation 5-18 mg.).

These results are in good agreement with those reported by Dorman and Shipley, who give a complete report on urinary 17-ketosteroid excretion in men and women. The mean excretion for men (20-50 years) from 12 reports using similar methods involving a colour correction is 13.8 mg./day (variation 7.6-20 mg.) and for women, the mean excretion is 9.1 mg.

The only discrepancy between the results is that we have a group of younger men (about 10 per cent) who are apparently normal, but have an excretion of 5 mg./day or less.

Older Men and Women

Some decline in urinary 17-ketosteroid excretion occurs in both men and women with increasing age, but there is divergence of opinion between workers as to the time of onset and the extent of this decrease. A consideration of the data available shows the highest excretion for both men and women is between the ages of 20-30 years, and after this age tends to fall in both sexes. In the case of the men the fall is about 15 per cent of the peak value for each 10 years increase in age. In the case of women the fall is not so sudden, and there is a flattening out between the ages of 35-40 years, followed by a decline of the same order as that shown by the men.

Adrenal Cortical Hormone Levels in Normal Subjects

The earlier oxidation and reduction methods had only a limited usefulness in clinical diagnosis as they all gave very small values for normal excretion. Talbot *et al.* using unacidified urine showed a range 0-1-0.38 mg./day. With acidified urine, Heard and Sobel give a range 1.1-2.1 mg./day and Robinson and Norton a range 0.0-3.3 mg./day with a mean value of 1.61 mg./day for men and a range 0.6-2.7 mg./day with a mean value of 1.28 mg./day for women. In cases of marked endocrine disease the values obtained were sometimes well outside the normal limits, but frequently either within or so close to the normal range as to make the estimation valueless for diagnostic purposes. The methods were, however, useful in following the varying state of any particular patient.

The limitation of usefulness of these two methods, due to the small normal values, was overcome in both the chromogenic method of Porter Silber and the ketogenic method of Norymberski. Both of these methods gave a range and mean value which was sufficiently large to enable some assessment of the patient's endocrine status to be made.

Using the chromogenic method of Porter Silber, Reddy, Jenkins and Thorn (1954) obtained a range of 1.1-10.7 mg./day for normal subjects.

There is less information available about the urinary excretion of 17-ketogenic steroids and 17-hydroxycorticosteroids than there is about 17-ketosteroids. Our own normal figures are as follows :—

A group of 30 men (20-40 years) gave a range of ketogenic steroid excretion of 5-21 mg./day with a geometric mean of 11.1 mg. and 17-hydroxy corticosteroid excretion of 9-21 mg./day with a geometric mean of 13.1 mg./day. A group of 41 normal women (20-35 years) showed an excretion of 17-ketogenic steroids from 4-20 mg./day with a geometric mean of 9.2 mg. and of 17-hydroxycorticosteroids 5-20 mg./day with a geometric mean 10.5 mg. The results for 17-ketogenic steroids are in reasonable agreement with those of Levell, M. J., Mitchell, F. L., Paine, C. G. and Jordan, Arthur (1957), who give a geometric value of 12.0 mg./day for men and 9.3 mg./day for women, but are somewhat lower than those obtained by Diczfalusy, E., Plantin, L. O., Birke, G. and Westman, A. (1955), who report excretion in 17 men (22-37 years) with a range of 11.1-22.1 mg./day with a geometric mean of 15.1, and for a group of 20 women (17-47 years) a range of 6.9-17.9 mg./day with a geometric mean of 10.6 mg., day.

Excretion of 17-ketosteroids, 17-ketogenic steroids and 17-hydroxycorticosteroids in Patients Suffering from Endocrine Dysfunction

High Excretion

Patients suffering from Adrenal tumour, Cushing Syndrome and Congenital Adrenal hyperplasia usually show excessively high excretion of these steroids.

(*a*) *Adrenocortical Tumours*

In seven cases of adrenal tumour the 17-ketosteroid excretion showed a range from 28 to 300 mg./day with a mean value of 134 mg.

In only two of these patients were the ketogenic and 17-hydroxycorticosteroids estimated. A 55 year old man suffering from a Cushing Syndrome due to an adrenal tumour had a 17-ketosteroid excretion of 28 mg./day and a 17-ketogenic and 17-hydroxycorticosteroid excretion of 70-80 mg./day.

While an 18 year old girl with an adrenal tumour producing virilism had a 17-ketosteroid excretion varying between 300 and 700 mg./day and 17-ketogenic 38-90 mg./day and 17-hydroxycorticosteroid 70-210 mg./day.

(*b*) *Cushing Syndrome*

In addition to the case of Cushing Syndrome referred to above, six other cases of complete Cushing Syndrome due to adrenal hyperplasia showed a mean 17-ketosteroid excretion which was not grossly elevated. The range was 11-35 mg./day with a mean value of 21.6 mg. Only two of the cases were above 30 mg./day. The 17-ketogenic and 17-hydroxycorticoid excretion was, however, grossly increased in five cases investigated, a three to eight fold increase in the normal values, 17-ketogenic values from 29-80 mg./day with a mean of 67 mg./day, 17-hydroxycorticoids 33-80 mg. with a mean of 68 mg./day.

(*c*) *Congenital Adrenal Hyperplasia*

Cases of congenital adrenalhyperplasia show a high excretion of 17-ketosteroids, 17-ketogenics and 17-hydroxycorticosteroids at birth, and this excretion increases rapidly to the age of 6 or 7 years when they may excrete four to five times the normal adult values. The reducing steroids, however, are within or only just above the normal values.

Twelve cases of congenital adrenal hyperplasia investigated in this hospital clearly demonstrate the increased excretion of 17-ketosteroids with age. Three children under 21 days of age showed an excretion of 1.3-2.4 mg./12 hours. A child of one year showed an excretion of 4.5 mg. which increased to 50 mg./day at the age of three years. Four other children, aged 2 years, 3½ years, 4 years and 6 years, had excretions of 17-ketosteroids of 7.4 mg., 13.4 mg., 13.9 mg. and 38.2 mg./day. Two 14 year old girls showed an excretion of 50 mg./day, and a 16 year old brother of one of these girls an excretion of 113 mg./day. Two women over 40 years of age, sisters, had an average excretion of 50 mg. and 66 mg./day respectively.

Patients with congenital adrenal hyperplasia show excessively high values for 17-ketogenic steroids and 17-hydroxycorticoids. This is due to the excessive production of pregnane-3-alpha-17-alpha-diol-20-one and pregnane-3-alpha-17-alpha-20-alpha-triol which is characteristic of this condition. These biologically inactive steroids are not usually regarded as corticoids, as there is no hydroxylation at C_{21}.

Low Excretion

Low values are encountered in cases of Addison's disease, Hypopituitarism and Myxoedema, and a single estimation of 17-ketosteroids and 17-hydroxy steroids is of little use in distinguishing between these conditions. Cases of myxoedema, however, undergoing successful thyroid therapy usually show an increased excretion of steroids. Differentiation between Addison's disease and hypopituitarism can be made from the response of the adrenals to stimulation with ACTH. Cases of Addison's disease will not respond even to prolonged stimulation, while cases of hypopituitarism will eventually respond to the stimulus with an increased excretion of steroids.

Normal or Near Normal Excretion

The most interesting cases which come into this group are women presenting a picture of hirsutes with or without obesity and hypertension. These women are not usually suffering from any recognisable endocrine disorder but have to be investigated to exclude this possibility.

A group of 41 women presenting hirsutism without any marked increase in weight showed a ketosteroid from 3.0-33 mg./day with a mean value of 18.5 mg., a 17-ketogenic steroid excretion of 4.0-22 mg./day with a mean value of 9.2 mg., and a 17-hydroxycorticoid excretion of 4.0-23 mg./day with a mean value of 14.5 mg. This mean 17-ketosteroid figure is elevated about 50 per cent on the mean figure for normal women, while the 17-ketogenic and 17-hydroxycorticosteroids are of the normal order.

A further group of 37 women with marked obesity showed a 17-ketosteroid excretion

ranging from 5.0-25 mg./day with a mean value of 13.5 mg., a 17-ketogenic steroid excretion 5.0-32 mg./day with a mean value of 15.4 mg., and a 17-hydroxycorticosteroid excretion 6.0-32 mg./day with a mean value of 19.3 mg. In this group the 17-ketosteroid excretion is not greatly elevated above the normal values, but both the 17-ketogenics and the 17-hydroxycorticoids are considerably elevated, the latter by nearly 100 per cent.

Conclusion

The main uses of the estimation of 17-ketosteroids, 17-ketogenic steroids and 17-hydroxycorticosteroids in clinical medicine are :—

(*a*) To confirm or disprove the presence of suspected endocrine disease.

(*b*) To establish the nature of this disease by differential diagnosis, e.g. ACTH stimulation can be used to differentiate between cases of adrenal insufficiency due to Addison's disease, and cases of hypopituitarism in which the adrenal insufficiency is secondary to this condition.

Cases of Addison's disease do not respond to the stimulus, in contrast cases of hypopituitarism do respond, with an increased excretion or urinary steroids, although in long standing cases the response may be delayed.

ACTH stimulation and cortisone suppression can be used to differentiate between cases of Cushing syndrome due to adrenal hyperplasia and those due to adrenal tumour. The urinary excretion in those cases which are due to adrenal hyperplasia show a marked response to these stimuli, by an enhanced excretion of urinary steroids in response to ACTH stimulation and a decreased excretion in response to cortisone. On the other hand, cases of Cushing syndrome due to adrenal tumour show no response to either stimuli.

(*c*) To follow the results of hormone therapy where this is used either to depress or increase the steroid excretion to normal levels.

This is particularly necessary in long term treatment of adrenal hyperplasia with cortisone or its more potent derivatives prednisone and prednisolone. Some patients respond to these hormones with a suppression of urinary steroid excretion which may persist for many months, without further treatment. Occasionally a patient may respond so dramatically that the urinary steroid excretion may fall to the dangerous level shown in cases of adrenal insufficiency.

The danger of oversuppression therefore makes it necessary that the steroid excretion of patients undergoing prolonged hormone therapy should be checked at regular intervals.

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From a letter received in the Hospital Office :—

23.4.59 TADWORTH, SURREY.

Would you kindly inform me if there is a Hospital that would give me a little plastic face lifting in return for my body at death. I am a widow, and do so want to keep on with my work. I have good blood and skin, and am a good patient.

TWO POEMS

by Elizabeth Hamilton

MOON MAGIC

Moon magic—made more magic by moving leaves and singing breeze.
More poignant by softness interspersed with sound,
Moon magic over Charterhouse.

Round and constant thing set behind and between,
Dark, shape-changing tree tops of London plane.
Moon magic over town.

Soft light of setting yellow squares of windows and gas lamps' limpid pools,
All revealing shabby old and sparkling new,
Moon magic among bricks.

Bricks—grey of Charterhouse—of Collets red and beige,
New and clean of line are College Hall and Golden Lane,
Moon magic over ornate Smithfield.

Moon magic seeping into the places, so quiet and still, whence men work by day.
Listening, without comment, to car brakes, footsteps and tube train.
Moon magic over the Hand and Shears.

Peace dropping through the branches to nest in the grassy square,
And dimly light a few random flowers,
Moon magic on cobble stones and railings.

Unrest and longing bred of the night, creeping as always, where loveliness is
Essence of nature soothing, yet keeping awake, tired being,
Moon magic after a busy day.

More complex than the harvest moon, for here is a seething human field
That can be cold or homely,
Moon magic over an acquired taste—London.

Moon magic—often seen across orchards and shadowy hills, still waters and windy sky,
And here the same—same bewitching
Unaccountable heart breaking and lonely—Moon Magic.

VOCATION

So you are going to be a nurse
And nothing I say about how
It's better or worse
Than what they say in the book,
Will make you alter your great decision !

You say in your mind, as two and a half years ago,
I said in my mind,
For me it will be different,
It will be as I want it to be,
I shall have all the fun I ever dreamed of
And, besides, I'm born to be a nurse !

Even so, I'll tell you about the life—
Our life. The life you'll lead.
At P.T.S. they'll treat you so that you are sapped in confidence.
You live in an all girl world
And when you come up to Town
You're the nervy junior, the nervy unsure,
Hardly being able to distinguish between
Students, porters, housemen and chiefs.

You'll hate the senior nurses,
You'll see life twisted up and death,
And wonder why you are so unmoved.

The hours are awful,
And you'll have to make your own clothes.
And grow away from the home circle.

But you'll learn—
That there are loops—good or crummy.
How to wear the uniform—becomingly !
How to run the gauntlet between the junior stripe,
The maid and an unkind staff nurse,
How to please almost everyone
And to make the most of the day.

You will want to leave,
But stay, for want of another job.
Suddenly—after some two or so years,
You'll become used to it, and even love the life,
Restrictions and all,
For now you know where the back doors are,
Having passed the wondering age,
And the accepting age,
Being at once resigned and understanding
You'll say you like it, meaning it,
But four years is enough !

EXAMINATION SUCCESSES

UNIVERSITY OF LONDON

Special Second Examination for Medical Degrees. March, 1959

Adnitt, P. I.
Bascombe, M. J.
Beecham, H. A.
Bloom, R. A.
Burbridge, N. J.
Collins, P.
Cotton, S. G.
Cupitt, A.
Deys, C. M.
Doney, B. J.
Edwards, H.
En-Nimri, S. A.
Ernst, E. M. C.
Gardos, G.
Green, G. S.
Harvey, J. A.
Howells, D. B. M.
Howes, A. C.
Jackson, G. B.
James, J. E. Angell
Johnson, M. S.
Khadjeh-Nouri, D.
Kingsbury, A. W.
Knight, E.
Ladd, G. H. Y.
Lewis, M. G.
McCarthy, W. E.
Marsh, B. T.
Martin, R.
Merry, R. T. G.
Metcalfe, B. J.
Miller, R. G.
Newton, J. R.
Riddle, P. N.
Robertson, M.
Sharp, G. T.
Stanley, R. B.
Stevens, J. E.
Sutcliffe, A. J.
Thomas, A. K.
Tomlinson, R. J.
Vartan, A. E.
Winter, J. M.
Zeegan, R.

CONJOINT BOARD

Final Examination. April, 1959

Pathology
Townsend, J.
Roden, A. T.
Tooby, D. J.
Godwin, D.
Thomson, R. G. N.
Mercer, J. D.
Johnson, T. O.
Richards, D. A.
John, R. W.
Fox, G. C.
Plant, J. C. D.
Muzio, D. M.
Sugden, K. J.
Brown, E. M.
Hinson, T. C.
Alabi, G. O.
O'Hanlon, N. M. P.

Medicine
Townsend, J.
Johnson, T. O.
Richards, D. A.
Birt, A. M.
Bowles, K. R.
Thompson, A. J.
Sugden, K. J.
Davies, D. G.
Bonner-Morgan, R. P.
Hobday, J. D.
Sime, M. O.
Roden, A. T.
Dobson, J. L. C.
Brown, E. M.

Surgery
Wills, G. T.
Birt, A. M.
Mather, J. S.
Lewis, J. H.
Thompson, A. J.
Patterson, M. J. L.
Tooby, D. J.
Gabriel, R. W.
Sime, M. O.
Woolmore, M. J. F.
Lyon, D. C.
Williamson, C. J. F. L.

Midwifery
Sime, M. O.
Davies, D. G.
Patterson, M. J. L.
Gould, A. M.
Johnson, T. O.
Dymond, G. S.
Woolmore, M. J. F.
Mather, J. S.
Sugden, K. J.
Birt, A. M.
Warrander, A.

The following have completed the examinations for the Diplomas M.R.C.S., L.R.C.P. :—

Sime, M. O.
Patterson, M. J. L.
Lewis, J. H.
Woolmore, M. J. F.
Birt, A. M.

★ ★ ★

DIFFICULTIES ON ENTERING GENERAL PRACTICE

by H. E. Thorn

The newly registered practitioner may find practice outside Hospital very disconcerting. This happens largely because the facilities to which he is accustomed are often not available, and if they are obtainable, they have to be got at in unfamiliar ways. The other great difference from work in a teaching hospital, is that more senior doctors are not so easily "on tap," and if several Specialists opinions are wanted, it becomes difficult to organise. A reference to a senior partner is likely to be very helpful, but if the junior doctor is on his own, it is much more difficult. I propose to discuss here the type of troubles which may beset the young G.P.

A doctor recently out of hospital may feel very shy and nervous on walking into a strange patient's house. He knows that when he has seen the patient, he has to make a diagnosis, and put it over well to the patient and/or his relations. If he has not made a diagnosis he is in trouble, because the patient expects a definite label for his illness. Under the circumstances he must get away with a discussion of symptoms, with or without opinions as to the cause and the prognosis. A young man must be careful not to commit himself too hastily. He cannot often be frank and say he " does not know." An older man, after 20 or more years, may know when he can admit that he does not know, but if he does this he must be prepared to suggest a further opinion, not only if the case appears to be serious, but if he finds that the patient or relatives think it is serious.

There are patients who are " Hospital-minded," particularly amongst the industrial and labouring classes, but it is often unwise to press hospital advice or investigation indiscriminately on better class patients.

The young G.P. probably does not know very much about midwifery, and much of his limited knowledge has been gained by hospital work in this field. He is, therefore, in difficulties when called upon to undertake obstetric cases. He is fortunate today that there is generally a midwife also on the case. Formerly this was not so. It is essential to try and see a good many babies born in the early days of general practice, otherwise it will be difficult to assess what is a serious complication. If a senior partner is available, the junior should not fail to call him in when in doubt about hospitalisation. In really acute complications the " Flying Squad " can be obtained from the nearest Maternity Hospital.

The inexperienced practitioner is in great trouble when he advises such serious treatment as emergency operation when the patient does not agree. He should press this if he thinks that life and death are at stake. But even then he must remember that the patient has a right to refuse operation, and prefer to die, if he feels strongly about it. In this case it is essential to try and get at least another opinion—preferably a specialist in the type of disease at stake.

I remember an assistant of mine seeing one of my patients when I was on holiday, and telling him that he had serious heart trouble. The patient was terribly upset over it, and I had to go to a lot of trouble to contradict it. The patient had a Systolic murmur, but the condition was well compensated, and was not really giving him trouble. This occurred over 20 years ago, and the patient is still in business in London, and reasonably well for a man of just over 70.

I also remember taking a young assistant to an old case of Mitral Stenosis. The bruit was so loud that you could hear it when standing alongside the bed, without any assistance from a stethoscope. This led to a discussion, during which I found that the assistant was surprised that I did not thoroughly examine the chest of each patient every time I attended, even in chronic cases. It is a matter of experience and tact to find out which patients expect frequent examination, and which do not. This is a matter which it is difficult for a young G.P. to assess.

Writing prescriptions presents great difficulties—both in quantities and costs. I once had an assistant who ordered ten times the full dose of strychnine. Fortunately it was written on an E.C.10, and was returned by the chemist to the doctor, who still failed to see what was wrong and returned it to the chemist. He then sent it to me, as Principal, and that was how I found out.

In hospital, and during training, the medical student does not seem to be taught anything about the cost of drugs ; nor does he know what quantities to order on a prescription.

A mental case appearing in the middle of a busy surgery often presents great difficulty to a young assistant. In the first place he is not really expecting it, and very likely does not diagnose it rapidly. It may present itself in many forms—often obsessional, with so much emphasis on the physical, that it is easy to fall into the trap that this is real. Much time is often required to tackle such a case, and it is difficult or impossible to give this at the time. If possible, it is well to temporise, and find an opportunity to investigate at another time, or refer the patient to a Psychiatrist.

The acute mental case is a problem in quite another way. When to give adequate dope, and when to call in the D.A.O. or a further medical opinion, are the questions to be solved.

The patient who has trouble from ill adjustment of sex in its various forms, sometimes knows that this is his or her trouble, but is too shy to approach it, particularly if the doctor is a stranger professionally. These cases present themselves as minor ailments in the form of " fencing," and it is difficult to assess them. I find that there is often a clue to be found by an atmosphere of worry over what is obviously a trifle, and admittedly so, even by the patient. The minor ailment has a twofold object. It serves as a subject for talk, and also an excuse to the relative for going to see the doctor. This is, of course, very important, and must be treated in some cases, so that the patient can attend for further advice on matters which she cannot discuss with her relations or neighbours.

I think it will be clear from this short survey that general practice presents quite a different aspect of medicine from that experienced by the student and House Officer in hospital.

TO CROATIA BY AMBULANCE

by Mivart Thomas

The Balkan States seemed far enough away to be the objective for a summer Long Vacation. My eye wandered to Croatia across the map, and I knew where I wanted to go.

I began the search for a vehicle strong enough to stand up to Yugoslav roads. A lorry would have cost too much to equip, so I decided on an ambulance. I sent off some twenty letters, and eventually found an ideal machine at a reasonable price. It was a monster of a 27 h.p. ambulance, 18 feet long and over eight and a half feet high, complete with stretchers and smoked glass windows. The engine sounded good and, judging I would not need to spend any more money on it, I was able to buy it on the spot, rush through the licensing formalities, and drive it back to Cambridge the same day.

Owning an ambulance is a strange affair. I found that everyone on the roads gave me right of way. And parking outside somebody's house soon brought anxious enquiries. My landlady asked if I'd mind leaving the ambulance round the corner in future, because all the neighbours had been to see how she was. And when I visited my uncle, who is a psychiatrist, there was an fantasite rumour of an attempted suicide in the consulting room.

So it was with some trepidation that, with five companions, I eventually set out for

Yugoslavia. The Channel was crossed without event. The customs officer tried to peer through the dark windows behind—where the other four were—gave a knowing grin and said he wouldn't disturb the ladies.

We drove to Paris, and did a few circuits in the mêleé round the Arc de Triomphe, then straight on to the Mediterranean, through St. Raphael, Cannes, Monte Carlo and the Italian Riviera. We were warned not to tempt the armed brigands who were suspected of being in the Bracco Pass at that time. And we learned to deal with the excessively belligerent tooting of French and Italian drivers on the way south, by fixing a great squeeze-type motor horn on the back of the ambulance, and mounting a " duty-tooter," whose job it was to retaliate with interest against noisy people on our tail. We eventually passed on, through Florence and Venice, into Yugoslavia.

Serbo-Croat proved to be a relatively easy language to pronounce, and we found that the most elementary phrase-book type courtesies, practised furiously for the last few hundred yards of Italian territory, had a very good effect upon the Yugoslav customs officers, who were at first forbiddingly stern.

We drove to Rijeka that day. There was very little traffic about, and children at the roadside waved to us everywhere. We gave several lifts between villages, and eventually camped near a village in Croatia just outside Rijeka. After we had had supper, I wandered off by myself. It was just dark as I went up the steep hillside track. The rough stones crunching under my feet showed soft and white in the moonlight and, away to the right below the rock strewn slope and low trees, the Adriatic Sea gleamed darkly. I walked with the gentle murmur of the sea wind, and thought I heard music in the distance. Quickly it faded in the wind and the click of the stones. But then, with a stronger puff of wind, the sound of gay dance music flew across the country. I rounded a bend, and there, beside a few cottages in a village square, were an accordian band and the villagers dancing. Between dances the young men all sat around with bottles of wine at tables on one side of the square, and the girls crowded around the other side. I was taken over to one of the boys who spoke a bit of English, and was very warmly welcomed by him and his friends. Their English was halting, but I later discovered that they could quote more Shakespeare than I.

It was still fairly early, so I decided to run back to our camp and fetch the others. When we returned to the dance, we were greeted by the Yugoslav boys with bottles of wine, and we drank and danced through the night.

We spent several delightful days there, swimming in the clear sea, walking the country—even dancing the Kola in the Park of Rest and Culture in Rijeka. And when we left, we were given presents of baskets of fresh green figs picked from the trees that morning.

We drove on to Zagreb, and then carried on north across the frontier in Austria. Our way home was through Munich and the Rhone Valley to Boulogne via Brussels. Our only serious hitch came when we got to Boulogne and found there was no room for us on the boat. Many other people were stranded, too, and so a boat was sent across especially to pick us up. When the A.A. representative came across to us, he asked us how much the ambulance weighed. It was two and three-quarter tons. " They won't take you if you are over two and a half tons," he said. So when the ship's officer came around we took our the spare wheel and trusted in there being the usual liberal safety margin.

" No more than two and a half tons ? " asked the ship's officer, " because there's no room for you in the hold, and you'll have to go on the fore-deck. You'll have to reverse on board and go over an iron hatch-cover which will only take two and a half tons. If you go through that, you'll ruin the ship."

" Two and a half tons," I said.

We were the last vehicle to go aboard. The others walked on, and I had the doubtful privilege of reversing the ambulance across the gangplank. The Captain himself stood above the deck on the bridge giving directions, and slowly, agonisingly, I went over the hatch. Nothing happened. I climbed down and had a look around. The rear left wheel was an inch from the ship's rail ; the top of the ambulance had just slid under the projecting corner of the bridge. And, lining the rail, watching at a safe distance, were the rest of the ship's passengers with half the crew.

SPORTS NEWS

VIEWPOINT

The welcome return of white flannels and the familiar chime of croquet balls come as a herald of the joys of summer.

What memories are evoked by the cry of " no ball " reaching even the inner recesses of the beer tent, or the relentless voice from the umpires' chair, love thirty, love forty, game, set and match to . . . The water lapping gently by the edge of geometrically mown lawns, blazers and caps. The punt slowly drifting downstream, the boom of the start and finishing gun engender in many the feeling of better days that are now, alas, past.

For those who are still anxious to exert themselves in the many opportunities of gamesmanship presented. There is also the hope that their efforts will be accompanied and rewarded by at least some lasting memories of happiness there to be gained.

SWIMMING CLUB

At the end of the first year of the Swimming Club it is gratifying to report some concrete evidence as to its activities.

Last winter the newly-formed club began with weekly outings to St. George's Baths, Buckingham Palace Road, every Tuesday evening. These evenings, having proved fairly popular, we were confident, when asked to enter a relay team in the Royal Free Hospital Gala in October, that we were prepared for competitive swimming.

Having won the invitation relay race at this event, we felt more sure of ourselves, and entered a team in the University Water Polo League, which took place in the Lent Term. For the remainder of the Christmas Term we were intent on practising water polo, and arranged one or two friendly matches with our coming opponents.

The Lent Term has been our busiest so far, and the programme included the matches to be played off in the Water Polo League (IIIrd Division) and the University of London Championships, the results of which are given below.

Results

Water Polo

Played 8, won 7, lost 0, drawn 1. Goals for 52, against 17.

U.L.U. Championships

Diving. 1st, C. Ruoss ; 2nd, D. Shand.

Freestyle Relay. 1st, Battersea ; 2nd, St. Bart's.

Final Placing. 4th.

It is worth pointing out that this final placing is a result of points gained in only two events.

At this time also, one of the members, C. Ruoss, gained first place in the high board diving and second place in the spring board diving in the British Universities' Championship.

This term we have again arranged weekly outings, this time on Wednesday evenings to Caledonian Road Baths, which we share with the Northern Polytechnic Swimming Club. Also, we are entering the United Hospitals' Championships, the results of which will be published later.

Next year, with more members and more training, and with this year's experience and moderate success behind us, the Club should be able to flourish beyond all our hopes of a year ago.

Teams drawn from : P. Brunner, J. Collier, W. A. M. Davies, B. Gurry, R. Hillier, R. Merry, C. Ruoss and D. Shand.

R. M. Drake.

RIFLE CLUB

This club has had the most successful small bore shooting season for many years. Eight teams have competed in six leagues, winning five of them, including the Inter-Hospital Lloyd Cup. The total number of matches shot was 73, including two shoulder to shoulder.

Lloyd Cup, 1st team.

Position 1st ; 8 matches won ; 1 lost.

Team : J. D. Hobday (*Capt.*), M. T. Barton (*Sec.*), G. R. Hobday, R. P. Ellis and A. M. Ward. F. A. Strang also shot.

Lloyd Cup, 2nd team

Position 6th ; 3 matches won ; 5 lost.

Team, led and organised by A. M. Holloway : A. M. Holloway, P. N. Riddle, A. J. B. Missen, and D. B. M. Howells. Also shot : G. W. Gabriel, F. A. Strang, P. Bennet, Z. Gardner, A. V. Watkins and A. J. Austin.

Tyro " X "

Position 1st ; 7 matches won ; 1 lost.

Team : A. M. Ward, M. T. Barton, A. M. Holloway, A. J. B. Missen and P. N. Riddle. Also shot : G. W. Gabriel, K. E. Grey, and R. G. Miller.

Tyro " Y "

Position 5th ; 3 matches won ; 5 lost.

Led and organised by P. Bennet, K. Wise and G. Richards.

Those who shot were : P. Bennet, K. Wise, G. Richards, A. J. Austin, C. J. Griffiths, R. W. Gabriel, Z. Gardner, J. Snow, K. Grey and J. Cannon.

Pistol

University of London, Div. I

Position 4th.

University of London, Div. II

Position 1st.

Those who shot were : G. R. Hobday, R. P. Ellis, J. D. Hobday, D. Metten, M. T. Barton, J. R. Strong and D. H. Dick.

Standing and Kneeling, organised by A. M. Ward
University of London, Div. II
Position 1st ; 7 matches won ; 1 lost.
Team : G. R. Hobday, A. M. Ward, R. P. Ellis and P. N. Riddle.
N.S.R.A., Div. 10
Position 1st ; 9 matches won, nil lost.
Team : A. M. Ward, J. D. Hobday and R. P. Ellis.

During the season the following shot for the United Hospitals' Small Bore team : A. M. Ward, R. P. Ellis, G. R. Hobday and M. T. Barton.

The Lady Waring Cup for the best average throughout the season is awarded to A. M. Ward, average 96.62. M. T. Barton is runner-up.

J. D. Hobday, *Capt.*

ATHLETICS

The opening match of the season was a three-cornered one between Barts, King's College Hospital and Wye College, at Denmark Hill, on Tuesday, April 28th. The final result was a convincing win by Barts by 88 points to King's 66 points and Wye's 59 points.

This result for the first match was extremely encouraging, and there were several new faces to be seen amongst the usual stalwarts who turn out regularly for the club. A very welcome sign was the ability of the club to produce four sprinters for the 4×110 yds. relay, who, once over the difficulty of passing the baton fron one to another, should during the season gain further victories.

Out of the eleven events, Bart's had first place in six and, in fact, had a man in the first three in every event. The full results were :—

100 *Yards.* 1st, G. Halls ; 3rd, C. Richards.
220 *Yards.* 2nd, G. Halls ; 3rd, N. Burbridge.
440 *Yards.* 2nd, C. Bridger ; 3rd, E. R. Hillier.
880 *Yards.* 3rd, P. Littlewood.
One Mile. 1st, P. Littlewood.
Shot. 1st, K. Nage ; 2nd, J. E. Stevens.
Discus. 1st, K. Nage.
Javelin. 1st, M. Orr ; 3rd, C. Richards.
Long Jump. 3rd, B. Marsh.
High Jump. 3rd, B. Marsh.
Relay. 1st (B. Marsh, N. Burbridge, C. Richards and G. Halls).

transposed band of orbicularis muscle.

The skilled radiotherapist may justifiably plead that his successes, and there are many, are comparable to surgical successes and the failures which may occur in units where there is defective judgment, skill and experience are comparable to the unsatisfactory results produced by a surgeon unskilled in reconstructive work. However, serious irradiation complications are worse than surgical failures and considerably more difficult to remedy.

So a pleas is made for the surgical treatment of malignant neoplasms of the eyelids. The healing is quicker and cleaner and the structural and functional results are, I think, better than after irradiation.

Moreover, my impression is that the incidence of recurrence of the malignant neoplasm is appreciably less after adequate surgery than after irradiation; and there are no serious ocular complications. I thank Mr. Norman Harrison for much valuable help with the excellent photographs he has taken of the patients and my drawings. Also I am grateful to the Medical Illustration Department, Institute of Ophthalmology for the production of some of the illustrations of patients operated on at Moorfields Eye Hospital.

ST. BARTHOLOMEW'S HOSPITAL JOURNAL

Vol. LXIII No. 7 JULY, 1959

EDITORIAL

" Euthanasia applied to hopeless children would relieve a serious medical problem."
—SIR RONALD FISHER[1]

The value of a Life has been questioned by men of all civilisations and it is interesting that even over the millenia they do not reach the same conclusion. Men range in their views from a regard of the absolute sanctity of all forms of life (the Buddhists for example) to the races who practice human sacrifice, whether as an appeasement to a god or to accompany a dead king in his future life. Our own civilisation has been based on Christianity which emphasises the sanctity of human Life, but not that of animals; and broadly speaking this is the attitude of modern Europeans, whether they are Christians or not, since they are all products of that civilisation.

To dispose of " hopeless children " in the way suggested by Sir Ronald Fisher is to shirk the issue at stake instead of setting out to solve it—the only way in which anything can be achieved. It is an entirely negative approach which is not characteristic of the medical profession and should not be.

Worse, if once such methods came into current use there could be no foreseeable limit to the extent of their misuse. In the past when strange and " incurable " diseases have presented themselves they have not been faced in this defeatist manner. Why should this happen now? We may have surrounded ourselves with more destructive methods than ever before, but our constructive methods have increased accordingly and more. With the possibility of radiation hazards threatening future generations with an increase in the number of " hopeless children," we cannot afford to be so complacent about the taking of human lives for convenience. Fortunately the Hippocratic tradition to respect human life has not been lost. As recently as 1949 with World Medical Association approved in the Declaration of Geneva the statement that: " I will maintain the utmost respect for human life from the moment of conception . . . "

Another comment which must be made is that there seems to be considerable discrepancy between the very rigorous control of new drugs and new techniques, lest there be even a minimal fatality while at the other end of the scale lives are toyed with as though they were of utilitarian value only.

Even as materialism grows, even as man becomes more satisfied with his own achievements and feels ever more secure within his world of concrete and steel, most men still

1 Emeritus Professor of Genetics, University of Cambridge; at a Press Interview during his lecture tour of Australia. The Times, 10th April, 1959.

shrink from the idea of the taking of human life although it may appear to be for the common good. Now more than ever before man's rights (not least his life) are safeguarded: our practice of Medicine and our laws have ensured this and given mankind a greater confidence than perhaps it has ever enjoyed before. It would be shattering if this confidence were removed, if the apparent problems of over-population, of old age and even disease were to be overcome by such drastic means. And yet if such means are not used and if the objection is not on religious grounds it must be sentimental and traditional and nowadays sentiment and tradition carry little weight. The means are at our disposal and we must be able to assess their value according to the value we place on a human life. If we merely regard its usefulness either to itself or the community then our way is clear and we should have no further hesitation as to the means. It is a logical conclusion and yet one which few people are sufficiently honest to acknowledge. However, our course is equally clear if we should have grounds for thinking in terms of permanent and unchanging values which are difficult to ignore in the light of the events of the last two thousand years and those of human experience outside our own civilisation. Yet they are increasingly ignored—for convenience?

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Printing Dispute

Going to press we observe that not only has there been a ban on overtime in the Printing Trade, but also by printing ink delivery workers. They are asking for a 10% rise in wages and a shorter working week—just another incident in the eternal wage spiral.

One cannot help suspecting that demands for shorter working hours is merely an excuse for increasing overtime work. What, after all, are men doing with ever-increasing free time? Many are probably using it to add to their fortunes in other ways. Surely it would provide a more stable and more useful existence for the men and a greater efficiency for the industry if they were to stay at their work for a little longer? One hopes, after all, that some men are *interested* in the work they have chosen for themselves.

Post Script. Meanwhile the strike has come to an end, and we would like to take this opportunity of thanking the printers, Messrs. Groves, Brodie & Co., for their magnificent co-operation throughout, and particularly for enabling us to produce the June issue at the height of the strike.

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Fifty Years Ago

The Editor complained of " the deplorable epidemic of slackness which is at present attacking so many members of the students union."

His distress is apparent when he comments that " We have not observed any marked increase in devotion to medical studies, which might in some degree explain this lamentable state of affairs." [This is happily in marked contrast to the Editor's comments of February of this year: "The vigour of the student body is in many ways reflected by the number and the vigour of the societies which it supports."]

The main article of the month was one concluding the series on the "Preparation and Use of Bacterial Vaccines", by T. J. Horder and W. Girling Ball. It is interesting to notice some of the conditions for which active therapeutic immunisation was considered beneficial—gonorrhoeal arthritis and erysipelas, tuberculosis and actinomycosis, and even pustulent acne and chronic cystitis.

Although a temporary malaise usually followed the administration of the vaccine, this was quickly superseded by a " state of general invigoration " which " is certainly not the result of suggestion." The suggestion is that results were promising in spite of the fact that therapeutic vaccination was (like so many new ideas) grossly misused, for example by inoculation with colon bacilli against chronic urticaria. The authors concluded with some carefully considered remarks, the wisdom of which we realise now: " Vaccine therapy is an invaluable adjunct in the medical and surgical treatment of bacterial infections, but it is a bad substitute for either. " The Physician of the future will be an immunisator." Maybe, but let not the immunisator cease to be a Physician."

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View Day, 1959

View Day was as usual held on the second Wednesday in May, which this year fell on the 13th. This did not bring bad luck, however, for it was the sunniest and warmest day of an exceptional heatwave, which gave the traditional gathering in the square a truly garden party air, though it took its toll in tired feet later in the day.

The ritual took its accustomed course, with the long wait before the signal that tea was served, while everyone talked to the people they talked to everyday anyway, only this time they were wearing their best suits, or Moss Bros. best suits. There were some very fine carnations to be seen, the ladies countering with some super-Ascot hats. There was also a new feature this year in the form of the Bart's Film Unit, who shot some pretty tableaux; notably Mr. Beattie, Mr. Fraser and Mr. Howkins enjoying a joke in one of the shelters.

When the wards were thrown open to the commonalty, the sisters and their staffs were found to have provided as magnificent teas, in as pleasantly decorated wards as always, and the crowds who enjoyed them, and seeing old friends again, were only exceeded by the crowds rushing hither and thither along the corridors, up and down the stairs, and to and fro the different wards and various exhibitions.

Some of these exhibitions were as good as ever, particularly the exhibition of instruments, and the photographic exhibition in the library. The photographs were of uniformly excellent technique, and several first-class landscapes, and " character " studies, either of people or animals, were shown. Brian Collier was the outstanding exhibitor in this group. Of the more unusual, and therefore more arresting photographs were two portraits, one of Mr. Gwyn Evans reclining against a lamp-post holding a bottle of milk in one hand, by Mr. Brian Duff, and another surrealistic one of a group of Bart's temporary postmen taken on the night shift by Dr. Barry Woolmore.

Also in the library an extremely interesting exhibition of old anatomical illustrations was to be seen, and one was amazed to see the collection of books which appeared from the hidden recesses of our library—and we are assured that there are many others. One could not fail to be impressed by Scarpa's pictures of the head and neck and the illustrations by the not so very distant Quain. One may well wonder why the splendour of such art has so steadily disappeared from our textbooks.

The efforts of the Natural History Society to exhibit in the library were feeble indeed. Apart from some rather interesting books on Medicinal Plants, their exhibits were scanty and ill-displayed.

In the Great Hall, a small and most illuminating exhibition was to be seen illustrating some aspects of Bart's long and fascinating history. Fragments found in the present excavation of the tunnel were to be seen, and the story of the site on which the hospital stands illustrated with old maps and prints. In view of the great interest taken in these exhibits, Miss M. V. Stokes has kindly agreed to include a review of this subject in this Journal.

It may be of some interest to say something about the history of View Day. The earliest references are found after the refoundation, to views of properties individually or in groups. An account of View Day, dated 1586, describes how the Governors were summoned to a service at 7 a.m. Now, however, View Day starts at 2.30 p.m.—without a service!

The duty of those governors, the four almoners, who looked after the poor in the Hospital, was established soon after the Refoundation, and they were supposed to go round at least once a week. The first reference to viewnig the poor was in 1610. Now, the procession which visits all the wards is led by the head porter carrying his staff of office. He is followed by the Clerk, Matron, Steward, Treasurer and Governors. In each ward the Treasurer is asked, " Are you satisfied with conduct of this ward?" The Matron is asked, " Are you satisfied with the nursing of this ward?" And he asks the patients: "Does any patient wish to speak to the Governors?"

The patients seemed this year to have been most disappointed that they did not get more than a glimpse of the procession.

The ceremony used to end with a View

Day dinner in the Great Hall. All those interested in the hospital work, the Medical and Surgical Staff, teachers and prizemen were invited. This has been discontinued since 1900.

View Day Ball

The View Day Ball this year was held on Friday 15th March at the Royal Festival Hall. In view of the concert being held there, the Ball did not commence until 11 o'clock, but we were immediately stimulated by Mr. Bill Saville and his orchestra, who never noticeably flagged until after the final medley at 5 o'clock the next day.

The dance floor itself was not too crowded and tables (at which we could relax) were placed around it at a higher level. One noticeable fashion change from previous years was the preponderance of short dresses for the ladies which introduced a modern note in accord with the twentieth century's surroundings. The mere male had to be content with his customary dinner jacket though some tails were seen.

About midnight the restaurant was opened as a buffet which we were able to enjoy whilst looking across the Thames to the floodlit buildings on the north bank; a little later we were entertained with an amusing interlude by the Bert twins. The senior members of the Hospital and Medical School were represented by only one reader enjoying the company of his past and present students. The junior staff as well as clinical and pre-clinical students were well represented. We were able to enjoy a very fine selection of wines though it was regrettable that the extended licence only lasted until 3 o'clock. At this time we were faced with the choice of joining in an eightsome reel or finishing the bottle which caused a rather sudden rise in blood alcohol level.

As the river was being illuminated by the cold blue light of dawn we were able to relax for a little while over bacon and eggs and then back for the final fling on the dance floor terminating in a vigorous post-horn gallop.

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The Calendar

We apologise for the absence of a Calendar this month, but deemed it wiser to have none than one which told of past events.

Abernethian Society

The Society was privileged to hear Sir Vivian Fuchs (for the second time in recent years) on Tuesday, 5th May. For 1½ hours he fascinated a very full house with an account of his epic Transantarctic journey. One was impressed by his delivery which was without attempt to dramatise the undertaking but still gave one the most vivid impression of working conditions at −67° F.

His slides were magnificent, and by the time of the meeting with the Americans at the South Pole, one understood the difficulty that it was "our night, their day." It was also interesting to notice his observations on the usefulness of dogs in such an expedition, falling as he does into a category exactly between Amunsden (who used them for everything) and Scott (who would not).

The audience included, as he observed, a fellow explorer in the person of our own Dr. Marsh, who was one of Hilary's team working towards the pole from the Scott base.

We note with interest that 50 years ago the Journal welcomed Mr. Eric Marshall on his return from Shackleton's 1909 Antarctic expedition. Moreover, at the same time Captain Rawling (whose brother, L. B. Rawling, wrote the well-known "Landmarks and Surface Markings of the Human Body") was at Bart's lecturing on his exploration of Tibet (where among other things he traced the Brahmaputra river to its source). It is good to observe this spirit of adventure still very much alive.

On Wednesday, 14th May, Dr. E. B. Strauss made a very welcome return to the hospital when he addressed the Abernethian Society on "The Anatomy of Treachery". Warmly greeted by the largest audience of the season he dissected treachery first through history and then at the present time. He spoke of the changing concept of treachery from the days when it meant only lack of loyalty to the king and those near him, to the present day when it may mean betrayal of some abstract ideology.

Dr. Strauss also spoke of the relativity of treachery, depending on which side you happened to be on. For instance after the Second World War, Facist Italians fought Italians who supported the Allies, both groups considering their opponents to be traitors. He ended the talk by declaring, at the risk of sounding pompous and old-fashioned, he said, that the possession of a sound set of moral beliefs was the best way to avoid becoming a traitor.

The last meeting of the Abernethian Society for the academic year was given by Dr. B. Anson, an eminent anatomist from Chicago, who honoured us with his presence during his brief stay in this country. His subject was "Mediaeval Medicine: pre-Christian sources and XVIIIth century survivals", and with a magnificent series of slides he gave us a fascinating picture of some of the ideas and techniques of our predecessors. We were whisked across the centuries from the ideas of Galen, and the Aristotelian elements (held for many centuries) to the new teaching of Harvey and Paré. He treated the early Christian era in a detail which was most interesting, but was very sceptical about its association with medicine. He wondered if perhaps the loss of our more fanciful ideas of Christianity, and the development of automation was one of the reasons why our mental homes were filling ever faster.

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The Film Society

The Valley of Peace

On May 19th The Barts Film Society showed considerable enterprise in giving us one of the first screenings of the Yugoslav film 'The Valley of Peace' in this country.

The film tells the story of two orphan children wandering through war-torn Yugoslavia in search of a hypothetical valley of peace. On the way they are befriended by an American airman who has been shot down and is escaping from German patrols into the mountains. Eventually, the American (a negro) is killed and the children wander on, still looking for their valley.

The theme invites comparison with famous 'Jeux Interdits,' but evokes a more immediate and emotional response, and is without the intellectual overtones of Clements film. It is nevertheless an impassioned plea for peace, occasionally sentimental but deeply felt. There is a certain element of contrived faux-naivete in the way in which the youngest of the two children trots out her bewilderment at the apparantly pointless fighting around her; but the fine acting and obvious sympathies of the director for his subject, transcend the occasional shortcomings.

The 'Valley of Peace' was shown at Cannes a few years ago and was much praised, but has so far been ignored by commercial exhibitors in this country. It deserves better treatment.

We also saw the 'View Day Newsreel' which consisted of some amusing candid camera shots of consultants in tails; and a well made colour film on the 1958 24-hour motor race at Le Mans.

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Medical Services Exhibition

The Second International Hospital Equipment and Medical Services Exhibition held at Olympia in May was of considerable interest to the layman and hospital worker alike. It was of a very manageable size, a virtue rare among modern exhibitions. But there was, unfortunately, a large amount of repetition: endless rows of surgical instruments and clothes, operating tables and lights, sterilising and laundering apparatus, and hospital furniture, made by different manufacturers, but all looking more or less alike, and leaving one with a slight feeling of mental indigestion.

Amongst the instruments, the most interesting were the very old, such as a surgeon's case dating from the Battle of Waterloo; and the very new, many of which demonstrated ingenious simplicity: for example, a bloodless rectal sigmoid mucosal biopsy instrument, which is painlessly operated without anaesthesia: the instrument sucks in a small piece of mucosa of constant size, which is sliced off by an internal blade. Equally ingenious were the self-sealing intravenous needle, an extradural space indicator for lumbar punctures, and others of similar nature.

The latest heart-lung machine was an impressive, if incomprehensible, complex of tubes and pumps. EEG apparatus is a common sight to many, but less familiar is the cortical stimulator, in which recording is made direct from the cortex. To interest the physicist there was a 2,000,000 volt generator

used in radiotherapy, and other ultra-modern X-ray devices.

Aids to nursing included a resistance thermometer apparatus, which, from a distant operator, can give the axillary or rectal temperature of each of up to ten patients, at the touch of a button. For the comfort of the patient, there was interior decorating and design and high class catering —but I think that we have a long way to go before every bed is supplied with one of those beautiful electric blankets.

An exhibition of the evolution of the ambulance proved very amusing. The ambulance was almost 100 years old when in 1882, John Furley, ambulance designer, suggested that each hospital should have ready "a carriage filled with stretchers and surgical or medical appliances" together with "a horse or horses to draw the vehicle". An early ambulance was on show for inspection (and possibly comparison?).

One could not leave Olympia without paying homage to Sir Alexander Fleming. A small exhibition of his life and work, tucked away on the second floor was so typical of the man it portrayed, giving in brief and simple terms the story which revolutionised medical practice. Here indeed, we learn that humility is the essence of greatness.

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ANNOUNCEMENTS

University of Cambridge

M.Chir. Degree, February, 1959

Philip, P. P.

Royal College of Physicians

F.R.C.P.—Dr. H. W. Balime.
M.R.C.P.—Dr. Ida Macalpine.
Dr. H. J. Wyatt.

Royal College of Obstetricians and Gynaecologists

F.R.C.O.G.—Mr. C. Rutherford Morrison.
Mr. L. M. Edwards.
Mr. J. S. MacVine.
M.R.C.O.G.—Dr. M. A. Pugh.
Dr. E. Aldous-Ball.

We offer our congratulations to them all.

Engagements

MILLWARD—WIGHT.—The engagement is announced between John Millward and Wanda Wight.

NEELY—HOWARD-JONES.—The engagement is announced between Dr. Julian Neely and Sarah Ann Howard-Jones.

PHILIP—VAUX.—The engagement is announced between Philip Paton Philip, M.Chir., F.R.C.S., and Julia Vaux.

SIME—PUNCHER.—The engagement is announced between Dr. Michael Sime and Carole Puncher.

TRAPNELL—GRAY.—The engagement is announced between Dr. David Hallam Trapnell and Mary Elizabeth Gray.

Marriage

HASLAM—JEFFERIES.—On May 2, at the Priory Church of St. Bartholomew-the Great, Dr. Michael Haslam to Shirley Jeffries.

Births

BAPTY.—On May 12, to Barbara, wife of Dr. Allan Bapty, a son (Patrick Charles).

DIXON.—On May 3, to Wendy, wife of Dr. John Dixon, a sister for Clive, Ben and Piers.

GRANDAGE.—On May 30, to Sybil, wife of Dr. Christopher Grandage, a daughter.

JORDAN.—On May 12, to Jessie, wife of Dr. Peter Jordan, of Mwanga, Tanganyika, a son (Alastair John) brother for Mary and Catherine.

KELSALL.—On May 2, to Margaret, wife of Dr. A. R. Kelsall, a daughter.

LUSCOMBE.—On May 2, to Ann, wife of Dr. Angus H. Luscombe, a daughter (Hilary Caroline).

NICHOLSON.—On May 6, to Joan and Dr. R. D. Nicholson, a son (David Richard).

THORNE.—On May 26, to Pamela, wife of Dr. Napier Thorne, twins, a brother and a sister for Susan and Jane.

Deaths

BARBER.—On April 24, Dr. Percival Ellison Barber, aged 95.

CONTE-MENDOZA.—On May 21, Horacio Conte-Mendoza, M.R.C.S., L.R.C.P., M.R.C.O.G., F.A.C.S., aged 48. Qualified 1941.

Changes of Address

Dr. J. C. J. Stoke,
5, 12th Avenue,
Makelreign,
Nr. Salisbury.
S. Rhodesia.

Dr. W. Norman Taylor,
Medical Officer of Health,
Highworth R.D.C. Offices,
Bath Road,
Swindon.
Formerly: World Health Organisation, Nigeria.

★ ★ ★

Examination Successes

UNIVERSITY OF LONDON

Final M.B., B.S. Examination, April, 1959
Pass

Birt, A. M.
Davies, D. G.
Johnson, T. O.
Patterson, M. J.
Wills, G. T.
Brown, E. M.
Hayle, T. H.
Lewis, J. H.
Sime, M. O.
Woolmore, M. J. F.
Castleden, L. S.
Hill, B. D. G.
Owens, J.
Tyrrell, M. J.
Wright, D. S.

Supplementary Pass List

Part I
Berry, W. H. C.
Chambers, R. J.
Gould, A. M.
Hudson, M. J. K.
Marshall, R. D.
Roberts, C. P.
Thomson, R. G. N.
Winch, R. D.
Bonner-Morgan, R. P.
Dobson, J. L. C.
Gould, W. A.
John, R. W.
O'Hanlon, N. M. P.
Robinson, J. S.
Tooby, D. J.
Burbidge, B.
Fox, G. C.
Harris, D. M.
McGrath, M. B. J.
Plant, J. D. C.
Roden, A. T.
Townsend, J.
Part II
Bonner-Morgan, R. P.
Stubbings, R.
Warrander, A.
Brookes, B. M.
Sugden, K. J.
Chambers, R. J.
Thompson, A. J.
Part III
Bonner-Morgan, R. P.
Dymond, G. S.
Sugden, K. J.
Brookes, B. M.
Gould, A. M.
Thompson, A. J.
Chambers, R. J.
Stubbings, R.
Part IV
Dobson, J. L. C.
Warrander, A.

Journal Staff

J. D. Scobie has completed his term of office as Editor. We owe him our sincere thanks for the hard work he has put into the Journal, and wish him every success in the career which lies before him.

He is to be succeeded by P. J. Watkins.

OBITUARY

After qualification F. R. Eddison elected to undergo a lengthy residential apprenticeship at Addenbrookes', Cambridge, and at the Royal Free Hospital where he held the post of Senior R.M.O. for some years.

Once he had decided to settle in General Practice he stayed put for over half a century. Characteristically he chose an ancient unspoilt Market Town in a N. Yorkshire Dale, for he admired the outspoken candour of the farming community in that countryside.

The generosity of his nature was made evident by the fact that, although he was Senior Partner in a Medical Firm for very many years, he insisted on sharing both the harder work and the profits on an equal basis with his Juniors.

His delight in good horses made him continue to drive a fine pair long after it would have saved expense and time to have changed to motoring. I fancy that he was never bored by long country drives, as long as he could watch the action of his favourites.

Friendly chaff was the method by which he established human contacts, but everyone realised that misfortune aroused immediately a practical form of sympathy. I did not know many of his patients, but of those I did, one and all, took it for granted that he would do his uttermost in any case of difficulty. His manner showed equal sympathy, whatever the financial or social status, and this, I take it, is one great secret of real success in a farming centre.

Dr. Pickles who made such a name for himself for his work on the spread of Epidemic Disease, served his apprenticeship under Dr. Eddison in the Bedale Practice.

Eddison suffered a prolonged crippling last illness, but, I am told, he was invariably cheerful and sparing of trouble to those who attended to his needs.

A.E.N.

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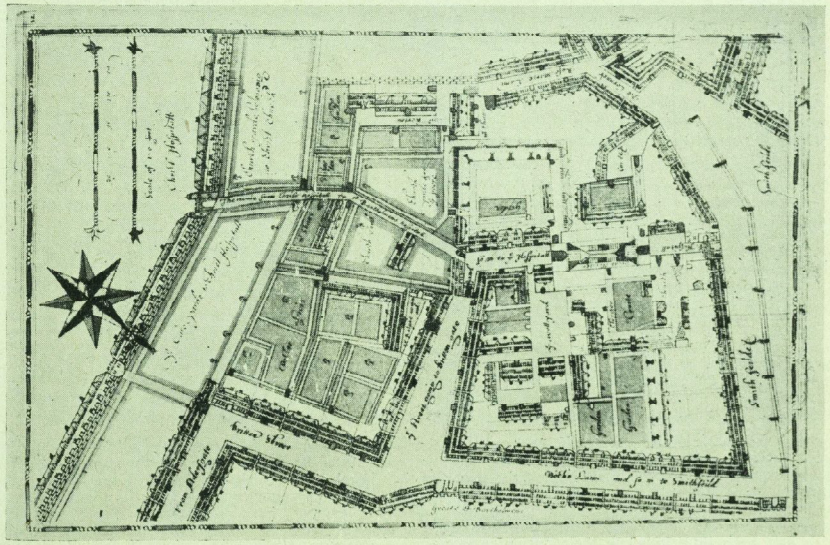
The Hospital Precincts

by MISS M. V. STOKES

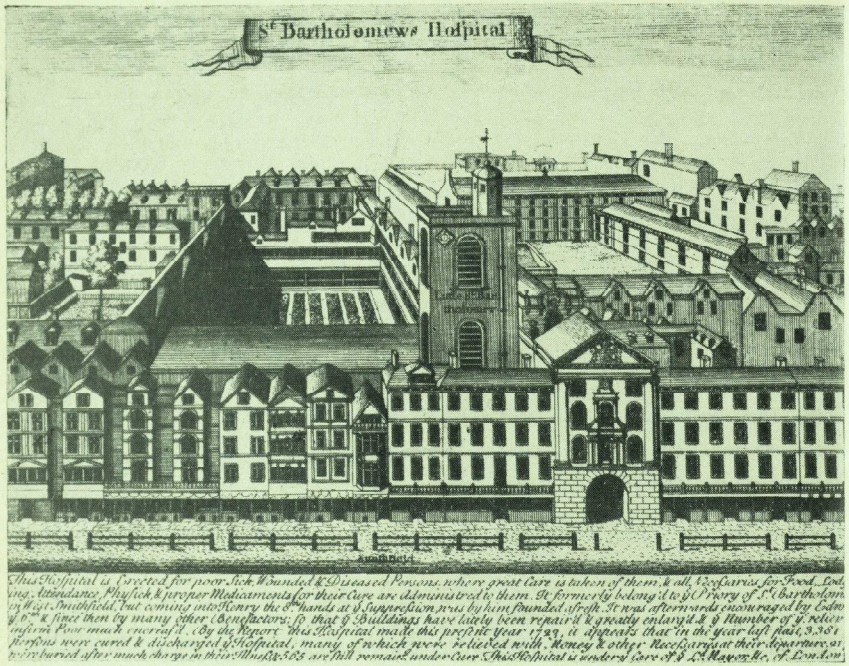
So many people were interested in the theme of this year's View Day Exhibition of Archives that it has been decided to publish in the Journal an outline of the history of the Hospital's site. This can only be a brief description, partly because of space, partly because many problems have still to be unravelled. For the mediaevel period information can be drawn from the "Liber Fundacionis," the XV century Cartulary, and from references in the hospital's deeds; we can also rely on the evidence of the 1617 Plan. After the Refoundation there is more documentary evidence, and from the mid XVIII century there is a good series of plans of the whole precinct as well as of individual houses. None the less a great deal of research remains to be done and so this is but a sketchy outline.

The place named by St. Bartholomew in Rahere's vision lay outside the City Wall, an open space belonging to the King. Much of it was "foul and very like a marsh" but some parts were higher and it was on this firmer ground that Rahere began to build his twin foundations, Hospital and Priory, separated by the lane called Duck Lane or Duke Street and now part of Little Britain. We know little of the first hospital buildings but from casual references in the "Liber Fundacionis" and by comparison with other mediaeval hospitals it can be assumed that the main building would be a hall, perhaps aisled, where the sick would lie and with an altar at one end. There would be housing for the Master, brethren and sisters. As early as 1147 there is a reference to the gate towards the horse market and to a chapel in the midst of the hospital. As the years passed the hospital buildings became larger and more substantial. The evidence of the 1617 Plan is invaluable for there have been no major changes between 1546 and 1617. It shows two main gateways, the Smithfield one, and the Little Britain one, called Tanhouse in 1414. South of the Smithfield Gate lay the largest of the mediaeval chapels, probably that dedicated to the Holy Cross and which became the parish church in 1546. Then came the Great Hall and the Cloisters by it. There were at least two other chapels; that of St. Nicholas was by the cemetery; St. Katherine's may have been a side chapel within the main one; the position of the third, St. Andrew's, is not known. There were more cloisters or courts. Unfortunately it is not possible to say where the various community buildings lay as the Schedule of 1546 lists but does not describe the siting of the parlours, the butteries, kitchens and the rooms for men and women. The hospital buildings did not cover the whole area and we know from the very earliest days the Master and Brethren leased out their land to private individuals. Some of these were people of consequence. Brother John Cok the Renter, writing in his old age, about 1456, gives in the Cartulary a summary of the houses lying amongst and around the hospital buildings. Two tenants were servants of Henry VI, his nurse, Dame Joan Astley and his Clerk of Works, William Cleves. William Markby, whose memorial brass of 1439 is still in the Church, was another tenant living within the Close. There was also after 1445 a grammar school, founded by John de Stafford, who left property to the hospital.

According to the Roll or Schedule of 1546 there were about 40 tenements leased out with 10 gardens, stables and one smithy. The rents varied from 10s. to £4 p.a. One of the tenants, Robert Chydley, had had his rent reduced in 1535 because of his legal services to the hospital and after the Refoundation he continued to act as counsel for many years. After the Refoundation there were many changes; the hospital had to be enlarged to take the hundred patients specified in the Indenture of 1546 and the new Court of Governors embarked upon a policy of increasing the revenue from their property, and rebuilding where necessary. However, the main features of the site remained unaltered. The boundaries of the new parish were more or less those of the hospital precincts and the parish, inheriting many of the privileges of the Mediaeval Hospital, became a City Liberty. Thus the parishioners, under the supervision of their landlord, the Court of Governors, were responsible for lighting, scavenging, watch and ward, and collecting taxes. The Governors did not neglect their responsibilities and we find them licencing alehouse keepers and tobacco sellers as the entry of 1618 showed, and earlier, in 1588, they drew up a list of the householders and their servants with the arms they were to provide to meet the danger of the Armada. Among the people in this list were Dr. Timothy Bright, physician to the hospital, though better known as the inventor of one of the earliest shorthand systems, and Dr. Syminges, a President of the College of Physicians. Other well known inhabitants include Dr. Caius, the parents of Inigo Jones and Sir Thomas Bodley, the founder of the Bodleian Library. The earliest plan still existing shows Bodley's house near the Little Britain Gate, a fine mansion with a large courtyard and a long gallery. There is a great deal of open ground near his house, laid out in gardens and the cemetery, with the graveyards of Christchurch and Christ's Hospital further to the south occupying the site of the City Ditch. Considering Bodley's wealth and position it is a little surprising to find that on several "views" the Governors reported that his house needed not only minor repairs, such as tiling, but that the "Gable ends into his garden lye open into the Wether soe that the raine beateth in and will rott the flower". On this occasion in 1606 William Allen, the hospital carpenter, and tenant for houses near Smithfield was causing trouble by stacking timber against the Sweat wards' wall and had built a shed against and through the walls so "lettinge in of the Ayre and indaungeringe of the sycke persons"—a good example of the difficulties that arose when shops and houses were interspersed among the hospital buildings. From the parish records, churchwardens' accounts and vestry minutes as well as from the Governers' minutes and rentals the history of the site



Plan of the Hospital in 1617



The origin of the print is obscure but it may well come from later editions of Stow's Survey of London, for it is similar to the other print of this period which appears in the early Stow editions. The inscription beneath the print, of some interest, is as follows:

This Hospital is Erected for poor Sick, Wounded & Diseased Persons, where great Care is taken of them, & all Necessaries for Food, Lodging, Attendance, Physick, & proper Medicaments for their Cure are Administered to them. It formerly belong'd to ye Priory of St. Bartholomew, in West Smithfield, but coming into Henry 8ths hands at ye Suppression, was by him founded afresh. It was afterwards encouraged by Edwd. ye 6th and since then by many other Benefactors; so that ye Buildings have lately been repair'd & greatly enlarg'd, & ye Number of ye reliev'd infirm Poor much increas'd. By the Report this Hospital made this present Year 1723, it appears that in the Year last past, 3,381 persons were cured & discharged ye Hospital, many of which were relieved with Money & other Necessaries at their departure, 217 were buried after much charge in their illness, & 565 are s
Care of ye Ld. Mayer, &c, of London. *till remaining under Cure. This Hospital is under ye*

The date 1723 is of particular interest, for in that year there appears in the records of the meetings of the governors of the hospital, under July 25th, the following entry: 'The governors present were of the opinion that some part of the house should be immediately rebuilt, and the whole in the process of time. A general plan is to be prepared and laid before the next meeting by a committee of the president, treasurer, and seventeen governors, including James Gibbs' (elected governor earlier in the same year).

Thus this print shows the hospital just as it was prior to the start of the rebuilding in 1730—rebuilding which was to replace most of the buildings seen beyond Little St. Bartholomew in the print, including the old Great Hall, immediately behind the tower of the church, and which was to form the basis of the hospital as we know it today. But then it was a place 'where beggars roamed with all the aplomb of physicians . . .where hawkers surged up the wide staircases carrying beer, sweetmeats, tobacco and foul nostrums, bawling down the wards, out-shouting the patients who screamed back in outrage because they had been interrupted in their current occupation of suffering'; stable-type doors even had to be fitted to keep these pedlars out.

and the lives of the tenants can be traced. Gradually in the XVII century as society moved west from the City the tenants in the Close were increasingly drawn from the middle classes, small merchants, craftsmen, shopkeepers and victuallers. More houses and new wards were built but any large scale development was halted by the effects of the Great Fire: the Precints were not burnt down in 1666 but much of the hospital's valuable property in the City lay in ashes and it was not until 1702 that the hospital's finances were steady enough for the Governors to embark on new schemes. The Henry VIII Gateway was then erected and in 1713 new wards were built. There is a print of this time showing the new gateway and behind it the old Cloisters, Church and Hall.

By 1723 the Governors felt that something had to be done. James Gibbs was elected a Governor and included on the building committee that was set up. Nothing happened until 1728 when the committee was enlarged. Gibbs worked on the plans during the winter and these received unanimous approval from the General Court on 24 July, 1729. It was decided to issue an appeal for subscriptions and to set forth the reasons for rebuilding; the preamble stated that the hospital was not large enough to receive all those who needed care, and some of the old wards were too decayed, and that the Hall, Counting House, Admission and Discharging Rooms were not only ruinous but dangerous. It went on to say "the said Hospital by being rebuilt at several times is so irregular that there is scarce any communication between the several parts . . . and by the erecting of buildings intermixed with those of the Hospital . . . the free course of air for the benefit of the poor hath been much obstructed . . . All buildings for the future shall be agreable to one uniform plan." There are several prints in existence issued for this and later subscriptions. The first wing of the Quadrangle, that with the Great Hall, was up in 1732, the last, the East Wing, was finished in 1766, though not in full use until two years later. The Governors had, however, given orders in 1766 that the houses left standing within the Quadrangle should be pulled down to form the "Square and area of the Hospital".

There still remained shops and houses around the outskirts of Gibb's four wings. Some of those facing Giltspur Street were demolished to make way for Hartshorn gate (for carriages) named after the public house that had stood there for over two hundred years. More houses were destroyed behind the West wing to provide space for the library, museum and lecture theatres for the rapidly increasing number of medical students. The Apothecary's shop and laboratory lay to the south of these. They are all clearly shown on the plan in the Charity Commissioners' Report of 1837. Between the Committee Room, now the Steward's Office, and the Smithfield Gate there had been built an office for the Clerk, standing on its own but linked with the Committee Room by a passage. This office was demolished by 1910.

The Governors continued their policy of pulling down houses to make room for the hospital buildings so urgently needed. A casualty or out-patient block with a surgery wing and wards running south from it was built in the N.E. corner of the site in 1842. It still stands and now houses the Physiotherapy Department and the Children's Wards but the old entrance onto Smithfield has been blocked up and the flight of steps removed. At this time the houses along Little Britain were taken over for residential quarters for students; the medical school buildings became more and more inadequate, and eventually the Hartshorn Gate and the shops along Giltspur Street were pulled down to make way for the present Library and Museum which were finished in 1879.

When Christ's Hospital moved out into the country the Governors, after protracted and complicated negotiations, purchased land along the south side of the site. They completed the present Out-Patients Department in 1907, and then the Pathological block in 1909, but the Nurses' Home was not ready until 1923; then only could work begin on the new surgical wards and theatres; finally Gibbs' south wing was demolished and new medical wards set up. Very few houses were left lying along Little Britain and housing hospital staff not private individuals; and they disappeared in the bombing of the last war. Expansion continues but it is now outside the original precincts of the hospital, encroaching upon the site of Rahere's other foundation, the Priory.

Vascular Symptoms in Cervical Rib Syndrome

by MISS C. TELFER

Current textbooks of general surgery have little to say about the cause of vascular symptoms in the cervical rib syndrome. The most usual approach is a long section on the mechanics of compression of structures at the thoracic inlet, and a short sentence to account for the aortic insufficiency.

There are two theories to account for the insufficiency. The first is that the rib interferes with the sympathetic supply to the arteries distal to the axillary. This causes generalised spasm of arterioles and also damage to the wall of the larger arteries. The axillary artery itself is supplied by the periarterial plexus and is not affected.

The second theory is that the rib injures the wall of the subclavian artery. This leads either to formation of mural thrombus which results in production of emboli, or post-stenotic dilatation causing turbulent blood flow and again production of emboli.

Aetiology. Todd (1911) was the first to suggest that pressure of a cervical rib or fibrous band produces paralysis of the sympathetic fibres in the lowest trunk of the brachial plexus.

Telford and Stopford (1931) agreed that the sympathetic nerves were damaged at the thoracic outlet. They produced clinical evidence of occlusion of the axillary artery at the insertion of pectoralis major. They put forward the theory that stimulation, not paralysis, of the sympathetic supply to the artery distal to the insertion of pectoralis major causes spasm of the vasa vasorum, with nutritional changes in the vessel wall, and finally thrombosis. They suggested the origin of the stimulation to be pressure by a cervical rib on the abnormally placed sympathetic bundle, and showed by post-mortem dissection that sympathetic fibres travel in the most inferior part of the brachial plexus. But if the sympathetic nerves were compressed it would be likely that the somatic nerves would be compressed also because of their close anatomical relationship in the brachial plexus, yet rarely do vascular and nervous symptoms of cervical rib occur together.

Also previous workers had shown that in a case of cervical rib, the sympathetic supply to the arm was scattered throughout all parts of the plexus. As well as this, the theory made no allowance for the fact that chronic compression of nerves produces paralysis not stimulation.

However, Lewis and Pickering (1934) suggested a new theory. Vascular symptoms associated with cervical rib were due, in their opinion, to trauma to the subclavian artery. This trauma might be the result of inflammation following a fracture of the first rib or clavicle, or chronic pressure in the case of cervical rib.

Eden, (1939), reviewed a series of cases of cervical rib with vascular symptoms. From these cases he produced more evidence against the theory of chronic sympathetic stimulation by pressure. He found that in one case the axillary artery was thrombosed above the point where its sympathetic supply was supposed to begin. In another case thrombosis occurred after the removal of the cervical rib and therefore after the removal of the pressure on the brachial plexus.

Eden suggested that these phenomena could be explained by pressure on the subclavian artery by the cervical rib. This pressure either caused dilation of the artery or fibrosis around the arterial wall, and the intimal damage so caused was followed by thrombosis.

Recently, Naylor (1959) published two cases of subclavian aneurysm associated with cervical rib. Sections of the aneurysm showed mural thrombus in each case, and he thought that the purely vascular symptoms in both cases were due to emboli originating from the thrombus.

Rob and Standeven (Sept. 1958) published ten cases of arterial occlusion associated with obstruction at the thoracic outlet. Evidence in favour of the direct vascular origin of symptoms was produced. The disappearance of the pulse was not a constant level in the different cases. In four cases the pulse ceased at the middle of the upper arm, and in

one case no pulse was felt even in the axillary artery, which could not be explained by the theory of chronic sympathetic irritation. Actual arterial damage was evident in most of the cases with blockage by local thrombus with or without embolus formation.

Discussion. The second theory for several reasons seems the better and more logical one.

Chronic compresssion of the sympathetic nerves should lead, in early stages, to spasm of the arterioles. This would probably present as attacks of coldness and numbness in the fingers aggravated by cold. This picture is seldom seen. Later, the prolonged spasm of the vasa vasorum would cause nutritional changes of the vessel wall, thrombosis and gradual obstruction of the main arteries with concomitant development of a collateral circulation. This late stage would give the picture usually seen in cases of cervical rib if there was poor collateral circulation, which is unlikely. However, before the full-blown picture has had time to develop, it is more likely that paralysis of the sympathetic nerves would occur leading to vasodilatation and recovery.

The second theory explains more aspects of the clinical picture. Chronic compression of an artery causes a narrowing of the lumen. Immediately distal to this narrowed section a dilatation develops. Blood is forced at increased pressure through the stenosed portion into a much wider part and this creates turbulent blood flow. Emboli are then formed in the dilatation and are carried down by the blood stream to block the distal arteries.

Chronic pressure on an artery can, of course, damage the arterial wall so that the artery becomes thrombosed without the formation of a dilatation. Emboli are then formed by the breaking up of this thrombus.

Embolic blockage more easily explains the sudden onset of the symptoms—an outstanding feature of most recorded cases of cervical rib. It also explains the severity of most cases as the abrupt onset allows no time for the development of an adequate collateral circulation.

One point which is not explained by the second theory, (direct compression of the artery), is the fact that in the majority of cases the pulse ceases at the junction of the axillary and brachial arteries. This more readily conforms with the first theory. A possible explanation is that the arterial trunk branches at this point causing an embolus to lodge there.

The following case is an ideal one to illustrate the second theory. Compression by a cervical rib caused, in this patient, dilatation of the artery and embolus formation, but damage to the arteries themselves had not yet occurred.

★ ★ ★

Case History

A married woman, aged 34, was referred from another hospital to the Out-patient department in June, 1958, complaining of pain and numbness in the right hand. She was right-handed and used right arm in her work—hammering with a 1 lb. hammer.

Her symptoms began four months ago with sudden onset during work, of pain in wrist, hand and forearm. The pain was alleviated by rest but recurred when work was resumed. About this time the patient also noticed pain in the arm while carrying her shopping basket, which was relieved by putting down the basket and bending the arm. She as sometimes awakened at night by attacks of pain.

Five weeks later there was sudden onset of coldness, numbness and pain in the right arm and hand. This was followed by colour changes, white, blue and red, in the hand and fingers. The coldness remained in the fingers and was made worse by working in the cold. Since this attack she became aware of a small sore area at the tip of her right index finger.

Three weeks before admission the patient noticed a pulsating swelling on the right side of her neck just above the clavicle. Also, she woke up one morning with severe pain in the right shoulder which lasted for one day.

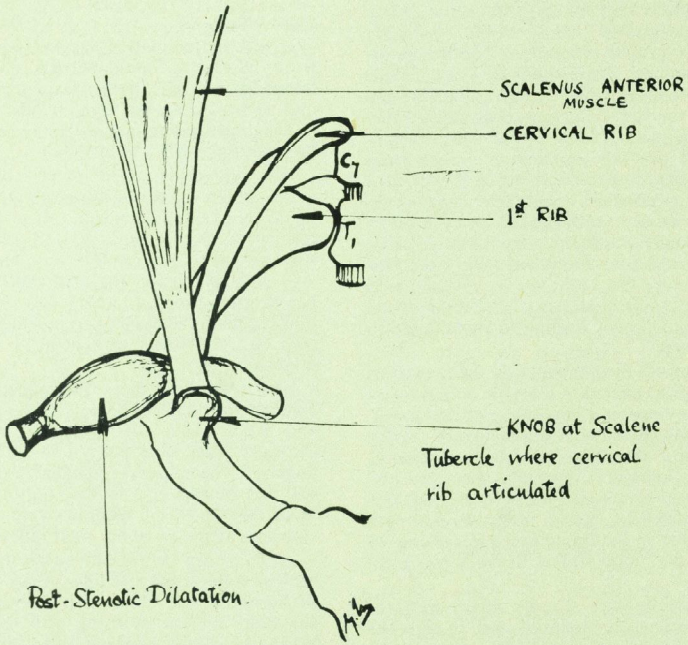
At no time was there any weakness of either arm.

On Examination there was a swelling on the right side of the neck in the supraclavicular fossa. The swelling was pulsatile and there was a blowing systolic murmur over it. Cervical ribs were palpable on both sides of the neck.

The right arm and hand were paler and colder than the left. There was uniform wasting of the flexor muscles of the forearm and of the thenar and hypothenar eminences, shown by even flattening of the contours. There was a small ulcer about 4 mm. in diameter on the tip of the right index finger. On elevation, the right hand and fingers became

pale, and turned bluish-pink on dependence. On the right side, the axillary pulse was present to the level of the origin of the brachial artery. Distal to this point no pulses at all could be felt. In the left arm all pulses were present although the radial and ulnar were weak.

The only other abnormality found on examination was diminution of grip of the right hand. X-ray of the thoracic inlet showed bilateral cervical ribs.



Operation

An incision was made just above the clavicle. Sternomastoid and omo-hyoid were divided. Scalenus anterior was found to have a tough posterior border which appeared to be nipping the subclavian artery behind it. This muscle was also divided. The cervical rib could now be seen articulating by a bony protuberance with the first rib. The subclavian artery was resting on this protuberance and distal to this it widened into a fusiform dilatation. The dilatation was carefully palpated but no thrombus could be felt and the walls seemed quite normal. The cervical rib was removed with some difficulty. Arteriograms were taken and a sympathectomy performed.

Post-operatively the hand was warm and pink. At the time of discharge, eight days after the operation, pulsation was not detected at any further point than previously.

The patient was seen again a month later. There was marked improvement of symptoms although she still had pain in the right thenar eminence when using the elevated arm. There was no sign of the ulcer on the index finger and the right hand was warmer than the left. On examination the brachial pulse was now palpable to the middle of the upper arm but could not be felt between this point and the cubital fossa. Radial and ulnar pulses were still absent.

Conclusions

The pain at work was ischaemic muscle pain analagous to intermittent claudication and agina of effort. It was made worse by dragging on the arm causing angulation of the subclavian artery over the cervical ribf The colour changes were characteristic o. main arterial blockage. The systolic murmur heard over the dilatation showed that the blood flow there was turbulent. The normal condition of the wall of the dilatation precluded any formation of mural thrombus.

The arteriograms show short blocked sections in the axillary, brachial and ulnar arteries. Since these are so localised and since there is neither any sign of thrombosis in the large arteries nor spasm in the smaller ones, it is highly likely that the blockages are due to emboli. The site of the emboli can fully explain the sudden onset of each group of symptoms.

Summary. The theories of the aetiology of vascular abnormalities are reviewed and discussed. A case of post-stenotic dilatation of the subclavian artery due to a cervical rib is described.

Acknowledgments

I would like to thank Prof. Sir J. Paterson Ross for his permission to publish this case and for his help and advice; also Miss Audrey Monk of the library for help with the references.

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Veins and Thiopentone

by A. M. HALL-SMITH

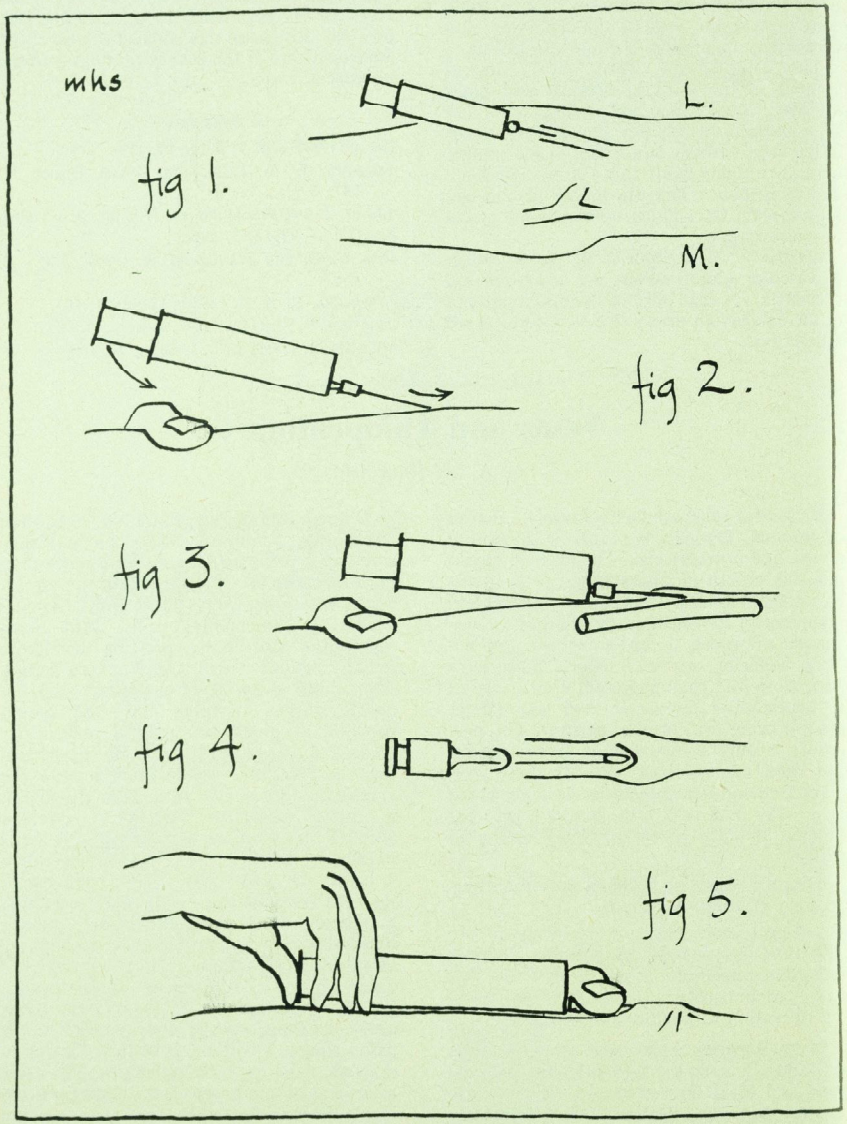
Successful venepuncture is largely a matter of practice. Thiopentone must be given into a vein, and nowhere else. The student, beginning his month of anaesthetics, is at a disadvantage. He hasn't had much practice, and (apparently) no-one has taught him a systematic approach to venepuncture. I'm not being superior; my own efforts must have been more luck than judgment until I arrived as anaesthetics houseman and was taught the following drill by the registrar. The procedure is only commonsense, and is doubtless used unconsciously by all those who make frequent venepunctures. It is presented in no way as a new idea, but as a plea for ordered thought before applying needle to patient.

The five stages of venepuncture for Thiopentone injection are these:

1. Select your vein;
2. Line up your syringe with it;
3. Skin puncture;
4. Venepuncture;
5. Fixation of needle, and injection.

In my experience the most common faults are failure to hold the syringe in line with the vein, and to attempt skin and venepuncture in one movement (often a slow deliberate shove, almost a lean—quite distressing to everybody). Skin is tough, and fine needles go through more easily, but a No. 20 is often too short, and in inexperienced hands there is a risk that it may pierce the vein more than once unless kept very still within the lumen. Tastes vary: my own favourite is an "Evipan" needle for antecubital veins. Skin being tough, and also elastic, pressing the needle steadily against it will stretch it to a certain point, until it suddenly punctures, and the needle rushes onwards into the tissues beneath. A much less painful and neater method is first to put the skin on the stretch, then to place the needle upon it with the syringe slightly angled to it. Now the needle is moved forward QUICKLY, over a SHORT distance, the syringe being lowered parallel to the skin as soon as the movement is begun. By combining forward movement with the lowering, the needle point describes a hooking or scooping movement, moving forward only a few millimetres, but making that movement quite fast. If no puncture has occurred, the movement is repeated at a slightly deeper plane. When puncture does occur, as the needle is now parallel to the tissue planes, it will do no further damage in the rest of its forward movement. With this technique in mind, approach the patient and tackle the vein by stages.

FIRST, select the vein. Do not allow the nurse to squeeze the arm too near to the



elbow. Spend time on tricks you fancy to distend the veins and clean up the skin. Three veins should be apparent in the antecubital fossa: the medial (basilic) should be eschewed because of the artery directly beneath; the central (anterior communicating) usually runs upwards and laterally, out of danger; the lateral (cephalic) is the best choice, though often the smallest. Always feel for aberrant arteries. A vein that can be seen should be chosen before one that can only be felt. If no veins can be seen, map their course carefully by touch, and be sure you know their direction before the puncture.

SECOND, line up your syringe with the vein. (Fig. 1.) If only a short length can be seen, your skin puncture should be at or just distal to the point where the vein first becomes visible.

THIRD, make your skin puncture. Warn the patient, put the skin on the stretch with the thumb of the left hand, and deftly hook the skin and puncture it in the manner already described. (Fig. 2.) Still in line with the vein, slide the needle forward under the skin a few millimetres, so that it shows white. Superficial to the blue vein beneath. You now know exactly where it is. (Fig. 3.)

FOURTH, the venepuncture. Re-angle the syringe slightly, then travel up the vein's surface with the needle point, in a series of hooking movements, each a little deeper than the last. Watch carefully. The needle point will catch up the nearest wall of the vein, causing it to pucker. (Fig. 4.) Another deft advance, with the needle parallel to the vein (NOT angled to it), will puncture the wall with a slight but perceptible " pop." A continuation of the movement forward will carry the needle a short way up the lumen of the vein, where it won't flip out again.

FIFTH, fix the syringe in position and inject. Place the left thumb (which was stretching the skin) FIRMLY over the hub of the needle, pressing it onto the surface of the arm. Aspirate to check that this manoeuvre has not dislodged the needle. Before squeezing the plunger to inject, press it downwards towards the arm beneath sufficiently to cause the needle point to rise, so making a shallow tent of vein and overlying skin along the shaft of the needle. (Fig. 5.) If the needle should now come out of the vein, it will pierce the superficial wall, and the ensuing bleb will be immediately obvious. Watch for this while injecting; if you look up at the patient's face, stop the injection.

Once familiar with the drill, one movement can be smoothed into the next, and even the smallest vein can be tackled with confidence, and this is most necessary for consistant success.

Appreciative

When I think of John Betjeman it is not as a public figure, celebrated poet, lecturer or broadcaster but rather instead as a very warm hearted and modest man who comes tip-toeing down a hospital ward every Thursday, bringing words of cheer and messages of encouragement that is difficult to express in words.

The privilege of a better insight into his remarkable personality arose during a stay of seven dreary months in hospital.

One day when I was idly contemplating the ceiling, I turned my head and a voice was saying: " Here's someone I'm sure you would like to talk to ". At that time I was embedded in pillows in a plaster bed and every sound was deadened so I was unable to catch his name. After about fifteen minutes of general talk which seemed to cover almost everything, I realised that I was with someone who had that human touch which only great men seem to possess.

After he had departed he left a glow; and when he returned every week my life in hospital was greatly enriched.

I have always wondered how to convey what emanated from him, and perhaps the whole character of this very modest man can be summed up when he said, one day: " I feel so humble when I come here and see such courage all around me ".

He, a man whose every moment is accounted for, found time to pass on something of himself to the sick.

" Only the great are humble ": so it has been said.

I salute you, John Betjeman, and leave you in your natural setting of medieval London with its historic hospitals and famous churches.

ALYS JEFFREE

LETTERS TO THE EDITOR

To the Editor of the Journal

Dear Sir,

I would be most grateful if you would bring to the notice of your readers the fact that there are constant requests received at the Dean's office from Barts' men in general practice for the temporary posts of locum tenens and trainee assistant, and for the more permanent ones of assistant.

Many newly registered men and women do apply here for the permanent ones, but very few seem to be interested in the posts of locum tenens or trainee assistant. These offer splendid experience and numerous contacts. Obviously there is great pressure these days on the newly registered to get himself or herself settled quickly but he will find difficulty in moving again when once established, and it behoves him to be sure he is joining a suitable practice.

What could be better than widening one's knowledge a little through these temporary posts before committing oneself to a permanent one?

Yours faithfully,
Adviser in General Practice.

Dunmow, Essex.
March 16th 1959.

Dear Sir,

Thank you for sending me Bart's Journal. I have read with interest the account of U.S. Voluntary Health Insurance plans in the April issue. It is a good description of our Blue Cross-Blue Shield schemes, i.e. hospital and physicians' coverage respectively.

One important point requires correction. The *monthly* premium for a family of four is *now* closer to £4-£5 rather than £2 10s. and this cost is rising rapidly. There seems to be no way to halt the premium increase. Basic hospital costs which include improved hospital care, more extensive diagnostic facilities, drugs, wider use of X-ray and laboratory tests, and wages for non-medical personnel in an expanding economy, are rising annually. Interestingly enough, physicians as a group have not rigged their fees to take advantage of patients' insurance coverage.

There is a very real danger that continued unchecked increases in insurance costs, which are in advance of real income, will force the majority of lower and middle income families out of the insurance schemes altogether.

If and when this happens, voluntary insurance will no longer provide for our medical needs and the people will demand instead a health scheme financed entirely by employers or, alternately, a State plan.

Yours sincerely,
ARNOLD H. SCHEIN,
Associate Professor.

The University of Vermont,
College of Medicine,
Burlington, Vermont.
May 7th, 1959.

BOOK REVIEWS

SURGICAL TECHNIQUE by Stephen Power, M.S., F.R.C.S., 2nd edition. **Published by William Heinemann.** Price 40/-. pp. x + 410. Illust. 198.

In his preface, the author states that the aim of this book is to bridge the gap between the standard text-books, which take the minor surgical technicalities for granted, and the vade mecums, which stop short of them. The book is primarily intended for house-surgeons who, having just qualified, probably know more about operations than operating.

In this new edition, the chapters on the Alimentary Canal, Wounds, Shock and Amputation have been rewritten or revised, and a new chapter on Instruments and Equipment has been added. The style and presentation of the book make it particularly easy to read, and the illustrations are clear and have been well-chosen.

The choice and arrangement of the subject matter has in certain sections been unfortunate. In the chapter on Ducts and Fistulae, the author discusses the choice of a catheter without reference to the specific uses for which certain types are intended. However he does give the practical details in the use of the Foley catheter in a later chapter on Drains.

In a book intended for house-surgeons, it would seem unnecessary to include six half-page photographs showing how to put on sterile gloves. This occurs in the special chapter on Orthopaedic Surgery, written by Mr. David Le Vay.

Students about to do their surgical appointments would certainly benefit by reading this book, but it is no substitute for the practical experience which is acquired in the operating theatre.

A SYNOPSIS OF SKIN DISEASES by Bethel E. Solomons, jun., M.A., M.D., F.R.C.P.I.

This new volume of the Synopsis Series aims at supplying the reader with short notes about a large range of skin conditions. The shortness of the notes and the lack of illustrations do not render the book suitable for the student who is making his first steps in the field of dermatology and therefore needs much more detailed descriptions and, if possible, plenty of coloured photographs, but—as the author himself states in the preface—it is intended for the final year student and the general practitioner. Both of them will find the Synopsis valuable, the finalist because he can refresh his memory before the exams and the practititoner, because he will find adequate answers to the problems arising from his practice. He will find the chapter on Diseases due to Chemical and Physical Agents, and within this chapter the list of external irritants and various drugs causing skin lesions, probably the most helpful.

The well-compiled index makes the rich material easily accessible to anyone interested in this Synopsis.

Sports Day

Reminiscences and Laments

by G. E. FRANCIS

Of all the events in the Bart's calendar which help to lighten the tasks of the academic year for staff and students alike, few can compete with the attractions of the Annual Sports Day at Chislehurst. Admittedly, for many, the journey to Chislehurst is somewhat long and awkward, but given fine weather, and the Athletic Club has usually been lucky in this respect in recent years, the effort of making the journey is amply repaid by an afternoon which must appeal to all tastes, combining as it does the interest of an athletics meeting with the atmosphere of a garden party in the most delightful of sylvan surroundings.

For those who are really interested in athletics there is always the excitement of watching the actual events, some of which every year result in a well-fought finish. There are few years also when there is not at least a chance of one of the existing records being equalled, or possibly broken, and among those who know the abilities of the contestants this naturally lends an additional element of interest to the events concerned. For those whose interest in athletics as such is small (particularly, perhaps, among members of the staff) there is often the encouraging experience of realising that Mr. X, that student who has nearly completed his first year at Bart's without showing any significant signs of interest in his work, or ability to excel at anything at all, can hare round the track like an express train or hurl a variety of projectiles for fantastic distances, and bids fair to put the name of Bart's on the map in some place where it has never figured before.

By the time Sports Day comes round each year, the groundsman, Mr. White, has invariably tended the ground to such good effect that it has miraculously recovered from the churned up state it acquired during the rugger season, and a very pleasant afternoon could be spent by the unathletically-minded simply sitting, or strolling around enjoying the sunshine and admiring the view, beautiful enough in itself but considerably embellished by the ladies in their bright summer attire, looking like so many colourful butterflies flitting over the green grass. For those that way inclined, a retirement to the bar is always possible, while the excellent tea in the marquee, so well prepared and so charmingly served by the ladies, adds much to the attractions of the afternoon. Then, of course, for those who can spare the time, there is always the dance in the pavilion in the evening.

Invariably, on Sports Day, one can expect to meet old friends, past and present students and members of the staff with whom one has lost contact, and the mutual exchange of notes and reminiscences is not one of the least attractive features of this pleasant social occasion.

Many will be heard recalling the years when the Stainton-Ellis twins jogged happily around the track, and wagers could be laid on which of them would win the three-mile event, in the certain knowledge that the other would undoubtedly win the one mile! Could there have been collusion here? Who too, can forget the elan with which the elder Craggs, after watching the stalwarts putting the shot, remarked: "That looks fun", and without taking off his jacket put down his pint pot and calmly proceeded to win the event! And who was the other spectator (was it Burles?) who picked up the discus after a winning throw and tossed it back to the thrower?

The sight of M. A. C. Dowling hurtling through the air and threatening to overshoot the end of the long jump pit is one which lives in many memories, and, more recently, the sheer grace of Prys Roberts breaking the high jump record. These people make it look so easy! And what of the incomparable Arthur Wint, who was so reluctant to appear an exhibitionist that it required the combined efforts of all the officers of the club, including Mr. Stallard, the existing record holder, to persuade him to break the quarter and half-mile records? Can anyone who saw it ever forget the sight of that perfect, seemingly effortless 9 ft. stride, so ably paced by A. E. Dormer, himself the holder of the one-mile record, as it ate seconds off the records? Even then, though he broke both these records convincingly, he would not take them both in the

same year, and was too great a gentleman to shatter them beyond hope of repair!

And so we come to Sports Day 1959. All the necessary ingredients were there for another perfect afternoon. The weather was fine but not too hot; the green grass, the bar, the marquee, the athletes, all were there. But the spectators! What a dearth of onlookers was there this lovely afternoon! How few to urge on the competitors! How few to enjoy the garden party atmosphere! And quite apart from the pleasures missed by so many, how disappointing for the competitors, and how doubly disappointing for the officers who had laboured so hard to make this afternoon possible, and for the ladies who had prepared the teas for more people than were there to eat them. How can anyone hope to cater properly for a garden party when so few can confidently be expected to attend?

And what of the financial aspects? It takes a large number of programmes at 6d. each and teas at 1s. 6d. to show any significant profit, and with the numbers attending this year both items may well have shown a loss. We were informed by the Dean that the financial straits of the club will not permit the winners of the various cups to receive the miniature replicas they have earned; they must be satisfied with a medal, and cannot even have their names engraved on the cups they have won, due to shortage of funds!

Surely the Athletic Club is deserving of better support than this? Surely sufficient spectators can attend this delightful function to help them out of their present plight? So come on, Bart's! See what can be done next year! Turn up in your hundreds, with your wives, sweethearts, uncles, parents, children and cousins. Bring your friends and neighbours. Bring everyone you can think of, and make it the finest attendance of the century. Never let it be said that Bart's does not deserve so much effort laid out on its behalf on Sports Day again, or such a fine sports ground.

And perhaps, who knows, Bart's might even emulate the Middlesex Hospital, whose announcer was heard calling forth the competitors for the women's hundred yards? Or can the ladies who show such fleetness of foot on the hockey field, and who so monotonously carry off the inter-hospital cup each year, and perhaps other ladies too, go one better and let us have two ladies' events next year?

Indeed, who knows?

Sports Day, 1959

The main highlight of this year's Sports Day came in the 3 miles, which was held on the Wednesday before. In this race, P. Littlewood ran a lone race, twice lapping all but one of the other six competitors to win in a new record time of 15 min. 10.3 sec. For beating this record which had stood since 1939, Littlewood was awarded the President's cup for the best performance of the Sports.

On Sports Day itself the weather was overcast which may have accounted for the very few spectators. In the field events, J. Keri-Nage broke the 1940 discus record with a throw of 116 ft. 4 in., an improvement of some 4 ft. over the previous record. On the track, there were no new records, although C. P. Roberts in a fine run just failed to break the one mile record. Roberts, who had a most successful afternoon, also won the 880 yards and the high jump. Mention must also be made of the great battle on the track, between Miss Janice Swallow and Mr. W. P. Boladz, in the sack race. Boladz won by a narrow margin, so ending Miss Swallow's run of annual successes in this highly technical event.

Physiology of Effort?

The Pre-Clinicals in the Tug-of-War proved to be too strong and too well coached for the Clinicals, and they won by two pulls to one. The winning team were then challenged by the neighboburing Middlesex Hospital (who were holding their Sports on the next ground) and after a great effort the Bart's team were beaten by two pulls to one.

The final result of the inter-year competition was a win for the Pre-Clinical 2nd year with 54 points with the 4-man team Introductory year 2nd with 39.

At the end of the Sports, Mr. D. F. E. Nash commented on the lack of support for an occasion which cost so much to put on both in time and money. Finally, Mrs. Nash presented the prizes, so bringing the proceedings to a close.

In the evening a most enjoyable dance was held in the pavilion.

120 *Yd. Hurdles*:
1. M. Noble; 2. P. Kingsley. Time 18.7 sec.

Javelin:
1. P. Drinkwater; 2. M. Orr; 3. A. P. Ross. Distance 168 ft. 11 in.

1 *Mile*:
1. C. P. Roberts; 2. P. Littlewood; 3. R. Thomson. Time 4 min. 27.4 sec.

100 *Yd.*
1. C. Richards; 2. G. J. Halls; 3. N. Burbridge. Time 10.4 sec.

Housemans 100:
1. Dr. Tabor; 2. Dr. Mitchell; 3. Dr. Pugh. Time 11.8 sec.

Long Jump:
1. G. J. Halls; 2. B. T. Marsh; 3. N. Burbridge. Distance 20 ft. 2½ in.

Shot:
1. J. Keri-Nage; 2. J. E. Stevens; 3. D. Glover.

120 *Yd. Handicap*:
1. T. Powles; 2. C. Bridger; 3. D. Glover. Time 12.6 sec.

440 *Yds.*
E. R. Hillier; 2. G. J. Halls; 3. C. Bridger. Time 53.3 sec.

High Jump:
1. C. P. Roberts; 2. B. T. Marsh; 3. Kingsley. Ht. 5 ft. 3½ in.

220 *Yds.*
1. N. Burbridge; 2. G. J. Halls; 3. E. R. Hillier.

Discus:
1. J. Keri-Nage; 2. P. Boladz; 3. P. Drinkwater. Distance 116 ft. 4 in. Record.

880 *Yds.*
1. C. P. Roberts; 2. P. Littlewood; R. Thomson. Time 2 min 4 6 sec.

Tug-of-War:
Preclinicals 2 pulls, Clinicals 1 pull.

Relay:
1. 2nd year Preclinicals.
2. 1st year Preclinicals.

Inter Year Comp.
1. 2nd year Preclinical—54
2. Introd. Clinical—39

SPORTS NEWS

VIEWPOINT

Confusion may well exist in many people's minds over the action of The Boat Club in withdrawing from this year's Bumping Races. It would therefore seem appropriate to consider the reason for such drastic action.

Rowing is a man's sport. Any who have witnessed the ungainly, indeed the pathetic sight of women attempting to put their whole weight into rowing can be left in no doubt as to the truth of that statement. It therefore follows that the male, proud of his feats of skill and endurance, is extremely hostile towards women intruding into his chosen pastime in any way, other than occasional admiration from the bank.

In case uninformed people consider these views outmoded it is as well to add that the rules of the Amateur Rowing Association as amended last year specify that women are not allowed to participate in men's rowing in any capacity.

The decision of the United Hospitals Rowing Club to allow women to cox in this year's Bumping Races was therefore anathema to the Saint Bartholomew's Hospital Boat Club and it was felt that there could be no alternative except to withdraw from the Bumping Races.

★ ★ ★

ROWING

Chiswick Regatta

The Bart's 1st VIII, being frustrated in their intentions of making a first bump earlier in the week, it was hoped to salvage some of our reputation in the Junior Senior Eights event at Chiswick.

Barts drew Vesta and Thames and were rowing from Mortlake to Chiswick on the Middlesex station. After a rather rushed start they settled down for about a minute and a half to row well but the other crews had gained half a length. Reason was then thrown to the winds and a mad rush ensued. The other crews drew further away, and half a length down at Guntin Boathouse had become two and a half lengths at the finish.

Bow; D. E. L. King; 2. H. M. B. Busfield; 3. A. J. Lines; 4. G. M. Besser; 5. T. W. Meade; 6. P. W. A. Mansell; 7. B. R. Middleton; Str. W. S. Shand; Cox A. R. Gooch.

The United Hospitals Bumping Races

For reasons given in The Viewpoint, the Boat Club withdrew the first, second, third and fourth eights from the Bumping Races. The fifth, Rugger eight however, was permitted to row as they were only concerned with the Bumping Races and in no other rowing capacity. Unfortunately the crew was denied any opportunity to show its racing ability owing to the non-appearance of Guys III on the first night, St. Bartholomews IV on the second night and the Middlesex II on the last night. No reason was given for the non-appearance of the Guys crew: Middlesex II withdrew as a result of an adverse decision concerning the previous night's racing. The Rugger boat therefore went up three places without having to row more than 15 strokes on each occasion. It must be added that a private combat with Westminster II proved St. Bartholomews V to be faster by 1½ lengths over 5 mins. rowing. The Rugger eight are therefore to be congratulated upon their endeavour and prowess and it has been decided that a suitably painted oar shall hang over the bar at Chislehurst.

Crew: Bow, J. K. Bamford, 2. J. W. Hamilton, 3. D. F. Gibson, 4. J. C. Chepner, 5. B. O. Thomas, 6. J. D. Thomson, 7. D. Gen, Str. G. Diamond, Cox, G. W. T. Renn.

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CRICKET

1st XI v. London House, at Chislehurst, on April 27th. Drawn

After seemingly in the very jaws of defeat, we practically forced a win, and came out of the match with more credit than we deserved. In the first 45 minutes we lost 8 wickets for 36 runs, on a very wet wicket. But we were saved from disaster by a very stout partnership between Harvey and Savage, who put on 79 runs. The opposition did not have a strong batting side, and never looked like making the runs, although they managed to stave off defeat. Davies and Harvey both bowled well.

Bart's 120 (Harvey 53, Savage 47).
London House 80—9 (Davies 5-35, Harvey 4-28).

1st XI v. U.C.H., at Chislehurst on May 2nd. Won by 4 wickets.

The opposition batting first, We managed to bowl well enough to restrict the rate of scoring on a good wicket, and so give our batsmen a chance to score the necessary runs. Garrod bowled very economically, only giving away 24 runs in 13 overs. Stoodley impressed on his first appearance. Abell batted well, and Walker, another newcomer, looked extremely good.

U.C.H. 134—4 declared.
Bart's 135—6 (Abell 44, Harvey 21, Walker 21).

1st XI v. Putney Eccentrics, at Chislehurst, on May 3rd. Match drawn (rain).

This match, which would have been the first real test of our bowling ability, was unfortunately ruined by rain. As the opposition batted first, we fielded for over three hours in a steady drizzle. Our bowling and fielding suffered accordingly, and they scored 217—6, one of them scoring a century. As we opened our innings the rain became heavier and the match was abandoned.

Putney Eccentrics 217—6 declared.
Bart's 8—0.

1st XI v. R.A.M.C. Crookham, at Chislehurst, on May 9th. Match drawn.

An unsatisfactory match. We batted first, scoring 168—9 before declaring. Walker and Juniper both batted well, Walker being particularly severe on the bowling. The opposition never accepted the challenge and were content to play out the rest of time.

Bart's 168—9 declared (Walker 35, Juniper 33, Pagan 24, Stoodley 20 n.o.).
R.A.M.C. Crookham 114—3.

1st XI v. Hampstead, at Hampstead, on May 10th. Lost by 8 wickets.

This is a match everyone except our treasurer thoroughly enjoyed. We batted well against a strong bowling side, and the size of the defeat was really due to one powerful member of the opposition, G. Goonesena, who a few weeks previously had taken a number of Indian tourist wickets. Of our batting, Juniper, Walker, Harvey and Stoodley all batted extremely well. Goonesena was shown very little respect, in particular by Stoodley, who scored 18 off one over. Facing a total of 172, Hampstead lost both openers for 49, but Goonesna and Winn came together, and after Goonesena was dropped off a "sitter" when 30, knocked off the runs in double quick time, the last 50 coming in 15 minutes, mainly from Goonesena who played a number of superb strokes. It was an education to watch him.

Bart's 172 (Harvey 38 n.o. Juniper 32, Stoodley 30, Walker 23).
Hampstead 176—? (Goonesena 76 n.o.).

1st XI v. Romany, at Chislehurst, on May 17th. Match drawn.

We took the field with a very weakened side and were lucky to escape with a draw. The highlight of the day was a very fine innings by our captain, Harvey, who came very close to scoring the first century for Bart's for many years. The Bart's fielding was appalling, so allowing their opponents to set us a big target. The start of our innings was disastrous, 3 wickets falling for 12 runs. But Pagan and Harvey came together, and batted very sensibly against a varied attack. They put on 101 runs, and after Pagan was out, Harvey continued to bat very well. We managed to force a draw.

Romany 221—5 declared (Harvey 4-59).
Bart's 196—7 (Harvey 97, Pagan 52).

Oxford Weekend.

1st XI v. Brasenose College, on May 22nd. Lost by 58 runs.

A disappointing result, where our batting failed to do itself credit. On a wet wicket, we did well to dismiss a strong batting side for 183. Davies and, surprisingly, Abell, bowled well, and the fielding was good. The start of our innings was startling, 34 runs being scored off the first four overs. But this proved to be a flash in the pan, as both opening batsmen were rather unfortunately run out.

The rest of the batting fared very badly, apart from Abell, who played a very forceful innings. This was a match we should have won.

Brasenose College 183 (Davies 4-26, Abell 3-37, Woodley 3-74).
Bart's 125 (Abell 46, Davies 20).

1st XI v. Balliol College, on May 23rd. Lost by 98 runs.

A disastrous defeat, perhaps partly explained by the activities of members of the team the night before. The nocturnal places of habitation varied from a potting shed to a Presbyterian church, and one of our members seemed to spend the night wandering about Oxford on a "borrowed" bicycle. Despite this, our fielding was reasonable though bowling untidy, and they were able to declare. Our perenial enemy Tomkys, with his slow leg breaks then dispatched the cream of our batting. Only Walker, who hit well, and Pagan, who batted soundly while seven wickets fell, played with any confidence. A rather dismal batting performance.

Balliol College 201—7 declared (Abell 3-39).
Bart's 103 (Pagan 30, Walker 25).

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MEN'S TENNIS

In the hospital's Cup match, the 1st VI once more met Guys in the first round. This has happened for the last four years in succession, and as Guys have won the competition for the last six years, it can in all fairness be said that we were unlucky in the draw. The result this year was a deserved win for our opponents by eight rubbers to one, though the result might have been more flattering had the first and second pair held on to winning positions, and the second pair in particular, clinched a couple of match points.

Team: T. B. Duff and D. Richards, A. J. Gordon and A. T. Seaton, J. H. Pennington and C. A. McNeill.

A bleary-eyed team staggered to a defeat by St. Thomas' Hospital following the exacting demands of the View Day Ball. The glorious weather and affability of our hosts made for a most enjoyable afternoon however, and on an equally sunny day we defeated Charing Cross and Royal Dental Hospital by eight rubbers to one.

A more light-hearted event, once more blessed by cloudless skies, was the mixed doubles American tournament held at Chislehurst on Sunday, 24th of June. By the time each couple had played every other, the sun was well over the horizon. Janice Swallow, aided by Trevor Seaton finally collected the prize.

LADIES' TENNIS

Mid-Season Report

Trials, Wednesday, April 22nd

By courtesy of the weather we managed to hold our trials at College Hall at the third attempt. It was a fine afternoon and an unexpectedly large number of people gathered. We were especially pleased at the Preclinical response and this has spurred us to arrange several second team fixtures.

United Hospitals Tournament

(1st Round)

1st VI v. Westminster Hospital 1st VI (A). April 29th—Won 6—0.

1st couple: A. M. Macdonald, S. Whitaker.
2nd couple: J. Arnold (Capt.), J. Hartley.
3rd couple: P. Kielty, V. Legeard.

This was the opening match of the season and was played at Cobham. Although everyone was still trying to find their touch this was a fairly easy match. Bart's quickly established a lead and when the score stood at 6—0 the Captains agreed that this was decisive and the remaining matches were not played.

1st VI v. Royal Holloway College 1st VI (H). May 2nd—Lost 3—6.

1st couple: A. M. Macdonald, S. Whitaker.
2nd couple: P. Kielty (Capt), J. Clarke.
3rd couple: V. Legeard, A. Varten.

This match was more even than the score suggests and much good tennis was seen. It was not until after tea that R.H.C. established a winning lead, which finally became 6—3.

2nd VI v. R.H.C. 2nd VI (A). May 2nd—Lost 4—5.

1st couple: D. Layton, P. Aldis.
2nd couple: S. Cotton (Capt.), J. Angell James.
3rd couple: C. Lloyd, J. Pitt.

Lost 4—5 but were unlucky not to win 5—4. 1st couple played well in winning all three of their matches, but the 2nd couple showed their lack of previous practice. The 3rd couple took some time to get settled but played well to win their 3rd match.

1st VI v. School of Pharmacy 1st VI (H). May 6th—Won 7—2.

1st couple: A. M. Macdonald, S. Whitaker.
2nd couple: J. Hartley, P. Kielty (Capt.).
3rd couple: D. Layton, P. Aldis.

The fine weather had just arrived and this match was played in brilliant sunshine. The team played well to establish a winning lead of 5—1 by tea-time. The final outcome was 7—2, and a well-satisfied team.

United Hospitals Tournament

(2nd Round)

1st VI v. Middlesex Hospital 1st (A). May 27th—Won 6—1.

1st couple: A. M. Macdonald, S. Whitaker.
2nd couple: J. Hartley, J. Swallow.
3rd couple: J. Arnold (Capt.), P. Kielty.

This match was played partly on our courts as the Middlesex were "at home" for two Cup matches without sufficient accommodation.

The 3rd couple were banished to a court on our side and spent the first 1¾ hours battling with their opposing numbers; eventually winning. In the meantime, four matches had been seen through by the other couples and only one lost.

So after an enormous tea 3rds took the field again and won, giving Bart's a lead 6—1.

May 29th-31st v. Cambridge Town.

1st couple: J. Arnold (Capt.), P. Kielty.
2nd couple: A. M. Macdonald, J. Clarke.
3rd couple: D. Layton, P. Aldis.

This must be the first time that fortune has smiled on the tennis tour, enabling us to play—and win—all three matches.

On May 29th one lonesome figure mounted her Lambretta, three others stepped on the accelerator of a Morris Minor and two others waited on the courtesy of British Railways in the hope of finding green fields and pastures new.

When these three variables converged on Cambridge, Newnham was the first site of combat. In spite of exams, they fielded a good team and although the tennis was not brilliant, the match was enjoyed by all, Bart's winning 7—2.

The team reassembled at Homerton the following afternoon where a hard match was played, producing the best tennis of the tour—possibly of the season—Bart's winning 8—1.

The Sunday saw combat ensuing on Girton's courts. The 1st couple had a marathon for 2¼ hours, and eventually lost 7—9, 6—4, 8—10. This was a match of scintillating rallies and many match points were survived on both sides before the outcome was final. The rest of the team played well to consolidate a 5½—3½ victory.

Needless to say these matches were interspersed with the other essentials of a successful Cambridge tour, i.e. pubs, punting and parties!

University of London Tournament

1st VI v. King's College "A" (H). May 13th—Lost 3½—8½.

1st couple: J. Hartley, S. Whitaker.
2nd couple: J. Arnold (Capt.), P. Kielty.
3rd couple: D. Layton, P. Aldis.

We went to Chislehurst expecting to meet King's 2nd VI and were rather taken aback to find that "A" meant 1st. However, we had a hard match, with some good play, and the result was not determined until the last two matches were played.

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ATHLETICS

Match v. Westminster Bank and Surrey A.C.

The annual match versus Westminster Bank and Surrey A.C. was held on Wednesday, 6th May, at Norbury.

The result was a satisfactory victory for the club, by 90 points to Westminster's 66 and Surrey A.C. 56. This was the first time for a number of years that the Hospital had won this match. However, one had the impression that the competition was not so strong as in the past years.

On the track we saw the welcome return of C. Prys Roberts who showed his superiority with clear victories in the 1 mile, 880 yards and high jump. He is especially to be congratulated on securing his place in the University team, for whom in Paris he gained a 3rd place in the 880 yards. Roberts was ably supported in the mile and 880 by Peter Littlewood who was 2nd and 3rd in the respective distances. Finally, on the track, Colin Bridger just held off the opposition to win the 440 yards.

In the field, all three throwing events were won by Bart's, with K. Nage easily winning the shot and discus, and D. Glover gaining 1st place in the javelin.

The full results were as follows:
100 *yds*: N. Burbridge, 3rd.
220 *yds*: N. Burbridge, 3rd.
440 *yds*: C. Bridges, 1st.
880 *yds*: C. P. Roberts, 1st; P. Littlewood, 3rd.
1 *mile*: C. P. Roberts, 1st; P. Littlewood, 2nd.
High Jump: C. P. Roberts, 1st; B. T. Marsh, 3rd.
Long Jump: B. T. Marsh, 3rd.
Shot: K. Nage, 1st; J. E. Stevens, 2nd.
Discus: K. Nage, 1st; J. E. Stevens, 2nd.
Javelin: D. Glover, 1st; J. E. Stevens, 2nd.

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GOLF

At the moment, the golf team looks better than it has done for some time. One of the factors being that there would appear to be a certain amount of interest and ability on the pre-clinical side, which could be the basis of a strong team for the next four years.

Our association with the South Herts. Golf Club has been terminated and now we have come to an arrangement with the Mill Hill Club to allow members of the Students Union to play on the course at the following times:
Wednesdays afternoons;
Saturdays;
Sundays;
Starting between 10.00 and 10.30 or after 11.30.

A subscription of half a guinea should be paid to J. A. Garrod.

A.G.M. The president and vice-presidents were re-elected and the following were asked to take office:
Captain: G. F. Abercrombie.
Hon. Sec: J. H. Holland.
Treasurer: J. A. Garrod.

Wed., April 8th—Spring Meeting. The competition, taking the form of an 18-hole Stableford bogey was played over the North Middlesex course. From a fairly good turnout G. F. Abercrombie and A. F. Stewart emerged the winners. It is hoped to hold at least two more open meetings this year, at which we will be very pleased to see as many golfers as possible, no matter whether they are tigers or rabbits.

Wed., May 27th v. The Staff, at Denham. Once again the staff match proved to be a very enjoyable occasion, resulting in a win to Dr. Hayward and his team by seven matches to four. However, this was not really surprising since the singles matches closely followed the usual excellent lunch in the clubhouse. This probably proved a greater

handicap than an allowance of 2 bisques given to the members of the staff! We were particularly pleased to see Dr. Graham once again and hope that he will continue to play in this match for many years to come.

As far as the golf was concerned, the couples were, on the whole, evenly matched. Individual results were as follows:

Mr. Fiddian beat T. P. Stephenson; Prof. Garrod beat J. H. Holland; Mr. Robinson beat G. F. Abercrombie; Dr. Borrice lost to J. Sugden; Dr. Spencer beat C. A. Fuze; Dr. Shooter lost to J. Waller; Dr. Graham lost to A. J. Miller; Dr. Nichol beat J. A. Garrod; Dr. Morell beat J. Hamilton; Dr. Brewer beat A. F. Stewart; Dr. Haywood lost to R. L. Cleave.

Foursomes, over a varying number of holes, were played after tea.

We would like to take this opportunity of thanking Dr. Hayward and his team for a most enjoyable day.

Wed., June 3rd v. V.H.C., at Denham. Lost 2½—3½. Team: G. F. Abercrombie (L), J. Sugden (W), R. L. Cleave (L), P. Drinkwater (½), C. A. Fuge (W), J. Sales (L).

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CHESS

The Hospital's Cup was won when we defeated the holders, Charing Cross and Royal Dental Hospitals 4—2 on May 21st. This was a match of startling fluctuations. We started well and had soon secured some useful advantages on several boards, but there followed a gloomy turn for the worst, so that the first results after two hours play were a draw and a loss, D. J. P. Gray losing to last year's London University champion, I. Marshal. There was then a change for the better, R. M. Perry offered his opponent a draw and when this was refused, he forced his way forward with a couple of past pawns, and emerged a comfortable victor. G. Gardos held the present University Champion (R. Polly) to a draw, while A. M. Gould relentlessly reduced his opponent's pieces to nothing. Everything now depended on A. McFarlane; in an almost hopeless position he needed at least a draw to win the match. This proved a most dramatic struggle, and at one time fortunes seemed to change with each move. In a hair-raising finish he at last gained the upper hand, and the cup became ours for the first time in the club's nine year history.

Result:

D. J. P. Gray	0	I. Marshal	1
G. Gardos	½	R. Polly	½
R. M. Perry	1	A. Crompton	0
A. McFarlane	1	B. Burnon	0
A. M. Gould	1	R. W. White	0
R. Harrison (Capt.)	½	A. Rodesano	½
	4		2

This year we won the France Cup (for the winners of a two-stage match between Bart's and Bromley). Mrs. France, whose late husband presented the cup 6 years ago, very kindly arranged for the first part of this match to be played at her house and her very generous hospitality made this a memorable evening for all concerned. The result of this evening was a 7—1 lead to Bart's, and the aggregate score after the return half was 9—6.

In reaching the final of the Hospital's Cup we defeated the Westminster Hospital 3½—2½ with three of the first team missing.

In the London University League I we defeated Battersea Poly 7—1 and narrowly missed beating the London School of Economics, this game ending in a draw (4—4). The other three matches resulted in losses, Queen Mary's College 3½—4½; Imperial College 2½—5½; and U.C.H. 1—7.

The newly-formed second team played three matches in League IV, winning one and losing two.

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The Sports Editor would like to ask Club Secretaries to be more punctilious about sending in their reports at the correct time, i.e. not later than the last day of each month.

ST. BARTHOLOMEW'S HOSPITAL JOURNAL

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EDITORIAL

During the pre-clinical years of our medical training we are saturated with facts and lists—details of subjects of which we are expected to acqure a very considerable knowledge in a very short time, and which must therefore be learnt in this rather unsatisfactory and dogmatic way. It is difficult to see how it could be otherwise, but one cannot help feeling that during these important and very formative years, medical students are not really taught to think for themselves—and it is given only to the few to do so without being taught. Therefore, at a moment when our teachers are reviewing the various medical curricula and methods of teaching, and the whole system is in the melting pot, it may be opportune to appeal for a place for the historical approach to medicine—an approach which could provide considerable stimulus to thought and discussion from the very beginning of medical education.

It has frequently been asked why one should "waste" time studying outmoded ideas when it could, apparently, be so much more profitably employed in studying the bulk of current ideas and planning for the future. The answer is given by Sir William Osler who reminds us that "History is simply the biography of the mind of man" [1]—not a new idea, but one most aptly phrased. The mind of man, after all, has not changed; it is his responses which have changed according to the environment in which he has lived, and the common quality of great men is that they have been able to break the fetters which bind them to one code of thought or another. Study of these men repays itself, because it teaches us how to approach the problems of the present. Before the Renaissance, men's ideas tended to be fixed: they continued to study the anatomy of Galen irrespective of whether it fitted the findings or not. It was a bold man who tried to alter the ideas of centuries before. For the discovery of the capillaries, Malpighi was attacked by two masked colleagues who still upheld the theories of Galen; Fabricius d' Acquapendente (and others) had the germ of the idea of the circulation of the blood—but it took 16 years of Harvey's life even to dare to suggest it to a very sceptical audience, and even then, in spite of his very logical and convincing work, it was not universally accepted for many years.

The nineteenth century proved more productive than ever before—dangerously, almost, for some people believed that "progress" had reached a peak which would be difficult to surpass; the twentieth century has taken advantage of the short-sightedness of its predecessors, and now perhaps more than at any time before, men open their minds to new ideas. There are more journals devoted

[1] Sir W. Osler, "The Growth of Truth"

to this end than there have ever been. But it is important to remain critical of these new ideas and to view them in their correct place as judged by what has gone before. Whether they are still in an embryonic stage, hotly debated and probably soon rejected, or whether they are well developed, must be the first consideration in determining an attitude towards them. The bacterial concept of disease, for example, was in its time hailed with an enthusiasm which boosted it out of all proportion, and countless diseases were absurdly attributed to bacterial causes. The lesson was learnt, and when the virus made its appearance, theories were more carefully considered. At the present moment we must beware that the immunological picture does not obscure the field and prevent developments in other directions. To research into any field must necessarily be preceded by the study of what has previously been done in that field. Certainly in the Middle Ages the ancients were studied, but they were viewed uncritically. The Renaissance perhaps bred some contempt for the inferiority of the past, and many of its discoveries remained undeveloped for another two or three centuries, until the nineteenth century picked up many of the lost threads. Surely if people had taken more notice of Leeuwenhoek's "animalcules" the bacteria might have come into their own very much sooner than they in fact did. We must not, therefore, become too complacent, but always remember that

'Tis man's worst deed
To let the things that have been run to waste
And in the unmeaning Present sink the Past.[2]

There is another aspect of the historical approach which should arouse a universal interest, and that is with regard to eponyms. Medicine perhaps more than any other science remembers its great men by applying their names to their own specialities—discoveries, inventions, procedures—yet to most they remain just names: Winslow is remembered as a foramen. Trendelenburg as a position, Spencer-Wells as a pair of forceps. Some regard the use of eponyms as tiresome, and believe that without them terminology would be greatly simplified—yet if one but knew about them as men an understanding of the development of medical science could become a very integral part of our learning.

In some universities there are already well-established (and very popular) courses on the history and philosophy of science: is there any reason why medical teaching should not follow suit?

Post Script. As if to consolidate the views expressed here, Sir Arthur Thomson (Dean of the Medical School of the University of Birmingham), recently said, in words far more eloquent than those of the Editor: "Knowledge of the past refines judgment of the present, and a man who knows something of the history of a rapidly developing subject such as medicine is more likely to distinguish the significant and enduring features of the contemporary scene than one who limits his studies to a synoptic view of that vast confusion known as current literature." [From the Linacre Lecture delivered at St. John's College, Cambridge, on May 6th, 1959, and reported in the B.M.J. on August 8th, 1959.]

* * *

It will be noticed that the present issue of the journal, and several of those to follow, contain much of historical interest. The authors have clearly been most interested and absorbed in these various subjects, and it is hoped that the reader will also share this interest. In particular, the Assistant Archivist, Miss M. V. Stokes, has made considerable contributions on various aspects of the past at Bart's, which contain information of the greatest interest to all Bart's men.

[2]From Sir W. Osler, "Books on Men"

JOURNAL COVER: COMPETITION

The Publications Committee intend to offer a prize of **five guineas** for the winning design for a new cover for the Journal

Designs may incorporate the whole cover page or simply replace the present design. They should be accurately drawn in black ink on white paper of the correct size.

Entries should be received by the Editor before November 30th

Fifty Years Ago

Bart's men featured prominently in the news at this time. Mr. Butlin (later Sir Henry Butlin) was unanimously elected President of the R.C.S. He had previously been President of the Pathological and Laryngological Societies, Vice-President of the B.M.A. and Dean of the faculty of medicine in the University of London.

Mr. Cripps, previously in charge of the skin department at Bart's, was elected to the council of the College at the same time.

Dr. Herringham (later Sir Wilmot Parker) received an honorary M.D. at Dublin University where the public orator referred to his work in forensic medicine and kidney diseases.

It appears that the summer of 1909 produced weather as bad as any we have seen since the development of nuclear weapons. "The fact that we had long given up all hope of summer was not though sufficient cause for the abandonment of the annual concert, which has always been associated with this now obsolete season." One can only regret that the annual concert, together with the hospital orchestra and choir seem to have followed this last Edwardian summer into oblivion.

In his mid-sessional address to the Abernethian Society, Mr. Claye Shaw M.D., F.R.C.P., while speaking on "The Span of Life", made some interesting observations on the contemporary scene.

"One of the most striking features of modern life is that marriages are decreasing; they have fallen from 52 per 1,000 to 48 per 1,000 in the last 50 years. Why is this? The large employment of women has something to do with it.

"In some of the public services women are not allowed to marry: not only so, but there seems to be especially in the middle classes, a much greater disinclination on the part of women to marry, they prefer what they term their independence; the increased difficulty of the servant question and the drudgery of maintaining the household routine, the worry connected with the training and rearing of children, the desire for pleasure and enjoyment seem to have changed the trend of the female mind which now runs more to celibacy. And as for the men? Well! They simply dare not undertake the responsibility. What with socialistic budgets, increased taxation, heightened extravagance, lessened domesticity, the expense of restaurant life, etc., the man of ordinary means must do one of two things, either he must marry for money or remain single; the former does not always lead to happiness, nor the latter to morality."

Things don't seem to have changed much!

* * *

Hospital's Symphony Orchestra

The principle work in the Hospital's Symphony Orchestra concert on midsummer night was Dvorak's "Second Symphony", which was in fact his seventh in D minor, written in 1885. In this work, which is one of the best in the orchestral repertory, the composer demands musicianship as well as technical ability from every member of the orchestra. In this performance it was sometimes difficult to distinguish the themes, due to a lack of orchestral balance, and while the general effect was quite pleasing, much detail dynamics and phrasing were lacking. Nevertheless a good deal of Dvorak showed through.

An excellent contrast was made by the inclusion of "Jeu de Cartes" (The Card Game), Ballet Music by Stravinsky. His later works have been the subject of dispute, and the controversy requires no further discussion here. This particular music presented a formidable task to the orchestra, which they took on very gallantly. The result was a ragged and in some places inaccurate performance, but one which conveyed the general idea of the work. As concert music this lacks the ballet for which it was written and of which it is an integral part. However, there are few amateur orchestras who would present Stravinsky works at a concert and the audience at this one, while obtaining value from it, probably realised the reason why.

The concerto in D minor for Organ and Orchestra by Handel, was played by Stephen Duro. His performance was outshone by the orchestral string accompaniment, played with great precision of note, intonation and phrase.

The Overture, "A Midsummer Night's Dream", by Mendelssohn began what was a profitable, though not outstanding evening of music making.

Research at Bart's

It is intended to publish each month a short report on the work in progress in the various departments at Bart's. There is a great deal of research under way here, probably little known to most of the students or to Bart's men no longer working here, and we feel that it would be of interest to all to know more about this. We are most grateful to heads of departments who have been most helpful in making possible the series of reports which will follow.

Department of Bacteriology

Two main research projects are being pursued in this department, each of which has several aspects.

1. Studies of Antibiotics

Work in this field falls into several categories. One is an examination of the properties of those in the erythromycin group [1], with a view to assessing their merits. A comparison has been made of the relative activities of those in the erythromycin group [1] and this study revealed that there are two types of resistance to erythromycin in staphlyococci, the distinct nature of which is still unexplained and is an intended object of further study. An examination is in progress of both the *in vitro* and the therapeutic properties of demethylchlortetracycline, a new tetracycline with apparently greater activity than its predecessors. An antibiotic discovered in Japan and named leucomycin has been examined and found to be indistinguishable from carbomycin [2]. A study is being made, as opportunity occurs, of the capacity of Humycin (paromomycin) to eliminate the *Salmonella* or *Shigella* carrier state. Two other antibiotics available for and requiring further clinical trial are vancomycin and ristocetin.

Surveys of the sensitivity to antibiotics of bacterial genera imperfectly studied from this point of view are undertaken from time to time: a recent example was a determination of the sensitivity of 10 species of *Clostridium* [3] to 16 antibiotics, undertaken on behalf of the War Office with a view to defining optimum treatment for the prevention of gas gangrene. Methods for performing sensitivity tests have been studied [4, 5], including those involving tests of combined action.

The laboratory is consulted not only in connection with our own patients [6], but by other hospitals about the treatment of bacterial endocarditis due to resistant organisms: cultures of these are submitted to a series of tests and treatment is recommended according to the results. A constant watch is kept on the development of bacterial resistance to antibiotics: it has recently been shown that strains of gonococci exist in London with increased resistance to penicillin [7].

The department has been particularly interested for some years in the treatment of infections of the urinary tract, and a recent re-examination of the mode of action of some of the older as well as newer drugs [8] has been the basis for a suggested policy of two-stage treatment which awaits clinical trial.

1. L. P. Garrod, "The Erythromycin group of antibiotics", *Brit. med. J.*, 1957, **ii**, 57.
2. Pamela M. Waterworth, "The antibacterial properties of leucomycin", *Antibiotics and Chemotherapy*, 1959, in press.
3. L. P. Garrod, "The chemoprophylaxis of gas gangrene, *J. Roy. Army Med. Corps*, 1958, **104**, 209.
4. L. P. Garrod, "The practical significance of sensitivity tests", *Proc. 3rd Internat. Cong. Clin. Path.* (Eight Colloquia on Clinical Pathology) Brussels, 1958.
5. Pamela M. Waterworth, "Spurious growth inhibition by antibiotic discs having a lactose base", *J. Med. Lab. Technol.*, 1958, **15**, 245.
6. C. W. H. Havard, L. P. Garrod and Pamela M. Waterworth, "*Deaf or Dead*? A case of subacute bacterial endocarditis treated with penicillin and neomycin", *Brit. med. J.*, 1959, **i**, 688.
7. J. E. Cradock-Watson, R. A. Shooter and C. S. Nicol, "Sensitivity of strains of gonococci to penicillin, sulpathiazole and streptomycin." *Brit. med. J.*, 1958, 1, 1091.
8. L. P. Garrod, "Chemotherapy of Infections of the urinary tract", *Royal College of Physicians, Edinburgh*, Publication No. 11, 1959.

2. Studies of Cross-Infection

Staphylococcal infections acquired after admission have become the most serious problem in hospital hygiene of the present day. Although Barts has for various reasons suffered less severely from outbreaks of such ward infections than many other hospitals, nevertheless several have occurred, and the factors responsible and means of prevention have been under close study for several years.

One series of cases of sepsis was traced to faulty ventilation in an operating theatre [1], which has now been corrected. Another series of operating theatre infections could be attributed to a carrier in the surgical team [2].

The present work is the continuation of a programme embarked on nearly three years ago to try to elucidate the behaviour of staphylococci in a surgical ward, their source, distribution, mode of transmission, infectivity, etc. Staphylococci are recovered from all possible sources including wounds and other sites of infection, the noses of patients and staff, the air, in which they are enumerated by the regular use of slit samplers, blankets, curtains and other objects. The Staphylococcus and Air Hygiene Laboratories at the Central Public Health Laboratory, Colindale, have collaborated in this study and have determined the phage type of nearly 10,000 strains of staphylococci from these various sources. One fact established has been that many distinct types of pathogenic staphylococci may be found in a ward, most of which do not cause cross infection: the capacity for this seems to be confined to a few types, usually found to be tetracycline-resistant, and patients infected with such organisms should be isolated [3]. One pair of surgical wards is shortly to be furnished with cubicles to facilitate this, and the effects of this measure will be studied. Another ward has been provided with cotton blankets, which can readily be sterilised, and the effect of this on the aerial dispersal of staphylococci is being determined. Anaysis of findings in 1,330 patients already studied appears to show that wound infections are often due to a stapylococcus of which the patient himself is a carrier: they may thus be autogenous and not extraneous.

Investigations have also been made in the maternity wards into the prevention of infection in newborn babies [4]: other observations have been made on the occurrence of staphylococci in the lower bowel [5] and on the effectiveness of surgical masks [6].

1. R. A. Shooter, G. Taylor, G. Ellis and J. P. Ross, "Post-operative wound infection", *Surg. Gynec. Obst.*, 1956, **103**, 257.
2. R. A. Shooter, J. D. Griffiths, Josephine Cook and R. E. O. Williams, "Outbreak of staphylococcal infection in a surgical ward", 1957, *Brit. med. J.*, **i**, 433.
3. R. A. Shooter, M. A. Smith, J. D. Griffiths, Mary E. A. Brown, R. E. O. Williams, Joan E. Rippon and M. Patricia Jevons, "Spread of staphylococci in a surgical ward", 1958, *Brit. med. J.*, **i**, 607.
4. Josephine Cook, J. A. Parrish and R. A. Shooter, "Acquisition of *Staphylococcus aureus* by newborn babies in a hospital maternity department", *Brit. med. J.*, 1958, **i**, 74.
5. J. Q. Matthias, R. A. Shooter and R. E. O. Williams, "*Staphylococcus aureus* in the faeces of hospital patients", *Lancet*, 1957, **i**, 1172.
6. R. A. Shooter, C. J. W. Hunter and M. A. Smith, "Tests of surgical masks", *Brit. J. Surg.*, 1959, in the press.

Distinction

Professor K. J. Franklin has been elected an Honorary Member of the Harveian Society of London.

Professor L. J. Witts has been made a C.B.E.

Royal College of Surgeons

Subject to the approval of the Council of the R.C.S. the following candidates at the examination held in May 1959 are entitled to the Diploma of Fellow:

Brown, H. S.	Austin, R. N
Maltby, J. W.	Vickery, C. M.

Journal Staff

The following appointments have been made:

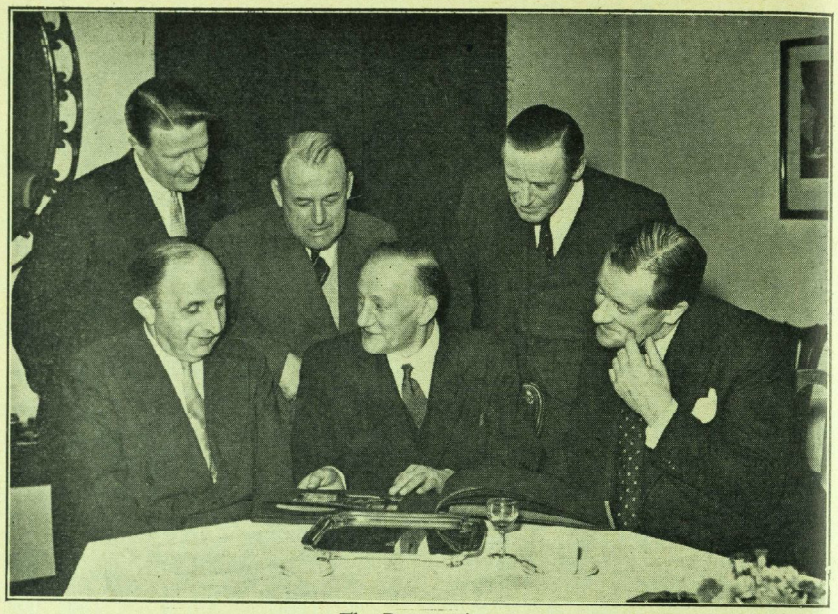
A. J. B. Missen is to become the Assistant Editor.

W. H. Pagan is to assume the position of Sports Editor following the retirement of J. J. D. Bartlett

J. E. Cawdery becomes the Manager on the retirement of J. Chapman.

A. Frank has been elected Charterhouse representative.

We would like to offer our thanks to those who have contributed so much of their time and energies to the Journal.



The Presentation

Mr. Dundas *Mr. Schofield* *Mr. Hankey*
Mr. Cowan *Mr. Taylour* *Mr. Cambrook*

An Appreciation : Mr. Alec Taylour

At an informal dinner given recently by the Consultant Dental Surgeons, Mr. Alec Taylour was presented with a silver salver and an album of photographs, both suitably inscribed, to mark his retirement after thirty-five years on the staff. The album contained photographs of the present dental staff at work in the various parts of the department. The presentation was made by Mr. G. T. Hankey, Senior Dental Consultant, on behalf of past and present members of the dental staff and friends in the Hospital.

It is noteworthy that all the letters accompanying donations from various parts of the country expressed the same gratitude to Mr. Taylour for his help and friendliness.

Mr. Taylour joined the staff in 1923 as a clinical assistant, and rendered valuable service by his goodwill, energy and ability, all of which remained undiminished despite the passing of the years.

All who know Mr. Taylour will wish him a long and happy retirement, a just reward for having given of his best for so long.

Wessex Rahere Club

The Autumn Dinner of the above club will take place at the Lansdown Grove Hotel, Bath, on Saturday, 31st October.

It is hoped that, as usual, a member of the staff will be present as guest of honour.

Membership of the Club is open to all Bart's men practising in the West Country. Further details will be circulated to members and to any other Bart's men who are interested and who get in touch with the Hon. Secretary, Mr. A. Daunt Bateman, at 11, The Circus, Bath.

Tenth Decennial Club

The Annual Dinner of the 10th Decennial Club will be held at the Royal Thames Yacht Club on 28th October, at 7 for 7.30 p.m. Those members of the 8th and 9th Decennial clubs who would care to come are invited to send their names to: Dr. Geoffrey Bourne, 20, Harley House, N.W.1. The cost of the Dinner will be two guineas. Dr. Norman Hill will be in the Chair.

ANNOUNCEMENTS

Engagements

DOHERTY—GORDON.—The engagement is announced between Surg. Lieut. Roger Patrick Doherty, R.N., and Helen Frances Gordon.

GILL—CUMMINGS.—The engagement is announced between Brian Vincent Gill and Janet Cummings.

PEARSONS—JARVIS.—The engagement is announced between Dr. David E. Pearsons and Mary Jarvis.

Marriages

GALBRAITH—FOTHERINGHAM.—On May 23, Dr. Alan William Galbraith to Gillian Felicity Fotheringham.

STRUTHERS—WILLIAMS.—On May 16, John Struthers to Valerie Williams.

Births

JACKSON.—On June 8, to Jean, wife of Dr. Peter George Jackson, a son, brother for Elizabeth.

KUNKLER.—On June 3, to Pamela, wife of Dr. Peter B. Kunkler, a son (Roger Bertrand), a brother for Malcolm, Ian and Paul.

MACKENZIE.—On June 17, to Elizabeth, wife of Surg. Lieut. Campbell Mackenzie, R.N., a son.

STROUD.—On June 23, to Jennifer Ann and Alan Stroud, a second son (John Andrew).

WHITE.—On June 21, to Ann and Dr. Humphrey Wilson, a daughter (Carol).

Deaths

DARBY.—On June 16, Dr. William Sydney Darby. Qualified 1898.

DORRELL.—On June 23, Edmund Arthur Dorrell, F.R.C.S., aged 87. Qualified 1894.

MACFAYDEN.—On June 5, Dr. Norman Macfayden, aged 83. Qualified 1902.

PARBURY.—On May 8, Dr. Walter Key Parbury, aged 93. Qualified 1901.

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OBITUARY

The death has occurred recently of Dr. Robert Lacy Kitching, at Wetherby, Yorkshire. He was 69.

Dr. Kitching was born at Scarborough, and educated at Oundle. He received his medical training at Barts. During the 1914-18 war he served in the R.A.M.C., and shortly afterwards started in general practice at Wetherby, where he remained until his death. He also worked as clinical assistant in the eye department of Harrogate General Hospital, until the introduction of the N.H.S.

His enterprise and initiative extended into many fields. It was due to his suggestion, published in the B.M.J. that the B.M.A. arranged the visit of Russian doctors to this country in 1955. He was also well known for his work for the British Empire Cancer Campaign.

His many talents were not restricted to medical work. True to the family tradition, he was an excellent rugger player, and captained the Bart's XV in the same year as his brother, A. E. Kitching, captained the Cambridge University XV. He was a member of the Blackheath Rugger Club and played for Middlesex. He was also secretary of his local tennis club. His other great interest was alpine flora, on which he was a well-known authority, and he was Yorkshire secretary of the Alpine Garden Society.

His death is a great loss to his patients and friends, and to all the societies for which he worked so tirelessly.

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It is with regret that we note the death of Mr. Norman Barber, T.D., L.D.S.R.C.S. (Eng.). Mr. Barber held the post of clinical assistant in the dental department, having joined the staff over twenty years ago. He was the first Dental House Surgeon appointed to the department and continued to serve it faithfully and devotedly until his death, with an absence on active service in the R.A.F. Our deepest sympathy goes out to his wife and family.

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Hospital Appointments

The following appointments to the medical staff take effect from the dates mentioned:

Department of Diagnostic Radiology
Registrar: Dr. I. K. Fry—1st October, 1959.

Department of Anaesthesia.
Senior House Officers: Miss M. C. Coakley & Mr. A. D. Nightingale—1st July, 1959.

Mr. Badenoch's Firm
Junior Registrar: Mr. J. E. A. Wickham—appointment extended to 30th November, 1959.

Children's Department
Senior House Officer: Mr. A. W. Galbraith—23rd July, 1959 (replacing Miss Manfield).

Department of Pathology
Senior Registrar: Mr. B. S. Jones—29th July, 1959.

House Appointments

1st July to 31st December, 1959

Dr. E. R. Cullinan
D. P. Wells
J. K. Chong (until 30/9/59)
M. J. L. Patterson (from 1/10/59)

Dr. A. W. Spence
D. C. L. Savage
T. B. Duff (until 30/9/59)
A. J. P. Campbell (from 1/10/59)

Dr. R. Bodley Scott
A. S. Tabor
R. M. Simons (until 30/9/59)
D. J. Price (from 1/10/59)

Dr. G. W. Hayward
T. W. Gibson
G. F. Abercrombie (until 30/9/59)
J. D. Parkes (from 1/10/59)

Dr. E. F. Scowen
A. B. M. McMaster
A. G. Branfoot (until 30/9/59)
J. D. Hobday (from 1/10/59)

Mr. J. P. Hosford
N. C. Roles
M. J. L. Patterson (until 30/9/59)
J. K. Chong (from 1/10/59)

Mr. C. Naunton Morgan
R. C. Cook
A. J. P. Campbell (until 30/9/59)
T. B. Duff (from 1/10/59)

Mr. A. H. Hunt
A. Whitworth
D. J. Price (until 30/9/59)
R. M. Simons (from 1/10/59)

Mr. A. W. Badenoch
R. I. D. Simpson
J. D. Parkes (until 30/9/59)
G. F. Abercrombie (from 1/10/59)

Prof. Sir J. P. Ross
J. A. C. Neely
J. D. Hobday (until 30/9/59)
A. C. Branfoot (from 1/10/59)

Casualty H.P.
T. C. Hindson

Children's Department, Dr. C. F. Harris
J. E. Stark
J. T. Silverstone

E. N. T. Department, Mr. Capps
D. G. Davies (until 30/9/59)
C. A. C. Charlton (from 1/10/59)

Skin & V.D. Departments, Dr. R. M. B. MacKenna
D. A. Birkett

Eye Department, Mr. H. B. Stallard
R. B. Harcourt

Gynae. & Obs. Department, Mr. John Beattie
P. J. Ball, C. J. Carr } Interns
D. S. Wright: Junior H./S

Anaesthesia, Mr. C. Langton-Hewer
J. Hedley-Whyte
M. Evans

Dental Department, Mr. Hankey
R. C. Patrick (from 11/7/59)

Orthopaedic Department
(Fractures)
R. P. Ellis

Casualty House Surgeon
T. H. Hayle

At Hill End Hospital

E.N.T. Department, Mr. Capps
C.A.C. Charlton (until 30/9/59)
D. G. Davies (from 1/10/59)

Orthopædic Department, Mr. H. Jackson Burrows
M. F. Hurding
C. J. F. L. Williamson

Thoracic Department, Mr. O. S. Tubbs
R. J. Mitchell
T. S. Matthews

Department of Neurological Surgery, Mr. J. E. A. O'Connell
B. Richards
R. L. Rothwell-Jackson

Anaesthesia, Mr. C. Langton Hewer
J. Hedley-Whyte
M. Evans

The Tunnel

(A description of the findings made during the recent excavations.)

by Miss M. V. Stokes

(*Assistant Archivist*)

Wherever pick or drill penetrates the tarmac in London, the past is once more part of the present in a very material sense. This is true of the hospital as well as of the city at large. When work began on the series of tunnels linking up the hospital's old and new blocks every one wondered what might turn up and all those connected with the work were interested and very helpful in saving objects as well as in telling us of any unusual features.

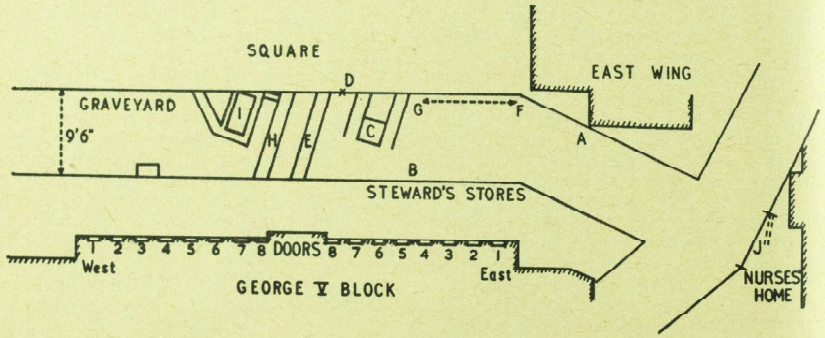
In some ways we knew what to expect. As the hospital was outside the city walls traces of Roman buildings were unlikely to be found; the most we could hope for would be a few sherds, like those unearthed on earlier occasions. The site that Rahere had chosen for his hospital had been an open space and the first buildings were probably not very extensive or substantial. Even at the end of the mediaeval period when they had grown they did not occupy the whole of the precincts, so that lying around and in between the hospital buildings were houses and gardens leased out by the master and brethren. To the south near the city wall and ditch lay the graveyard with the chapel of St. Nicholas and near by towards the centre of the close was one of the hospital's main gates, Tanhouse Gate, opening on to the street called Little Britain; it is shown on the plan of 1617. The general lay-out of the buildings probably did not change between the 16th and early 18th centuries and the main features shown in 1617 of Great Hall, cloisters and courts remained unaltered until Gibb's plan was adopted. It was not until the four wings of his quadrangle were completed in 1766 that the governors ordered that "the houses, shops and buildings within the quadrangle be demolished in order to form the square and area". The walls were razed, the cellars and yards filled in. However, along Duck Lane, now part of Little Britain, houses of the late 18th and 19th centuries remained until the 1939-45 war. Digging for foundations of the Gibb's wings, for the 20th century blocks and for innumerable service pipes, had disturbed the soil. Therefore, we knew that we would only find bits of household pottery and rubbish, walls and foundations of houses of the 17th-19th centuries, and perhaps some traces of mediaeval building.

In the first sections of the tunnel behind the east wing only one rough block of chalk masonry was found. It had been part of a mediaeval building, but, as nothing of the same date was found near it, we concluded that it had probably been thrown back as filling when the east wing's foundations were finished. No remains of houses earlier than the 18th century were unearthed round here and most of the pottery was late apart from one fragment of an earthenware jug *c.* 1600. This had a light brown speckled glaze with pairs of vertical grooves. Among the later wares was a 19th century Wedgwood cooking mould with a hazel nut pattern and three pedestal-based white drug pots. Near the Clerk of Works' office where there had once been a public house, "The Blue Anchor," six stoneware gin measures and the neck and shoulder of a stoneware spirit container with "T. Vickress . . ." on it were dug up. A little further south the men found a nearly complete white salt glaze saucer *c.* 1750, one of the most attractive fine wares of this century, and some pieces of a blue and grey chamber pot of Wester Walde ware *c.* 1700-1720. A very small mother-of-pearl spoon is harder to date but it is probably early 18th century, as also are many of the English Delft fragments found in this area. Sections of the hospital's 18th century drainage system were discovered; they may have been laid by Cooper, whose bills are among the Archives. One small brick drain of 12 in. diameter ran north-west—south-east at a depth of 4 ft., but at 11 ft. resting in natural soil, was one drain of 12 in. diameter running into another of 18 in., both made of brick.

At this point, in front of the nurses' home and south of the east wing, the soil had been disturbed on many occasions; there was not much pottery and one could make nothing out of the many fragments of walls. However, when the excavations turned west into the square, matters changed. All along the south side of the tunnel stood the bowed

retaining wall of the steward's stores with a modern pipe close to it, so few finds occurred within an area of 3 ft. from this side. The northern side of the tunnel was cut by many brick walls, 17th and 18th century in date, jutting out at different angles. From the first five feet down from the surface, where the cellars and yards of the old houses had been filled in and levelled off with rubble, the finds were mostly of 18th century date. However, from the next 5-6 feet down earlier objects appeared. A stray blue and white bead was the only Roman object found. Of many centuries later is our puzzle piece: two worked pieces of bone which were once joined together. So far no one has been able to suggest a plausible use for them. The base of a polychrome Delft vessel provided no problem; it had been part of a 17th century drug pot. In the Guildhall Museum at the Royal Exchange is a perfect example. One interesting find was a metal spoon with a trifid end, dated *c.* 1690, which was lying near a bellarmine stoneware jug. *c.* 1625. These jugs with their gravely stylised masks of a bearded face are supposed to have received their name from Cardinal Bellarmine, the enemy of Protestants, though it is very unlikely that the face was ever intended as a portrait of any particular person; the jugs were to be found in nearly every household for over a hundred years and had many uses. Originally they came from the Rhineland full of spirits; when empty they were used for anything, even as witch bottles for they have been found filled with hair and nail parings and felt hearts stuck with pins. None of those found in the hospital had such evil contents. We did find another complete one and fragments of others. Naturally we were delighted to find this first unbroken one, but stoneware is tough and we were more amazed when a workman uncovered an undamaged early 18th century wine bottle, short and fat, rather like Queen Anne who then sat on England's throne. The lower part of a tyg, a dark-glazed two-handled jug, lay nearby; again you will see more perfect examples in the City's Museum.

It was just after these finds, when the workmen were digging a few feet away from the door of the George V block that part of a mediaeval wall was discovered. It was made of rough chalk blocks, standing on a thin layer of tiles above a mixture of rubble and dark soil, at 7 ft. 6 in.-8 ft. below present ground level. The wall's width was 2 ft. 6 in., the length 4 ft. and the height was 3 ft. It stood in the centre of the trench, running north-west—south-east. In the first 4 feet of



The Tunnel along the South side of the Square (not to scale)

A. Arched Cellars : ? connected with East Wing. B. Small group of human bones
C. Mediaeval Wall. D. XVIII century drain
E. Wall of chalk, stone and brick (one stone slab with drainage channel)
F—G. Along this line were many walls : cellar or foundation of varying dates
H. Brick Wall. I. Cess Pit
J. Sewer 12" running into a larger one of 18", 11 feet down

A bellarmine c. 1625-50 *A bellarmine, late XVII century*
Base and sides of a tyg, mid XVII century

soil down from the surface there were no signs of it nor of stones from it, which indicated that it had not been standing in 1766; it may have been demolished before the construction of Gibb's Square. The wall was not in a direct line with the Smithfield Gate, but lay to the east of it, roughly where the old Little Britain Gate stood. Perhaps it was part of the old gatehouse but we can never be certain of this.

Just to the north of the chalk wall was a pit filling of dark soil containing quantities of shells, oysters and cockles, with fragments of early pottery including early 16th century Hessianware with attractive slip and sgraffito decoration. A small money box *c.* 1500, was also found; it is a neat round pot with green glaze on the shoulder and a thin slit for the slim hammered silver coins of those days. The top had been broken and the money taken out before it had been thrown away. Too often fragments were tantalisingly small like the small piece of fine latticino glass, which had come from Venice in the 16th century. One cannot attempt to reconstruct the original vessel. Other objects, more complete, keep us puzzled because we cannot be sure of their purpose; for example, the thick grey stoneware crucibles with streaks of thick glaze-like substance on the outside.

From the higher levels at this point, halfway along, came debris from the 18th century kitchens, coarse brown earthenware crocks, pans and pipkins, some with fire-blackened bases. There were also fragments of imported blue and white oriental porcelain, and of the fine English salt glaze cups and bowls. Scattered about were chunks of marble, probably from a great chimney piece. A brush-back of bone was found with green stain indicating that it had once had a metal backing. Both that and the bristles have disappeared.

There was a pause in the tunnel digging halfway across the square and when the men resumed digging they soon struck the cesspit of a house. The pit measured 5 ft. x 3 ft. and the floor level was 8 ft. down from the present surface; the walls on three sides had plaster while the fourth was lined with narrow tiles. It had been used as a rubbish pit for about a hundred years from the mid-17th to the mid-18th century, and the household, fairly well-to-do, must have suffered from a series of clumsy-fingered housemaids. There was one large bowl of oriental china, with landscapes in blue and white and there were fragments of other porcelain cups. We found the stem of one wine glass and the complete bowl of another 18th century glass, but alas, fingers in the 20th century are just as clumsy and the workman dropped it before my eyes. We found several small glass drug bottles, early 18th century in date; one of them still has some resinous material left in it that has a bitter smell. Among numer-

ous fragments of glass wine bottles there was an unbroken round squat one, again of Queen Anne's reign. Another late 17th century spoon, damaged, was recovered and there were some clay pipe bowls, stubby and short, of the same period; however, most of the pipe bowls and stems were later in date. Some of the late English Delft ware was most attractive. One plate with a blue bird and leaf pattern is nearly complete and the pot of the mid-17th century, is taller than the modern ones; it is not complete but a yellow one, a little later in date is quite whole, for it had just cracked in half. An early 18th century one, green-glazed, a little rounder and lower in shape, has a few pieces missing. Most of the others were more fragmentary and difficult to fit together again; they were of white Delft and belonged to the mid-18th century. Mixed in with all this were odd bits

Blue and white Lambeth Delft plate, late XVII century

fragments of two slender blue and white cups with a similar pattern have been pieced together. As most of the things were broken over two hundred years ago it is not surprising that they cannot be completely restored; of one pipkin there is part of its three-legged base and the greater part of its rim, sides and handle, but the pieces do not fit together. From the pit came small Delft drug pots of the 17th and 18th centuries, and there were many broken cooking pots of buff and red-bodied earthenware; of three brown drinking mugs the largest was nearly complete. Among this debris of a hundred years the pit yielded fragments of at least twelve chamberpots; the earliest, a brown-glazed of metal and iron nails and one button or stud shaped like a Tudor rose. Near the pit, in what may have been a yard, the men found some early drug pots. Wester Walde stoneware and a very small blue and white Delft jug.

As the men worked their way west, the area of houses was left and the trench cut across the northern apex of the graveyards. According to the early 17th century plans the graveyard was divided by the way that ran through the hospital from Christ's Hospital. The eastern half was labelled "the Churchyarde for the parrissioners of Lettel St. Bartholimew" and the western section "The Hospitall Church yarde for the buringe

of the poore that dieth". The claim to its own graveyard had been an early cause of the hospital's quarrels with the priory, and in 1184 Pope Lucius III granted the hospital brethren the right to have their cemetery, which they and the poor sick could use. Pope Celestinus III confirmed this in 1191 on account "of the multitude of those who sujourn in the house of your Hospital and the excessive distance of the cemetery (of the Priory) through the horse market and muddy streets". Disputes over this continued and in 1224 the Bishop of London granted the brethren the right to receive for burial citizens of London "as if they had died among the poor of the said Hospital". In 1373 Simon of Sudbury removed all restrictions on the use of the graveyard except that forbidding the parishioners of St. Selpuchre's interment there. A description of a house in the close in 1414 says that it lies "within the Great South gate of the Hospital called Tanhousegate towards Duke Lane and next the common cemetary of the Hospital". On the creation of the parish of Little St. Bartholomew in 1546 it seems that one part was set aside for the parish and the other for patients, though the vicar seems to have officiated at burials in both. The burying place was still used in 1689 but in 1731 there are references to patients having been buried in Moorfields for some years past; the building of Gibb's south wing, 1736-40 would have closed it in any case. Finally, arrangements were made in 1741 for the provision of a burial ground in Seward Street, St. Luke's parish. Therefore, it is clear, these bones of adults and children cannot have been interred after the early 18th century. The bones were in a very disturbed condition, lying closely jumbled for they had probably been buried without coffins. (In the accounts there are references to purchases of lengths of southwich, and later to burials in woollen, according to the act, but not to the provision of coffins.) The later interments had disturbed the earlier ones, and I saw only one skeleton more or less in position. None of the bones were in a good state of preservation, indeed they were very soft and friable. As many bones as possible, skulls, limb bones, vertebrae, etc., were taken down for examination to the Archives Room, which began to resemble a charnel house. It was clear that this had been a general graveyard for the remains were of young and old, of men and women, but it was not possible to give any close dating because of their condition; they could have been of any period from the early Middle Ages to the early 18th century, a dating which is borne out by the documentary evidence. After examination the bones were handed to the vicar who had them re-interred in consecrated ground near the church.

Though the hospital was outside the walls it was already in the mediaeval period a "built-up area". Most of the city churches had their consecrated graveyards for their parishioners and it was not the custom to have "plague pits" in populated districts. London suffered two visitations of plague when the mortality rate was so high that special burial facilities had to be provided, the Black Death of 1349 and the Plague of 1665. Even during the first epidemic the hospital precincts were too crowded to be made the site of a special graveyard for the victims and the nearest plague burial ground was north of Smithfield where Charterhouse Square now lies. In 1665 the city churchyards again proved inadequate and the burial grounds for the dead were farther out, for example, on the site of the present Broad Street Station. Many of these plague pits were never recorded and would have remained forgotten but for London's later expansion. Those unfortunate parishioners of St. Bartholomew the Less and those patients who died of the plague, were buried in their own graveyards, as they would have been whatever the cause of death. Their names are in the parish registers; of course some of those who died here may have been buried elsewhere. However, this is a side issue. There can be no doubt that this graveyard, cut into by the tunnel, was an ordinary one, attached to parish and hospital, in general use over a very long period and that it cannot be called a "plague pit". It is interesting to note that the same inaccurate suggestion was made during the construction of the surgical block and the goods entrance. The remains then disturbed belonged to the cemeteries of Christchurch and Christ's Hospital. It is a pity that the idea has arisen among the general public that when a number of bones are found in the City of London they must have been plague victims. Nearly always such notions are inaccurate.

As the workmen approached the west side of the square and passed out of the graveyard area finds became fewer for there had been a great deal of disturbance during and after the 18th century.

Many of those who daily crossed the square bombarded us with questions and I hope this account has answered them more fully than we could do at the time. It cannot be described in any way as a scientific excavation and my part as rescuer and recorder would have been impossible without the interest and advice of all those concerned in the work. The tunnel lay too far south of the main hall of the mediaeval hospital and the ground had been too much disturbed for us to have any hopes of large or startling discoveries; nevertheless, the results support the documentary evidence we have about the precincts and add a little colour to the picture we have of the hospital's tenants and their homes.

(I am most grateful for the help that I received in dating and identifying the various finds from Miss M. Bimson of the British Museum, Mr. N. C. Cook of the Guildhall Museum and Dr. K. M. Backhouse.)

Bartlemas

The Hospital of St. Bartholomew at Oxford

by G. C. R. MORRIS

(*Demonstrator in Physiology*)

Seated on the East Side of Oxford, *about Half a Mile distant from* St. Clement's *Church, on the Descent of a gentle Hill, covered with a Lofty Grove, rich in Pasture, and watered with Springs, did* King Henry I, *induced by its Vicinity to his Seat at* Beaumond, *and to* Oxford (*whence might easily be sent them Relief*) *as for its agreeable Situation for Retirement and Devotion, erect a Chapel to the Memory of* St. Bartholomew, *with an Edifice adjoining for Leprous Folk that should happen to be at* Oxon, or its Neighbourhood, with a House for a *Friar or Chaplain who should govern them, and for his pains receive yearly six Marks. And both he and they should daily pray for the Health of the King and Queen's Souls; which Hospital, raised by the Overplus of the Matter necessary for this King's Building his Palace in* Beaumont, *was finished, Anno* 1126, *from whence, at the Times of the Royal Abode at the Palace, with Alms and broken meat from his Table, it sufficiently sustained itself.*

Sir John Peshall began with this elaborate paragraph the first published description of Bartlemas, in the late eighteenth century, expanding the manuscript notes by the invaluable Anthony à Wood, who was writing in the 1660's. The hospital had changed by Wood's time, and it has changed more since: its history is an interesting contrast to the better-known story of Bart's.

Mediaeval hospitals were of several types. Bart's was from the first a place for the relief of the sick; the emphasis was always on treatment, if any were possible. That is the familiar sense of the word "hospital". Hospice, hostel or hotel now distinguishes the other main type of mediaeval hospital, which was for the rest and sustenance of travellers. A third kind was designed for the permanent care in isolation of lepers, and such was Bartlemas. (The nearest recent English analogue is a home for the insane; but those, like leper colonies in tropical countries, are now largely places of treatment.) All three types were religious foundations, whether furnished with a chaplain or closely associated with a priory. In all the health of the soul was considered at least as much as the needs of the body.

Bartlemas was one of more than a dozen lazar-houses founded in the first third of the twelfth century. The number is evidence of a widespread need for segregation of people with a cutaneous affliction, though the nature of the disease and the reasons for its prevalence are still subjects for argument. It was certainly regarded as contagious and incurable. Dedication of a leper hospital to St. Bartholomew may have been thought particularly apt because he was flayed; two-thirds of the foundations which bore his

name were for lepers, but only a quarter of all mediaeval hospitals. King Henry may also have had in mind Rahere's foundation in West Smithfield, only three years before, when he chose the name.

There were at first twelve "infirm brethren", probably housed in a single building which, with the chapel and the house for the chaplain-master, formed an open quadrangle facing south (fig. 1). The almshouse for the brethen was "quite demolished" in the Civil War, but rebuilt in 1649-1651. It then provided four rooms on the ground floor and another four above them; each had its own fireplace. After the almsmen left it was used for an undignified variety of farm purposes, or disused, until its conversion in 1922 into a single house of great charm, now known as "Bartlemas House" (fig. 2).

The chapel is a simple rectangular building, its appearance suggesting considerable modification during the repairs that were necessary in the fourteenth century. It also suffered damage in the seige of Oxford, when its lead roof was stripped to make bullets, and it was "almost runiated to th ground"; but it was "re-aedified" at the same time as the almshouse. The austere interior, a low carved oak screen dividing the greater part from the stone-paved east end dates from that restoration.

There is less record of the "House for a Friar or Chaplain", but it probably forms the nucleus of the complicated mixture of style and structure now called "Bartlemas Farmhouse" (fig. 3). It was let in 1645 to an innkeeper who covenanted to supply the almsmen with bread and drink at reasonable prices, and similar leases were granted up to 1680. Earlier and later references suggest that it was often used as a farmhouse when there was no resident warden or chaplain.

The "Lofty Grove" of "above five hundred tall elmes" was cut down in case it gave cover to the parliament men attacking Oxford. The northern side of Bartlemas is now a clear sweep of turf (the Oriel sports field) rising gently up to trees concealing suburban Cowley. Gardens set off the houses, an orchard adjoins the chapel, and allotments separate the whole from the main road.

The changes of use are not wholly modern. During the twelfth and thirteenth centuries lepers of the hospital are mentioned, but by 1312 some of the inmates are "infirm" and others simply "brethren". That was the year of the first of a long succession of enquiries into the conduct of the hospital, the occasion being complaint of peculation by the war-

Fig 1. *Bartlemas in 1833* (*engraving by G. Hollis*)

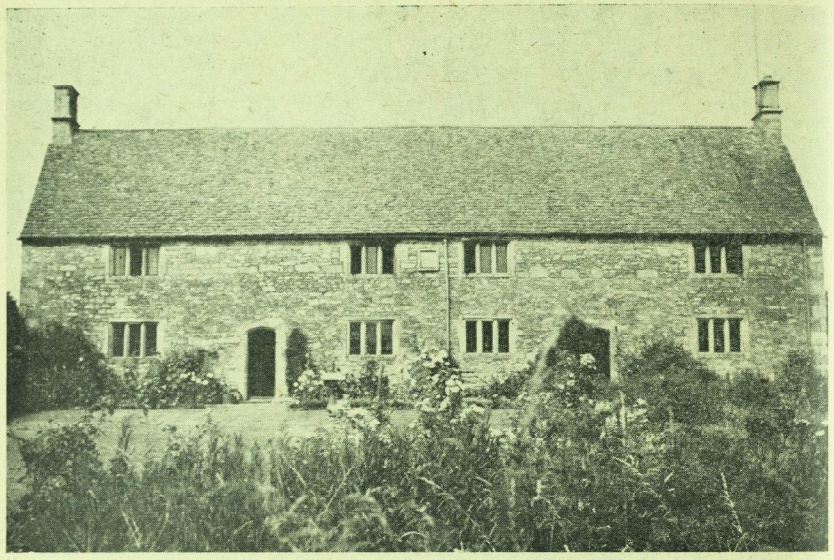


Fig. 2. *Bartlemas House in* 1957

den. He was said to have sold or converted the goods of the hospital to his own profit, kept some of the revenues for himself, evicted the previous warden from a house he had built for himself, and kept a certain Laetitia de Kayso, "concubinam suam ab antiquo". The Ordinance of Edward II from Lincoln four years later reduced the number of brethren to eight, of whom six should be infirm. The two hale brethren were to be capable of work on the farm and buildings. All were to have ninepence a week. The income of the foundation was then the original £23 0s. 5d. from the City of Oxford out of the King's anual fee-farm rent, the profit of the home farm, and a variety of small endowments amounting to a further £7 a year.

The wardenship was given in 1324 to Adam de Brome, the founder and first provost of what was to be known as Oriel College; five years later the hospital was given by Edward III to the provost and scholars of that college. They were to maintain the brethren and a chaplain as before, and might themselves be refreshed by the purer air there when they were ill.

Soon afterwards the Bishop of Lincoln was granting indulgences to those who visited St. Bartholomew's in the octave of its patron and made gifts to the hospital for the brethren. Wood says that this was very successful, pilgrims being drawn also by images of the Saint, and by "St. Edmund the Confessor's combe, St. Bartho'omew's skin, the bones of St. Stephen, and one of the ribbes of St. Andrew the Apostle . . . those that were troubled with continuall headaches, frenzies, or light-headed, were by kembing their heads with St. Edmund's combe restored to their former health; or those that were troubled with a weakness of joynts or halting were by the handling and applying those Bones to the places affected restored to their pristine state". The relics, soon jealously transferred by Oriel to St. Mary's Church in Oxford, disappeared at the Reformation, as did the images of St. Bartholomew, King Henry and the benevolent Bishop in the chapel at Bartlemas.

Wood says that the hospital was partly compensated for the loss of its attractive images by the deliberate introduction of

annual ceremonies which lasted into the first quarter of the seventeenth century—though others have thought that the proceedings imply a far earlier origin. "The youth of the city would come here every May Day with their Lords [and] Ladyes, garlands, fifs, flutes and drums to acknowledge the coming in of the fruits of the year or (as wee may say) to salute the great goddess Flora and to attribute her all prais with dancing and musick." Some found this occasion too popular and held their own ceremony on Ascension Day, when "the Fellows of New College after their grave and wonted manner, early in the morning used to walk towards this place" to a service in the chapel which was finished by an offering of silver for the almsmen. Afterwards "they walked from thence to a well, called Strowell, at the upper end of the grove adjoyning (which with the way from the chapell therto used anciently to be strewed with flowers). Where being fixt, (after an epistle and gospell, as was sometimes used) they, in the open place, like the ancient Druids the Apollinian offspring, eccho'd and warbled out from the shady arbours harmonious melody consisting of severall parts then most in fashion". It is a little surprising that these customs were not resurrected at the Restoration.

There is no evidence of any formal medical care at Bartlemas: mediaeval patients were more likely to be healed by faith than by medicine or surgery. But the medical associations of the hospital go beyond its original custody of lepers and the reputation of its relics. Wood says that it was often used as a refuge from the plague by the Fellows of Oriel, and that "the lodging rooms of thes poore men were anno 1643 occupied by people that had the plague in Oxon and became a common pest-house."

In 1760 the buildings were let to Mr. Sam Glass, a surgeon, who used them as a "Laboratory for the Manufacture of his Noted Magnesia", so they continued until about 60 years later, when, without almsmen, they were disused. Cholera was still prevalent then, in the early nineteenth century, and the Oxford epidemic of 1832 gave brief glory to Bartlemas. Patients who survived the disease (the mortality was fifty per cent) were trans-

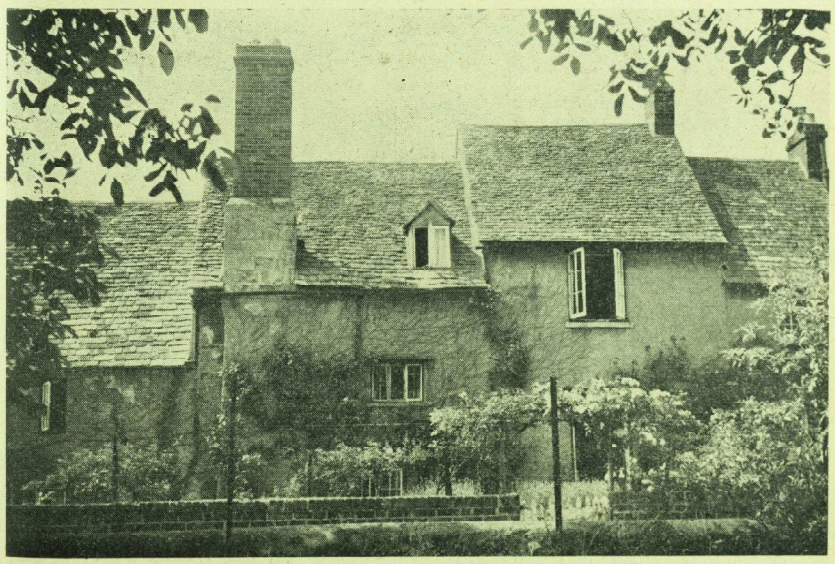


Fig. 3. *Bartlemas Farmhouse in* 1957

ferred from their homes or the specially-built isolation hospital to "the House at Cowley, called St. Bartholomew's Hospital" to complete their recovery and still avoid spreading the infection. Mr. Patrick Madgett, surgeon and apothecary, was in medical charge of the convalescents. There were not more than ten at a time, but they suffered from relapses and "other sorts of disease", so that Mr. Madgett earned the praise he is given in the excellent published account of the epidemic.

Recurrent conflicts between the City of Oxford and Oriel about the annual payment to the hospital and the maintenance of chaplain and almsmen were finally settled by a decision of the Charity Commissioners in 1900. Oriel retained the hospital with all its endowments on payment to the City of £2,400, the income from which, with the annual fee-farm rent, was to be administered by Trustees to provide pensioners with five to seven shillings a week on the account of "St. Bartholomew's Hospital Charity". The chapel and one rood of land were transferred to the Ecclesiastical Commissioners and are served by the neighbouring parish.

The first two tenants of the reconstructed almshouse were Deans of Oriel, who became Bishops. The next was K. J. Franklin, then Tutor and lecturer in Physiology at Oriel, later Professor of Physiology at Barts. My thanks are due to him, to his successor at Oriel, Dr. A. G. M. Weddell, and to the Treasurer of Oriel, for their helpful courtesy in allowing access to the basic material of this paper.

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A STORY

Is there a doctor here ?

Charles was tall and strikingly good-looking and Lettice had much charm. She wished to see him become very well known, and why should not he?—for his practice was increasing steadily and included some of the best people. They often talked things over and came to the conclusion that it would help if they became well known as first-nighters in the best circles of Mayfair. So they took up this idea and were generally to be seen in good positions in the stalls whenever any promising play was produced. On this particular night everything seemed to be just as they desired. The audience contained several distinguished people and amongst them an ambassador and his wife. Charles and Lettice had seats in the second row, near the centre. At the end of the first act and almost before the applause had finished a man stood up and called out "Is there a doctor here?" This was too marvellous. Lettice felt her heart beating furiously. And Charles was splendid. He did not appear to hurry though they both knew that old Dr. Johnson was in the house; fortunately he was rather deaf and decidedly slow in his reactions. Charles stood up to his full height, just touched his tie to ensure that it was correct and faced the enquirer and the audience. Lettice had never felt more proud of him. In firm but unhurried tones he said "Yes, I am a doctor". "Say Doc," said the questioner, "don't you think this is a damned rotten show?"—R.O.W.

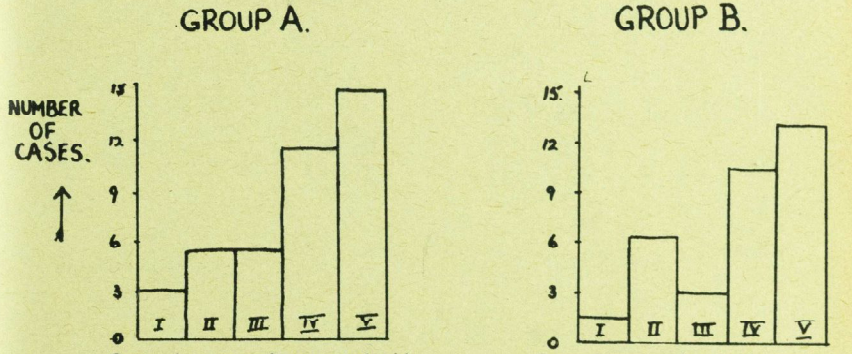
Two Cases of Swellings in the Groin

by J. K. BAMFORD
(*2nd year clinical student*)

Two interesting cases were admitted on successive duty days by the Green Firm, both patients being schoolboys, and requiring immediate surgical treatment.

The first case was a boy of thirteen presenting with a swelling in the right groin, and a history of considerable pain. He had been born with undescended testicles, the left testis descending just after his thirteenth birthday. Two days before admission, he had been hit in the right groin by a cricket ball, resulting in a swelling, with intermittent attacks of severe pain, which worsened and led to his admission to the Casualty Box. There were no abnormal findings on general examination, except for an immobile tender swelling in the right inguinal region. The right side of the scrotum was empty. He had a pyrexia of 100 deg. F., and a pulse rate of 115/min. The provisional diagnosis was Acute Traumatic Epididymo-Orchitis in an ectopic testis.

An exploratory operation was performed under general anaesthesia. A crease-line incision was made over the swelling, and the testis was exposed in the superficial inguinal pouch, lying on external oblique fibres. The hydatid of Morgagni was present, and the epididymis was large and tense. The tunica vaginalis was incised, and a pale yellow fluid escaped. A swab was taken. The coverings of the inguinal canal were divided, the spermatic cord was traced up as far as the internal ring, and the vas and spermatic vessels dissected free from the coverings, and from the connective tissue between them. This procedure added considerable length to the cord, and enabled the testicle to be brought down to the bottom of the scrotum. A hernial sac (which was associated with the ectopic testicle) had become shut off from the general peritoneal cavity, and was dissected free from the cord, transfixed, ligated, and excised. The method of fixation of the testicle in the scrotum was by nylon suture, attached to the tunica albuginea,



Group A were patients treated with orchidopexy for unilateral cryptorchidism.

Group B were patients with untreated unilateral cryptorchidism.

Key:
I = sterility (aspermia).
II = severely impaired fertility (below 5 × 10^6 spermatozoa).
III = moderately impaired fertility (5—15 × 10^6 spermatozoa).
IV = slightly impaired fertility (15—40 × 10^6 spermatozoa).
V = fertility unimpaired (60—80 × 10^6 spermatozoa).

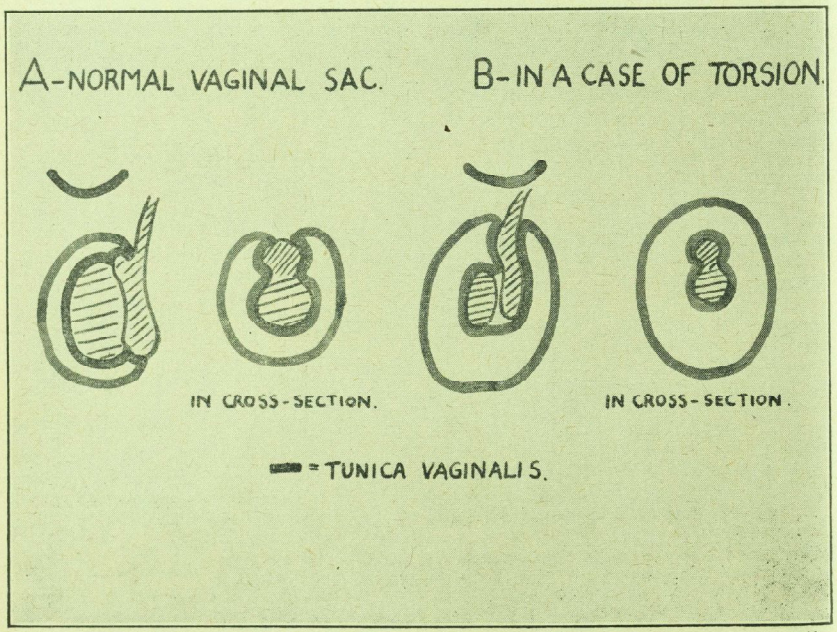
passing through the scrotal wall and secured to the right thigh by an elastic band under slight tension. This operation was a slight modification of the routine Keetley-Torek technique, the difference being that in the latter, the testis is fixed to the fascia lata of the thigh, after replacement in the scrotum.

The patient made an uneventful recovery, and was discharged within ten days. He was seen in the follow-up clinic one month later, and was perfectly fit and symptom free. The right testis was in the correct position and only slightly less mobile than the left.

The results of the Keetley-Torek technique were reported by Burdeck and Coley 1933. Out of 137 cases, 120 were considered anatomically successful. However Hansen 1949, has investigated the results of orchidopexy in patients with unilateral cryptorchidism, and compared their fertility with that of patients with untreated unilateral cryptorchidism. By counting the number of spermatozoa produced in an ejaculate, he attempted to judge whether the operation had succeeded in making the operated testis produce significant numbers of spermatozoa. This would be reflected by the difference between the numbers of spermatozoa produced by the treated and untreated patients.

The similarity between groups A and B may be attributed to the failure of operative treatment in making the originally undescended testis produce a significant number of spermatozoa. Hansen concludes his paper by suggesting that, while operative treatment may be unsuccessful in the above respect, it certainly offers relief from the complications of cryptorchidism, e.g. pain accompanying retention of the testis.

The second case was a schoolboy of fourteen, who presented with pain and swelling of the right side of the scrotum. Two days previously, he had woken up with a sudden severe pain in the right testicle, which became less painful, but returned with increased



A, the posterior aspect of the epididymis is not covered by Tunica, but is adherent to the inner wall of the Dartos, preventing lateral movement.

B, the testis and epididymis are freely movable in the vaginal sac, making rotation possible.

severity during the next 24 hours. At the time of admission, he was complaining more of scrotal swelling than of pain. There was nothing of further significance in the history. There was a slight pyrexia of 100 deg. F., and a pulse rate of 100/min. Examination disclosed marked guarding over the right iliac fossa, gross oedema of the prepuce and of the right side of the scrotum, and tenderness of the right testicle and epidymis.

The most likely diagnosis was thought to be torsion of the testicle, in view of the suddenness of onset of symptoms, and the intermittent attacks of pain. An exploratory operation was performed.

A right inguino-scrotal incision was made, exposing the tunica vaginalis, which was incised, and a dark red blood clot was evacuated. The testis appeared deep purple in colour, and was oedematous. It had undergone torsion, within the tunica, of one-and-a-half turns. The testis was untwisted easily, and bathed in warm saline packs for several minutes, after which time its colour showed decided improvement. No fixation or eversion of the tunica vaginalis was performed in view of the gross oedema. The wound was closed in layers, with a drainage tube from the most dependent part of the scrotum. The patient made an uneventful recovery. He was fit and well at the follow-up clinic one month later, but a later follow-up showed that the right testis had become slightly smaller.

The mechanism of torsion of the testis had been a subject for considerable discussion and diversity of opinions. It is caused by a sudden twisting of the spermatic cord, or even of the body of the testis, resulting in ischaemia distally. This twist may theoretically occur within or outside the tunica vaginalis. All the specimens illustrated in the Bart's museum are of intra-vaginal torsion, and it seems doubtful whether true extra-vaginal torsion actually occurs. In reported cases where this is said to occur, there is little real evidence that torsion is the aetiological factor. In most of these cases the lesion was probably due to pressure effects, rather than true torsion of the cord.

Two main problems are posed by testicular torsion, namely: What are the anatomical relations which predispose to torsion ? and, What force actually causes the torsion?

In illustration A, it can be seen that the mobility of the normal testis is restricted. For this reason, torsion of the normal testis is rare. For twisting to occur, the testis must be freely mobile, and suspended in the vaginal sac by a long stalk of spermatic cord.

It is considered that a high investment of the testis and spermatic cord by the tunica vaginalis is present in every case of torsion. This investment is of greater importance than any other anatomical abnormality of the testis and neighbouring structures. Variations in the normal rotation of the testis and epididymis during their descent, frequently result from a previously high investment by the tunica.

With regard to the second problem, it is believed by some that the actual rotation is caused by a strongly contracting cremaster muscle. The fibres of this muscle extend along the spermatic cord in the form of loops extending over the outer part of the vaginal sac. On contraction, the cord and testis are pulled up, with a resulting tension on the vaginal sac. In a case of high investment of the cord, the cremaster fibres are carried down into the inner part of the vaginal sac, so embracing the lowest part of the cord. When the muscle now contracts, it pulls on the cord, testis and epidymis, as if they were a single movable body. Hence a spirally arranged cremaster muscle will cause twisting of this body when muscular spasm occurs.

A. E. Roche 1928 stated that " Torsion may be regarded as the result of muscular action on an abnormally mobile testicle, this abnormal mobility having a close developmental relation to imperfections in its descent."

I should like to thank Mr. A. W. Badenoch for permission to use two of his cases, and also Mr. P. Paton Philip for his kind assistance.

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LETTERS TO THE EDITOR

PRACTICE IN N. RHODESIA

Dear Brother Bart's Man,

Further to my humble literary contribution enclosed, I seem to recall having read in one of the recent journals which I opened with a lesser time lag than that which had Geoffrey Bourne's grand effort, an article which suggested that through the splendid literary medium of our "Alma Mater" one might be able to get in touch with a medical man wishing to carve a niche for himself in some other part of the Commonwealth—well, here's an opportunity!

I have a "one man band" practice in one of the more potentially wealthy areas of the world, the Copperbelt, in Northern Rhodesia, of which Kitwe is the largest town. It is going from strength to strength, and due to the rapid growth of this young country it is the general opinion that in less than a decade this town will become the "Johannesburg" of the north.

The practice grosses about £5,000 per year, which could be doubled without any doubt whatsoever by the assistantship and potential partnership, of an energetic, keen, young man, either single or married. The work is varied and interesting, vide Bart's Journal of March 1944 with an article by myself "Bart's on the Copperbelt" (pages 22 to 27). There has of course been tremendous progress in the intervening 15 years since that article was written. At that time I was Mine Medical Officer in another Copperbelt town—Mufulira. The practice here includes the right of obstetric work at our recently opened £1¼m. hospital, but does not carry the privilege of attendance on ordinary cases hospitalised there, nor operative surgery.

I would be prepared to bring out a man on contract with single passage paid, and pay him £120 per month, with the usual car allowance. It must be obvious from this offer that I have retirement in view.

Visitors to these 'ere parts, like Drs. Edward Cullinan and E. E. Claxton will, I am sure, confirm my assertions about this virile, go-ahead young township.

Yours sincerely,
PERCIVAL B. P. MELLOWS.

P.O. Box 299,
Kitwe, N. Rhodesia.

For those who would like further information regarding this offer, I have a number of interesting pamphlets and photographs.—Editor.

Also, Dr. Mellows sends further reminiscences stimulated by Dr. Bourne's article "Personalities" in the Journal of October, 1958.

" PERSONALITIES " CONTINUED

I read with rich appreciation Dr. Geoffrey Bourne's refreshing turning over of the life of the decades of Barts of 1910-1920-1930, and personally wish to thank him for "mentioning me in despatches!"

I agree, one had to get up very early in the morning to take Tommy Horder for a ride, and I would like it to be fully appreciated that the slight score I got over his lordship in the anecdote related was largely due to the "Dutch courage" engendered by a somewhat prolonged midday session in the "White Hart" and subsequently gastrically analysing the good brews in the nearby Whitbreads' vaults!

Further to emphasise appreciation of the greatly revered Thomas' caustic, but keen, sense of wit, I will subscribe here and now two more illuminating incidents.

It was on the Horder firm, I believe in October 1924, when Green and Cullinan were his housemen, that the firm had been working for two weeks under the able aegis of Dr. Bow whilst the chief had been taking a well-earned holiday on the French Riviera. As usual, on the round he had his considerable entourage of about 80 students and post graduates. At one of the bedsides in Rahere ward where there was a somewhat erudite cardiac case which occasioned considerable interest, so much so that, catching Sir (as he then was) Thomas' eye I slunk well into the background feeling understandably guilty that I had only recently captured him, with the assistance of his wife, to give a sitting to an artist pal who was holding an exhibition of portraits of well-known personalities. My self-abasement was detected by his eagle eye and Mellows was invited to give his "invaluable opinion" upon the heart lesion. Not having a stethoscope I apologised for my inability to indulge in the consultation, to which Sir Thomas stringently observed that it was surprising that so keen a student, after two weeks working with the firm, had not acquired his most necessary instrument of office! Mellows' rejoinder that he was waiting his chief's return from a well-earned slack in the south of France to see what type of stethoscope he had before buying one brought forth the reply "Bad luck, again. I also borrowed this one—help yourself!"

A further past event recalled, also in Rahere, was a case entrusted to me when I was clerking. After a searching but futile examination the diagnosis was a complete abysmal enigma to me. Tommy had the patient's bed pulled into the middle of the ward and told me after I had read a completely negative report upon eyes acting equally to light, and etc., to pull the bedclothes down to expose the patient's abdomen. Without a brightly illuminated by a shaft of light from the afternoon sun— dramatically revealed as by a spotlight on the stage—were a number of bronze pigmented spots upon the abdomen! Without a word he pointed his dynamic finger at them. Confusedly, but brightly, I remarked "Oh, I could not quite place them, sir." "Quite unnecessary, Mellows," he remarked, "They are there waiting for you!" Naturally I sank through the deck, but rose a few days later to give vent to the vociferous aria mentioned by G. B. the instigator of my return to the columns of Barts Journal.

I am writing this note as a gesture of sincere respect for the writer of the article "Personalities," Dr. Geoffrey Bourne, who with those other also greatly beloved and revered teachers and friends, Messrs. Basil Hume, to whom I take opportunity to apologise for not answering his letter ere this, Corbett and Higgs, who are going into so-called retirement at the height of their professional careers, and to wish them long life, health, wealth and happiness.

DR. DRYSDALE

Sir,

Letter writing appears to be now a habit. This one is to make a protest about one sentence in the article about Dr. Geoffrey Bourne in the Journal for February 1959. This states that Dr. Drysdale was singularly lacking in human charity.

I disagree with this very strongly, and as one of "Dropsy" Drysdales students in 1924, I saw a good deal of him. I agree about the acid wit and the tongue like a whiplash, but he was a most kindly man. He was especially severe on slackness and indecision and had no hesitation in expressing his disapproval of anything approaching unprofessional conduct in his colleagues. I remember a particularly vituperative exchange with (then) Sir Thomas Horder over a disinfectant called "Fadill". I think I have spelt it correctly. It was an extract of onion, and Sir Thomas' name had been associated with it in the daily press.

Geoffrey Bourne was his clinical assistant at the time and a great help we found him. I think I can say truthfully that he taught me most of the very little clinical medicine I ever did know.

I found "Dropsy" a stimulating teacher and a very human person. He had an amusing habit of closing his eyes, and rocking back on his heels when one of his team made an especially outrageous statement.

Yours faithfully,
R. H. BETTINGTON.

P.O. Box 61,
Napier, N.Z.

EMINENT OPINIONS, PLEASE

Sir,

Mr. J. S. Price's "Medical Case Histories" (April 1959) was of great interest.

His first case, that of the jeweller's polisher with the sudden swelling of the face and lip clearing up in 24 hours, sounds very similar to angio-neurotic oedema, which behaves as Mr. Price has described, I believe. Perhaps the rash on the hands which was old standing was not connected.

I would be interested to learn of other more eminent opinions of this case.

Yours faithfully,
P. G. CRONK.

69, London Road,
Gloucester.

BOOK REVIEWS

DE MOTU LOCALI ANIMALIUM of William Harvey, 1627, edited, translated and introduced by Gweneth Whitteridge, C.U.P., for Royal College of Physicians, 1959. 163 pp. 60s.

It is astonishing to realise that a manuscript from the pen of William Harvey should have remained unpublished for well over three hundred years, especially since its existence in the British Museum has been known to medical men for more than a century. Robert Willis, G. E. Paget and Sir D'Arcy Power appear to have examined the manuscript, and mentioned it in their writings, but all carefully avoided any attempt at transcription and translation. Mrs. Whitteridge modestly asserts that "the deciphering of Harvey's abbreviations and contractions presents little difficulty," but to any but an archivist with a thorough knowledge of palaeography a glance at a single page is sufficient deterrent.

It is obvious that this work has entailed much research, for the English version is not a mere literal translation of the Latin text, but an interpretation of Harvey's notes based on a study of the authorities consulted by Harvey. The editions of Aristotle (Venice, 1552), Fabricius (Patavii, 1625), and Laurentius (Frankfurt, 1600), for example, correspond with the texts used by Harvey, and extensive notes throughout this book authenticate the renderings provided.

The manuscript containing this treatise appears to be a notebook in which Harvey jotted down his thoughts with a view to publishing a work on animal movement. The section *De mutu locali animalium* was added to at intervals without being finally drafted, and it is this incomplete synopsis that is here presented as a modern interpretation of Harvey's opinions. These are worthy of presentation to all interested in the history of anatomy, for much of Harvey's work has been lost. His fame rests largely on *De motu cordis*, while the *De generatione animalium* has not received adequate attention, despite the fact that it incorporates the results of extensive experiments, and mirrors contemporary embryology.

The celebration of the tercentenary of William Harvey's death brought forth many papers relating to his life and works, and also a new translation of his *De motu cordis*. Furthermore, it inaugurated the preparation of this work, for the Royal College of Physicians of London, of which Harvey was a benefactor, commissioned Mrs. Whitteridge to undertake the task, a fitting duty for the Archivist of Harvey's Hospital. Beautifully produced by the Cambridge University Press (Harvey was a graduate of Caius College), this book reflects credit upon all concerned, not least upon William Harvey, and his admirers will be grateful for having this fragment made available in such a scholarly production.

John L. Thornton.

MEDICAL TERMS: Their origin and construction, by Ffrangcon Roberts, M.A., M.D., F.F.R. 3rd Ed. 92 pp. + viii. Published by William Heinemann. Price 6s.

This is the so-called "Scientific Age" when a classical education is deemed neither a necessity nor, in some cases, an advantage for the study of medicine. However, most of the terms used in medicine today are of Graeco-Roman origin, being

either words that have survived from the time of Hippocrates and Galen, or modern inventions. The student of medicine is obliged to learn and to use words without being aware of their origin or their mode of construction, and hence his study tends to be more difficult and uninteresting than it need be.

This little book is designed to help (first) those people unversed in the classics. The first part is descriptive and is devoted to the uses of medical words and their sources, and to the principles of derivation and word construction, the text being illustrated with well-known examples. The second part is a list of words grouped under the ideas that they represent e.g. texture, quantity, form and shape, etc. In this way undue repetition is avoided and one can find words of a similar or opposite meaning at a glance.

This book is concise, well-written and interesting and is a useful book of reference.

THE REWARDS OF MEDICINE. By Hugh Barber, F.R.C.P., Physician Emeritus, Derbyshire Royal Infirmary. H. K. Lewis & Co. Ltd., 1959. pp. 140. 15*s*.

Whether its title intimidates you or fills you with pious anticipation you will probably be pleasantly surprised, for Dr. Barber's book is nothing more formidable than a collection of delightful essays, most of which have appeared in the Guy's Hospital Gazette during the past five years. It is a little disappointing to find that *The Rewards of Medicine* itself is an account of the history of doctors' pay, but it is redeemed by the author's anecdotes which are prolific and rarely dull.

The other essays are a good mixture. Dr. Barbers' own long medical experience is particularly evident in his articles on Psychosomatic Medicine and the Act of Dying, but he restricts himself, in actually giving advice, to the doctor-patient relationship where experience is so much more valuable than facts. It is a pity, however, that many of his best ideas on Positive Health are taken from Osler without acknowledgement.

Indeed, the influence of Osler and innumerable other great men is plain throughout the book and is one of the most attractive features of it. The author has clearly found great joy in absorbing the past of medicine and this enthusiasm is as important as his knowledge when he writes about it. He leaves the feeling that a little more scholarship and less of the "after dinner" type of information would be welcome in his articles on historical subjects, but in these, and in his essays on the value of fiction in medical education, he does stimulate one to return to the sources themselves, to discover more of Smollett, for example, which after all is what he is trying to do.

This would be an excellent book to pick up towards the end of a summer afternoon in the library when the mind wants a little reorientation.

A SURGEON'S ADVENTURES, by H. A. Morton Whitby. London, Christopher Johnson. (1959). 224 pp., 18*s*.

Very few autobiographies make successful reading partly because those whose lives are of sufficient interest to the general public are usually too modest to write about themselves. Those that do achieve print are generally egotistical, hum-drum, and of interest only to relatives and very close friends.

The current public interest in doctors, hospitals and disease, fostered by the popular press, radio and television, has created a demand for this type of book by those in search of sensationalism. Mr. Morton Whitby will disappoint these readers. His book is a factual account of a varied career, richly embellished with reconstructed dialogue. Bart's readers will meet familiar names. Sir Holburt Waring and Sir Girling Ball for example, but few places or personages are allowed on the stage long enough to spoil the reflected self-portrait of the author.

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ANNOUNCEMENT

Student prizes and travelling fellowship in psychiatry

The Mental Health Research Fund awards annually to medical students and doctors in their pre-registration year three monetary prizes and a travelling fellowship as the result of an essay competition on a subject relating to mental health, and a subsequent interview.

Applicants gaining the top three places in the essay competition will be given prizes of £100, £50 and £25 respectively.

The travelling fellowship, tenable in a psychiatric or other department abroad for up to six months, will be awarded as the result of an interview combined with consideration of the candidate's undergraduate record. Persons interviewed will be chosen from the top ten in the essay competition. The travelling fellowship will normally be taken up at the end of the pre-registration year or, in the event of it being awarded to a medical student, may be taken up after qualification.

The subject for the essay this year is *"Discuss the Rôle that Age Plays in the Genesis of Psychiatric and Psychosomatic Disease"*.

The panel of examiners consists of two members of the research committee of the Mental Health Research Fund and one member of the Association of Teachers of Psychiatry in undergraduate medical schools.

Essays should be sent before 1st March, 1960, to the Secretary, Research Committee, Mental Health Research Fund, 39 Queen Anne Street, London, W.1 (Tel. WELbeck 1272), from whom further details may be obtained.

Sports News

THE BOAT CLUB, 1958-59

by T. W. Meade

By far the most important occurrence in the Boat Club this year and the most significant event in the United Hospital's Rowing Club (U.H.R.C.) for many years was the withdrawal of four out of five Bart's Eights from the U.H.R.C. Bumping Races. So far-reaching have the consequences of this been that this report will deviate from its usual form, to be concerned only with this episode.

The U.H.R.C. Bumping Races were started in 1955 by a number of people, chiefly from Cambridge, who felt that it would be an enjoyable event, and also that it would be best to hold the senior U.H.R.C. event in the summer, rather than in the winter, as previously. Before 1955, the senior event amongst the Hospitals had been the Senior Eights event in the U.H.R.C. November Regatta. By transferring this senior event to the summer, it was hoped that senior oarsmen would be able to devote more of their time to coaching novices and juniors during the winter. The Bumps accordingly took place in 1955, and ran successfully and enjoyably for three years.

This summer's crisis really started last year when St. Thomas' produced a woman to cox their 2nd VIII, in spite of protests from many hospitals, including Bart's. However, she was allowed to participate. Recently the Amateur Rowing Association and the Head of the River Race Committee both passed new regulations forbidding female coxes or oarsmen in A.R.A. events. However, in last winter's U.H.R.C. Regatta, we witnessed the spectacle of a St. Thomas' Rugger crew coxed by no fewer than three different people in as many races, the third of them being a woman. St. Thomas' won the final against Bart's with a female cox, our objection to her having been lodged very feebly to avoid bad feeling. The St. Thomas' crew should, under A.R.A. rules, have been disqualified immediately, but was not, for the same reason.

Meanwhile, a further protest had been made at a U.H.R.C. committee meeting about women coxes. It was not properly received and discussed. The same thing happened again at the beginning of this year, and it became clear that unless a firm line was adopted soon, women would gradually be accepted as oarsmen as well as coxes. The U.H.R.C. would have established mixed rowing practised nowhere else in the country. Bart's made it quite clear that they wanted the whole problem thrashed out at the committee meeting held just before the Bumps, and the captain and secretary of Bart's had agreed beforehand that if it were decided to allow women coxes this or any year, they would recommend the withdrawal of the 1st VIII from the Bumps. This was not mentioned to anyone at the meeting, to avoid any accusations that they were using threats to enforce their own wishes. At the meeting, much trouble was encountered, because the rules of the U.H.R.C. did not coincide with the club's practice, in spite of repeated proposals over the years by G. M. Besser that the rules should be revised. Thus,

Ladies?....." the rules should be revised."
G. M. Besser with A. Knight and R. France

one rule states that all U.H.R.C. races should be rowed under A.R.A. rules. Bart's held that although the A.R.A. is not concerned with bumping races, their rules should nevertheless be applied as far as possible, and that therefore no women coxes should be allowed. They also held that a change in the rules of the U.H.R.C. could only be made at an A.G.M., and that such a change was necessary if women were to be admitted. However, it was decided to allow women coxes.

The Bart's 1st VIII agreed unanimously to withdraw from the Bumps. Other Eights were asked to decide their course of action by a majority vote, since many people felt that all our crews should withdraw. The result was that only the Rugger VIII, who had put in much hard work, and had no prospect of racing again during the season, took the water. In the event, the races turned out disastrously. The organisation was bad and twelve crews out of a total of 26 defaulted on one or more nights. Four of these were Bart's crews. They, unlike most of the other eight had at least given the maximum possible notice of their intention not to row, and we cannot thus be fairly blamed for more than a very small part of the chaos which occurred. J. J. D. Bartlett, a committee member of our Boat Club, and secretary of the U.H.R.C. had a most difficult and unenviable job to do throughout all this.

The aftermath has been very satisfactory. First, we received more support for our action from senior and junior members of the club than had been thought possible. Second, everyone has had to reconsider the whole problem of the usefulness and the organisation of the Bumps. The U.H.R.C. crew realises that they must either be done really properly, and gain the prestige and importance they should have, or they must be discontinued. The Bart's B.C. has been the most insistent member of the U.H.R.C. on this point, but has never felt the problem has received the attention it deserves. Third, a sub-committee has been appointed to revise the U.H.R.C. rules. And finally, and most important. St. Thomas' have agreed not to have women coxes in future. It seemed virtually certain that, had some strong action not been taken, women would have been accepted first as coxes, and then possibly as oarsmen. The only disadvantage to us has been that our summer's programme has been badly upset as a result of our withdrawal. This is a price worth paying for satisfactory Bumps in the future.

Some may wonder why women should not be allowed to row or cox with men. The answer is for exactly the reasons that women do not play rugby football with men. But above all else has been the aim of maintaining the U.H.R.C. Bumping Races at the highest possible standard, and in a position compatible with other inter-hospital events.

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VIEWPOINT

The idea of having a six-a-side interfirm cricket tournament at Chislehurst is excellent. No one would wish to claim that the idea was original, but as the corresponding rugger tournament has proved so worthwhile there is all the more reason for encouraging similar occasions. No doubt the finer art and skill of cricket will not be overmuch in evidence but the efforts of all taking part should provide a most entertaining afternoon. One knows only too well how difficult it is for many to spare the time to share in sporting activity as they would wish, so that any encouragement in that direction deserves our full support.

We must congratulate the Ladies' Tennis Club for winning the U.H. cup competition. All their players have often been seen practising vigorously, and they thoroughly deserved their success.

The Cricket Club has also surprised its supporters by reaching the final of the U.H. cup competition. They have a very well balanced team this year, and have great hopes of winning the cup for the first time in many years. Good luck to them.

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HOCKEY

The A.G.M. of the Women's Hockey Club took place on Tuesday, June 16th, when the following officers were elected for the season 1959-60.

Captain: Miss Elizabeth Knight.
Vice-Captain: Miss Jean Arnold.
Match Secretary: Miss Jennifer Hall.
Hon. Secretary: Miss Isobel Tomkins.
Treasurer: Miss Susan Cotton.
Committee Member: Miss Sheila Minns.

Colours were awarded to Miss Jean Arnold and Miss Jennifer Hall. Honours colours were awarded to Miss Jane Chambers and Miss Janice Swallow (subject to the approval of the Students Union).

CRICKET

1st XI v. Queen's College, Cambridge, on Saturday, June 6th. Lost by 2 wickets.

A match of swaying fortunes. Due to the late arrival of various members of the side, we batted first with the batting order practically turned upside down. We performed miserably, with only Davies, showing a welcome return to form, and Harvey playing with any confidence.

Queens started well, and at one stage were 90—2. But a collapse set in, and with two overs to go, the score was 119—8, with No. 10 grimly hanging on. With an over to go, they were still 12 short. But No. 7 took his courage in both hands, and hit the unfortunate bowler for 15 in the over, the winning 4 coming off the last ball.

Bart's 132 (Davies 43, Harvey 29).
Queen's College 134—8 (Harvey 4-39, Stoodley 3-47).

CUP MATCH: 1st XI v. King's College Hospital, on Thursday, June 11th. Won by 7 wickets.

Ample revenge for our defeat of last year. Fielding first on a lively wicket, we had the opposition in trouble throughout their innings. All four bowlers performed very well, and the fielding was the best seen this season. The highlight was a leg side stumping by Warr off Abell.

When we batted, Juniper and Pagan both played very sensibly, and with a fair amount of luck, put Barts on the right road, with a stand of 47. Warr and Walker carried on the good work, and we ended up as comfortable winners. Kings fielded badly, dropping 6 catches. We dropped none, and this was probably the deciding factor in the game. All credit to the team for an excellent performance.

Scores:

KINGS		BART'S	
P. Smirles, caught Warr, bowled Garrod	6	C. P. Juniper, bowled Guldfine	25
J. Watson, caught Juniper, bowled Garrod	3	W. H. Pagan, bowled Thomas	24
H. Berry, bowled Garrod	21	A. C. Warr, not out	13
W. Couldrick, bowled Abell	18	J. D. Davies, caught Berry, bowled Thomas	2
J. Thomas, caught Warr, bowled Stoodley	16	H. R. J. Walker, not out	11
A. McGibbon, caught Juniper, bowled Harvey	1	Extras	2
D. Challacombe, bowled Harvey	2		
G. Hutchinson, caught Pagan, bowled Abell	1	for 3 wickets	77
G. Randall, stumped Warr, bowled Abell	2		
R. Dodge, bowled Harvey	0		
L. Goldfine, not out	1		
Extras	3		
	75		

Bowling:
Stoodley 8.4—0—23—1
Garrod 9—4—16—3
Harvey 8—2—25—3
Abell 7—2—11—3

Bowling:
Thomas 14—3—34—2
Couldrick 3—0—12—0
Goldfine—10.3—2—29—1

1st XI v. Wimbledon, Saturday, June 13th. Won by 6 wickets.

A very impressive win against a strong side. Wimbledon batted first, and were, on the whole, restricted in their scoring rate by Stoodley in particular. When they tried to quicken their rate near the end of the innings, they lost quick wickets to Walker. Bart's were set to score 191 at a rate of 90 an hour. This total was reached with 10 minutes to spare, mainly due to a fine opening stand of 99 between Davies and Pagan. After this, Davies continued to play superbly, and Abell with his "cultured" hitting left Juniper and Harvey plenty of time to score the remaining few runs. A very satisfactory result.

Scores:
Wimbledon 190—6 declared (Walker 4-30).
Bart's 191—4 (Davies 76, Abell 37, Pagan 32).

1st XI v. Horlicks, Sunday, June 14th. Won by 5 wickets.

This was the third win for the club in four days, and another very satisfactory one, since they had beaten us for the previous two years. Also, we had a very weak side playing, including 7 2nd XI players. The real hero of the game was Harrison, who, playing in only his third 1st XI game, obtained much life from the wicket, and flighted the ball well. He was well supported by Davies, and two excellent catches in the gully by Pagan. When we batted the opening batsmen were out cheaply, and their captain, a minor counties player, in particular, bowled very well. But Fell, Robson, Harvey and Price batted sensibly, and we were comfortable winners.

Horlicks, 138 (Harrison 5-23, Davies 3-56, Harvey 2-24).
Bart's 140—5 (Harvey 37 not out, Fell 24, Price 20, Robson 19).

1st XI v. Royal Dental and Charing Cross Hospitals, Saturday, June 20th. Won by 6 wickets.

Another good win. This was mainly due to a really fine piece of sustained fast bowling by Stoodley,

who bowled for 16 overs without a break. He was well supported by Harvey, who also held two good catches.

Although two quick wickets fell at the start of our innings, the runs were scored with no trouble. Pagan batted very well throughout, and Merry showed signs of regaining his form.

Royal Dental and Charing Cross Hospitals 90 (Stoodley 6-41, Harvey 3-30).
Barts 93—4 (Pagan 49 not out, Merry 30).

1st XI v. Old Cholmeleians, Sunday, June 21st. Lost by 29 runs.

Bad fielding cost us this game, where six catches were dropped. The ground fielding also left much to be desired. Hence we let our opponents score too many runs. Our wicket-keeper failed to turn up, and the secretary had a nightmare of a game behind the stumps. Stoodley again bowled with great endurance, and was most unlucky.

We never looked like scoring the runs after 4 wickets fell for 43. But the middle order batsmen hit in a fine fashion, in particular, Harvey and Stoodley, and most creditably, Fell and Padfield. But in the end we were 29 short with 15 minutes left.

Old Cholmeleians 213—7 declared (Stoodley 4-70).
Barts 184 (Harvey 57, Stoodley 37, Fell 29, Padfield 18.

1st XI v. Jesters, Saturday, June 27th. Won by 8 wickets.

Yet another very satisfactory performance. This win was due mainly to a very welcome, if temporary return of Whitworth. He bowled very well, and extracted life from the wicket that no other bowler did. Harvey supported him well.

When batting, we lost two quick wickets, but Pagan and Abell scored the remaining runs with no difficulty. Pagan drove the fast bowlers repeatedly, and Abell hit very powerfully against the slow bowlers. This was shown by the fact that when the score was 60, Pagan had scored 40, but only added eight more in the next 54 runs.

Jesters 113 (Whitworth 6-44, Harvey 4-16).
Bart's 114-2 (Abell 58 not out, Pagan 48 not out).

1st XI v. Old Roans, Sunday, June 28th. Lost by 135 runs.

A match that Bart's will wish to forget. The opposition batted, and when two wickets fell for 17, we felt reasonably happy. But when it had reached 222 without further loss, our feelings had changed. The fielding and bowling was poor throughout, and two of their batsmen were allowed to become stuck in. Hence they set up a big total to get.

The Bart's batsmen found the runs very hard to get, and managed to get themselves out in devious ways. Harvey was most unfortunate to be caught brilliantly off a full-blooded stroke. Pagan played soundly, until he threw his wicket away, and Merry also batted well. The rest of the innings should be quickly forgotten.

Old Roans 254—3 declared.
Bart's 119 (Pagan 44, Merry 26).

CUP SEMI-FINAL. 1st XI v. St. Mary's Hospital, Tuesday, June 30th. Won by 176 runs.

This was our best display for years. Mary's had a really strong batting side, with weaker bowling, but were completely outplayed in all departments of the game. Bart's were put in. From the start, Juniper and Pagan batted confidently and scored 40 in 30 minutes. Following this, Walker and Whitworth scored even faster, both playing some fine strokes, and at lunch we were 128 for 4. After lunch, the good work was continued, and later there was a very good stand of 100 between Harvey and Stoodley. Bart's finally were able to declare at 277—7.

Mary's were in trouble from the start of their innings. Two wickets fell for one run. Although Carless for St. Mary's played well, the middle order batsmen collapsed, Whitworth taking three wickets in four balls, a catch being dropped off the other ball. The last two wickets held out for one and a half hours, but Price took the winning catch amidst great excitement with fifteen minutes to go. The fielding, in spite of two dropped catches, was good, Savege in particular taking four good catches behind the stumps. Whitworth bowled splendidly throughout. A really good performance by all, and we hope for a similar result in the final.

Scores:

BART'S		MARYS	
C. P. Juniper, bowled Snell	22	D. Howells, bowled Garrod	0
W. H. Pagan, caught Moore, bowled Snell	21	G. Moore, caught Savege, bowled Stoodley	0
H. R. J. Walker, caught Moore, b. Hunter	41	J. Carless, caught Savege, bowled Whitworth	47
A. Whitworth, caught Zander, bowled Hunter	42	L. I. Zander, caught Savege, bowled Stoodley	12
J. D. Abell, caught Black, bowled Hunter	0	G. Dwyer, caught Savege, bowled Whitworth	6
J. A. Harvey, not out	79	R. Black, bowled Whitworth	4
R. G. Merry, run out	4	P. Pavier, bowled Whitworth	0
B. J. Stoodley, caught Hookway, b. Hunter	46	D. Hookway, l.b.w. Whitworth	0
R. N. W. Price, not out	1	D. Farrow, bowled Whitworth	0
Extras	20	D. Hunter, not out	10
for 7 wickets declared	277	M. Snell, caught Price, bowled Whitworth	9
		Extras	10
			101

Did not bat:
P. Savege, J. A. Garrod.

LADIES' TENNIS

1st VI v. Charing Cross Hospital (A). June 3rd—Won 8-1.

1st couple: S. Whitaker, J. Swallow.
2nd couple: J. Arnold, P. Kielty.
3rd couple: J. Tuft, J. Clarke.

This match was a struggle from start to finish against the weather, the courts and naturally our opponents. The sun beat mercilessly down on the red shale courts, which we found very slow. It was almost impossible to move quickly to the ball and the whole match was won by the placing tactics adopted. The standard of play was far from high, but each couple won their matches easily, apart from one lost by the 3rds.

Semi-Final U.H. Tournament
1st VI v. St. Mary's Hospital (H). June 10th—Won 5-1.

1st couple: A. M. Macdonald, S. Whitaker.
2nd couple: J. Arnold, P. Kielty.
3rd couple: J. Swallow, E. Knight.

We were rather apprehensive about this match as Mary's were the holders of the Cup. Unfortunately for them, their two university players did not play and the result was decisive by tea-time.

The 1st couple played well throughout and the 2nd's played solidly and steadily to beat their opponents. The 3rd's took some time to settle down; service double faults were all too common during their first set, but they overcame this and played well, unfortunately losing to Mary's 1st couple in 3 sets.

Tea was made even happier than it could have been by Dr. Lehman's gift of strawberries and cream. A perfect finish for a cup match.

2nd VI v. Bedford College 2nd VI (A). June 13th—Lost 1-8.

1st couple: I. Tomkins, E. Knight.
2nd couple: P. Aldis, M. Goodchild.
3rd couple: A. Vartan, S. Cotton.

We found ourselves up against a good Bedford 2nd VI who were substantially better than us. However, the score perhaps reflects unfairly on us as some of the sets were hard fought despite the heat, which was trying. All credit to our 2nd couple who pulled our only win out of the bag.

1st VI v. Royal Free Hospital (H). June 24th—Won 7-2.

1st couple: A. M. Macdonald, S. Whitaker.
2nd couple: J. Arnold, P. Kielty.
3rd couple: J. Hartley, J. Swallow.

This was, in effect, a practice for the final round of the cup the following day and was quite promising. The standard of play was not high, but all three couples played steadily throughout.

Final U.H. Tournament
1st VI v. St. Thomas's Hospital (H). June 25th—Won 5-2.

1st couple: A. M. Macdonald, S. Whitaker.
2nd couple: J. Arnold, P. Kielty.
3rd couple: J. Hartley, J. Swallow.

A dull day and one full of misfortunes for our opponents. Just before commencing play one of the 2nd couple twisted an ankle and although she played, it must have caused her much discomfort.

The 1st couple started well and thought that they had the first match with three match points in the second set v. 1st couple. But these were lost, and they never came back to play good tennis and Tommy's won in three sets.

However, the 1sts easily beat and outplayed the 2nd couple who had previously beaten our 2nd couple also in three sets. The 2nd's relaxed too often and were slow on the ball and not steady enough for such a nerve-racking match. It was a hard tussle, each side gaining many points on the other's mistakes.

The 2nd's wearily departed to face the 3rd's and to their horror found themselves losing the first set. Hastily they awoke and with some good services and constant attack at the net managed to win.

The 3rds played well, attacking throughout and easily beating the 3rd and 1st pairs. So at tea-time the score stood at 4-2 to Bart's. Once again, Dr. Lehman had given us strawberries and cream—a real treat which we all appreciated tremendously—and renewed in body and spirit the deciding match was played in which our 1st's beat Tommy's 3rds.

So for the first time Bart's Ladies have won the Tennis Cup—a double victory for this year with the U.H. Hockey Shield also residing in the library.

1st VI v. Men's Cricket Club. July 1st—Lost 5-7.

This match was played in slightly different spirits from the cup match. To our horror, we found ourselves facing two of the 2nd VI tennis, Prossor and Walker; two competent sloggers, Pagan and Harvey, and those two wizards of the turf, Garrod and Stoodley. Two of our team were obviously unable to face the situation and never arrived. So the four who were there bravely battled on narrowly losing by 7 sets-5 sets.

Clinical VI v. U.C.H. (A). July 4th—Lost 4-5.

1st couple: I. Arnold, E. Knight.
2nd couple: I. Tomkins, A. Vartan.
3rd couple: S. Watkins, A. Sinclair.

A pleasant match on the hottest day of the year. The tennis played throughout was of a good standard and we narrowly lost the match. Altogether it was a most enjoyable friendly afternoon.

★ ★ ★

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Fountain Centenary Celebration

A champagne party will be held in the Great Hall on Thursday, October 8th, at 6.0 p.m.

Double tickets 25/-, Single tickets 15/-

These may be obtained from the Clerk and Bursar, at St. Bartholomews Hospital.

ST. BARTHOLOMEW'S HOSPITAL JOURNAL

Vol. LXIII No. 9 **SEPTEMBER 1959**

EDITORIAL

This academic year sees an innovation in the admission for the first time of dental students from the Royal Dental Hospital. They have until now been housed under three widely separated roofs — those of University College, the Royal Free and King's College—and for various reasons the two latter are unable to provide for them any more. Twenty are therefore to start at Bart's this year, increasing to sixty-five in 1961. That there is space enough for another sixty-five students to use the premises at Charterhouse can hardly be denied, although there will be some regrets that the spaciousness and "elbow room" enjoyed at present will be considerably reduced. As regards their course, they will share the whole of the 1st M.B. course and some of the physiology lectures; their anatomy course will be completely separate and is to be held in the old Zoology department.

The introduction of dental students is a break in a very long tradition, and there are some who regard a break with tradition with disfavour, and while it may be true that certain old fashioned customs die hard, this need not be the case in the present matter. On the contrary, the introduction of an outside influence in students pursuing a similar but not identical course should be for the good. Differences of outlook and curriculum lend themselves well to stimulating discussion ultimately to the benefit of both sides. Moreover, an ideal opportunity is provided at an early stage for each to understand the working and scope of a profession with which there must always be the closest co-operation. In some schools, however, there is a deep line of division between medicals and dentals : it is hoped that from the very beginning this will never be the case at Bart's.

Some of the arrangements which have been made will unfortunately not always help this aim of unity at Charterhouse. These students will pay a subscription of £3 to the Students' Union which will give them temporary membership and use of the facilities at Charterhouse Square only. They will not be allowed to use the sports ground at Chislehurst because their own authorities wish them to use their own grounds, and while this wish can be respected and understood as a means of salvaging some integretion of the rather scattered dental students, it will not help integration at Bart's. There may be some justifiable resentment that students who can use the excellent facilities which we have to offer here are not permitted to offer their talents for the benefit of this community. While this may be unfortunate, there should be no reason to allow it to become a bone of contention, if we only consider that these dental students are less fortunate than ourselves, and for the moment our guests, and we extend our cordial welcome to our new colleagues.