PROCEEDINGS AND REPORTS OF UNIVERSITIES,
COLLEGES, COUNCILS AND ASSOCIATIONS

CANADA

JOINT MEETING OF THE CANADIAN, BRITISH AND
AMERICAN ORTHOPAEDIC ASSOCIATIONS

Canada is to serve as host for the combined meeting of the American, British and Canadian Orthopaedic Associations which will be held in Quebec City in June. The American Orthopaedic Association will be led by their president, Dr Robert I. Harris of Toronto. Dr J. Edouard Samson of Montreal will preside over the meetings of the Canadian Orthopaedic Association. The British Orthopaedic Association will be represented by the president, Mr Alan S. Malkin of Nottingham, and a small group of surgeons who will endeavour to make good their lack of numerical strength by the vigour of their youth. The programme has been arranged by a committee under the capable chairmanship of Dr John L. McDonald of Toronto, whose organising ability was once demonstrated in Chicago when he saved the life of the British Editor of this Journal by disguising him as "Mr Smith." Clinical presentations, symposia, short

* The Editor would take this opportunity of regretting that in the first British number of the Journal the name of Mr Alan S. Malkin, who was then president-elect of the British Orthopaedic Association, was not included in the list of representatives of the British and American Orthopaedic Associations who joined in the London Conference on future developments of the Journal of Bone and Joint Surgery. Having regard to the important part he played, the omission was all the more unfortunate, but we know that our respected president will forgive the oversight.

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papers, executive sessions, and banquets, will occupy every moment from early Thursday morning, June 3, until late Sunday evening, June 6. The provisional programme includes these papers and discussions:

- Subtrochanteric Leg Shortening—Lawson Thornton, Atlanta; Discussion—Walter P. Blount, Milwaukee.
- Ischio-femoral Arthrodesis—Herbert A. Brittain, Norwich; Joseph Freiberg, Cincinnati.
- Osteoid Osteoma—Malcolm Dockerty, Rochester; Discussion by Ralph Ghormley, Rochester; Campbell Thomson, New York.
- Slipping of the Upper Femoral Epiphysis—Beckett Howorth, New York; Discussion by S. Kleinberg, New York; Armin Kline, Boston.
- Changes in Elastic Adipose Tissue with Advancing Years—J. G. Kuhns, Boston; A. W. Farmer, Toronto.
- Physiological Blocking of Flail Joints—Alberto Inclan, Havana; Discussion—Fremont Chandler, Chicago.
- Fracture-dislocation of the Pelvis—Frank W. Holdsworth, Sheffield; H. Earle Conwell, Alabama.
- Developmental Coxa Vara—A. B. Le Mesurier, Toronto; Discussion by W. T. Green, Boston.
- Congenital Dislocation of the Hip Joint—J. R. Norrell, Mexico; Fred C. Durbin, Exeter; Discussion by Henry R. McCarroll, St. Louis.
- Arthrodesis of the Ankle Joint—W. Edward Gallie, Toronto.
- Oestrogens and Bone Formation in the Human Female—Mary S. Sherman, Chicago; C. Howard Fletcher, Chicago; Fuller Allbright, Boston; Arthur Ham, Toronto.
- Congenital Discoid Meniscus; Results of Meniscectomy; Knee Joint Changes after Meniscectomy—Ian S. Smillie, Edinburgh; John C. Charnley, Manchester; T. J. Fairbank, London; Joseph S. Barr, Boston.
- Presidential Address—Robert I. Harris, Toronto.
- Undergraduate Teaching in Orthopaedic Surgery—Bruce Gill, Philadelphia; George Perkins, London.
- Operative Approaches to the Shoulder Joint—Le Roy Abbott, San Francisco; George Bennett, Baltimore.
- External Fixation in Orthopaedic Surgery—J. R. Naden, Vancouver; Discussion by E. C. Janes, Hamilton; John R. Moore, Philadelphia.
- Fractures of the Shaft of the Femur—E. Harlan Wilson, Columbus; John C. Charnley, Manchester.
- Denervation of the Elbow Joint for the Relief of Pain—James E. Bateman, Toronto; J. Albert Key, St. Louis.
- Elephantiasis with Congenital Bands in Children—A. W. Farmer, Toronto; H. B. Macey, Temple, Texas.
- The paper was read by Sten Friberg, Stockholm, Sweden.

**Nuffield Fellows and Travelling Fellows in Orthopaedic Surgery**—The appointment of ten Nuffield Fellows, and two Travelling Fellows in Orthopaedic Surgery was recorded in the last issue of this Journal. Mr James Wishart, first assistant at the Robert Jones and Agnes Hunt Orthopaedic Hospital, has been appointed a third Travelling Fellow. All these surgeons are to be met on arrival in New York by the president of the American Orthopaedic Association. Thereafter they will be received in the clinics of New York, Boston, Philadelphia, Baltimore, Washington, Quebec, Montreal, Toronto, Detroit, Ann Arbor, Chicago, St Louis, and Rochester. A six weeks' tour of American and Canadian orthopaedic centres has thus been planned; travelling has been facilitated; generous hospitality has been arranged; and expenses are being defrayed by American and Canadian friends of Britain. We trust only that these young British surgeons will seal once more, in their own generation, the bonds of friendship which already exist in a former generation.

**GREAT BRITAIN**

**ORTHOPAEDIC SECTION OF THE ROYAL SOCIETY OF MEDICINE**

A well-attended meeting of the Orthopaedic Section of the Royal Society of Medicine was held in the late summer, 1947, under the presidency of Mr V. H. Ellis, at the Lord Mayor Treloar Hospital, Alton, when a clinical demonstration was arranged by the medical superintendent, Mr Stanley Evans. Cases of Britain's ischio-femoral arthrodesis were demonstrated by Mr Langston. Professor T. P. Kilner read a paper on Plastic Surgery in Relation to Orthopaedic Surgery.
Contributions of the late Sir Henry Gauvain to Orthopaedic Surgery

Sir Thomas Fairbank said that when Gauvain was appointed to take charge of the hospital in 1908 there were definite signs of a swing from the radical to the conservative treatment of non-pulmonary tuberculosis. In the same year, one of Gauvain's teachers, the late Sir Anthony Bowlby, published a paper on tuberculosis of the hip joint, based on 900 cases under twelve years of age, treated at the Alexandra Hospital. He condemned operative treatment which at that time was almost universally adopted, and showed that better results could be achieved by conservative methods. Gauvain was an enthusiastic advocate of these methods. The first of many papers was written in 1910 in collaboration with Dr Calvé, and dealt with the treatment of tuberculous abscesses by aspiration instead of incision. Many of his most valuable publications dealt with general or adjuvant treatment, in which he did pioneer work. He supported the idea that tuberculous arthritis was no more than a local manifestation of generalised infection. Heliotherapy had been adopted earlier in the century by Bernhard, and by Rollier, but quite independently Gauvain was convinced of the value of sunbathing. He often paid tribute to the value of this method of increasing the powers of resistance of the patient. He insisted on the need for graduation of exposure, and insisted that exposure in the shade was no less necessary than exposure to the sun. He stressed the value of alternation of stimuli. Sun treatment was allowed only under the supervision of a specially trained sister. He was convinced of the psychological value of this treatment.

Open-air treatment was carried out in all weathers. Believing that sea-bathing and a change of climate would benefit selected cases, he persuaded the Trustees to open a branch at Hayling Island. He found, however, that while most cases responded well, some were affected adversely, and constant care was necessary. Sea-bathing was considered valuable even for recumbent cases, but elaborate precautions were taken to avoid chill by the use of windscreen, braziers, and hot meals. With the support of the Medical Research Council, he collaborated with Sir Leonard Hill and Dr Argyll Campbell in carrying out metabolic researches which showed that exposure to air had a much greater influence than exposure to sun, and proved that the two together might increase the metabolic rate by as much as 40 per cent.

Gauvain took a leading part in the introduction of celluloid splints for the later treatment of tuberculous cases. The celluloid solution was rendered non-inflammable by mixing with calcium chloride. He was impressed by the work of Finsen, and by the use in Denmark of artificial light. He went to Copenhagen to study their methods. It was not until after the First World War that he was able to open a Light Department, fully equipped with all the latest apparatus, and with a sister in charge who had been sent to Denmark for special training.

He was a pioneer in the development of hospital schools, insisting on the importance of discipline and full occupation of the time of the patient with work and play. Occupational therapy had been a feature

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at the Treloar Hospital for many years, especially among older girls in whom it served both as diversion and as training for later employment. He also started one of the first crippled boys' colleges where they were taught to earn a living. To sum up, Gauvain took a leading part in introducing all the features which now, as a matter of course, were included in the modern country hospital.

Sir Thomas Fairbank said that in one paper, published in the Lancet, November 16, 1918, Gauvain described a method of testing for pathological activity or quiescence of arthritis in tuberculous hip disease. If the condyles of the femur were grasped by one hand, the head of the bone could be rotated in the acetabulum. When this movement was checked, further sharp rotation was followed instantly, when disease was active, by protective spasmic contraction not confined to the muscles about the joint, but extending to the abdomen where it was felt easily by the palm of the other hand placed above the pubes. Gauvain also pointed out that if disease was not quiescent this rotation of the femur with slight force was transmitted to the pelvis and the iliac spines.

"I cannot conclude these remarks" said Sir Thomas "without referring to the exceptional charm of Henry Gauvain's personality, which endeared him so much to all with whom he worked. Henry Gauvain made this hospital: he was the hospital. The happy and optimistic atmosphere that he engendered, and which was evident in every member of the staff, infected the patients and played an important part in their progress and recovery."

Orthopaedic Surgery in Rheumatoid Arthritis—Mr Alexander Law (London Hospital) on January 14, 1948, emphasised the importance of undertaking reconstructive surgery before joint destruction was complete and before serious atrophy of muscles and ligaments had developed. He described the indications for excision of the acromion process in rheumatoid arthritis of the shoulder joint; for excision of the head of the radius with synovectomy in certain cases of arthritis of the elbow; for complete arthroplasty of the elbow joint; for excision of the lower end of the ulna by which to restore radio-ulnar and wrist movement; and for arthroplasty of the hip joint by the Smith-Petersen vitallium-mould technique. He emphasized the necessity for shaping congruous joint surfaces by means of special instruments, and for creating a large acetabulum; and said that success depended not only upon careful and experienced operative technique, and an intensive post-operative regime, but upon willingness to repeat operative procedures a second or even a third time on the same joint of the same patient. There was no short cut to success. It was pointed out that a satisfactory arthroplasty of the knee joint had not yet been developed but that recent work showed promise. In the treatment of fixed kyphotic deformities of the spine, especially in spondylitis ankylopoetica, spinal osteotomy by resection of the posterior neural arch and facets was worth undertaking.

Serious Limitations and Erroneous Indications of Biopsy in the Diagnosis of Bone Tumours—

At the meeting held on January 16, Dr James Brailsford urged that punch or drill biopsy of bone tumours was unreliable, and that even open biopsy was misleading and led to serious error. He suggested that there might be radiographic evidence that biopsy caused general dissemination. Radiographic diagnosis, particularly when based on serial examinations, was considered to be much more reliable. In the course of subsequent discussion Dr Brailsford's dogmatic views were found to be generally unacceptable. Dr Frank Ellis pointed out that radiologists varied in their competence no less than pathologists. Serious misinterpretation might arise from radiographic examination just as readily as from pathological examination. He believed in fact that errors after biopsy were infrequent. Mr W. D. Collart said that diagnosis must always be based on the correlation of clinical, radiographic, and pathological evidence.

Curare (Intercostrin) in the Treatment of Acute Anterior Poliomyelitis—A film by Dr Nicholas S. Ransohoff (New York), which had been brought to this country by Sir Morton Smart, was introduced by Sir Reginald Watson-Jones at the meeting held on February 3, 1948. Dr Ransohoff accepted the evidence of Plato-Schwartz that in acute anterior poliomyelitis there was widespread muscle spasm, and believed that such spasm was responsible for dysphagia, respiratory embarrassment and early onset of deformity. By injecting curare the spasm was relieved, Sherrington's law of reciprocal innervation was re-established, and the pathological stretch reflex was obliterated. The dosage employed was 0.9 units per kilo of body-weight every eight hours for the first twenty-four hours; the dosage thereafter being increased, if there was no adverse reaction, to 1.5 units per kilo of body-weight every eight hours. Intra-muscular injection was continued until all evidence of muscle spasm had disappeared.

The essential principle of Ransohoff's treatment was not simply to give curare injections, but to make use of such injections in order to institute passive stretching, exercise, weight-bearing, and ambulation at the earliest possible moment. The exercises and movements were started within twenty-four hours of admission. At three separate intervals during the first three hours after each day-time dose of curare, every joint of the body was put through as complete a range of movement as possible. All muscles were stretched in the attempt to re-establish normal muscle length. The patient was put on his feet as early as possible, no attempt being made to avoid fatigue. Throughout the hours that joints and muscles were not being stretched the patient was made to exercise with parallel bars, specially constructed chairs, trapeze, mariner's wheels, bicycles, and every type of apparatus. The patients were always busy.
It was emphasised that no claim was made to have established a cure for anterior poliomyelitis, but that this treatment gave better results more quickly than any other method. In a series of twenty-nine patients, no fixed deformities or contractures developed. Five patients with bulbar paralysis responded in a surprising manner to adequate doses of curare, the relief being attributed to relaxation of spasm of the accessory muscles of respiration and the diaphragm. Dysphagia responded immediately.

Sir Reginald Watson-Jones (London) said that although he had introduced the film it must not be thought that he accepted Ransohoff's principles. He quoted the words of Voltaire: "I utterly disagree with what you say, but I would defend to the death your right to say it." He thought that further electromyographic investigation was needed into the question of spasm in poliomyelitis, and the extent to which spasm was an important factor calling for special treatment. Further evidence was needed before it could be accepted that treatment by the injection of curare altered the prognosis and improved the outlook. That part of the treatment which insisted upon early mobilisation and weight-bearing, passive stretching despite pain, and exercise despite fatigue, was in startling contrast to the principles advocated by Hugh Owen Thomas and Robert Jones. It might be that in the past we had emphasized too much the importance of protecting paralysed muscles. It might be that avoidable joint stiffness had sometimes been allowed to develop. It was possible that earlier mobilisation and ambulation was advisable. But he would need much more than the evidence of this film to persuade him that fatigue and exhaustion of weak and partly paralysed muscles was desirable. Still more did he feel revulsion, amounting almost to horror, when he saw painful joints and muscles being stretched and forced despite the agonised protests of the patient.

Professor H. J. Seddon (Oxford) agreed that deformity after poliomyelitis was probably due to the development of contractures rather than to muscle imbalance per se, though the latter was, of course, a source of deformity. If this notion was correct then maintenance of a full range of movement was of great importance. The treatment of poliomyelitis had been dominated in this country by the belief that paralysed or paretic skeletal muscle was in so delicate a state as to require prolonged rest. There was no longer any doubt that denervated muscle did not degenerate as did, say, a divided nerve. It merely atrophied; and putting a paralysed muscle through its full range was no more harmful than stretching a normal muscle, though maintenance of a muscle in an over-stretched position was clearly harmful whether the muscle was denervated or not.

If it was accepted that preservation of mobility was necessary, we were faced with the difficulty of how to achieve it despite limitation by pain. Dr Ransohoff believed that pain was due to muscle spasm and that if spasm could be abolished the pain would also be relieved. But there was no clear evidence that a motor neurone disturbance causing muscle spasm also caused pain. In spastic paralysis painful limitation of movement did not occur except in late neglected cases where contractures had been allowed to develop. It was much more likely that pain was the cause of spasm. Unfortunately, we knew very little about the cause of painful phenomena in poliomyelitis, except that extensive changes in the posterior root ganglia had been found with some frequency in fatal cases as well as in experimental disease. Muscle spasm, though by no means a constant feature of the disease, was very real and could be demonstrated electromyographically; it might be independent of the pain or it might be caused by it. In either case it was difficult to see how curare, acting on the motor end-plates, could relieve it. Did it, in fact, do so?

Professor Seddon said that the cases he had seen in Dr Ransohoff's clinic in New Jersey had impressed him most favourably, but it so happened that at that time all were past the acute phase of the disease and none was receiving curare. He had been told by other surgeons who had seen manipulations after the administration of curare that patients suffered very considerable pain. The agonised expressions shown in this film were disturbing. He could not help questioning the efficacy of the drug as a remedy for painful limitation of movement in poliomyelitis, and believed that the treatment derived its success more from the determination of physiotherapists than from the action of the drug.

There was now little doubt that in poliomyelitis there was disorder of reciprocal innervation; the electromyographic evidence was convincing. Unfortunately, in this country, we had not been able to assemble the apparatus in time to make observations during the recent epidemic. Dr Ransohoff claimed that curare restored the normal reciprocal activity of antagonistic muscles, but unless the drug had some fairly powerful central action it was impossible to see how it could act in this way.

Dr Ransohoff's second argument was that patients should be got out of bed as early as possible; if they were bedridden for many months they forgot how to walk. At Oxford, during the recent epidemic, patients had been allowed up much earlier than had formerly been considered safe, but with nothing like the rapidity favoured by Dr Ransohoff. In every case a careful watch had been kept for deterioration in muscle power. Slight decrease in power had sometimes been observed in such muscles as the abductors of the hip. Yet in these cases slackening of the pace arrested the deterioration, and in almost all cases there had been gradual increase in power whether weight-bearing was allowed or not. This was hardly the occasion for discussing the rather complicated phenomena of recovery from paralysis in poliomyelitis.
but he thought that Dr Ransohoff's arguments in favour of early ambulation were much nearer the mark than the slavish enforcement of bed-rest that most of us had practised.

Dr Ransohoff's last point, that very early active exercises should be instituted, was altogether unsound. If recent experience in the treatment of meningitis was any guide, then the presence of protein in the cerebro-spinal fluid was an indication of persistence of active inflammatory changes in the cord and meninges. In poliomyelitis, protein might be found as late as eight weeks after the onset of the disease, and it hardly seemed rational to encourage activity in the anterior horn cells until after the acute process had subsided.

Clinical Meeting, Section of Orthopaedics, March 1948—Mr Nissen showed a case of congenital bowing of the tibia in which pathological fracture had been treated successfully by massive posterior bone grafting. Mr T. H. Meyer showed a most successful arthroplasty of the knee joint in a woman aged fifty-five years with active rheumatoid arthritis whose other knee had beenarthrodesed. No tissue had been interposed between the bone ends. Care had been taken to remove the back of the femoral condyles. The result showed unusually good stability, and a range of movement from full extension to right-angled flexion. Mr H. L. C. Wood showed a case of idiopathic hypertrophy of the mandible. Mr George Bonney reported the result of treatment by immobilisation in plaster of Sinding-Larsen-Johansson disease of the patellar apices. One knee was immobilised and on that side the discrete fragments had fused and the symptoms were relieved. In the other knee was left free; symptoms persisted and radiographs showed that the discrete ossicles had not fused with the main centre of ossification. A number of cases of neoplasm of bone were shown including a reticular-celled sarcoma of the humerus by Mr W. D. Coltart for which local excision was advised; a synovia of the ankle joint by Mr Kessel; and various obscure tumours by Mr Hywel-Davies and Mr Robb.

Rupture of Intervertebral Discs in the Cervical Region

In the Section of Neurology of the Royal Society of Medicine, on March 4, 1948, Dr Russell Brain opened a discussion on rupture of the cervical intervertebral discs. He outlined all the causes of nerve root irritation due to lesions of the spinal intervertebral joints, and reviewed ten proved cases of cervical disc retropulsion.

Pathological Features—The frequency of retropulsion of a disc was greater in the cervical and lumbar regions than in the dorsal region by reason of the mobility, lordosis, and exposure to trauma. The earliest resulting changes were vascular in origin—the veins being affected first. The problem in the cervical spine differed from that in the lumbar spine not only because cervical roots were shorter, but because there might be involvement of the spinal cord as well as of nerve roots. Ten of Dr Brain's cases of ruptured cervical intervertebral discs had been verified at operation—nine by Mr Northfield and one by Sir Hugh Cairns: two had root signs alone; eight showed evidence of pressure on the spinal cord. Only in two patients had injury been a possible factor; one other occurred during pregnancy; and seven were associated with cervical osteoarthritis. In the traumatic group, congenital weakness of the disc might be a factor; one patient had previously suffered from sciatica. The group of cases with osteoarthritis were older; in these patients compression might arise partly or wholly from bone. The level involved was C.3-4 in one, C.4-5 in two, C.5-6 in six, and C.6-7 in one.

Clinical Types—Four clinical types could be distinguished: 1) acute onset of severe pain with root signs; 2) insidious onset of severe pain, sometimes intermittent, with root signs; 3) insidious onset with root and cord signs; 4) insidious onset with cord signs alone. Root pain was shooting or gnawing in character, aggravated by movement of the neck and upper limbs, and by coughing. There might be numbness or tingling in the corresponding dermatome. Sensory loss was patchy and limited in area. Reflexes might be diminished or lost. Fasciculation of muscles might be seen, but weakness and wasting were uncommon. Four patients showed the Brown-Séquard phenomenon, and in four there was bilateral cord pressure with greatest involvement of the pyramidal tracts and little involvement of the sensory tracts. There was abnormality of the cerebro-spinal fluid in seven of the eight cases, and myelography showed a filling defect in every case in which it was carried out.

Treatment—The essential treatment was immobilisation in bed with or without skull traction, or the use of a plaster or leather cervical collar. Operation should be reserved for cases with much wasting or with evidence of cord compression.

Review of thirty-seven cases—Mr G. C. Knight pointed out that pain seldom reached the distal limit of a dermatome. It might be referred over the front of the chest to the precordial area. Compression of the seventh cervical root caused severe precordial pain which was sometimes mistaken for cardiac angina. Pain was usually provoked by homolateral flexion of the neck, sometimes by extension, and not always by vertical compression. Electromyography might be useful in diagnosis. "The best treatment is a long waiting list," said Mr Knight. Manipulation was dangerous. Rest was advisable in the position of
greatest comfort—usually hetero-lateral flexion. Operation was indicated only when conservative treatment failed. If the nerve root only was involved, hemilaminectomy gave sufficient exposure; but if there was evidence of cord pressure, laminectomy and a transdural approach was advisable. Mid-line protrusions should not, if possible, be operated upon. He had records of thirty-seven patients, twenty-nine with root symptoms and signs, four with evidence of pressure on half the cord, and four with mid-line protrusions affecting both sides of the cord.

**Review of forty-six cases—Dr Aldren Turner** had studied forty-six cases, forty-five of which had been followed until all pain was relieved. He relied on bed-rest with the head supported with pillows. Relief came within three weeks. Paraesthesia lasted longer than pain. He stressed the importance in diagnosis of dysaesthesia of the index finger, pain on cervical movement, and signs of involvement of the seventh cervical root.

**Anatomical Studies—Mr John E. O'Connell and Dr H. Coombs** reported an anatomical study which showed that the lumbar intervertebral discs were twenty to twenty-five times as heavy as the cervical discs. He distinguished four clinical types of cervical disc lesion: 1) cervical and brachial pain, with symptoms and signs in the distribution of one cervical root, and with a good prognosis; 2) cord compression often coming on suddenly after vague cervical pain; 3) severe tetraplegia from compression of the cord after trauma; 4) cervical stiffness after injury with signs resembling those of amyotrophic lateral sclerosis.

**Radiographic Studies—Dr J. W. Bull** mentioned two anatomical characteristics of the cervical spine: 1) the relative smallness of the intervertebral discs; and 2) the presence of neuro-central joints. The joints between the skull and atlas, and between the atlas and axis, lay in front of the emerging nerve roots. The homologues of these joints in the rest of the cervical spine were the neuro-central joints which also lay in front, and the ordinary lateral joint between neural arches behind. The importance of directing the rays slightly upwards in taking antero-posterior radiographs of the cervical intervertebral spaces was emphasized. Oblique projections were necessary to visualise the lateral joints.

**ROYAL COLLEGE OF SURGEONS OF ENGLAND**

**Elections ad eundem of Professor T. P. McMurray and Mr S. Alan S. Malkin**—Mr T. P. McMurray, who recently retired from the chair of orthopaedic surgery in the University of Liverpool, and Mr S. Alan S. Malkin of Nottingham, president of the British Orthopaedic Association, both Fellows of the Royal College of Surgeons of Edinburgh, have been elected ad eundem to the Fellowship of the Royal College of Surgeons of England.

**Lectures in the Royal College of Surgeons**—Throughout April, May and June 1948, Lectures on Anatomy, Applied Physiology, and Pathology will be given daily in the College. On June 14, Mr Eric Lloyd will lecture on Fractures in Childhood, and on June 15, Sir Thomas Fairbank will lecture on Abnormalities of the Skeleton. The statutory and other lectures given during February and March included:

| February 6 | Repair of Tendon Injuries in the Hand—Hunterian Lecture—Professor R. G. Pulvertaft. |
| 6 | Reactions of Bone to Injury—Professor S. L. Baker. |
| 12 | Bone, Cartilage, and Fascia Transplants—Mr Rainsford Mowlem. |
| 14 | Skin Flaps—Indications and Technique—Sir Harold Gillies. |
| 17 | Treatment of Skeletal Tuberculosis—Hunterian Lecture—Professor M. C. Wilkinson. |
| 18 | Free Skin Grafting—Methods and Application—Mr A. B. Wallace. |
| 18 | Penicillin—Sir Alexander Fleming. |
| 20 | Burns and their Early Treatment—Mr R. P. Osborne. |
| 25 | Hand Injuries—Mr J. N. Barron. |
| 25 | Actinomycosis—Mr Zachary Cope. |
| 26 | Hand Deformities—Mr J. B. Cuthbert. |

**March 10** | Manifestations of Boeck's Sarcoid—Erasmus Wilson Demonstration—Mr R. W. Raven. |
| 12 | Recent Advances in the Treatment of Arm Amputations, Cineplastic Surgery, and Arm Prosthesis—Arris and Gale Lecture—Mr Leon Gillies. |
| 15 | Acute Uraemia—Arris and Gale Lecture—Dr E. M. Darmady. |
| 24 | The Pectoral Girdle—Arnott Demonstration—Mr R. J. Last. |
| 25 | The Knee Joint—Arnott Demonstration—Mr R. J. Last. |

**Flexor and Extensor Retinacula of the Wrist and Ankle**—In a Hunterian Lecture, Mr H. F. Lunn said that the difference in function of the flexor and extensor retinacula depended on the fact that the flexor tendons, when in action, thrust against the underlying bone, whereas the extensor tendons thrust against the overlying retinacula. Consequently surgical division of the extensor retinacula might be expected to weaken the extensor power of ankle and wrist. The length of synovial sheath of a tendon...
depended on a number of factors, of which the most important was change in the direction of the tendon. Hence the longest sheaths in the hand were those for the tendons of the most divergent digits. Another factor was the crossing of one tendon by another—for example the long sheath of the extensor pollicis brevis which was crossed by the flexor digitorum longus, and of the extensors carpi radialis which lay beneath the abductor pollicis longus and extensor pollicis brevis. Beneath the retinacula, the mesotendon with its contained blood-vessels was attached to that surface of the tendon least subjected to friction. Hence at the wrist the mesotendon was attached to the ulnar surface of the flexor pollicis longus tendon, but to the radial side of the flexor tendons of the fingers. The lecture was illustrated from dissections in the Anatomical Museum of the College some of which had been beautifully prepared by Dr D. H. Tompsett.

**THE HUNTERIAN SOCIETY**

It is customary for the Hunterian Society to celebrate each year, within the boundaries of the City of London, the day of birth of John Hunter—February 13 or possibly February 14. This year, austerity conditions made it necessary to substitute for the usual dinner a simple evening reception which was held in the West End, within a few hundred yards of St George's Hospital. Mr Roche, president of the Society, in receiving the guests and proposing the traditional toast, said that "if Hunter had lived to-day he would probably not have been born at all. He was the youngest of ten children and in these days families of ten are hard to find." Mr Roche wondered what might have been the reactions of John Hunter in attending a cocktail party in his honour 150 years after his death. Despite the temperance of his later years he might well have applied one of his favourite expressions, "Don't think; try it." In honour of the celebration, the Society displayed its treasures including Hunter's manuscripts, his walking stick (the handle of which was lost in the London blitz), his watches, balances, silver-rimmed spectacles, brass dispensing instruments, and the large repeater watch which was presented to him by the staff of St George's before the quarrels, and before the stage when his life was "held in the balance by any who cared to anger him."

An account of the influence of John Hunter on the development of orthopaedic surgery is included in the Historical Reviews of this number of the Journal, but it is impossible within the compass of a few pages to include all the dramatic features of the life of this great man. Why was his marriage delayed? Was it no more than a financial problem, or was it in consequence of his experimental auto-innocation with the gonococcus—a study complicated by unexpected infection with the spirochaetes of syphilis? What was his relationship with his brother, William Hunter? Was it represented accurately by the letter in which he wrote: "Dear Brother, to-morrow morning at eight o'clock and at St James' Church I enter into the Holy State of Matrimony. As that is a ceremony which you are not particularly fond of, I will not make a point of having your company there"? What was the attitude of his wife—"a lady noted for her beauty, wit and accomplishment—a social figure in the world of art" when her husband, at his own expense, sent a young man to Greenland to bring back a whale, and continued to add to his ever-growing collection so that "the family were literally forced into the street"? What was the reason for the burning of Hunter's manuscripts after his death by his brother-in-law, Everard Home? Was it strictly in accord with Hunter's last instructions, or was it the result of piety, jealousy, or plagiarism? The reader is referred to the vast volume of accumulated literature which breathes through every page the spirit of an individualist and a great pioneer.

**DESTRUCTION BY FIRE OF THE ROBERT JONES AND AGNES HUNT ORTHOPAEDIC HOSPITAL, OWSESTERY, SHROPSHIRE**

In the last number of this Journal, almost at the moment of publication, certain pages were put through the press a second time in order to include a stop-press account of the disastrous fire which destroyed the greater part of the Robert Jones and Agnes Hunt Orthopaedic Hospital on Tuesday, January 27, 1948. On a dark and raining night a fire started in the Dispensary. There was a west wind, and the flames spread with alarming rapidity along the communicating corridor, destroying every open-air ward in turn. Six hundred patients, most of them immobilised in splints, frames, and plasters, were pushed to positions of safety and protected, so far as was possible by coats and mackintoshes, from the deluge of rain. All six hundred beds and trolleys were lifted by hand over water hoses, debris, and other obstacles, and pushed one mile along the main road by nurses and sisters who proved expert in their unaccustomed task. There was no single casualty. The greatest personal disaster was that the dentures of two patients were interchanged, thus leading to much confusion! Fire brigades, assembling from many quarters, found it impossible to control so widespread a series of fires. In the face of the wind the last of the scattered but intercommunicating buildings was destroyed. At about this moment the wind veered round into precisely the opposite direction. Thereupon the fire spread eastward along the main corridor and threatened the remaining wards, the operating theatres, radiographic department, and nurses' home. To the credit of the resident medical staff, which includes surgeons not only from England and Wales but from Australia, Canada, and the United States, a new form of manipulative technique was
applied. A ten-yard gap was torn in the structure of the main corridor. Slates, felts, and beams were avulsed by hand in the face of advancing flames. Spread of the fire was arrested. No operation was ever more successful. In consequence of their efforts enough was saved to restore the functions of this great hospital within five days. It is true that the number of beds was reduced. It is true that for a long period there was no hot water and no light. But routine duties were restored; operations continued; surgeons scrubbed up in cold water; patients were fed—not from the dietetic department which exists no longer but from army tent kitchens set up in neighbouring fields. The destroyed sites are cleared already. A rebuilding committee started work the next day. The shape of new wards, physiotherapy department, administrative block, and concert hall can now be determined. No thought of an Appeal Fund was entertained but within twenty-four hours the flow of bank-notes, cheques, postal orders, and other donations from former patients and supporters, ranging from many hundred pounds to one or two shillings, was so great that a rebuilding account has been opened by John Menzies, Secretary-Superintendent of the hospital. The only comment made by Dame Agnes Hunt, who at the time was a patient herself, was: "I never wanted too big a hospital." Her spirit and the spirit of Robert Jones survives; indeed it has gained new impetus.
Redevelopment of Muscle Function

Mr Nicoll (Mansfield) introducing a discussion on the redevelopment of muscle function after injury said that there were four important properties of muscle, each of which had particular significance: 
1) power of contraction; 2) velocity or speed of contraction; 3) co-ordination; 4) endurance.

1. Muscle power—This was defined as the equivalent of horse-power in an engine, or what was popularly known as strength. It was measurable and always diminished during immobilisation in plaster whether the muscle was damaged or not, and whether exercises in plaster were carried out or not. Exercises certainly minimised falling off in muscle power, but they never abolished it. There were certain physiological facts which had a bearing on treatment. A muscle graduated its power output according to the load. According to Sherrington's law of muscle action, each individual unit contracted to its fullest extent, or not at all, and therefore the process of adapting power-output to load could be achieved only by varying the number of contractile units brought into play at any given moment. The accurate method of measuring muscle power was to measure the maximum load against which the muscle was capable of working. Another physiological fact of importance was that the efficiency of a muscle fibre varied with the extent to which it was stretched, so that it became mechanically less efficient as it shortened. This had a bearing on the technique of resisted exercises.

Most Rehabilitation Centres now employed resisted exercises in order to build up muscle power. There had been criticism of this technique, so that it was appropriate to review the principles on which it was based. In the first place there was the analogy with unstriped muscle which always hypertrophied, providing that the resistance against which it worked was increased gradually. In prostatic obstruction, chronic intestinal obstruction, and high blood-pressure, enormous hypertrophy occurred in the bladder, bowel, and left ventricle respectively. The two factors concerned were the gradual nature of the obstruction, and the fact that the muscle was endeavouring to overcome it almost continuously. On the other hand, if obstruction was acute, then instead of hypertrophy there was passive stretching with atrophy. Secondly, there were the well-known occupational examples of dock-porters developing enormous shoulder muscles, and footballers developing hypertrophy of the quadriceps and calf muscles. In other words, muscle hypertrophy was a response to unusual demands over a long period. In America they had carried resistance exercises a stage further and now preached that high resistance exercises develop true power whereas low resistance exercises develop the property of endurance, which was quite a different thing.

He claimed that there were sound reasons for the adoption of graduated resistance exercises in building up both power and endurance in muscles. When these exercises had caused ill-effects it was not because the principle was wrong, but because the technique had been faulty. Because morphine in excessive doses killed people, or even in normal doses occasionally killed very feeble people, there was no reason for prohibiting the use of morphine in medicine. The apparatus originally developed at the Miners' Rehabilitation Centre at Berry Hill for graduated resistance exercises was cumbersome and mechanically inefficient. A new type of apparatus had now been developed at the Oakmere Hall Miners' Rehabilitation Centre which was better in all respects.

2. Velocity or speed of contraction—This was a property of muscle, partly inherent, and partly acquired by training. The highest speeds of contraction were observed in insects; the wings of certain insects moving so rapidly that they created sound waves. Although the muscles of human beings operated at a much slower speed, much improvement could be achieved by training. The virtuoso pianist was at least two species removed from the rest of us (including the virtuoso surgeon) in this matter of speed. Mr Nicoll was ignorant of the physiological basis of this property, but presumed that it had something to do with the speed of nerve impulse and possibly with lowered resistance at synapses through which it passed. It was certainly amenable to training, the mechanism of which, like memory, would seem to be related to facilitation at the synapses. The importance of this property, apart from enabling people like Horowitz to play piano concertos, was that it was the basis of agility, which was important to miners who had to be prepared to move quickly in certain circumstances. Agility, together with co-ordination, was the basis of dexterity and "timing" which was just as important in work as in sport. Finally, the speed at which a muscle like the vastus internus could be brought into play by reflex action was important. If the medial collateral ligament was stretched, and the stretch reflex travelled quickly, the protective action of the muscle was exerted before any damage was done and this was often a matter of split seconds. It was, therefore, an important property to redevelop in muscles, particularly those like the vastus internus which maintained protective action on a joint. It was a property that had to be redeveloped by training.

3. Co-ordination—The perfect example of co-ordination was in the ballet dancer. Its physiological basis was related to the synergic and antagonistic action of a muscle, as opposed to its function as a prime mover. It was therefore dependent on preserving the sensory mechanisms in muscles and ligaments, and keeping these mechanisms in training by synergic exercises during immobilisation in plaster. The importance
of co-ordination was that it played a great part in what was known as "timing." The skilful miner, by proper timing, could load a ton of coal on to the conveyor belt with a minimum output of energy, just as the expert golfer could drive a golf ball 350 yards down the middle of the fairway with no apparent effort. Like velocity of contraction, this property of co-ordination was responsive to training, and like all such human properties it disappeared rapidly when it fell into disuse. Exercises in plaster were, therefore, of paramount importance as were general exercises for the recumbent patient. These kept the proprioceptive mechanisms and all the complicated reflexes in training.

4. Endurance—Physical endurance was defined as the ability of muscles and tendons to go on working at high efficiency over a prolonged period. It was another quality fast disappearing in the human race. People who complained, usually from armchairs, that the miners of to-day could not work half as hard as their grandfathers, were apt to forget that grandfathers were not half the men great-great-grandfathers were. In fact, we were approaching that stage of human evolution depicted by H. G. Wells' "Man in the Moon" who was capable only of sitting in a chair while his enormous head was sprayed with water to keep his brain cool. Two thousand four hundred and thirty-seven years ago, a Greek soldier named Pheidippides, hearing that his country was about to be invaded by the Persians, travelled for two days and two nights, climbing mountains and swimming rivers, to seek aid from the Spartans. His mission having failed, he returned to fight throughout the day in the great Battle of Marathon, in which the Greeks were victorious. He then ran 26 miles 385 yards to Athens, and having delivered the great news to the city elders, dropped dead at their feet. Such feats of endurance are beyond human compass to-day, though there are authenticated examples within recent memory of native runners covering a distance equal to that from London to Manchester in forty-eight hours. The running footmen of the Middle Ages, who ran ahead of their lords to arrange board and lodging (an occupation that might well be revived to-day), also performed prodigious feats of endurance.

Endurance was quite separate from power, which depended on the actual number of functioning contractile units in the muscle—in other words, bulk. Endurance, on the other hand, was often associated with lean spare types like Sydney Wooderson, and it was physiologically an expression of respiratory and circulatory efficiency in muscle—the ability to get rid of waste products fast enough to prevent the onset of fatigue. It was not power, mobility, or even residual deformity that prevented spinal cases from going back to full work—it was the fact that they could only work at normal pace for four hours instead of eight hours; so it was worth while trying to find out how to restore this vital property of endurance.

Mr Nicoll had visited France last year to study methods of rehabilitating injured miners. Next time it might be more profitable to study how they trained racehorses! Whatever the secret, it seemed obvious that the orthopaedic surgeon who was bent on improving the respiratory efficiency of muscles should not lose sight of the fact that there was also a central respiratory mechanism. Breathing exercises should form part of the treatment of every case. The "high repetition, low resistance" technique of the Americans was worthy of trial, but it was far from proved.

Mr A. O. Parker said that muscles varied considerably in their response. His experience in poliomyelitis had been that only certain muscles were favourable for transplantation operations; others gave disappointing results however hard one tried. He had noticed surprising hypertrophy in the shoulder and arm muscles of patients compelled to become dependent on crutches—and this was particularly so in children. Hypertrophy in response to extra demand was, in fact, almost constant in the growing muscle but he wondered if the same applied to adults.

Mr C. H. Cullen referred to the fact that some muscles wasted much too quickly for it to be a simple phenomenon of disuse. In injuries of the medial collateral ligament of the knee, for example, wasting of vastus internus was very rapid indeed and it was a matter of urgency to get back the use of the muscle quickly. He agreed that much could be achieved by training and concentration in the matter of individual muscle development. One of his staff was an expert in muscle control and would demonstrate later. He stressed the importance of not overloading the muscle in resistance exercises and referred to Professor Le Gros Clark's findings that if only the muscle sheath and a few nuclei were left the muscle fibre could regenerate.

Mr Leslie Morris doubted if resistance exercises were necessary. He operated on many professional footballers suffering from cartilage lesions and his usual procedure was to put them back in the second team after five weeks. He never prescribed resisted exercises but his patients seemed to get fit and usually played first-class football within three months.

Sir Thomas Fairbairn referred to the time-honoured use of massage and heat before and after exercise periods in those patients who developed pain due to early fatigue. These agents stimulated intra-muscular circulation and lymph flow.

Mr F. G. St Clair Strange said that under normal conditions there must be some mechanism for inhibiting the full output of muscle power. This restraining mechanism was released in conditions like acute mania.
in which normally weak and puny people suddenly became possessed of superhuman strength. He had seen the same thing happen during an experiment on hypnotism at which he had been present. Mr E. A. Nicoll, in reply, said that hypertrophy in response to extra demand was commonly observed in adults as well as children. This was particularly borne out in paraplegics, and one had only to visit Stoke Mandeville to be convinced of it. In reply to Mr Morris, he agreed that some patients got fit if they were left to their own devices, but only if they were normally active and determined types. In such cases, analysis of progressive activities revealed that they were, in fact, subjecting muscles to progressive resistance, though without special apparatus. The principle was unaffected, and what the surgeon had to do was to apply the principle scientifically and methodically so that apathetic types would get better as well as others. He agreed with Sir Thomas Fairbank's views on massage and heat therapy. These agents acted by stimulating the circulatory mechanism in muscle, and it was reasonable to suppose that this mechanism improved by being exercised just as did the muscle itself.

Demonstration—The discussion was followed by a practical demonstration of resisted exercise technique in which the special apparatus developed at Oakmere Hall was demonstrated. Mr James Evans, of the remedial staff, concluded by giving an exhibition of muscle work in which he demonstrated power (weight-lifting), individual muscle control, balancing, and co-ordination. This exhibition was conducted with flawless technique and a fine sense of showmanship and was much appreciated by the audience.

SOUTH-WEST ORTHOPAEDIC CLUB

The first regional meeting of orthopaedic surgeons working in the South-West of England was held at Mount Gold Hospital, Plymouth, on March 6, 1948, with Mr Charles Kennedy of Plymouth in the chair. At a preliminary business meeting it was decided to adopt the name "South-West Orthopaedic Club" in order to indicate the friendly and informal atmosphere which it was hoped would be the keynote of the meetings. Mr F. C. Durbin of Exeter was elected honorary secretary. Four short papers were read.

Recent Developments in the Treatment of Rheumatoid Arthritis—Mr John Bastow (Bath) summarised recent important advances, and emphasised the value of biopsy both in diagnosing true rheumatoid arthritis, and in estimating the degree of muscle atrophy before arthroplasty or other operative procedures were contemplated. He said that calcium-gold salts were often used and that the danger of unpleasant reactions was minimised by "anti-lewistite." The transfusion of blood of pregnant women appeared to be of some assistance but there was difficulty in obtaining it. Joint lavage helped by clearing out fibrous debris.

Arthrography in Congenital Dislocation of the Hip Joint—Mr F. C. Durbin (Exeter) recalled the distinction drawn by Jacques Leveul between true congenital dislocation, and primary subluxation of the hip joint. Mr Durbin showed arthograms demonstrating this difference, and showed slides illustrating the late subluxation to be expected in primary subluxations if a shelf operation was not performed.

Arthrography as a Diagnostic Aid in Knee Conditions—Mr A. E. Jowett (Taunton) used a radio-opaque substance, "pylumbrin." He injected 10 c.c.s. of 35 per cent. solution into the knee joint to demonstrate the shape and form of the synovial cavity in various disorders. A very interesting series of slides was shown. Pylumbrin was quickly absorbed from the knee joint; most of it disappeared within thirty minutes of injection and it caused little or no reaction.

Results of Intra-articular Injection of Lactic Acid for Osteoarthritis—Mr H. Salz (Plymouth) reviewed the results of lactic acid injection in a small series of sixteen cases. In gross osteoarthritis it did not appear to be of much benefit. In the knee joint, when changes were not advanced, good results were obtained. Maximum benefit was usually produced by the second injection. Sometimes circulatory collapse as well as severe pain followed an injection into the hip joint.

Clinical Demonstration—Clinical cases were demonstrated at Mount Gold Hospital by Mr Lillie and the resident medical officers.

JOINT MEETING OF LIVERPOOL MEDICAL INSTITUTION AND MANCHESTER MEDICAL SOCIETY, MARCH 4, 1948

The Backache-Sciatica Syndrome and the Intervertebral Disc—Sir Harry Platt recalled Goldthwait's original case, operated on by Harvey Cushing, and said that Goldthwait's first conception of rupture of the annulus fibrosus leading to posterior protrusion of the disc substance with pressure symptoms still held good. A warm tribute was paid to the pioneer work of the Boston Medical School, especially of Mixter and Barr, whose original paper had become classical. He did not consider that spinal fusion as well as removal of the disc was necessary, provided that there was not a long history of backache extending over many years, and that the occupation of the patient was not arduous. Prolapsed disc was the commonest intra-spinal cause of sciatica, but he deplored the tendency to believe that all sciatica was due to prolapse.
of a disc, the clinical picture of which was characteristic and unmistakable. Professor Geoffrey Jefferson said that neuritis could not be dismissed as non-existent, and might be the cause of a single attack of sciatica; approximately one-third of these cases cleared up completely with conservative treatment. He discussed the question as to whether a normal disc prolapsed as the result of trauma, or whether trivial injury caused prolapse of a disc already softened by disease. The disc could be displaced laterally and anteriorly as well as posteriorly into the spinal canal and it was necessary to be sure that there was not impingement of part of the disc on the nerve root in the foramen. The results of operation were most satisfactory, over 80 per cent. of his patients subsequently being able to do a full day's work. Professor T. P. McMurray urged caution in arriving at assessment of the final value of removing herniated discs. Mr A. Sutcliffe Kerr supported hemilaminectomy as the method of choice. Mr Bryan McFarland declared that many patients with "disc syndromes" were cured by complete rest followed by a suspension plaster. Mr Charnley warmly supported radical measures. Dr Smiley advised full investigation and preliminary conservative treatment before operation. Dr Lennox Johnston recorded a personal experience of cure by manipulation. Mr Sayle Creer advised operation.

HUDDERSFIELD MEDICAL SOCIETY

The Huddersfield Medical Society is one of the oldest medical societies in England. It has been continuously in session, and in the winter months has held regular meetings, every year since 1813. On February 11, 1948, Mr Bryan McFarland (Liverpool) showed cinematographic records of interesting and unusual orthopaedic cases. Lively discussion followed on the problems of lipodystrophy, Legg-Perthes' disease of the hip joint, congenital club foot, and the treatment of destructive gap fractures of long bones.

BRITISH MEDICAL ASSOCIATION—116th ANNUAL MEETING, JUNE 1948

The 116th annual representative meeting of the British Medical Association will be held in Cambridge from June 25 to July 2, 1948. The orthopaedic section will meet under the presidency of Professor T. P. McMurray (Liverpool). The vice-presidents will be Mr N. Ross Smith (Bournemouth), Mr R. W. Butler (Cambridge), and Mr H. A. Brittain (Norwich); the honorary secretaries are Mr Bourdillon of Addenbrokes Hospital, Cambridge, and Mr H. Langston of Gifford House, St Giles Hill, Winchester. The programme will include a discussion on the clinical significance and treatment of lesions of the intervertebral discs, opened by Professor Geoffrey Jefferson (Manchester) and Mr Norman Capener (Exeter); a discussion on the operative treatment of fractures; and papers on the injection treatment of osteoarthritis by Mr Grant Waugh (Sunderland), and on the treatment of osteomyelitis.

Discussions and papers in other sections will include: Recent work on Proteins by Professor A. C. Chibnall, Dr J. A. V. Butler, Dr Leonard Colebrook, and Professor G. Pickering; Plasma and Blood Derivatives in the Treatment of Burns by Professor E. C. Dodds; Physiological Basis of Neuromuscular Disorders by Sir Henry Dale and Dr W. S. Feldberg; Acetylcholine and Neuromuscular Transmission by Dr Bernard Katky; Excitation at the Myoneural Junction by Dr Andrew Wilson; and Poliomyelitis by Dr W. Gunn and Dr F. W. Bunting.

INTERNATIONAL CONGRESS ON INDUSTRIAL MEDICINE,
LONDON, SEPTEMBER 1948

The ninth International Congress on Industrial Medicine will be held at Caxton Hall, London, from September 13 to 17, 1948, under the patronage of Their Majesties the King and Queen. The vice-presidents include the Right Honourable Mr Ernest Bevin (Secretary of State for Foreign Affairs), Mr Isaacs (Minister of Labour), Mr Aneurin Bevan (Minister of Health), Mr James Griffiths (Minister of National Insurance), Mr Strauss (Minister of Supply), and Mr Gaitskill (Minister of Fuel and Power). The presidents of the Royal College of Physicians and the Royal College of Surgeons will serve as presidents of the Congress. The chairman of the Planning Committee is Dr Donald Hunter (London Hospital) and the chairman of the British Organising Council is Mr T. E. Stowell (London). The discussions will include biological, psychological, physical, chemical, and architectural aspects of environment in industry; organisation of industrial medical services; surgical aspects of industrial medicine; chemical and thermal burns; medicolegal aspects of industrial hazards; and rehabilitation after industrial injury. The MacKenzie Industrial Health Lecture will be given by Mr H. E. Griffiths on Rehabilitation in Industry. Visits will be arranged to the London Hospital, Industrial Health Exhibition of the Royal College of Nursing, Queen Elizabeth's Training College for the Disabled, Rolley Park Rehabilitation Centre, Ministry of Labour Rehabilitation Centre, Egham, Birmingham Accident Hospital, Austin Motors Rehabilitation Centre, Mersey Docks and Harbour Board Medical Centre, Liverpool. Arrangements can be made with Miss Mawdesley, Organising Secretary, B.M.A. House, Tavistock Square, London, W.C. 1.
AN ARTIST'S VIEW OF THE ORTHOPAEDIC SURGEON'S THEATRE

An exhibition of drawings by the well-known sculptor, Barbara Hepworth, which was of particular appeal to orthopaedic surgeons, was held last month at the Lefevre Galleries in London. In former days many of the old masters found interest in the work of medical men. A well-known example is Rembrandt’s "The Anatomy Lesson." Most surgeons are familiar with the work of medical artists who brave the rigors of the operating theatre to record or illustrate pathological detail and operative technique. In Barbara Hepworth we have an artist of a different type with both stamina and vision, who sought to appraise, not technical detail, but the sincerity, harmony, rhythm, tenderness, and simple drama of the operating theatre. Little, perhaps, do surgeons realise the classic beauty of their surroundings—a beauty based upon perfect architectural conditions designed for a purpose, and a grouping which appeals to the sculptor because of the associated movement of individuals and objects, with perfect co-ordination, towards one
purpose within a central stage. These drawings seem to reveal the spirit of surgery—the spirit of inquiry, intensity of proper solicitude, power of the craftsman, unhurried activity, and energetic poise. For the layman the artist has distilled out of the picture the sentimental and the morbid. In these drawings there is no individual portrayal, but there is an uncanny sense of the unseen; indeed the sense of the good surgeon himself—always conscious of the unseen "person" beneath his hands and never callous of his "material." Surgeons may or may not feel flattered by these drawings, but they cannot fail to be impressed with their beauty and by the sincerity of the artist.

N. C.

EPIRME RHEUMATISM COUNCIL

The spring week-end course of the Empire Rheumatism Council was held in Apothecaries' Hall, Blackfriars Lane, London, in March 1948. Lectures were given by Dr Kersley on Gout, Dr Fletcher on Osteoarthritis, Dr Tegner on Spondylitis, Dr Bonham-Carter on Still's Disease, Dr Copeman on Sciatica, Dr Savage on Rheumatoid Arthritis, and Mr W. D. Coltart on Orthopaedic Aspects of Rheumatic Diseases.

NORTHERN IRELAND

THE NORTHERN IRELAND ORTHOPAEDIC SCHEME

It was an historic day for Northern Ireland in 1940 when Sir David Lindsay Keir, Vice-Chancellor of Queen's University, Belfast, called a meeting of representatives of the hospitals and other statutory and voluntary bodies throughout the six counties. The Northern Ireland Council for Orthopaedic Development was established, under the presidency of the Duchess of Abercorn, with the object of developing an orthopaedic scheme for the Province. Sir David, who was elected Chairman of the Council, carried out the wishes of Trustees of the Nuffield Fund for Cripples, who in 1937 had set apart £26,000 for the development of orthopaedics in Northern Ireland, and the Central Council for the Care of Cripples which acted in advisory capacity.

Northern Ireland, comprising the counties of Antrim, Armagh, Down, Fermanagh, Londonderry and Tyrone, with the County Boroughs of Belfast and Londonderry, is peculiarly suited to the development of centralised medical schemes, and this has been recognised by the Parliament of Northern Ireland which passed a Tuberculosis Act in 1946, centralising the scheme for all forms of tuberculosis. Northern Ireland's population of 1,348,000 is nearly one-third that of Ireland as a whole. Belfast, its chief industrial centre, has a population of rather less than half a million, with its University admitting approximately 120 medical students each year. The main industry in the rest of the Province is agriculture. From the point of view of economics and social services, Northern Ireland is on a par with Great Britain, constitutionally being an integral part of the United Kingdom with a Parliament of its own, federal in type, but with certain powers reserved to the United Kingdom Parliament. On the whole the people are a mixture of Celt and Scot, and many retain the qualities of their Scottish ancestry—hard-working, industrious and thrifty, slow to accept new ideas, but determined in their pursuit of ideas once they have been proved worth while.

Thus in 1941 the Northern Ireland Council for Orthopaedic Development launched its Orthopaedic Scheme. In consequence of the war, the Council was unable to carry out its first objective, namely the establishment of an open-air Orthopaedic Hospital. Instead it set out to provide clinical facilities at the main centres of population throughout the Province. A panel of surgeons was formed, and Sister Gwladys Morris came from the Robert Jones and Agnes Hunt Orthopaedic Hospital, Oswestry, to do her magnificent pioneering work.

From small beginnings at Coleraine and Londonderry the scheme progressed until now there are eleven clinics under the Council's auspices with a total of more than 3000 patients. These clinics are situated at Londonderry, Coleraine, Ballymoney, Ballymena, Ballycastle, Downpatrick, Omagh and Armagh, and in three Belfast Hospitals. Further extension is planned on a regional basis so that the whole Province may have access to orthopaedic clinical facilities. In addition, the Council has sought to make arrangements for hospital treatment for its patients. The lack of its own open-air hospital has proved a source of difficulty and delay in arranging effective treatment. However, beds have been made available at various Belfast Hospitals and in particular at the Ministry of Health Emergency Hospital. Here the Council's visiting orthopaedic surgeons are in charge of their own cases referred from the clinics, and thus the principle of continuity of treatment is maintained. Every effort has been made towards the establishment of an open-air hospital; plans were drawn up, sites were investigated and the cost was assessed; but the Council was asked not to put the plans into action because the hospital will soon be considered by the Hospitals Authority to be appointed under the new Health Services Act, in relation to the complete needs of hospitalisation in the Province.

The Council has four visiting surgeons—Mr H. P. Hall, Mr Maurice Laverty, Mr Norman Martin, and Mr R. J. W. Withers; and three orthopaedic physiotherapists—Miss G. M. Morris (After-Care Superintendent), Miss M. Fearing, and Miss S. Brown.

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The Vice-Chairman of the Council is Mr S. T. Irwin, C.B.E. Under the Executive Committee administration, execution, and organisation of work is carried out by Mrs Doreen McConnell, organising secretary to the Council, with an office staff of three. Voluntary Committees have been set up in various areas, and members of the Voluntary Aid Detachment give their services in the clinics as part of the orthopaedic team.

In aiming to provide a complete orthopaedic scheme, the Council has interested itself in all aspects of the care and cure of cripples: special education, vocational training, rehabilitation and general welfare. A continuous effort has been made to acquaint the general public with the need for orthopaedic treatment by which to prevent and cure crippling diseases and defects. Talks have been given and films are shown all over the country.

Noteworthy events have been the recent acceptance of the Presidency of the Council by Her Excellency the Countess Granville, D.C.V.O., wife of the present Governor of Northern Ireland; the incorporation of the Council; the training at the Wingfield-Morris Orthopaedic Hospital of Mr Norman Martin, now one of the Council's visiting orthopaedic surgeons; and the servicing at Purdysburn Fever Hospital of the poliomyelitis cases during the 1947 epidemic.

The Northern Ireland Council owes much to many individuals in Northern Ireland; to the Trustees of the Nuffield Fund for Cripples and the Central Council for the Care of Cripples; and to Sir Reginald Watson-Jones, Mr Norman Capener, Mr G. R. Girdlestone, and Professor Mackintosh, who have visited Northern Ireland with the purpose of developing their work.

AUSTRALIA

The next meeting of the Australian Orthopaedic Association will be held in Perth on August 11-12, 1948. This will immediately precede the meeting of the Australasian Medical Congress, organised under the direction of the British Medical Association, which meets every third year. This is the first occasion that the Congress has been held in Perth. The meeting embraces every section of medicine and surgery and there will be a section of orthopaedics under the presidency of Mr Charles Littlejohn of Melbourne. The Secretary of the orthopaedic section is Dr A. L. Dawkins of Perth.

UNION OF SOUTH AFRICA

In South Africa the importance of orthopaedic surgery has been recognised for many years in the University cities of Johannesburg and Cape Town. This arrangement of two isolated centres of orthopaedic service continued until comparatively recently when the generous grant from Lord Nuffield stimulated the development of orthopaedic centres in many other cities.

In the University of the Witwatersrand in Johannesburg the responsibility for undergraduate and post-graduate teaching rested on Mr Fouché, who was the first lecturer in orthopaedic surgery. Undergraduate instruction consisted in the delivery of a course of lectures, extending over two University terms. The student was also obliged to attend clinical demonstrations in the Out-Patient Departments of the General and Children's Hospitals. For the post-graduate who wished to obtain the Mastership of Surgery with specialisation in orthopaedics, a two years course, both theoretical and practical, was obligatory. During the past year Mr Fouché has retired and the University has appointed Mr Edelstein to take over the control of teaching.

Master of Surgery in Orthopaedics, Johannesburg—Professor T. P. McMurray (Liverpool) writes: "My experience of the Witwatersrand University was gained through invitation to serve this year as external examiner in orthopaedic surgery for the degree of Master of Surgery. I found that the instruction, and the experience gained by candidates for the examination, was in every way excellent. During the two years of training, the student receives continuous instruction in general surgery from the Professor of Surgery, and in general and special pathology from the Professor of Pathology. At the same time he is appointed as clinical assistant to Mr Edelstein, Mr Polonsky, Mr du Toit, or Mr Moller. In these posts he has the opportunity of dealing with large numbers of patients, not only in the out-patient department but also in the wards and operating theatre. These unusual opportunities for training are possible only on account of the immense amount of clinical material which is available in the orthopaedic services. The clinics include large orthopaedic and fracture departments of the general hospital, and the even larger department in the Non-European hospital, together with the orthopaedic service of the Children's hospital.

"In common with the practice at most large hospitals in Britain fracture clinics are held daily, and the work is divided evenly between members of the orthopaedic staff of the hospital. Patients requiring long periods of hospital treatment for tuberculous arthritis, infantile paralysis, or congenital deformities, are treated in the Hope Hospital which is run under the direction of Mr Edelstein, and has the advantages of high altitude, and of the enthusiasm of an active staff of nurses and physiotherapists.

"The standard of examination for the Mastership of Surgery is very high. The tests consist of written sections on general surgery, general and special pathology, and orthopaedic surgery, together with a
searching clinical examination. The University has rightly decided that knowledge of part of surgery alone is not sufficient to qualify the candidate for a Master's degree. It insists upon a satisfactory knowledge of all branches of surgery and surgical pathology. The tests in general surgery were in the hands of Professor Underwood and Professor Brehner. The pathological examination was held in a private ward of the General Hospital where Professor Strahan did not allow his powers of examination to be impaired by the fact that, at that time, he was a patient himself. No section of general surgery or pathology was left untouched. The marking was fair but firm. As the result of an examination extending over seven days, the pass rate was only 25 per cent."

Orthopaedic Surgery in Cape Town—In Cape Town Mr Hamilton Bell holds the posts of Lecturer on Orthopaedic Surgery at the University, and senior orthopaedic surgeon to the Groot Schur General Hospital. University teaching has been confined to undergraduates, and although the University holds examinations for the degree of Master of Surgery, a special examination in orthopaedics has not yet been held. Holding the post of assistant surgeon at the Groot Schur Hospital, and in charge of the active orthopaedic research department in the University, is Mr A. J. Helfet, who is also a clinical teacher in orthopaedic surgery.

Long-stay patients are accommodated in the Lady Michaelis Home, which has been specially designed and equipped for this purpose. The Home, which is under the direction of Mr Bell, deals largely with children suffering from infantile paralysis, tuberculous arthritis, and congenital deformities. In addition to physical rehabilitation the patients receive school instruction up to the matriculation standard.

The undergraduate student receives adequate and concentrated instruction during the whole of one University term through a planned course of lectures and practical training in the orthopaedic out-patient department of the General Hospital. Further attendance at the out-patient clinics is voluntary, but this privilege is taken advantage of by a considerable proportion of the students. As in Johannesburg, undergraduate instruction in orthopaedic surgery is adequate, including out-patient, ward and operative teaching, combined with training in orthopaedic pathology. Facilities for full post-graduate training in orthopaedic surgery are available in Cape Town, but at present it is considered that the number of trained orthopaedic surgeons is sufficient for the posts available in the Union.

 Pretoria, Durban, and Port Elizabeth now have active orthopaedic centres under Mr du Toit, Mr Allen, and Mr Maister. The Orthopaedic Surgeons' Group of the Union of South Africa, which is an active clinical body, meets in the different centres twice each year.

PolioMeYelitis in South Africa—We learn with regret that South Africa is in the midst of a severe epidemic of poliomyelitis. Since January of this year, 1062 cases have been reported (Europeans 784, non-Europeans 278). Cases have been reported in Johannesburg 535, the Transvaal Province 832, Cape 82, Orange Free State 56, and Natal 96. The epidemic is notable for the high proportion of adult cases. The Orthopaedic Section of the Thirty-sixth South African Medical Congress will meet in Pretoria in July 1948.

ColoNies of east and west Africa

Panel of Medical Consultants for the Colonies—The Secretary of State for the Colonies has recently appointed a panel of medical visitors to East and West Africa (Times, March 8, 1948). The scheme was proposed by Professor H. J. Seddon, Nuffield Professor of Orthopaedics at Oxford, and the late Dr W. H. Kauntze, Medical Adviser to the Secretary of State. The Nuffield Foundation has generously undertaken to finance the scheme during an experimental period of six years.

The Colonial Medical Service labours under several peculiar difficulties, one of which is the discouragement which arises from the isolation of many of its members. There is lack of professional companionship and of contact with leaders in the various fields of medical activity. During the war, medical consultants in the Army Commands of East and West Africa, mostly men from British teaching hospitals and medical schools, were strikingly successful in stimulating the enthusiasm of junior colleagues, many of whom were stationed in remote places. The Colonial Office has followed this precedent in undertaking a development of Colonial welfare which promises to be of great significance.

Specialists from a panel of eighteen will each visit Africa twice in the next six years. If the experiment is successful it may be extended to other parts of the Colonial Empire. The consultants will go out with the blessing of the Secretary of State, but they will also be under the aegis of the Nuffield Foundation, and will have no departmental or official status. It is believed that men in the field will discuss their difficulties with a freedom which would probably have been difficult or impossible if the consultants had been government servants. The various specialists, most of whom are well-known teachers, have been chosen for their particular knowledge of the special problems of colonial medicine such as tropical diseases, tuberculosis, venereal disease, and child health; they will be able to give valuable advice to administrators, public health workers, and clinicians. But even more the visiting specialists have been chosen for their qualities of congeniality and friendliness which will make them acceptable guests in the bungalows of men who work in solitude.
NEW ZEALAND

ANNUAL MEETING OF THE ROYAL AUSTRALASIAN COLLEGE OF SURGEONS, 1948

The Annual Meeting of the Royal Australasian College of Surgeons was held in Dunedin, New Zealand, on January 28, 1948.

Bilateral Rupture of the Long Tendon of the Biceps—Mr Kenrick Christie reviewed the literature and referred to the analysis of Gilcreest which showed that rupture of the biceps tendon involved the long head in 65 per cent. of cases, the short head in 26 per cent., both long and short heads in 7 per cent., and the lower common tendon in 4 per cent. Only in 5 per cent. of cases was the rupture bilateral. Senile degeneration due to diminished blood supply, together with attrition due to the peculiar course of the long tendon over the head of the humerus, which was often the site of arthritis with marginal osteophytes, were the predisposing causes. The exciting cause was flexion of the elbow against powerful resistance.

In long-standing ruptures, and in old age, operation was often not indicated, but in other cases early operation was advised. Mr Christie demonstrated the results of passing the biceps tendon through the tendon of insertion of the pectoralis major tendon, looping it round and suturing it to itself. After operation the limb was immobilised in the flexed position for three weeks. Return to work could be expected in eight to twelve weeks. The prognosis was good. Even in comparatively late cases it was possible to regain almost normal muscle power. Medico-legal aspects were discussed.

NORWAY

Decoration of Dr Smith-Petersen—On December 6, 1947, Dr M. N. Smith-Petersen was decorated by the King of Norway with the Grand Cross of the Royal Order of St Olave—the highest Norwegian award that it is possible to confer.

Lectures in Norway by Mr I. Lawson Dick—During the last few months British Medical Association Lectures have been given by distinguished British physicians and surgeons in Czechoslovakia, Denmark, Spain, and the Netherlands. Mr Lawson Dick took the place of Sir Reginald Watson-Jones in Norway and lectured on orthopaedic surgery. After his return he wrote: "The welcome could not have been more cordial. National feeling in Norway is very strong and they have a high regard and warm affection for Britain. Both in Bergen and in Oslo we had marathon evenings with two lectures, one straight after the other, but the audiences were so responsive that it was no effort. The long-stay hospitals for tuberculosis and orthopaedics are very fine. The Martina Hausen Hospital near Oslo, and the Kysthospitalen i Haagevik, which is on the coast about fifteen miles south of Bergen, are lovely buildings, magnificently situated, in superb surroundings. Medicine in Norway bears the mark of long isolation. Their fracture treatment shows much more of the influence of Bohler than is now seen in Britain. But some of their work is excellent. The imprint of Dr Smith-Petersen’s teaching is everywhere recognisable. Specialisation is not yet completely developed but they are taking active steps to introduce it. Five years of occupation did not break the Norwegian courage. Nearly all the doctors had been in concentration camps. The Secretary of the Norwegian Medical Association had been interned for five years because his colleagues would not subscribe to the new German controlled Medical Association. My host in Stavanger had tears in his eyes when he told me how he saw the first British paratroops march down the hill into the town. I shall never forget my visit which was made wonderfully enjoyable by boundless Norwegian hospitality."

SPAIN

In February 1948, the Spanish Ministry of Labour approved the establishment of a School of Industrial Medicine, administered by the Spanish Institute of Medicine and Industrial Safety, and attached to the Central University of Madrid as a post-graduate school. One of the objects is the training of specialists in orthopaedic and traumatic surgery. A University degree in these subjects will be demanded of those filling orthopaedic vacancies in the National Insurance Scheme, and in the Insurance Companies concerned in industrial medicine. Research will be carried out over a wide field of industrial medicine. We welcome this practical understanding of the important part which orthopaedics has to play in industrial medicine.

FIRST INTERNATIONAL POLIOMYELITIS CONFERENCE—NEW YORK

The first world conference on infantile paralysis is to be held in New York on July 12-17, 1948. It is sponsored by the National Foundation for Infantile Paralysis of the United States. There will be representatives from China, Sweden, France, Argentina, Brazil, Great Britain, and other countries. Professor H. J. Seddon will show a film prepared in Oxford.