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FEMORAL SHAFT FRACTURES: A COMPARISON BETWEEN MEDULLARY NAILING AND ASIF PLATE OSTEOSYNTHESIS

J. Steen Jensen, J. Johansen & A. Mørch

In fractures of the middle third of the femur 60 medullary nailings (Küntscher) and 49 ASIF plate osteosyntheses were performed. The mortality rate was 7.8 per cent. General complications were seen in 18.3 per cent—4.3 per cent being thromboembolic and 5.2 per cent fatty embolism. Local complications were encountered in 26.6 per cent with an infection rate of 7.3 per cent. Seven cases of implant failure were described.

At the follow-up of 99 patients (average 3.5 years) the results were classified as excellent in 86 per cent. The only differences between the two methods were concerning fracture healing and time of full weightbearing.

The results do not give grounds for unreasonable efforts in using medullary nailing instead of ASIF compression plates.

HAEMARTHRON GENUS

Klaus Jacobsen & Erik Tøndevold

All patients with knee haemarthrosis diagnosed by puncture in the casualty ward were, during a 5-month period, admitted to the Department of Orthopaedic Surgery.

The primary diagnosis was based on conventional 2-plane radiography and clinical evaluation. In the Department it was found that ⅔ of the patients with the primary diagnosis *haemarthron causa ignota* had major lesions in the knee joints.

DYSPLASTIC HIP JOINT PROBLEMS DISCUSSED THEORETICALLY

H. Glastrup

Pauwels' theories and calculations of the pressure on the hip joint are mentioned.

Symptoms, diagnostic problems with other diseases, clinical and radiological findings are examined.

Pauwels' varus osteotomy is a causal therapy to normalize the pressure per unit area.

DYSPLASTIC HIP JOINTS TREATED WITH PAUWELS' VARUS OSTEOTOMY

H. Glastrup

Reference is made to 61 operated hips on 52 patients. All patients have been examined post-operatively.

Pauwels' theory has been followed in treatment after revision of clinical and diagnostic criteria.

Wrong diagnoses and treatment can be avoided and a lot of wrongly diagnosed patients can be helped to a painless or almost painless existence.

SUBTROCHANTERIC FRACTURES FOLLOWING NAIL OSTEOSYNTHESIS OF MEDIAL FRACTURES OF THE FEMORAL NECK

A. Bjørn Christensen & J. S. Kofod

On the last 30 nail osteosyntheses performed at the Orthopedic Department, Frederiksberg Hospital, six subtrochanteric fractures have occurred through the hole made for the nail. Possible explanations are discussed. The secondary fractures were treated in one case with a Jewett nail, in the rest with McLaughlin apparatus on the previous nail.

FEMORAL FRACTURES AFTER MOORE ARTHROPLASTY OR McLAUGHLIN OSTEOSYNTHESIS

Børge Ruben Hansen

The insertion of an inert surgical implant in living bone alters the biomechanical factors and induces stress concentration in the transmission zones. Repeated loading of the system results in minute relative movements between the implant and the bone and may be the fundamental cause of a late fracture.

A total of 36 patients with a hip prosthesis and 23 patients with a proximal internal fixation sustained a secondary fracture. Most of the fractures were localized at or below the level of the shaft of the prosthesis or the McLaughlin plate; all were oblique fractures with considerable instability.

In unstable fractures, an internal fixation with a lateral eight-hole plate has been considered the most convenient method secondary to a Moore arthroplasty. In fractures secondary to a McLaughlin operation the original implant has been replaced with a long-plate McLaughlin.

HYDROXYCHLOROQUINE SULPHATE IN PREVENTION OF DEEP VENOUS THROMBOSIS FOLLOWING HIP FRACTURES OR EQUIVALENT LESION

Peter Østergaard, E. Hansen, P. Jessing, H. Lindewald & T. Olesen

A total of 153 patients with fracture of the hip or similar injuries were included in a double-blind placebo controlled investigation of the usefulness of hydroxychloroquine sulphate in prevention of deep venous thrombosis.

The drug can reduce the number of thromboembolic complications significantly; this corresponds to the results obtained with coumarin derivatives or dextran 70, but without the untoward side effects of these drugs.

AN UNDISPLACED EXPERIMENTAL FRACTURE IN RATS

Jørgen Greiff

A total of 42 inbred hooded rats of an average weight of 250 g sustained a fracture of the tibia. Prior to the fracture a medullary nailing was carried out with a 0.7 mm stainless steel wire. 43/44 fractures were transversal; 6/44 nails bent more than 5 degrees. Radiologic union occurred within 3–4 weeks.

AUTORADIOGRAPHIC STUDIES OF THE COURSE OF HEALING OF RAT TIBIA FRACTURES USING ^{99m}Tc-Sn-POLYPHOSPHATE

Jørgen Greiff

Using ^{99m}Tc-Sn-Polyphosphate, 34 inbred hooded rats (average weight 245 g) had macroautoradiograms made of medullary nailed tibia fractures, 1–10 weeks after the trauma. The increased radioactivity was located in the callus, epiphyseal growth plate and from the 5th week in smaller areas in the cortical bone.

MICROAUTORADIOGRAPHIC LOCALISATION OF ^{99m}Tc-Sn-POLYPHOSPHATE IN RAT CALLUS

Jørgen Greiff

Six inbred hooded rats with an average weight of 293 g and a 2-week-old medullary nailed tibial fracture supplied callus for the microautoradiographic study. The ^{99m}Tc proved to be diffusely scattered solely within the mineralised part of the callus.

THE TARSAL TUNNEL SYNDROME (ELECTRODIAGNOSTICS)

S. Pilgaard & A. Øster

The tarsal tunnel syndrome is a nerve compression syndrome. Its aetiology, symptoms, signs, differential diagnosis and treatment are reviewed. The value of the evaluation of the motoric distal latency and the motoric conduction velocity time in the posterior tibial nerve is pointed out, the differential diagnostic value of these criteria being stressed. The authors find that the value of the electrodiagnostic procedures in tarsal tunnel syndrome is greater than that of electrodiagnostic examination in carpal tunnel syndrome (Pilgaard, S.: *Nord. Med.* **81**, 131, 1969).

TRANSVERSAL OR SAGITTAL TECHNIQUE IN LOWER LEG AMPUTATION FOLLOWING ARTERIOSCLEROTIC GANGRENE

Niels B. Termansen

In a prospective, randomized investigation including 88 patients with arteriosclerotic gangrene two techniques of below knee amputation were compared (sagittal technique (Persson & Sundén 1971) and transversal technique (Ghormley 1946)).

Reamputation above the knee was more frequent after sagittal than after transversal amputation. The difference was not statistically significant. Otherwise no differences in the results were found (primary healing, fitting of prosthesis, ambulatory and social status).

References: Ghormley (1946) Persson & Sundén (1971)

OSTEOARTHRITIS OF THE HIP TREATED WITH OSTEOTOMY

Jens Evaldsen, K. Simesen & O. Kallesøe

An assessment has been made of 172 hips treated during the years 1964–73 in the Orthopedic Department, Kolding. Merle D'Aubigne's hip table was used for the assessment. The effect on pain was best when pain was most pronounced. Mobility was unchanged. Without importance were the genesis, the duration of symptoms, the age of the patient and the technique of operation. The effect lasted at least 7–10 years.

THE FIRST YEAR'S EXPERIENCE WITH THE MONK PROSTHESIS

Frank Wang Hansen

At the Central County Hospital in Hillerød, 66 Monk prostheses were used for total hip joint replacement in 1974.

Hip assessments were made according to the method of Merle d'Aubigne and the results found to be similar to the results obtained when using the Ring prosthesis. The need for blood transfusions was on the average halved when using the Monk prosthesis.

DISCUSSION

K. Rechnagel

In nearly 100 Monk operations using the southern approach we have seen no dislocations although the patients are allowed to lie freely in bed and start walking on the 10th day.

To make the cup fit well we always reshape the acetabulum with a spherical mill.

The stem is in many cases too short. I should prefer a *long* stem, coated with isoelastic material.

THE TREATMENT OF DIAPHYSIAL PSEUDARTHROSIS WITH A-O COMPRESSION PLATE TECHNIQUE

Kurt Simesen, Joachim Boss Nielsen, Erik Hammersgård & Valther Mouritzen

The A-O compression plate technique was used in 32 cases of diaphysial pseudarthrosis. The average pseudarthrosis time was 13 months.

All the pseudarthroses united. Average healing time was 4 months.

Complications: One infection, one refracture, four skin necroses.

Conclusion: The method is very suitable, with high probability of healing, tolerable frequency of complications and rapid rehabilitation.

A METHOD OF MEASURING THE ABILITY TO BEAR WEIGHT IN PATIENTS OPERATED FOR FRACTURE OF THE FEMORAL NECK BY APPLYING EARLY WEIGHTBEARING

Arne Skipper

The results are presented here of a 2-year examination concerning the ability to bear weight in all patients with fracture of the femoral neck operated upon at the Department of Orthopaedic Surgery, Odense Hospital.

The study involved 40 patients, 21 with medial fractures, and 19 with pertrochanteric fractures. The ability to bear weight was measured thus:

The patient stood with the operated leg on bathroom scales and the contralateral leg on a fitted stool. The weightbearing was then converted into a percentage of the bodyweight, and a curve was drawn on a graph to show the amount of weight borne by each patient.

The material clearly shows that none of the patients put all their bodyweight on the operated leg from the start, but that the ability to bear weight increased gradually from a few days after osteosynthesis and that this ability increased more rapidly in patients with medial fractures.