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# PROCEEDINGS OF THE COMBINED MEETING OF THE BRITISH ORTHOPAEDIC ASSOCIATION, THE NORDISK ORTOPEDISK FÖRENING AND THE NEDERLANDSE ORTHOPAEDISCHE VERENIGING

From October 1–3, 1980, a very important event in European orthopaedic surgery took place. A combined meeting of the British Orthopaedic Association, the Nordisk Ortopedisk Förening and the Nederlandse Orthopaedische Vereniging was held in Amsterdam. As a result of the organizing endeavours of Dr. Evans, Dr. Slätis and Dr. Veraart, the meeting proved to be a great success with participants representing not only the organizing countries but also coming from all over the world. In all, some 550 participated. The weather was acceptable, the Dutch hospitality superb, the social programme varied and enjoyable and the scientific programme of a high standard, not least the poster sessions.

There were honorary lectures, round table sessions, workshops and free papers.

The Robert Jones Memorial Lecture on "Juvenile Chronic Arthritis: Current Ideas of Surgical Management" was delivered by Mr. George Arden. The Nordisk Ortopedisk Förening Honorary Lecture was delivered by Professor Anders Langenskiöld on "Considerations on Growth Factors in the Treatment of Fractures of Long Bones in Children". "You Must Have Learned a Lot to Know a Bit" was the title of the honorary lecture of the Nederlandse Orthopaedische Vereniging presented by Dr. Theo Boesman.

Round table discussions were held on the following subjects.

M. A. R. Freeman, F. Duyfjes and R. Hagen: Hip arthroplasty: double cup or total hip?

E. O' G. Kirwan, P. F. van Akkerveeken and G. Sundén: Lumbar spinal stenosis.

J. Stevens, E. L. F. B. Raaymakers and J. Lauritzen: Osteosynthesis or primary arthroplasty in femoral neck fractures.

A. N. Henry, B. Veraart and J. Gillquist: Acute knee ligament injuries: analysis and results.

J. Noble, F. A. J. van Hussen and F. Lund: Chondromalacia of the patella.

G. C. Lloyd-Roberts, T. Hoogland and I. Reimann: The early management of the congenital clubfoot.

C. L. Colton, P. E. Ochsner and A. Lindstrand: The unstable ankle.

A. J. Hall and W. Ph van der List: Fractures of the distal femur.

A. Catterall, A. M. van der Heyden and A. Hjelmstedt: Congenital hip dysplasia: older than one year.

W. Waugh, P. Rozing and G. Bauer: Management of gonarthrosis.

J. P. O'Brien, Th. J. G. van Rens and L. E. Laurent: Management of mild and severe spondylolisthesis.

B. McKibbin, F. Magis and S. Olerud: External fixation versus internal fixation of tibial fractures: results and complications.

J. N. Wilson, B. van Linge and V. Damholdt: Femoral shaft fractures.

A. G. Apley, G. P. H. Hermans and A. Alho: Chronic ligamentous instability of the knee (especially posterior).

D. R. Sweetnam, J. W. van der Eijken and U. Nilsonne: Treatment of osteosarcoma.

R. Owen, G. H. Slot and A. Nordwall: The early management of idiopathic scoliosis.

R. A. Elson, T. J. J. H. Slooff and L. Lindberg: Revision of hip arthroplasty.

D. K. Evans, G. Th. M. Bossers and B. Althoff: Cervical spine fusion.

M. B. Devas, R. Deutman and B. Nilsson: Social effects of arthroplasty.

It was of course impossible to be present at all round table discussions but those attended proved to be quite stimulating; in particular those on Hip arthroplasty: double cup or total hip, Management of gonarthrosis, Management of mild and severe spondylolisthesis and External fixation versus internal fixation of tibial fractures. The object of a round table session is no doubt to activate the audience to participate by continuous discussion with the panel. Unfortunately, however, the panel seems to achieve such a dominating position that the audience becomes quite silent. A piece of advice to future panelists is to base their presentation more on questions, without giving replies, so as to stimulate the audience to more active participation.

The main topics of the free papers centred around the spine, the hip and the knee.

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## THE SPINE

G. H. Slot from Nijmegen spoke on "The importance of vertebral resection in correction of spinal deformities such as scoliosis, kyphosis and hyperlordosis in the thoracic and in the lumbar region: a survey of results in 29 patients." He had treated four different groups of patients. In the first there were 6 children and 2 adults with hemivertebrae. The mean correction of the curve had been from 58 to 26 degrees using Harrington distraction and compression rods. In the second group there were 11 patients with myelomeningocele. Two or three wedged vertebrae had been excised at the kyphosis, followed by dorsal spinal fusion. A correction of the curve from 138 degrees to 72 degrees had been achieved. Group three consisted of 4 patients with myelomeningocele with a paralytic kyphosis. The mean curve of 91 degrees had been corrected to 17 degrees by partial resection of each wedged vertebra and dorsal fusion. In the fourth group there were 6 patients with congenital scoliosis and myelomeningocele. The deformed vertebrae were excised and a correction from 73 degrees to 50 degrees had been achieved. The conclusion was that excision of hemivertebra or wedge vertebra was an efficient method of correction in congenital scoliosis.

Posterior spinal fusion, including the sacrum, in scoliosis was described by J. M. Steenaert from Nijmegen. Three hundred and fifty spinal fusions had been performed between 1970 and 1980. In 70 patients the spinal fusion had included the sacrum. The angle of scoliosis could be corrected from 91 to 45 degrees by this operation. The procedure of fusing the lumbosacral joint in idiopathic scoliosis could be open to much criticism and some of those contributing to the discussion doubted the necessity of this procedure.

R. A. Dickson and P. Stamer from Oxford spoke on "School screening for scoliosis: a longitudinal (cohort) study of natural history". More than a thousand schoolchildren had been screened visually for scoliosis and after a further more accurate examination 44 curves measuring more than 10 degrees were detected. Further investigations were carried out and it was concluded that school screening yielded a large number of non-progressive lumbar scolioses, but that most of these were not idiopathic but, rather, curves compensating for a tilt of the sacrum.

Kirkaldy-Willis, Yong-Hing, de Korompay and Shannon from Saskatoon, and Getty, Johnson, Kirwan and Sullivan (London) spoke on lateral entrapment of lumbar spinal nerves as an underrated entity. This occurs as a recurrent dynamic type of entrapment between the superior facet and the back of the vertebral body. The stenosis could be an isolated occurrence or be associated with or follow a disc herniation or be seen as part of a central stenosis. Radiography might yield a narrow disc space and myelography was often negative, but the greatest aid in diagnosis was computed tomography. Surgical decompression was recommended and it was suggested that a free fat graft be placed posterior to the dura to prevent adhesions. More than 80 per cent good results were recorded.

Mr. P. M. Yeoman, from Bath, described a two-stage osteotomy of the cervical spine in ankylosing spondylitis carried out over the last 10 years in 15 patients. In the first stage an anterior osteotomy is carried out. Two weeks later the dura and emerging nerve roots at C V to VI are exposed posteriorly. The head is elevated to close the osteotomy made possible by the wide exposure posteriorly. In this way minimal force is exercised and there is full control over the nerve elements during correction. Fixation is obtained by a halo device. The results showed satisfactory correction with patients being able to look ahead rather than down. The procedure is not recommended for the elderly.

## THE HIP

A more detailed diagnosis of congenital dysplasia of the hip can be achieved by computer tomography. Thus the deficiency of the anterior wall of the acetabulum can more easily be illustrated. This information is essential as long term stability of a prosthetic cup depends on full bony cover. The authors Hardinge, Isheerwood and Forbes (Wrightington) concluded that in the case of a deficiency of the anterior wall, or when the acetabulum was shallow, innominate osteotomy of either the Salter or the Chiari type could be recommended.

The Chiari osteotomy properly performed can improve the mechanics of the dysplastic hip according to D. A. Reynolds, London. The load-bearing area of the acetabulum is increased both anteriorly and laterally to an equal extent and the leg length is unaffected. The procedure is quick, non-traumatic and requires no internal fixation, nor long-term immobilization. In a study of 40 patients it was shown that pain, limp and radiological appearance had been improved in a high proportion of the patients. It is essential to concentrate on level, slope, curve of osteotomy and degree of displacement. The operation can not be recommended in the following situations: painful dysplastic hips in patients between 12 and 18 years of age, hips where symptoms rapidly increase, stiff hips, hips where there is evidence of a local concentration of pressure, where the head is conical and where dysplasia is excessive and associated with high subluxation.

Perthes' disease was discussed in three papers all from Holland and dealing with conservative treatment with traction and bed rest, a treatment successful in 10 out of 64 hips with an average of 9.5 years follow-up. Only patients under the age of 6 and those in Catterall Groups 1 and 2 did not require treatment. The shelf operation in hips with head "at risk" gave good results in 16 (64 per cent) and excellent results in 9 (36 per cent), and finally the Salter pelvic osteotomy as performed in 25 hips yielded excellent results in 5, good in 10, fair in 9 and poor in one.

An interesting contribution regarding examination of hips was made by A. N. Edwards, R. J. Cherry and M. H. M. Harrison from Birmingham who spoke on

Trendelenburg's sign. There are difficulties in the management of children with treated congenitally dislocated hips who at radiography demonstrate progressive dysplasia because, in the absence of pain, a positive Trendelenburg sign is used to decide whether further surgery should be carried out or not. In 550 normal schoolgirls 9.5 per cent were found to have a positive Trendelenburg sign. In 22 girls with 29 treated congenitally abnormal hips radiographs appeared normal in 20, but 10 had a positive and 10 a negative Trendelenburg sign. In 9 hips with radiographic evidence of dysplasia, 5 had a positive and 4 a negative Trendelenburg sign. It was concluded that the Trendelenburg sign is not a reliable guide in the decision regarding treatment of dysplasia of the hip.

The Exeter group presented results of total hip replacement showing an overall improvement according to the Charnley modification of the D' Aubigné-Postel scale. Before operation the grading was 1.8 for pain, 2.33 for function and 2.83 for movement. At follow-up the figures were 5.7, 5.07 and 4.85, respectively. Subsidence was seen in 31 per cent but this did not seem to adversely influence the good results.

Marti from Amsterdam and Besselaar from Harlem spoke on reconstruction of the acetabular roof and other bone grafts in total hip replacement and total hip revision. They found that in dysplasia of the acetabulum, protrusio acetabuli and defects in the calcar, the use of cancellous bone grafts improved the anchorage and gave much better results following reconstructive surgery.

Alho and co-workers from Norway spoke on loosening of the femoral stem component in cemented hip prostheses in 234 arthroplasties in 229 patients. Infection occurred in 3.8 per cent, fracture of cement in 17 per cent, resorption of the calcar in 55 per cent, a radiolucent zone between the femur and the cement in 51 per cent, cortical bone reactions in 9 per cent, medial migration in 11.5 per cent and distal migration in 13 per cent. Revisions had been carried out in 10 per cent. Half of these were for loosening of the femoral stem. The conclusion was that technical factors such as choice of implant, quality of cementation and positioning of the stem had contributed to the loosening of the prosthesis.

A group from Nijmegen (Ypma, Sloof et al.) found that mixing acrylic bone cement with carboxymethylcellulose gave a bone-cement interface with better bone ingrowth and without any intervening soft tissue membrane. There were no adverse tissue reactions and the cement with 35 per cent porosity had an acceptable strength for implant replacement of the hip.

Sörensen et al. from Odense demonstrated the effect of physical methods only in thrombo-embolic prophylaxis after total hip replacement. The total frequency of thrombosis was 3.4 per cent and of pulmonary embolism 1.4 per cent. They asserted that the method was easy to administer and without risk, but the cautious remark was made that diagnosis can be most hazardous and that this might be reflected in the results.

THE KNEE

Göran Bauer (Lund): Symptomatic osteoarthrosis of the knee does not heal spontaneously. There is a continuing loss of articular cartilage and bone, and pain increases. There is instability on weight-bearing. In medial compartment osteoarthrosis high tibial osteotomy may provide complete freedom from pain. The range of movement is acceptable and the osteotomy may arrest the disease. Regeneration of articular cartilage has been observed. However, osteotomy can not be relied upon in the advanced stages of osteoarthrosis.

With involvement of the lateral compartment a unicompartmental prosthetic replacement is advisable. In cases with severe bone destruction and instability total prosthetic replacement is recommended. Thus in treating osteoarthrosis of the knee joint it is essential that the radiography is exact, and the correct surgical method selected and accurately performed.

A Finnish group headed by P. Raunio from Heinola compared the results of the Geomedic, the Freeman-Swanson and Townly knee replacement procedures. There were no great differences between the three prostheses except as regards the correction of fixed flexion deformities in which the Freeman-Swanson proved to be the best. However it gave more anterior and minor mediolateral instability. The failure rate was 13 per cent for the Geomedic replacement and 4 per cent for the Freeman-Swanson replacement. The failure rate was not registered for the Townley prosthesis. The effect of removing the tourniquet before and after wound closure was reported. Healing problems occurred in 29 per cent when the tourniquet had been left until the end of wound closure and in only 13 per cent when the tourniquet was released before wound closure.

The natural history of the failed knee replacement was reported by Hunter et al. from Toronto. The results of 661 knee replacement operations were reported. The average time from the original operation to failure was 4.7 years and the average time from failure to follow-up was 2 years. The failure rate had been 13 per cent and there were 73 revisions. An attempt at fusion had been carried out in 9 patients, but only 5 were successful. Amputation was necessary in 4 patients. There was a good or excellent result in 30 per cent and fair or poor in 52 per cent. The infection rate for the primary operation was 3 per cent but after revision this increased to 11 per cent. Six patients had had one revision only, 7 two, 5 three, and 2 four. The results of multiple revisions were poor. Patients with a nonconstrained or semiconstrained prosthesis did better than those with a hinge prosthesis.

The poster sessions were most successful and the afternoon devoted to their demonstration, in which it was possible to establish personal contact with the exhibitor, proved to be most stimulating and this model of presentation is well worth applying to future scientific meetings.

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