Acta orthop. scand. 52, 367–370, 1981

# PROCEEDINGS OF THE NORWEGIAN ORTHOPAEDIC ASSOCIATION

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*Oslo, January 19th, 1980*

## TIBIAL FRACTURES: TREATMENT WITH THE ORIGINAL HOFFMAN'S DEVICE COMPARED WITH THE DOUBLE FRAME ANCHORAGE OF VIDAL-ADREY

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From January 1974 till June 1979, 45 tibial fractures, of which 33 were complicated, were treated with Hoffmann's device for external fixation. Until April 1977 the original Hoffmann device was used (25 fractures); after that time the modified device of Vidal-Adrey with a double frame (20 fractures) was used. This double frame was found to increase the rigidity of the fixation considerably.

In the total material there was one deep infection, two patients had a second operation because of delayed union, there was no definite pseudarthrosis, no amputation and no serious pin infection.

Comparison of the results in the two groups showed no difference in the time before removal of the device, on average 25 weeks, nor in the healing time, on average 28 weeks. However, in the group treated with the original device more moderately malunited fractures were found.

## AN OBSCURE CAUSE OF SCOLIOSIS

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Scoliosis may, for a long time, be the first and only symptom of an intraspinal tumour. A 15-year-old boy, was treated by bracing for a 38 degree scoliosis, thought to be idiopathic, until he developed weakness and atrophy of both upper extremities. Further examinations revealed a large tumour of the cervical spine which was successfully removed, and found to be an ependymoma. Six months later the scoliosis had lessened to 31 degrees, even though bracing had been discontinued.

It is emphasized that intraspinal tumours in children are very often diagnosed quite late, and that the initial erroneous diagnosis is mainly an orthopaedic one.

## PIGMENTED VILLONODULAR SYNOVITIS

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Five cases of pigmented villonodular synovitis were presented. Four cases of the diffuse type, three located in the knee joint and one in the ankle joint were treated by synovectomy, and one of the nodular type located in the ankle joint was treated by removal of the nodule.

In two cases the lesion in the knee joint displayed an extensive tumour-like synovial thickening with invasion of periarticular bone and an angiographic picture characteristic of a tumour. Synovial sarcoma was considered the most important differential diagnosis, but as both patients previously had been treated for pigmented villonodular synovitis (15 and 4 years, respectively), local recurrence seemed to be the most probable preoperative diagnosis. This was confirmed by the findings at the synovectomies and the histological examinations.

0001-6470/81/030367-04 $02.50/0

## *Oslo, February 15th, 1980*

### TILLAUX – KLEIGER'S FRACTURE

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During a period of approximately 18 months at the age of 12 to 14 years, slightly earlier in girls than in boys, the lateral part of the distal tibial epiphysis remains open while the medial part is closed.

In outward-rotation injuries of the ankle an intraarticular fracture of the lateral part of the distal tibial epiphysis may appear. Open reduction is recommended in cases in which dislocation is the main problem.

Two cases of this fracture type which goes by the name of Tillaux-Kleiger's fracture were presented.

### A MODIFIED ENDER NAIL

ARNE HAUKEBØ

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A modified Ender nail was demonstrated in which the distal part of the nail was provided with "crackpoints" at intervals of 1½ cm to make it possible to break off the nail using a pair of tongs to the required length in each case.

Only 4 to 5 of these nails have to be sterilized before each operation in contrast to up to 40 nails of the original type, and the stock can be kept to a minimum.

### THE USE OF BONE CEMENT IN FRACTURE TREATMENT

ASTOR REIGSTAD

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Bone cement has been widely used to improve the stability of osteosynthesis of fractures in osteoporotic patients.

The results of fracture treatment by internal fixation combined with bone cement were reported in cases of Colles' fracture, femoral neck fracture, supracondylar femoral fractures and in an iatrogenic femoral fracture which occurred when a total hip replacement and an arthrodesis of the knee joint were performed after removal of a prosthesis.

### ARTHROPLASTY IN ANKYLOTIC HIPS

HANS K. DAHL

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Seven patients, one male and six females, average age 50 years, who have had an ankylotic hip (one bilaterally) mobilized by an arthroplasty were reported.

In three hips, one bilateral, the ankylosis was caused by infection, and five hips had had an arthrodesis performed 1 to 35 years previously. Five patients suffered from severe low back pain, one had in addition a painful fibrotic ankylosis, and in three females various emotional indications dominated.

In four patients a Smith-Petersen cup arthroplasty was performed (in one bilaterally) and these patients have been followed up for 5, 8, 16 and 19/20 years, respectively. In three patients a total hip replacement was performed and the follow-up period is 3, 9 and 9 years, respectively. There have been no special complications.

At follow-up examination a few of the patients have negligible pain, and all have good to excellent mobility in the mobilized hips. The Trendelenburg sign is negative in four hips, positive in three, and has not been examined in one. Three patients use a stick permanently, and four a stick only out-of-doors.

## *Oslo, April 19th, 1980*

### BILATERAL IDIOPATHIC OSTEONECROSIS OF THE HEAD OF THE FEMUR DURING PREGNANCY

HANS KLEVEN

County Hospital, Molde

A 30-year-old pregnant woman was hospitalized because of severe pain in both hips. Radiological examination showed pathological changes in both hips, and a spontaneous fracture of the neck of the femur on the right side.

A bilateral osteonecrosis of the head of her femur was the obvious reason for her complaints, and further investigation disclosed that the patient was suffering from transitory idiopathic demineralization of both hips during pregnancy.

*Oslo, May 31st, 1981*

## OPERATIVE TREATMENT OF COMPLETE DISLOCATION OF THE ACROMIO-CLAVICULAR JOINT

PETER KLUNGSØYR

County Hospital in Ålesund, Åsestranda

A series of 22 patients, average age 42 years, were operated on for complete dislocation of the acromio-clavicular joint. The outer end of the clavicle was resected and the acromial end of the coraco-acromial ligament was transposed to the resected clavicular end. Immobilization time was 1 to 2 weeks, and average sick leave period was 5 to 6 weeks.

At follow-up examination, average observation time 62 months, two patients had died. Of the remaining 20 patients 17 were classified as having very good results; two of these had had long-standing dislocations. One was classified as good and two as poor. One of these had experienced several new traumas to the operated shoulder, and the other one had a loose clavicular end probably due to rupture of the transposed ligament.

## A REVIEW OF CHILDREN WITH A POSITIVE ORTOLANIS TEST AND OF CHILDREN WITH FAMILY HISTORY OF CONGENITAL DISLOCATION AND DYSPLASIA OF THE HIP (CDH)

KJELL MATRE

County Hospital in Ålesund, Åsestranda

Children born at this hospital in the years 1976 and 1977 were reviewed in 1980.

The Ortolanis test was positive in 19 per thousand, and a family history of CDH was found in 58 per cent of these. Of all children born in this period a family history of CDH was found in 7.2 per cent, and in children examined clinically and radiologically only because of a family history, signs of CDH were found in 15 per cent. All in all 30.7 per thousand were found to have some degree of CDH.

## FRACTURES OF THE FEMUR TREATED WITH THE KLEMM-SCHELLMANN INTERLOCKING NAIL

A. VISTE & A. ALHO

Regional Hospital, Bergen

Eleven patients with femoral fractures treated by the method described by Klemm & Schellmann were reported. Six of the fractures were comminuted, one was a double fracture and two had a large intermediary fragment. Five were open fractures.

The insertion of the distal bolts in the nail is technically difficult, and improvement of the instrumentation is needed. All patients were allowed immediate weight-bearing of 20–30 kg. One originally compound fracture was complicated by a deep infection but was successfully treated by antibiotics.

The results were good. No delayed unions were encountered. Eight patients had a shortening of less than 1 cm; one patient with a shotgun fracture had a shortening of 3 cm.

## FRACTURE OF THE HUMERAL SHAFT WITH RADIAL NERVE INJURY

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In cases of radial nerve injury associated with humeral shaft fracture most authors favour conservative treatment.

Two cases were reported where nerve function did not recover spontaneously, and where the radial nerve had to be cautiously chiselled out from the callus, 5 months after the injury. In the first case nerve function recovered almost completely, and in the second case recovery has started 6 months after operation.

It is recommended that an early exploration of the nerve and an osteosynthesis of the fracture be performed in the following cases:
1) In open fractures. 2) In cases where the nerve function deteriorates during treatment. 3) In severely dislocated fractures.

# HARRINGTON INSTRUMENTATION FOR VARIOUS INDICATIONS

A. ALHO

Regional Hospital, Bergen

On the basis of preliminary experience, the following indications, other than structural deformities, were outlined for Harrington fixation in the thoracolumbar region:

In unstable fractures with or without neurological damage, and in primary bone tumours of the vertebrae, where histology indicates resection, or where collapse of the vertebrae threatens, Harrington distraction instrumentation is combined with a spondylodesis. Anterior grafting is used in cases with resection or crushing of the vertebral body. For metastatic tumours of the columna, Harrington instrumentation alone may be indicated due to the short prognosis *quoad vitam*. The fixation is usually performed two vertebrae above and two below the affected level.