Mr Charles Manning, the first scholar appointed by the British Orthopaedic Association to visit centres in Great Britain and Europe, writes:

The British Orthopaedic Association Travelling Scholarship enabled me to pursue two objectives: to see and hear more about the treatment of spinal tuberculosis, in particular operative treatment; and to see as much as possible of general orthopaedics in Europe.

I visited certain centres in England first, to meet especially those surgeons with a primary interest in skeletal tuberculosis. Mr. M. C. Wilkinson at Black Notley showed me cases in his wards and discussed his views on the direct surgical treatment of spinal tuberculosis. I was also able to visit Mr. R. Roaf at Oswestry, Mr. E. W. Somerville at the Nuffield Orthopaedic Centre at Oxford, and Mr. D. E. MacRae at the Henry Gauvain Hospital, Alton. All these surgeons very kindly gave me much of their time in demonstrating, by operation and in discussion, their views on spinal tuberculosis. This gave me a useful basis for comparison with the views of Continental surgeons when I visited them later. I also visited Mr. R. G. Pulvertaft at Harlow Wood Hospital and had an opportunity of discussing with him many aspects of hand surgery. I then spent a week in Exeter where I was cordially received by Mr. Norman Capener, Mr. F. C. Durbin, Mr. G. Blundell Jones and Mr. C. C. Jeffery: a full programme had been arranged in the orthopaedic and accident services and visits were made to other units in the area, including the Dame Hannah Rogers School for children with cerebral palsy, the St Loyes College for Rehabilitation and the excellent Devonian orthopaedic workshops. I was most impressed by the wealth of cases of great orthopaedic interest in Exeter, and my week there was an excellent foretaste of my experiences in other countries later.

I spent three weeks in Paris, mainly at Professor R. Merle d'Aubigné's unit at the Hôpital Cochin. There I saw a great variety of orthopaedic and traumatic cases of all kinds. As in Exeter, I had full access to out-patient and follow-up clinics as well as to operations and lectures and animated discussions. Of particular interest were examples of Professor Merle d'Aubigné's development of tibial transposition grafts after excision of the lower end of femur for bone tumour, and anterior fusion with bone graft and long screw for spondylolisthesis. A useful device which I saw only in Paris hospitals was a vacuum bottle attached to polythene tubing for wound drainage after operations. I was able to visit a number of other surgeons in Paris, including Professor J. Cauchoux at the Hôpital St Louis, and Dr P. Petit and Dr P. Queneau at the Hôpital des Enfants Assistés, who reviewed critically a large series of patients with congenital dislocation of the hip. Reduced prints of radiographs joined together in chronological order made it easy to follow the progress of the condition. Many patients had been watched for over twenty years, but Dr Petit does not intend to publish any details until his follow-up is still longer. Their methods on the whole are conservative, but when operation is considered necessary they prefer a complete exposure of the hip and have found a number of factors preventing perfect reduction. Dr P. Masse at the Hôpital Bretteau and at a children's hospital and paraplegia centre at Fontainebleau showed me his patients; in particular I saw a number of paraplegic patients who had developed masses of new bone about both hips and knees but had very good function after excision of the bony masses.

Professor R. Judet and Dr V. Benassy also showed me their patients at Garches, an orthopaedic and paraplegic centre a few miles outside Paris. Professor Judet demonstrated his new oblique hip prosthesis, which he has found eliminates movements of the stem in the femur. At present he is mainly concerned about the progression of osteoarthritic changes in the acetabulum after operation, but is hopeful that the insertion of preserved human skin between the head of the prosthesis and the acetabulum will eliminate this difficulty.
Professor Cauchoix invited me to spend some days at Berck on the north coast, where three hospitals cater for most of the bone and joint tuberculosis in France. We stayed in the Institut Calot, the smallest of the three but, I think, the most active surgically. This monthly visit of Professor Cauchoix was filled with work, both operative and clinical, and there was excellent discussion about scoliosis. In two patients with tuberculosis of the spine the lesion was exposed and curetted; in one the lumbo-sacral joint was affected, and after curettage the joint was fused with a massive full-thickness iliac graft. Two patients with scoliosis had spinal fusion after plaster correction, strut grafts being used in addition to autogenous cancellous bone from the ilium. We were all most hospitably looked after by the members of the religious order running the hospital.

My next visit was to Professor F. Pauwels at Aachen, who was most hospitable and spoke excellent French to me because I could not speak German. Professor Pauwels explained his theories about muscle forces and the production of pain in degenerative arthritis of the hip and demonstrated his views at operation, and he gave me a number of most useful tips from his long experience in surgery.

The next centre was Vienna, and there I was based on the Orthopaedic Hospital under the direction of Professor P. J. Erlacher. This is a convent hospital on the southern outskirts of Vienna, where Professor Erlacher has 150 beds, with about ten assistants. His wards are full of most interesting orthopaedic patients, though nowadays very few of them are tuberculous. As in many centres, the day starts at eight o’clock with study of radiographs by the whole staff, and the cases of the day before are discussed. Many children with congenital dislocation of the hip are treated in Vienna, and now few are seen after the age of six months: indeed, the average age for children to be presented for treatment in Vienna itself is now only one week after birth. Professor Erlacher also talked to me about his views on tuberculosis. He recalled that he had started operating directly on the focus in spinal tuberculosis as early as 1934.

While in Vienna I visited Professor L. Böhler at the Workmen’s Accident Hospital. He spoke particularly of his views about rest for fractures and bone infection. He has eighty beds with twenty assistants, and 500 out-patients attend this hospital daily. There is a new Workmen’s Accident Hospital built since the war by the workmen’s compensation insurance authority. Dr O. Russe is in charge of this new hospital which has 280 beds and twenty-four assistants. They have a good system of receiving the seriously injured: the ambulance enters a weatherproof compartment in the basement, the patients being then rapidly transferred by lift to the ward or to the resuscitation room for the operation theatre, or to the ordinary minor dressing station.

I also visited Dr I. Chiari at the General Hospital, who has eighty orthopaedic beds and sees 100 out-patients every day. He had about ten assistants. Lorenz’s orthopaedic department in this same hospital had consisted of two rooms and access to five beds when the general surgeons allowed it. I was most impressed by the thoughtful work being done in this unit, and Dr Chiari very kindly performed his fifty-fourth pelvic osteotomy for congenital dislocation of hip for my benefit.

In Florence I visited Professor O. Scaglietti at the Instituto Orthopedica, Toscano, where about 200 beds overflow an old villa in the hills above Florence with a wonderful outlook. This is a very busy hospital with about thirty assistants, every type of orthopaedics as well as injuries being treated. I was privileged to see some of Professor Scaglietti’s filming during operations on congenital dislocation of the hip. I was much impressed by both the conservative and operative treatment of the condition in Florence. A new orthopaedic hospital is already being built which will have 350 beds, four operating theatres and excellent accommodation for seventeen visitors.

I visited the Instituto Rizzoli at Bologna where Professor R. Zanoli took me on his grand round, which was preceded by a discussion of radiographs. There are about fifty assistants but there are 620 beds and almost every case seemed to present a major orthopaedic problem. Here I also saw the wonderful orthopaedic workshops that produce a vast amount of orthopaedic appliances every year.

Then to Lyons where I visited Professor M. Guilleminet’s orthopaedic unit, seeing there an excellent review of a number of different conditions including congenital pseudarthrosis of the tibia, of which Professor Guilleminet personally has successfully treated fifteen cases. I saw him perform a Milch-Batchelor pseudarthrosis with internal fixation for osteoarthritis of the hip. I also had excellent opportunities for discussing cases with Dr P. Stagnara and in particular the problems of reconstruction after poliomyelitis and scoliosis. Like his chief, Dr Stagnara operates with great gentleness and little loss of blood.

From Lyons I went to Heidelberg where the Orthopaedic Hospital is under the direction of Professor K. Lindemann. This hospital of 420 beds with a medical staff of twenty has attached, in the same group of buildings, accommodation for 100 male and 100 female handicapped children and young adults who receive general education as well as technical training. Professor Lindemann himself is particularly interested in the problem of osteoarthritis of the hip, and is impressed by Professor Pauwel’s views on muscle pull as a cause of pain in that condition. I saw him perform one operation in which he separated the muscles from the upper end of femur. This he has performed...
in a number of patients who are being carefully followed up. The senior assistants were specialising in certain aspects of orthopaedics. Heidelberg possesses a most active and progressive surgical appliance workshop and has produced the pneumatic arm developed by Mr O. Haefner, an engineer, working with Dr E. Marquardt, an orthopaedic surgeon. Liquid carbon dioxide, contained in 6-inch aluminium flasks, is connected by thin rubber tubing to bellows, the inflation of which can be used to move a joint; this appliance is designed particularly for loss of both upper limbs and it is preferable if the patient has an above- or below-elbow stump. I saw, however, a twenty-four-year-old Polish man who had had a disarticulation at each shoulder ten years before, after an accident; after using the prosthesis on one side for six weeks he could eat and use the lavatory alone, having been previously completely dependent on others. He was able to produce elbow flexion, forearm rotation, and pinch between the thumb and fingers.

I spent two weeks in Copenhagen, mainly at the Orthopaedic Hospital. Unfortunately Professor A. Bertelsen was away, but I was very hospitably received by Dr K. Jansen, Dr H. Larsen, Dr J. Mortens and also Dr B. Rasmussen in charge of hand surgery. There is an excellent junior staff at this hospital and a great deal of friendly rivalry and differing opinions in the treatment of many conditions, for instance scoliosis. Some interesting work was being carried out on arthrogryposis and I saw most encouraging results of conservative operations, particularly on the knees and hands. I was also impressed by the treatment of club foot: operative intervention, varying from simple elongation of the tendo calcaneus to extensive soft-tissue release which included division of the talo-calcaneal intersosseous ligaments, was undertaken at an early age in recalcitrant cases. I saw examples of good results in patients treated entirely conservatively and by a combination of surgery and conservative treatment in young children. All types of orthopaedic abnormality are treated in this hospital, but not injuries.

I also visited the excellent workshops and saw several examples of the Canadian prosthesis for disarticulation at the hip working excellently even in old patients, also the Swedish type of hydraulic knee joints.

I visited the cripples' training centre in Copenhagen where 150 girls and 100 boys are training. In charge of the centre is Mr Tachau, who himself is disabled, and we had an interesting talk about the best type of motor-propelled vehicle for disabled people.

I also visited Dr J. Meyer at the Finsen Institute, who discussed the treatment of tuberculosis and showed me his wards. He has a special interest in tumours of bones, and I was invited to attend a conference with the radiotherapists, seeing several most interesting patients. I also visited Dr Meyer's seaside hospital at Karlandberg, overlooking a small inlet on the west coast. There were few tuberculous patients in the hospital at the time, but a number of patients with Perthes' disease, and Dr Meyer and his assistants have done much original investigation into this condition. I was shown a remarkable series of radiographs, and it seemed that Dr Meyer was beginning to be able to give an idea of prognosis from the early films.

I saw the new county hospital recently built at Glostrup, a few miles outside Copenhagen—one of the most modern in Europe, which incorporated many good ideas in hospital architecture and design. The architects were Finnish.

Then I travelled to Jutland to the Orthopaedic Hospital at Aarhus under the direction of Professor E. Thomsen, who kindly invited me to stay in a guest room in the hospital. This is an active unit with assistants to some extent specialising in certain aspects of orthopaedics. Here also a daily conference is held and all medical staff meet every day for lunch, and many subjects were discussed freely, both medical and non-medical. I was able to attend operating sessions, ward rounds and out-patient follow-up clinics, and saw examples of myotonia, a subject in which Professor Thomsen is particularly interested.

I also visited a hospital being reconstructed at Holstrobro to which Professor Thomsen's senior assistant, Dr H. Erikson, has been appointed orthopaedic surgeon. From a surgical point of view the construction and lay-out of the orthopaedic wards and out-patient department appealed to me more than those in the hospital at Glostrup.

I was also taken to a country hospital for long-stay cases originally built as an internment camp for British and Germans during the 1914–18 war. In addition to such conditions as Perthes' disease and rheumatoid arthritis, some mental disease is being treated without segregation. There is also a historically interesting collection of physiotherapy apparatus mechanically driven by moving belts powered by electricity, and a small modern rehabilitation unit planned on lines to ensure easy return to domestic work in patients' own homes.

I visited the seaside tuberculosis hospital at Julesminde, where Dr H. Thomsen has about 140 beds. Many of the patients with tuberculosis came from Greenland, and there were about twenty children. We had a useful discussion, and as usual there was great friendliness and most generous hospitality.
Next, I visited Oslo, being based at the Martina Hansens Hospital about twelve miles outside Oslo. This hospital of 120 beds was built in 1926 for bone and joint tuberculosis. Now about half the beds are occupied by other orthopaedic conditions. Dr. J. Hald, the surgeon in charge, and his assistant, Dr. J. Sandaa, operate on the tuberculous focus in most cases, being insistent on thorough elimination of all dead and infected material.

While in Oslo I visited the orthopaedic hospital of about ninety beds. Injuries are not treated in this hospital. Dr. I. Alvik was unfortunately sick, but I was conducted round the hospital by Dr. Foss Hauge and had a most interesting discussion. Dr. Alvik employs derotation osteotomy of the femur in a number of cases of spastic conditions as well as in almost all cases of congenital dislocation of the hip. I saw also the Crown Princess Martha Hospital, built since the war mainly for cases of poliomyelitis. Dr. Nissen Lee, in charge of this hospital, showed me the wards and the excellent physiotherapy facilities; a large occupational therapy department is being constructed on functional lines.

Then I went to Sweden, first visiting Gothenburg where I had been very kindly invited to stay with Professor E. Moberg. In this hospital, treating injuries of all kinds, Professor Moberg is especially interested in hand surgery, and I had an excellent demonstration of all aspects of assessment, operation and follow-up of these cases. I saw also the new department in the University Hospital, which is being made ready for Professor Moberg in the near future.

I also visited Professor E. Severin at the University Orthopaedic Hospital where all orthopaedic conditions are treated, but no injuries. Professor Severin spoke about anteversion in congenital dislocation of the hip and also explained the workings of the Swedish health service and some of the plans for orthopaedic care in Sweden in the future.

I next went to Lund for the Scandinavian Orthopaedic Association meeting. Professor G. Wiberg had kindly arranged for me to stay at the hospital. I enjoyed the meeting very much and found it possible to follow most papers from the illustrations and a running commentary from helpful friends.

I was invited to visit the orthopaedic department of the hospital at Malmö by Dr. S. Von Rosen, who is particularly interested in congenital dislocation of the hip and showed me some children undergoing treatment on his malleable metal frame, and demonstrated clinically and in a film his use of Ortolani’s sign for the early detection of subluxation and dislocation of the hip.

I then moved to Stockholm, where the orthopaedic hospital at Karolinska Institutet is under the direction of Professor S. Friberg. Again the patients treated are purely orthopaedic, though some cases of late reconstruction after injury are also dealt with. Dr. T. Hierton, next senior to Professor Friberg, is particularly interested in vascular surgery and showed some interesting cases and some good results of operation. Undergraduate teaching is carried out at this hospital, and each morning a short clinical conference was held, the students presenting the cases and taking part in the discussion.

While in Stockholm I was able to visit Uppsala, where Professor C. Hirsch has forty adult and children’s orthopaedic beds in a general teaching hospital. Professor Hirsch is interested in disc protrusion and I was impressed by his operative exposure in these cases. In addition to attending ward rounds and discussion on many subjects I visited his experimental research laboratory where much original work has been done on intervertebral disc physics and the application of stress to bone.

I visited St. Goran’s Hospital in Stockholm to meet Dr. Mac Fellander, who treats bone and joint tuberculosis in addition to running a busy general orthopaedic and traumatic unit. At this hospital I was introduced to Dr. T. Strandell, a general surgeon with a special interest in hand surgery; I watched him operating and saw some of his patients.

I returned to Lund for the last week of my stay in Europe. The orthopaedic department there is part of a large university hospital and deals with casualties from the surrounding area as well as all orthopaedic conditions.

Conclusion

Everywhere I visited, both in England and in other parts of Europe, I met with wonderful hospitality and friendliness. Generally our common language was English, and I felt thoroughly ashamed of my poor efforts at speaking other languages.

During my tour in England, France, Germany, Austria, Italy, Denmark, Norway and Sweden I heard many new ideas propounded, and have seen many new and different methods of treatment. In particular I have been able to compare thoughts on such subjects as tuberculosis of the spine, congenital dislocation of the hip, osteoarthritis of the hip, scoliosis, many aspects of trauma, Perthes’ disease, hand surgery, poliomyelitis, paraplegia, the treatment of cerebral palsies, rehabilitation of patients suffering from all kinds of orthopaedic disabilities, and surgical appliances. I am very grateful indeed to the British Orthopaedic Association for making this six-months’ tour possible.
ROYAL COLLEGE OF SURGEONS OF ENGLAND

HUNTERIAN ORATION

The Hunterian Oration for 1959 was delivered by Sir Reginald Watson-Jones in the Great Hall of the College on February 16. Sir Reginald took as his title “Surgery is Destined to the Practice of Medicine.” After describing the many historical treasures relating to the life and times of John Hunter that are in the possession of the College, he elaborated his main theme that through advances in medicine—both preventive and curative—surgical operations were being rendered unnecessary in an increasing number of diseases. Sir Reginald paid tribute to the work of Lord Webb-Johnson, who had done so much to build up the activities of the College during his Presidency.

JACK COTTON CHAIR IN BIOCHEMISTRY

After the Hunterian Oration it was announced that Mr Jack Cotton, of Marlow, had decided to give to the College a sum of £100,000 to establish a Chair of Biochemistry.

UNIVERSITY OF OXFORD AND OXFORD REGIONAL HOSPITAL BOARD

OPENING OF NEW RESEARCH BUILDING AT THE NUFFIELD ORTHOPAEDIC CENTRE
BY HER MAJESTY QUEEN ELIZABETH THE QUEEN MOTHER

On October 27, 1958, Her Majesty Queen Elizabeth the Queen Mother graciously opened the new Research and Teaching Building at the Nuffield Orthopaedic Centre, Oxford.

An otherwise perfect day was marred by the absence, through illness, of Lord Nuffield, whose generous gift of £200,000 had made the project possible. In his absence, Lady Nuffield handed over the Building to Sir George Schuster, the Chairman of the Oxford Regional Hospital Board, who received it on behalf of the Minister of Health. Lady Nuffield was thanked by Sir George Schuster on behalf of the Ministry and by the Vice-Chancellor on behalf of the University of Oxford. The building was then received by the Chairman of the Hospital Management Committee, the Duchess of Marlborough, who invited Her Majesty to open the building. In her address Her Majesty praised the generosity of Lord Nuffield and remarked on this and his many other benefactions which have contributed so much to the advancement of healing. Her Majesty also emphasised the importance of research and clinical effort marching side by side for the benefit not only of patients to-day but of patients in the days to come. With the facilities now available this concerted effort is possible in the

FIG. 1

The entrance hall of the new building, showing a plaque unveiled by Her Majesty Queen Elizabeth the Queen Mother.

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Nuffield Orthopaedic Centre. Her Majesty then opened the building which was dedicated by the Lord Bishop of Oxford, assisted by the Chaplain to the Hospital, the Reverend J. E. Cocke. Her Majesty was conducted round the new building, and Professor J. Trueta explained the particular purposes to which the different sections of the Centre are dedicated. Her Majesty showed great interest in its various departments, particularly in the electron microscope and the opportunity it will afford of opening up new and wider fields of investigation. During this tour postgraduate scholars from several parts of the Commonwealth were presented to Her Majesty. Australia, Canada, Pakistan and South Africa were represented. After this inspection Her Majesty presented the prizes and certificates to members of the nursing staff. In her address Her Majesty commended them on their efforts and the choice of their profession. Such was the interest shown by Her Majesty in the new building that the tour was longer than expected. This delay may account for the minor technical hitch which afforded Professor Trueta the unique privilege of presenting his address of thanks to Her Majesty while she and the whole company were standing.

After these ceremonies Her Majesty toured wards of the hospital, showing particular and sympathetic interest in the patients suffering from poliomyelitis, speaking with many of them. Her Majesty then took tea in the gymnasium, where she consented to receive many members of the medical and lay staff of the hospital. After a full afternoon's programme Her Majesty left to stay at Blenheim Palace with Her Grace the Duchess of Marlborough. As she was leaving she learned that this great day for the Centre coincided with the birthday of Professor Trueta who, together with Lord Nuffield and the late G. R. Girdlestone, was primarily responsible for its creation. She turned back to congratulate him on his double event and wished him many anniversaries as happy as this one. Her Majesty left behind a multitude of people, patients, visitors and members of the staff, charmed by her graciousness and the warm sincerity of her interest.
This ceremony realises the dream of G. R. Girdlestone that, a comprehensive orthopaedic service having been established in the Region, an Orthopaedic Centre should be created where research, teaching and clinical work should proceed together in most intimate collaboration. It was also his wish that the great generosity of his friend, Lord Nuffield, without which none of these hopes would have been fulfilled, should be commemorated in the title "Nuffield Orthopaedic Centre." Finally, it was the industry and drive of Girdlestone's disciple, Professor Trueta, that crystallised the dreams of one and the generosity of the other in the creation of this Centre.

The new building, consisting of three floors, contains on the ground floor a greatly enlarged records office, a large out-patient office where patients can be received in comfort, and a suite of offices for the consultant staff. On the next floor a greatly enlarged radiological department will now be able to deal with the hospital's work as well as the extra demands of a research centre. This floor also contains a lecture theatre, seating over 150 people, and a dining room and common room for the staff. The top floor houses the Nuffield Department of Orthopaedic Surgery of Oxford University, containing a museum, an enlarged medical library, increased laboratory facilities, a special Medical Research Council department with an electron microscope and x-ray diffraction apparatus, and a suite of offices for the Professor, his assistants and postgraduate scholars.

REGIONAL ORTHOPAEDIC CLUBS

SOUTH-EAST METROPOLITAN REGIONAL ORTHOPAEDIC CLUB

A clinical meeting was held at the Kent and Sussex Hospital, Tunbridge Wells, on November 15, 1958. Patients were shown by Mr W. H. Gervis and Mr E. W. Bintcliffe.

Excision of the trapezium—Mr Gervis showed a thirteen-year result in a farm worker aged sixty-one who had arthritis of the carpo-metacarpal joint. He had remained at his normal work since the operation, and the stability and power of the thumb were little short of the normal. Those present agreed that the operation was certainly not as unsatisfactory as many members had previously thought.

Hallux valgus—Mr Gervis showed three patients for whom he had done a Keller's operation, preserving the base of the phalanx to make a wedge-shaped inlay for arthrodesis of the tarso-metatarsal joint, at the same time correcting the metatarsus primus varus deformity. The prominent head of the metatarsal was reshaped and the shortened lateral sesamoid ligament divided.

In discussion Mr R. H. Sewell said that Keller's operation left a non-functioning toe. Mr J. H. Mayer believed that, since the pain was relieved by Keller's or Mayo's operations, there was no need to fuse the tarso-metatarsal joint. Mr P. R. Wright agreed with this. Mr J. E. Buck said that in at least one case there was enough permanent disturbance of cutaneous sensation to account for the non-perception of pain, and Mr R. C. F. Catterall suggested that the whole foot was so mobile in these cases that splaying was likely to recur elsewhere. Mr T. T. Stann suggested that no patient could walk quite normally after such procedures because the muscle balance was impotent to re-establish adductor function. Mr J. C. F. Loyd-Williamson advocated a supporting figure-of-eight strap to help maintain correction after any operation for hallux valgus.

Backache—Mr Gervis showed three patients treated by gradual full mobilisation. He ascribed the backache in these patients to lack of movement causing excessive wear of the bearings in one position. He said that animals stretched often and thoroughly whereas man stretched seldom, if at all, and never thoroughly. The patients had all originally had limited extension, and, though no sensory, motor or reflex changes were present, some had referred sciatic pain. Mr Catterall disagreed with these ideas and pointed out that in post-partum backache, at least, the cause could not be due to lack of extension because lordosis was increased during pregnancy. Mr F. G. St C. Strange suggested that in many cases of this sort the patient could be cured by the injection of pain spots and a treatment which he described as a "laying on of thumbs." Mr B. Lawson thought that such treatment caused so much local pain that the patients no longer dared to mention their backache.

Quadricepsplasty—Mr Bintcliffe showed a remarkably good result from Campbell's technique. Members could not but admire the result, but few had the courage to try it themselves.

Difficult supracondylar femoral fracture—Mr Bintcliffe sought advice in the case of a man of fifty-one who had suffered a severe compound fracture involving the knee joint eighteen months before; there was still insufficient union for safety out of his caliper and the knee joint was very stiff. It was suggested that the small knee movement could be sacrificed and that a massive inverted tibial graft should be used after the manner of R. Merle d'Aubigné. Mr Catterall and Mr Sewell called attention to the stiffness of the hip on the same side, and Mr K. F. Hulbert recalled a case in which an acetabular fracture had been diagnosed at an insurance consultation and the three years' correspondence with the Medical Defence Union had only just closed. It was agreed that in any compound fracture of the lower limb occurring in a motor-cycle accident the hips should be radiographed routinely.
Trans-scaphoid perilunar dislocation of the wrist—Mr Bintcliffe showed a man of thirty-five who had fallen off a ladder at work a year before. Two months after the injury it was apparent that the scaphoid bone was avascular, and a bone graft was carried out. The patient was still not at work. Mr Buck suggested that the man was fit for work and was just not trying. Mr Bintcliffe agreed that the patient was ‘interested in compensation.’

Local gigantism—Mr Bintcliffe showed a girl of nine months whose index finger, at birth, had been almost as large as the rest of the forearm. The middle finger and thumb were less affected and the ring and little fingers were normal. There was no known family history of any defect for two generations. Mr Bintcliffe had already removed the index finger and sought advice. Suggestions varied between rotating the little finger into opposition and excision of subcutaneous tissue in the thenar eminence, but most of those present were not in favour of further surgery.

SHEFFIELD REGIONAL ORTHOPAEDIC CLUB

The second meeting of the Sheffield Regional Orthopaedic Club was held at the Royal Infirmary, Sheffield, on November 8, 1958, under the chairmanship of Mr F. W. Holdsworth.

During the morning a number of patients were available for examination and later the problems which they presented were discussed. Suggestions were put forward by Mr Holdsworth about the formation of a Regional Bone Tumour Registry which is to be started in the near future at Sheffield.

Giant-cell tumours—Professor D. H. Collins emphasised that the pathologist can play only a limited role in the diagnostic team if he is content to pronounce on no more than the histological appearances of a small fragment of tissue; this was especially so in the case of bone tumours. The growth potential of bone cells changed enormously throughout life, and the pathologist must know the age of the patient; he must also know the anatomical site of the lesion; and the clinical radiograph or the radiograph of the bony specimen was as essential in the pathological examination as, say, the naked-eye inspection of a tumour excised from the breast or bowel. Some of the giant-cell lesions of bone were histologically very much alike, yet differed greatly from one another, and the diagnosis of osteoclastoma should not be proffered by the pathologist if the lesion was, for example, in the jaw of a ten-year-old girl, when it was almost certainly a central epulis, or in the clavicle of a fifty-year-old woman, when it might be a manifestation of hyperparathyroidism. The more facts we know about the circumstances as well as about the appearances of each giant-celled lesion, the more accurately could we place it into the appropriate pathological category. This was important not only from the point of view of the individual patient, but also in assessing the efficacy of various recommended modes of treatment. The term osteoclastoma should be restricted to the rather rare primary non-metastasising tumour of bone, arising usually at the extreme ends of the long bones after union of the epiphysis to the shaft, but occasionally also in the bones of the pelvis. Most of these occurred round the knee joint, the growth caused massive osteolysis, and the bone was often resorbed practically to the articular cartilages. It did not occur in childhood and was seldom seen below the age of twenty, and women were as commonly affected as men. Histologically the tumour was compounded of spindle fibroblast-like cells and syncytial multinucleated masses of osteoclast-like giant cells. For all practical purposes the tumour might be regarded as non-metastasising, although individual variations in the vigour of local growth might be reflected in the cellularity and mitotic activity of the spindle cells. So defined, osteoclastoma had a common set of attributes and could be clearly separated from other giant-cell lesions for statistical as well as for prognostic purposes. The supervision of sarcoma in osteoclastoma was a theoretical possibility, as it was in the case of any other characteristically benign tumour. But most giant-cell sarcomas of bone were found to have arisen either from atypical sites or at an atypical age, and might have been potentially sarcomas from the start. Giant-cell sarcoma was a common form of Paget’s sarcoma in older patients, and it was wrong to describe this as malignant osteoclastoma. The lesions of osteitis fibrosa might be histologically indistinguishable from osteoclastoma, but the gross characteristics were very different. Giant-celled epulis or central epulis arose usually in children in either mandible or maxilla; there was much debate whether this was tumour or granuloma. Aneurysmal bone cyst was a form of skeletal angioma, and was a primary vascular tumour of bone that passed through phases of growth and stability. In the stable form it resembled a cavernous angioma, but when it was growing osteoclastoma-like tissue was prevalent. Benign chondroblastoma (Codman’s tumour) had many distinguishing features, but giant cells were prominent here as they were in the more recently described benign osteoblastoma which might have some relationship with osteoid osteoma. There were, of course, many other lesions of bone in which giant cells might be prominent. The only way of clarifying the situation in regard to giant-cell tumours was to reach a precise diagnosis in every case, and this could best be achieved by conference and agreement between the clinician, the radiologist, and the pathologist.
Congenital paralytic dislocation of the hip—Mr W. J. W. Sharrard pointed out that, with improved techniques for the closure of myelo-meningocele and the control of secondary hydrocephalus, many more children were surviving, with normal mental capacity but with paralytic deformities. Of about 200 children with meningocoele, fifty-seven had paralysis in one or both lower limbs, and in these children fifty-eight dislocations or subluxations of the hip joint were discovered. In twenty-six cases the dislocation was present at the birth. Mr Sharrard considered that the dislocation in these cases was due to the action of strong adductor, flexor and sartorius muscles acting in utero in the presence of paralysed gluteal muscles. There was radiographic and other evidence that the hip joint itself was at first normal, and these cases were therefore not true congenital dislocations of the hip, but congenital paralytic dislocations. Five other dislocations and seven subluxations developed gradually during the first eighteen months of life when there was paralysis below the second lumbar segments. This was again due to the action of unopposed adductors and flexors of the hip. These cases required completely different management from ordinary congenital dislocations of the hip. Operative correction of the contractures was needed to reduce the dislocation, and transplantation of the iliopsoas to the greater trochanter and of the sartorius to the outer side of the knee was needed to maintain reduction of the dislocation.

Fractures of the tibia and fibula—Mr J. W. Dickson acknowledged the work of Ellis (1958) (Journal of Bone and Joint Surgery, 40-B, 42, 190), which was based on 567 cases treated at the Royal Infirmary, Sheffield. The best treatment was the simplest that was compatible with restoration of function. The compound comminuted fractures produced by modern traffic and industrial accidents did not lend themselves to internal fixation, and this method has been applied only rarely and in selected cases. Wound excision, reduction (often by traction applied to a Steinmann pin in the calcaneum) and immobilisation in plaster continued to produce good results with an incidence of non-union of less than 3 per cent, and practically no ill-effects upon the calcaneum. Distraction, frequent changes of plaster, and early weight bearing except in transverse stable fractures, must be avoided.

Neonatal sciatic palsy—Dr N. E. Shaw reported three patients with neonatal sciatic palsy who were admitted to the Children’s Hospital, Sheffield, during 1957. The cases were unusual, because each occurred in twins. The classical features of the condition were present in each case. All the babies were born by caesarian section and suffered from asphyxia pallida at birth, and an injection of Nikethamide (1 millilitre) was administered into the umbilical cord. Shortly afterwards a mottled purplish discoloration was observed over the skin of the left lower limb and buttock, and the skin of the left iliac fossa. A left foot drop was also present. In one case the condition progressed to massive gangrene of the parts supplied by the femoral and internal iliac arteries, and the child died. In a second baby a pericolic abscess developed in addition to the foot drop, and the abscess was drained. This child still had a sciatic palsy, but in other ways had made excellent progress. The third baby had made a complete recovery. Dr Shaw recalled similar cases described by Fahini and by Mills. McFarland had suggested that the condition might be caused by the injection of Nikethamide into the umbilical artery instead of the umbilical vein, so that the analgetic was distributed through the internal iliac and femoral arterial tree and caused spasm of these vessels. This explanation was certainly in accordance with the clinical findings in the cases presented.

SOUTH-WEST ORTHOPAEDIC CLUB

The Autumn Meeting of the South-West Orthopaedic Club took place on November 29, 1958, at the Princess Elizabeth Orthopaedic Hospital, Exeter. Mr G. Blundell Jones was in the chair. Thirty members were present.

Stress fractures of the neck of the femur—Mr C. C. Jeffery (Exeter) reviewed the clinical features of this condition and showed three patients whose femoral necks had been satisfactorily treated by nailing. The shortest period of observation was three years and there was no evidence of avascular necrosis so far. Sound union of the fractures had been achieved in all.

Treatment of the fractured femur by intramedullary nailing—Mr F. C. Durbin (Exeter) reviewed forty-two selected cases of fractured femur treated in this manner at Exeter during the last ten years. He presented six cases which would have posed great problems if treated otherwise. Four patients had comminuted simple fractures in which a nail and several encircling wires had been used for fixation. Sound union with good knee movement had been obtained in all. There followed a patient with a transverse fracture of the upper third in Paget’s disease with full function, and finally a boy of seven years with a meningocoele in the thoracic spine and paraplegia who had developed multiple fractures in the bones of the lower extremities, a complication previously reported by Katz (1953) (Journal of Bone and Joint Surgery, 35-A, 220). Fractures of the right femur and tibia had been
treated by intramedullary nailing, the femoral nail transfixing the knee joint. Before operation the boy had been bedridden, and now he was able to walk with calipers and a walking cage. Few complications had been encountered, and all fractures in the series were soundly united and most patients had full range of movement in the knee. Two instruments which could be purchased from any ironmonger cheaply and which were most useful in intramedullary fixation were a Cobra bit 3\(\frac{1}{2}\) inch in diameter and 24 inches long, which made an excellent reamer, and the "Mole" self-adjusting wrench, which enabled a firm grip to be taken on a nail when extraction was necessary.

Problems in scoliosis—Mr G. Blundell Jones (Exeter) showed some difficult problems which included infantile scoliosis, kypho-scoliosis with arachnodactyly and paralytic scoliosis. The Risser localiser plaster and a modified form of the Milwaukee brace had been used. Slides were shown of the technique of application of the localiser plaster and the special frame was demonstrated.

Other cases—Members of the staff also demonstrated patients with the following conditions: 1) chondrosarcoma of the pelvis treated by hindquarter amputation; 2) resection of the lowest third of the radius for malignant osteoclastoma and replacement by a fibular graft; 3) arteriovenous aneurysm of the posterior tibial artery involving the tibia and following a simple fracture of the tibia: part of the tibia had been resected and the vessels had been ligated; 4) two cases of recurring sarcoma in the pelvis after disarticulation at the hip for sarcoma of the lower end of the femur; 5) local resection of the proximal half of the humerus for osteogenic sarcoma: there had been a local recurrence which was now receiving radiotherapy.

Bone sarcoma—In a discussion on bone sarcoma Mr Norman Capener (Exeter) said that it had been shown in America that the results of conservative resection were no worse than those of amputation. In the case of the upper limb it was felt that there was a place for conservative surgery as the use of the hand could be retained. Mr F. C. Durbin felt that radiotherapy alone had no place in the treatment of bone sarcoma. It rarely effected a cure or relieved pain, and deformities followed. When the lower extremity was involved amputation assisted the early rehabilitation of the patient. Mr A. L. Eyre-Brook (Bristol) did not entirely accept that view. He knew of at least two cases in which a bone sarcoma involving the shoulder region had been cured by radiotherapy. He felt that radiotherapy still had a place where amputation was difficult or unlikely to effect a cure, as in tumours close to the trunk. Mr Dillwyn Evans (Cardiff) had seen a patient with an osteogenic sarcoma of the lower limb who had later developed another osteogenic sarcoma in the opposite humerus, indicating that local spread could not have taken place. He believed that if possible a malignant bone tumour should be irradiated with a lethal dose of x-rays and that the limb should then be amputated.

Upper limb anomalies of muscle and nerve—Two patients were shown. The first patient, a boy of nine, had aplasia of muscles and tendons in the arms, forearms and hands. A Clark pectoral transplant had been employed on both sides using a plantaris tendon graft to continue the pectoral tendon to the radius. The transplant worked well but flexion of the elbow was deficient and had to be regained by serial plasters. Mr D. M. Rocyn Jones had had a similar case in which he had used a pectoral transplant and extended it into the radius with a strip of fascia lata, but this had not been satisfactory. The second patient was a girl aged seven with a symmetrical paralysis of all muscles supplied by the eighth cervical and first thoracic nerves, ascribed to injury at birth. Paralysed muscles and tendons had been demonstrated at operation.

Disappearing metatarsal bones—A woman of sixty was presented who had developed fixed clawing of the toes and cavus deformity of both feet during the previous ten years, with ulceration of the metatarsal heads in the soles of both feet. There was no apparent vascular or neurological disorder. Surgical treatment was required to remove the bony prominences: on the right side the metatarsal bones were disarticulated completely, and on the left side the head and half of the shaft of each metatarsal were excised. The patient was now comfortable and able to walk with surgical shoes. Sections of the bone which had been seen by Professor S. L. Baker shed no light on the problem. Mr Hedley Hall said that he had encountered a family who had suffered from a similar condition. It had affected first a male and later four male siblings. These four males had later died without issue as they had been sterile. No conclusive views about the pathology had been reached. Mr J. Bastow described a similar case, and reference was made to another case described by Mr A. E. Jowett at a previous meeting.

Infantile coxa vara—Three patients were shown in whom the deformity had been corrected by osteotomy. In one patient the fixation had been by Steinmann pins incorporated in a plaster spica. A Capener nail-plate and plaster spica had been employed in two patients. Remoulding of the upper end of the femur had taken place in all the patients, who had excellent function.
Fracture-dislocation of cervical spine with tetraplegia—A man of fifty was presented with a complete tetraplegia below C.7 after a fracture-dislocation of C.7 on T.1. With ordinary radiological technique it was impossible to obtain radiographs that showed the lesion. Tomography showed it clearly and was a valuable means of diagnosis in the very difficult situation.

Medullary nailing of fractures of the shaft of the tibia—Mr M. Alms (Bristol) reported the results of fixation of twenty-one closed fractures of the shaft of the tibia with an ordinary large straight femoral nail. Union had been achieved in all cases. Walking without external fixation commenced ten days to three months after operation, depending on the stability of the fracture. Two patients showed delayed union, but the remainder all had union at four months. The average duration of absence from work was ten weeks, and functional recovery was complete, comfortable and rapid.

Arthrography in congenital dislocation of the hip—Mr S. Tupman (Bath) believed that arthrography was an essential part of the investigation and planning of treatment in every case of congenital dislocation of the hip. He said that the possibility of redislocation from an obstruction or from dysplasia of the hip could be appreciated only by arthrography. The surgeon could diagnose more accurately, check without doubt his reduction, and serially check the maintenance of reduction and the development of the acetabular roof. Arthrography was a simple procedure with few failures if care was taken to place the point of the needle into the cartilage of the femoral head and to elicit a reciprocal "rocking" sign of the needle on rotation of the leg. The technique was demonstrated by a short film. No complication had been found in over 120 cases. Slides of fifty-four arthrographs representing fifteen cases were shown.

Arthrodesis of the hip by Charnley's method—Mr J. Piggot (Exeter) reviewed seventy cases with a follow-up of at least one year, the average follow-up being two years nine months. The operative technique was that described by Charnley, but cheaper simplified instruments were used and a compression screw was not employed. Patients were allowed to bear weight in two weeks. They wore a long spica for about four weeks and a short spica for a further seven weeks. The average stay in hospital was only forty-six days. There was no early post-operative mortality. Bony fusion had been obtained in 74 per cent. A detailed analysis of the results and complications was given. There were 46 per cent excellent results, 24 per cent good results, 17 per cent fair and 13 per cent poor.

Dislocation of acromio-clavicular and sterno-clavicular joints—Mr K. Pridie (Bristol) reviewed the methods of treatment of dislocation of the outer and of the inner end of the clavicle and the disadvantages of various forms of treatment. He described his experience of removing the outer, middle and inner ends of the clavicle for 1) ununited fracture, 2) arthritis of the acromio-clavicular joint, 3) sterno-clavicular dislocation, and 4) tumours of the inner end of the clavicle. He showed an ununited fracture of the middle of the left clavicle which had been treated by subperiosteal resection of the false joint and one and a half inches of the middle of the clavicle. A radiograph seven years later showed the clavicle to be indistinguishable from normal. This clearly demonstrated the regenerative powers of the clavicle. Cases of complete outward and backward dislocation of the clavicle which had been treated by excision of the outer two inches were described. Two cases of recurring dislocation of the inner end of the clavicle were demonstrated with photographs taken before and after operation. The advantages of partial excision were a full return to activity, lack of pain and discomfort and excellent cosmetic results as compared with conservative treatment and other operative measures which so often failed. Conservative treatment of acromio-clavicular dislocations was satisfactory only in subluxations and minor dislocations. In complete dislocations a clavicle burst out from its periosteum and could not be replaced. Conservative treatment in such cases was painful and unsatisfactory. Surgical removal of the outermost third of the clavicle gave excellent cosmetic results with a quick return to full function. Within three weeks the patient had full shoulder movement and was able to do strenuous work in six weeks from the date of operation. Mr Norman Capener said that the operation of excision of the clavicle was not new and that successful cases in Metropolitan policemen had been demonstrated by Furlong at a meeting of the Orthopaedic Section of the Royal Society of Medicine at Pyrford in 1942.

Observations on Perthes' disease—Mr G. Blandell Jones reviewed eighty-three patients with Perthes' disease who had been treated by immobilisation on a Jones's frame and later in a plaster spica, and in the final stages in a weight-relieving caliper. He thought that it might be possible to demonstrate the effect of traction and immobilisation by examining the small group of patients who presented originally without any radiological change. Seven such cases produced four good, two moderate and one poor result. This was a better than the average result in the series. A further group of twenty-six patients who presented without collapse of the head but with increased density of the epiphysis showed a similar distribution of the results. There was nothing in the investigation which supported
the view that traction was necessary in the initial stages of the treatment, but further work was necessary to confirm the findings of Evans and Lloyd-Roberts in 1958 that the simple avoidance of weight bearing was adequate treatment.

Some recent studies in spondylolisthesis—Mr Norman Capener said that the basic lesion of spondylolysis occurred in infancy and he suggested that trauma played a part probably in initiating a fatigue fracture in material that was defective for developmental or other reasons. The displacement of spondylolisthesis occurred in adolescence. Reduction could be effected by extending the spine with traction. In the development of spondylolisthesis a kyphosis was formed at the site of the slipping. The deformity could be corrected only by changing the kyphosis into a lordosis, which in fact required extension of the spine. It was extremely difficult to maintain the corrected position by grafting. He doubted whether heroic measures were necessary and in most instances the spine stabilised itself by developing a buttress of bone below the displaced vertebra. Mr E. Mervyn Evans showed radiographs of a man who had been injured in a road accident and had fractured a femur. The development of serious bedsores in the sacral area and loss of control of the bladder drew attention to a cauda equina syndrome. Radiographs revealed a complete forward displacement of the fifth lumbar vertebra on the first sacral. The bedsores prevented an effective reduction.

BOARDING SCHOOL FOR THE EDUCATION AND REHABILITATION OF PHYSICALLY DISABLED BOYS

Another step in combining the education and rehabilitation of boys suffering from paraplegia, poliomyelitis, or other serious physical disabilities has been taken by the establishment of Hephaistos School, Farley Castle, near Reading. It will be an independent boarding school with at no time more than forty-five pupils who will be admitted from the age of five years and will be able to stay until normal school leaving age with education up to the G.C.E. Advanced level. The intention is that boys with severe physical disabilities who are not educationally sub-normal should be given the greatest opportunity of a high standard of education despite their handicap. It is a non-profit-making school established by Mr David Atterbury, whose tank was blown up by a land mine in the last war, in consequence of which he himself has traumatic paraplegia from a vertebral injury.

SOUTH AFRICA

SOUTH AFRICAN ORTHOPAEDIC ASSOCIATION: SEVENTH CONGRESS, 1958

The Seventh Congress of the South African Orthopaedic Association was held in Johannesburg on October 23–25, 1958. Mr A. J. Helfet presided, and distinguished guests from abroad included Dr J. E. M. Thomson (Lincoln, Nebraska) and Miss Maud Forrester-Brown (Edinburgh).

The lumbar spine in the Bantu—Dr L. M. Jonck (Pretoria) had examined 748 Bantu spines, in the living under conditions of vertical loading, and in the cadaver by macroscopic and microscopic dissection. The anatomical features contradicted most of those described in current anatomy text-books: thus 1) The supraspinous ligament, strong in the thoracic spine, was totally absent in the lumbar. 2) The interspinous ligament, peculiar to man, was made up of fibres whose direction was essentially from lamina below to inferior surface of spinous process above. 3) The interspinous ligament, ligamentum flavum and fibrillar lamellae of the annulus fibrosus together formed a ligamentous triad which guided the movements of the vertebra above upon the one below. He likened the movements to a rocking horse action, which was guided and assisted by the nucleus pulposus. 4) The erector spinae muscle was a powerful force, the two components of which were in a horizontal (dorsal) and vertical (caudal) direction. The dorsal component was resisted by the interspinous and annulus fibrosus fibres, degeneration or destruction of which led to "reversed" spondylolisthesis. 5) Reversed spondylolisthesis plus disc space narrowing led to compression of the nerve root in its foramen, between the inferior surface of the pedicle above and the apex of the superior articular facet of the vertebra below. Gradual compression of the nerve root, which at that level was clothed in its axillary fold of the dural sac, permitted the nerve root to "carve" a niche for itself in the vertebral body, after the same fashion as an aneurysm of the aorta. Sudden compression gave rise to acute sciatic pain. 6) Vertical loading of the spine increased the sacral angle. While this more horizontal position
of the sacrum did bring about an increased shearing strain at the lumbo-sacral disc (load $\times$ sine of sacral angle), it had the effect of increasing the length of the lever (in this case the dorsum of the sacrum) upon which the erector spinae muscles acted. The mechanical advantage of the latter was therefore improved two or three times. 7) None of 200 adult Bantu men who for from twenty days to twenty years had shifted a total of twenty-five tons of meal over a distance of seventy yards a day, had suffered a "disc syndrome" or lumbar osteoarthritis.

Mr G. F. Demomisse (Pretoria) said that he had been privileged to examine many of Dr Jonck's anatomical specimens, and to confirm much of what he had postulated. He felt sure that many hitherto inexplicable features in the treatment of the painful back would be clarified on the basis of these findings, not the least of which was the prolonged disability that followed even the simplest of disc removals. Stripping of the multifidis muscle fibres from a large number of spinous processes was undoubtedly a harmful procedure; recovery was probably never complete. Dr J. E. M. Thomson (Lincoln, Nebraska) had been impressed by tears of the supraspinous ligament in the lumbar region that could be demonstrated at operation, and he had difficulty in believing that no supraspinous ligament existed. Dr Jonck replied that slips of origin of the lumbo-dorsal fascia from the tips of the lumbar spinous processes were commonly mistaken for fibres of the supraspinous ligament. With regard to the operation for laminectomy and disc removal, he was at present investigating a most promising approach, slightly lateral to the standard approach, which could be made through bloodless anatomical planes.

**Prosthetic replacement of the femoral head for recent fracture**—Dr J. E. M. Thomson (Lincoln, Nebraska) reviewed the history of the treatment of these fractures, and paid tribute to the late Fred Albee whose bone-grafting procedure was, in his opinion, the first constructive advance. To-day, and since 1949, he himself favoured the Austin Moore endoprosthesis which, in his clinic, had been inserted in ninety-four patients, the average age of whom was seventy-nine years. He considered the method to be unsuitable for individuals less than sixty-five years old. Results in his series compared closely with those of a series of 163 cases reported by the Committee on Trauma of the American Orthopaedic Association: 39 per cent were graded as excellent and the same percentage as poor; but of the patients with "poor" results many were enjoying a comfortable wheel-chair existence. This, considering their ages, was not unsatisfactory, and he was in any case much opposed to early weight bearing after the operation. Thirty-two of his ninety-four patients died within twelve months of operation, a more or less natural mortality rate in this particular age group. The unsatisfactory experience with the Judet type of prosthesis was reflected in its steadily diminishing sales in the United States since 1951.

Mr F. P. Fouche (Johannesburg) recalled his experiences in the use of the Smith-Petersen nail since 1935. He performed an open reduction, and transfixed the head securely by inserting the nail up to and into the hard subchondral layer of bone; unless this was done, the softness of the remaining portions of the head in old people was sure to cause failure. This was a procedure of some magnitude, and those who were considered too frail were encouraged to get up and bear weight as soon as possible. This allowed the fragments to shift and unite in the displaced position, and it prevented the development of a fixed mental pain-pattern which had proved most intractable.

**Normal variations of bone in radiological diagnosis**—Dr M. Denny (Johannesburg) read a paper which Professor E. Samuel (Edinburgh, late of Johannesburg) had prepared. Confusion was common, and many innocent "lesions" were interpreted in a serious and entirely faulty light, for example: 1) fibrous rests and cartilage rests in bone, disappearing with normal growth; 2) epiphysial variations, mistaken for osteochondritis dissecans at the lower femoral epiphysis, for apophysitis at the calcaneum (Sever's disease), for osteochondroma or chronic osteitis at the ischio-pubic region, for fractures at the tip of a spinous process or at the tuberosity of the navicular bone; 3) exaggeration of normal muscular ridges, variations in normal bone architecture as at the lower part of the femoral neck, enlargement of intervertebral foramina or of foramina of the skull, mistaken for secondary carcinoma, neurofibromatosis and the like; 4) variations in normal healthy callus; these could be differentiated from sarcoma by means of arteriographs. Mr J. M. Edelstein (Johannesburg) stressed the difficulties of diagnosis of these variations from the normal, and warned that a "fibrous cell rest" could prove to be the forerunner of a non-ostogenic fibroma. Close observation and long term follow-up examination were of the utmost importance. Osgood-Schlatter's disease was not an osteochondritis at all, but rather a lesion of a ligamentous attachment to bone. Apophysitis of the calcaneum should be regarded as a disease process, when associated with local pain, tenderness and swelling; the diagnosis was not to be made on radiological grounds alone.

**Repair of the lateral ligament of the ankle**—Mr R. Hamilton Bell (Cape Town) had performed twenty operations for reconstruction of the lateral ligament of the ankle in cases of chronic lesions. A free fascial graft was used, and it was threaded through drill holes in fibula, talus (and, when necessary,
calcaneum) as in the Watson-Jones technique with the peroneus longus or brevis tendon. Results were universally good. The fascial transplant actually increased in strength and dimensions with the passage of time, and caused permanent diminution of ankle movements if pulled too tight when inserted.

The sprained ankle—Mr N. Mungo Thompson (Pietermaritzburg) discussed the acute case, and described a new test for the torn lateral ligament: the inversion test was difficult of application, but the anterior drawer test was easy; it required no local or general anaesthetic and it was reliable: if the lateral ligament was torn, the talus could readily be displaced forward within its mortise. Early surgical repair was both essential and effective in these cases. Mr J. F. P. Mullins (Durban) called attention to the distal tibio-fibular syndesmosis, avulsion of which could so readily be confused with tears of the lateral ligament. Fixation with a screw was essential to recovery. Mr J. G. da Toit (Pretoria) agreed with Mr Mullins, but warned that a bi-malleolar screw should always be removed. Weight bearing upon this screw would lead either to toggle motion or to fracture of the screw.

Vascular surgery in trauma—Mr A. M. Glen (Pretoria) stated that amputations in association with main arterial trunk lesions had been reduced to 7 per cent by a team of vascular surgeons in Korea, as opposed to 62 per cent in World Wars I and II when treatment had been by ligation. The value of repair and grafting in these cases could no longer be doubted. Recognition of arterial damage was often difficult, and an absent or palpable pulse should not be accepted at its face value. Detailed examination was vital, because ischaemia lasting no more than three or four hours would cause permanent damage to tissues. He wished to debunk a number of "historic precepts" in the handling of these cases. The part should not be heated, nor should it be cooled—either of these manoeuvres could prove disastrous. Nor should it be elevated, as this could embarrass a vital trickle along a blood vessel to the point of actual cessation. Operation should be carried out as soon as possible, and the blood pressure of the patient restored in order to promote collateral circulation in the affected part. End-to-end suture was the procedure of choice, but autogenous grafting, using the saphenous vein, with or without a by-pass graft was done if there was intimal damage necessitating resection. Homografts were used when autogenous grafting was impracticable; synthetic replacements had little if any place in the presence of open, potentially infected wounds. Thrombosis in the injured vessel or in the graft was a common cause of failure, and required repeat operations in which a satisfying percentage of successes had been achieved.

Dr M. Berk (Johannesburg) said that arteriography was valuable in cases of trauma, yet it was not receiving the attention it deserved. He showed the arteriograms of five cases in which vital information was obtained which was unobtainable from any other source; not only had the level of the lesion been determined, but also the type of lesion, the presence of anatomical variations, etc.

Mr P. Theron (Johannesburg) agreed with the two previous speakers. Arterial spasm was a common complication in cases of trauma, and even arteriograms were difficult to interpret in these cases. Papaverine pledges packed round the spastic artery for about ten minutes, or alternatively hyalase plus procaine infiltration of the arterial wall, were both promising. Anticoagulants were not only valueless, but they could be dangerous and should therefore be entirely excluded. Retrograde catheterisation of the spastic artery was another method which was promising. Mr W. T. Ross (Johannesburg) recounted his experience, reported in the Journal of Bone and Joint Surgery (November 1951), in which he had partly severed the popliteal artery while performing a meniscectomy. He merely turned the patient over, exposed and sutured the vessel and watched the uninterrupted return of the circulation in the foot. He did not wish to claim any credit for this good result. Professor B. J. du Plessis (Department of Surgery, Witwatersrand University) endorsed the views of the previous speakers and differentiated between neurogenic spasm of the arterial wall which was evanescent and easy to treat successfully, and myogenic spasm which was not. He repeated the importance of operative exposure of the vessel in the latter, and agreed that the skill of the vascular surgeon was often put to the acid test in these cases.

The role of plastic surgery in orthopaedics—Mr J. M. Cuthbert (Johannesburg) outlined the methods of skin closure available, but wished rather to emphasise two more general points: the timing of plastic procedures in the presence of compound fractures, and the integration of the plastic with the orthopaedic services in cases of trauma. Timing was the most important aspect, and he had no doubt that immediate closure of compound wounds was often not desirable. Primary closure in the presence of oedema of soft tissues which had not yet reached its zenith could cause rather than prevent further breakdown. A delay of some days, both in cases with and without skin loss, gave the opportunity of creating conditions in the wound that would make a "take" certain. Too great a delay in applying a graft resulted in advancing epithelialising wound edges and contraction of granulations, both of which required wide excision. Integration of services had hitherto been to a large extent inadequate. To-day it was recognised that a skin flap plus a tendon graft or even bone chip graft could, and indeed should, be done at the same operation on many occasions.
Amputation of the thumb—Mr P. A. Hugo (Pretoria) recalled a method of reconstruction described by Sir Harold Gillies, the "cocked hat" advancement of the skin of the thenar eminence combined with a bone peg in the metacarpal head. The defect so created in the palm or on the dorsum of the hand was covered by a Thiersch graft, and the thumb cleft was deepened by a Z-plasty at a later date if needed. Mr Hugo showed a patient in whom this procedure had been adopted, and the outstanding features were the retention of normal sensations over the pulp and the strong grasp between thumb and index finger. The same principle could be applied in the case of amputation of other digits.

Discussion of these two papers was lively, and, in reply to questions, Mr Cuthbert said he would not hesitate to leave a tibial subcutaneous surface uncovered for a few days, during which he would dress the raw surface with "tulle gras" followed by eusol to promote granulations. Relaxing skin incisions with the production of long flaps were not only undesirable but also positively dangerous, because of the advancing oedema in cases of major trauma.

Bone tuberculosis—Mr C. J. Kaplan (Durban) compared two series of Bantu patients treated by conservative methods in Durban before and after the advent of antibiotics and chemotherapy. Outstanding results were achieved in the latter series, and the duration in hospital was considerably reduced. Mr Kaplan showed an excellent colour film which portrayed the regime he had adopted. This paper will be published in full elsewhere.

Insert grafts for non-union—Mr J. M. Edelstein (Johannesburg) described his experiences in the use of E. A. Nicoll's (1956) (Journal of Bone and Joint Surgery, 38-B, 70) operation for bridging defects in long bones. The method was of great value, and he presented six patients in whom either the tibia or the radius was involved. Autogenous iliac bone was used in all cases, and a metal plate with two screws at each end provided internal fixation. Bone chips were packed about the graft, which fitted tightly into the space between the bone ends. Five out of six fractures united, and a feature was the prolonged interval between the date of grafting and that of observing radiological evidence of "creeping substitution" of the graft. Mr Edelstein believed that, although this delay might be more apparent than real, it might signify the persistent viability of the bone graft.

Congenital hallux valgus—Mr C. T. Möller showed three patients, two of them twins, in whom the Lapidus procedure with slight modifications had been performed eight years earlier. Three of the twins' four feet were graded "excellent"; the fourth developed a severe recurrence of the deformity. What was the factor which had caused this relapse, and what other procedure should he have adopted? Miss M. Forrester-Brown (Edinburgh) suggested an oblique osteotomy of the first metatarsal shaft, followed by a light plaster shell which permitted the shaft to shorten and thereby eliminate the deforming bow-string action of the tendon of the extensor hallucis longus. Mr R. H. Bell (Cape Town) performed the osteotomy in the cuneiform rather than the first metatarsal base, and so avoided epiphysial trauma which he regarded as responsible for relapses. Mr G. T. du Toit (Johannesburg) avoided any form of bone disturbance in children, and merely diverted the course of the tendon of extensor hallucis longus to a position medial to the metatarsal head. A sling was constructed from the capsule, and it held the tendon in its new position, at the same time permitting its normal amplitude of movement.

Fractures of femoral head—Mr F. J. Hedden (Durban) and Mr R. C. J. Hill (Durban) reviewed their results in 172 patients operated upon during five years to December 1957. The average age was seventy-one years and the mortality 15.7 per cent. Serious local complications occurred in twenty-four patients of the ninety-one with subcapital and transcervical fractures: avascular necrosis accounted for seven of them. The fracture-angle in the latter group was of no prognostic significance, but the magnitude of the force which produced the fracture was. Severely displaced fractures indicated severe trauma (which included soft tissues) and these were associated with the worst prognosis; these were also the cases in which they now advised primary prosthetic replacement of the head. Trochanteric fractures in which stable reduction was possible were fixed with a McLaughlin type internal splint. Unstable fractures were also operated upon, and the shaft was displaced inwards and upwards as for the McMurray type of osteotomy. It was often necessary to rotate the shaft laterally in order to gain this displacement; a blade-plate was then applied in this position of lateral rotation.

Slipped upper femoral epiphysis—Mr M. Lanz (Johannesburg) had performed the Heyman (Cleveland) procedure of removal of the mass of redundant cartilaginous tissue on the superior aspect of the epiphyseal cartilage and the metaphysis of the neck. No effort was made to reduce the slipped epiphysis. After ten weeks the result was encouraging. Mr C. Morris (Johannesburg) performed an osteotomy through the femoral neck, locked the fragments in position by medial rotation, abduction and extension of the hip, and applied a plaster in this position. He was satisfied with his results, and had not observed necrosis in the femoral heads in his series.
The mechanism of internal derangement of the knee—Mr A. J. Helfet (Cape Town) had been able to demonstrate in the quick and the dead the function of the cruciate ligaments and semilunar cartilages in the rotator mechanism of the knee, and the manner in which tears of the cartilages were produced. Unobstructed lateral rotation of the tibia upon the femur was essential to the mechanism of locking; when this rotation was prevented, the anterior horn of the medial cartilage was ground down upon the tibia by the medial condyle of the femur, and one type of cartilage lesion produced. Another type of cartilage tear, commonly known as the "bucket-handle lesion," should rather be referred to as a "bow-string tear," for the rotating medial femoral condyle could and did push the anterior horn of the cartilage forward and laterally, and so caused it to tear in its longitudinal axis and bow-string in part or in toto. The pattern of erosion of the medial femoral condyle or the small inner segment of the articulating surface of the patella in association with medial cartilage lesions could now be explained, and could successfully be treated by removal of the damaged cartilage. This paper is published in full in this issue.

INDIA

ASSOCIATION OF SURGEONS OF INDIA: ORTHOPAEDIC SECTION

A meeting of the Orthopaedic Section of the Association of Surgeons of India was held at the Andhra Medical College, Vishakapatnam, on December 29–30, 1958.

Recurrent dislocation of the shoulder—Dr A. K. Mukherjee (Calcutta) reviewed fifty-two cases. He emphasised the importance of congenital factors in the causation of recurrence and recommended the Putti-Platt type of repair as the operation of choice. Dr K. T. Dholakia (Bombay) believed that unsuitable treatment of simple traumatic dislocation of the shoulder might predispose to habitual dislocation. He preferred the Bankart type of repair whenever it was possible.

Osteoclastoma—A symposium on osteoclastoma brought out the following points: 1) it is a much commoner tumour in India than in western countries; 2) primary malignant osteoclastoma is a definite pathological entity, whose diagnosis depends on careful histological study; 3) needle biopsy gives a negative result in nearly 50 per cent of benign osteoclastoma and in 100 per cent of malignant osteoclastoma; 4) excision is to be preferred to radiotherapy for all accessible tumours; 5) simple curettage has a higher recurrence rate than total excision; 6) massive excision in the region of the knee can be followed by successful arthrodesis of the knee by sliding bone graft.

Radiological observations on the relationship of the lower humeral epiphysis with its shaft—Dr D. P. Ghosh (Asansol) showed radiographs of the elbow taken in strictly lateral position in which two-thirds of the lower humeral epiphysis lay in front of a line drawn along the anterior border of the shaft of the humerus in normal children. This finding was contrary to the statement of Sir Reginald Watson-Jones that such a finding indicates traumatic anterior displacement of the epiphysis. The diagnosis of such displacement depended on clinical findings and not on the radiographs.

Observations on articular cartilage damage—Dr B. Mukopadhyaya (Patna) reported a series of animal experiments in which he showed that the nature of repair of the articular cartilage of a joint depends to some extent on the type of injury. When the articular cartilage alone was damaged, the repair was very satisfactory. But when a fracture was also present the repair was not so good. He also showed interesting changes in the articular cartilage of the opposite articular surface.

Tibialis posterior transfer for paralytic drop foot—Dr Selvi Pandian (Vellore) reviewed cases of paralysis of the lateral popliteal nerve from leprosy in which a transfer of the tibialis posterior tendon was done to the front of the foot either by passing the tendon through the interosseous membrane or by routing the tendon across the medial side of the tibia. The results were good both functionally and cosmetically in nearly 80 per cent of cases. The results from transfer on the medial side of the leg were slightly better than from transfer through the interosseous membrane.

Conservative treatment of trochanteric fractures of the femur—Dr B. B. Orhi (Indore) reviewed fifty-two cases of trochanteric fractures of all degrees of severity treated conservatively by traction. The results were satisfactory both anatomically and functionally in fifty of the cases, the oldest patient being 100 years of age.
ANNOUNCEMENTS

BRITISH ORTHOPAEDIC ASSOCIATION TRAVELLING SCHOLARSHIPS

The British Orthopaedic Association invites applications from its Fellows, Members and Associates for two Travelling Scholarships in orthopaedics of about three months' duration to visit centres in Great Britain and/or other European countries. The sum available to each scholar will be not less than £500.

Candidates should apply to the Honorary Secretary, British Orthopaedic Association, 47 Lincoln's Inn Fields, London, W.C.2, setting out the object of the proposed visit, the proposed itinerary, and previous clinical experience and contributions to research, and should give the names of two referees, who must be Fellows of the Association. Twenty copies of the application should be supplied. The closing date for receipt of applications is May 31, 1959.

BRITISH ORTHOPAEDIC ASSOCIATION AUTUMN MEETING, 1959

The Autumn Meeting of the British Orthopaedic Association will be held in London from October 22 to 24, 1959. Those wishing to present a paper at the meeting should submit an abstract of about 400 words to the Honorary Secretary, British Orthopaedic Association, 47 Lincoln's Inn Fields, London, W.C.2, before July 22 at the latest.

THE BRITISH COUNCIL

COURSE IN ORTHOPAEDIC SURGERY

An advanced two-week course in orthopaedic surgery has been organised by the British Council for twenty overseas orthopaedic surgeons with at least three years' experience in the speciality. This course starts in London on June 28, 1959. The programme has been arranged with the help of the Institute of Orthopaedics and is under the direction of Mr K. I. Nissen, of the Royal National Orthopaedic Hospital. Lectures and demonstrations will take place at hospitals in and around London, and a week-end will be spent in Cambridge. Further particulars may be obtained from the British Council, 65 Davies Street, London, W.1.