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FRACTURE OF THE TALUS. A STUDY OF ITS GENESIS AND MORPHOLOGY

Otto Sneppen

In a material of 7192 ankle fractures and 218 talar fractures and/or subtalar dislocations, there were 59 cases of combined ankle and talar fracture. On the basis of a classification of the ankle fractures, it could be concluded that the position of the foot at the moment of injury is of decisive importance for the frequency of occurrence of talar fractures and dislocations. Supination in particular predisposed to fracture of the neck and trochlea of the talus as well as to subtalar dislocation.

SPINAL FUSION

E. Buus & S. Pilgaard

A follow-up of 57 patients who had spinal fusion performed during the period 1949 to 1962 is presented. The diagnoses were: poliomyelitis, 37 cases; congenital scoliosis, 8 cases; idiopathic scoliosis, 10 cases; v. Recklinghausen's disease, 1 case; and muscular dystrophy, 1 case.

In 25 cases the major curve was between 40 and 69°; in 32 cases 70 to 100°. The curves were corrected in a Rizzer jacket and fused through a window in the cast. The small joints were not opened and bank bone was used. The patients were kept recumbent in casts for 10–12 months postoperatively.

The loss of correction found was less than 30 per cent in 12 cases, from 30–60 per cent in 27 cases and from 60–100 per cent in 10 cases. Six patients had, postoperatively, a greater curve than before treatment. In spite of the great loss of correction, only 12 patients complained of back pain, 38 were working, and seven were receiving disability pension. The operative procedure has since been altered.

A PHOTOELASTIC STUDY OF HIP NAIL-PLATES

J. Steen Jensen

Photoelastic studies of an acrylic model of the upper femur were demonstrated. The author's standard model had a femoral inclination of 5°. The resultant hip pressure was found to act at 6° inclination and the abductor muscle pull at 20° inclination with the vertical. The abductor pull was found to be 0.57 times the hip pressure.

Photoelastic studies of Jewett nail-plates with 125°–160° angulation were presented.

In osteosynthesis the largest possible nail-plate angle is recommended, in order to reduce the strain on the nail-plate.

A PHOTOELASTIC STUDY OF OSTEOSYNTHESIS OF UNSTABLE TROCHANTERIC FRACTURES USING HIP NAIL-PLATES WITH DIFFERENT ANGLES

J. Steen Jensen

Acrylic models of unstable trochanteric fractures osteosynthesized with Jewett nail-plates at angles of 125°, 140° and 160° were demonstrated. Photoelastic studies confirm that the largest possible nail-plate angle should be used to reduce the strain on the nail-plate junction.

RECURRENT DISLOCATION OF THE ELBOW

Torben Weeke

Three cases of recurrent dislocation of the elbow, encountered since 1968, are reported. They were treated at the Orthopaedic Hospital, Dept. 2, Copenhagen. An anamnestic survey of the cases is given. They were operated *ad modum* Reichenheim & King, all with good result. A survey of the 56 cases contained in 28 reports in the literature, since 1871, is given.

Because of Reichenheim's rather complicated exposure of the elbow and problems with scarring on the front of the joint, we recommend the method of Osborne & Cotteril, which has been reported to have been successful in eight cases.

THE RESULTS OF 41 BELOW-KNEE AMPUTATIONS (SAGITTAL TECHNIQUE) IN RELATION TO LOCAL SKIN PERFUSION PRESSURE

Per Lund & Philip Sager

The material consisted of 68 per cent males and 32 per cent females. Forty-four per cent were diabetics. The average age was 71.7 years (range 45–88 years). Preoperatively, the local arterial skin perfusion pressure in the area of amputation (external counterpressure, isotope technique) was measured in all patients.

There were 10 (24.4 per cent) femoral re-amputations. Six out of 16 patients (37.5 per cent) with preoperative skin blood pressures below 40 mmHg underwent re-amputation and 4 out of 25 (16.0 per cent) with pressure above 40 mmHg. Re-amputation was more common in diabetics (33.3 per cent) than in non-diabetics (17.4 per cent). In all cases of re-amputation there was concomitant infection leading to re-amputations even in patients with a good local blood supply.

FRACTURA TALI

J. E. Lorentzen & O. Krogsøe

A total of 123 patients with fracture of the neck of the talus were followed up with a mean observation time of 22 months. The distribution of the 123 fractures was as follows: 54 fractures of the neck without dislocation, 53 fractures with dislocation and subtalar luxation or subluxation, and 16 fractures with dislocation and simultaneous luxation of the trochlea in the ankle joint as well as in the subtalar joint. The results were: 26 patients (21 per cent) developed avascular necrosis of the trochlea, resulting in severe osteoarthrotic changes. 38 patients (31 per cent) developed talocrural arthrosis and 58 (47 per cent) subtalar arthrosis. 87 (71 per cent) expressed moderate or pronounced complaints. For 74 patients (60 per cent) the fracture meant a change of employment or disability.

SUBTALAR DISLOCATION

Steen Bach Christensen

Thirty-three subtalar dislocations were reported. An account was given of the typical fractures following the lesion, with special reference to the mechanism and consequences of fracture of the processus posterior tali.

The long-term prognosis in this material seems to be worse than is generally assumed to be the case. Two patients had avascular necrosis followed by panarthrosis, and a further 18 patients had radiological arthrosis in the subtalar joints. Clinically 23 patients had pain during strenuous activities, and 15 patients had a limp.

The incidence of arthrosis in the dislocations without fractures is surprisingly high, and a comparison of the immobilisation periods suggests that early mobilisation will reduce the risk of arthrosis.

THE HEALING OF BELOW KNEE AMPUTATIONS IN RELATION TO PERFUSION PRESSURE OF THE SKIN

E. Hammersgaard & K. Baadsgaard

Sixty-nine below-knee amputations, utilizing a long posterior musculocutaneous flap, were performed on 67 patients with occlusive arterial disease.

Nine patients had skin necrosis and deep infection. Six had to be re-amputated above the knee. The frequency of re-amputations was thus 9 per cent; the mortality was 15 per cent.

In 56 cases skin perfusion pressure 10 cm below the knee was measured preoperatively. Among 50 cases with a pressure > 30 mmHg only one had to be re-amputated. Of the 6 patients with a pressure < 20 mmHg two had to be re-amputated.

BLADDER FUNCTION AFTER HEMIPELVECTOMY

T. Gerstenberg, J. Boss Nielsen, M. Lykkegaard Nielsen & L. Palm

A urological follow-up of 7 patients was performed 5–90 months after hemipelvectomy. The follow-up included cystometry, urodynamic investigations, i.v. pyelogram, micturition-cystourethrography and cystoscopy.

All patients had, at the time of the follow-up, clinically normal micturition, and the cystometric and urodynamic investigation showed no neurogenic bladder dysfunction. It is concluded that a possible unilateral denervation of the bladder does not result in disturbances of bladder function.

LATE ULNAR PALSY: ETIOLOGY, PATHOGENESIS AND MICROSURGICAL TREATMENT

Ole Osgaard

Late ulnar palsy, which has been recognized since the beginning of the 19th century, can be roughly divided into two etiological groups, one group having sustained an adequate trauma of the elbow region or a deformation of the elbow, and an "idiopathic" group. In both groups, a connective tissue mass is found in the nerve, constricting the nerve fascicles, and by a new microsurgical method, this tissue can be removed

by microdissection of the fascicles. In most cases, clinical and neurophysiological recovery is achieved 6–9 months after the operation.

OCCULT PATELLA LUXATION

Klaus Jacobsen & Peter Metz

In 10 patients admitted with haemarthrosis of the knee, denying earlier or recent patellar dislocation, we found during operation and with radiography the pathognomonic signs of this condition. An immediate spontaneous reduction had taken place.

THE PROGNOSIS OF NERVE LESION IN THE VOLAR CARPAL REGION

Henning Overgaard Nielsen & Jørgen Lauritzen

Over a 7-year period, 19 lesions of the median nerve, 5 of the ulnar nerve and 3 of both nerves were repaired. Twelve were treated by primary atraumatic suture, and the remaining 15 by secondary repair but nerve grafting was not used. There were 16 cases of lesion of the finger flexors. Twenty-three patients were reviewed. All had regained protective sensation of touch and function of the sweat glands but only 9 could discriminate below 2 mm and had regained some stereognosis. All repaired tendons were functioning perfectly. All the children had recovery completely. Of the 18 adults, 11 had returned to their former job, while 3 now had another full-time job.

SHOULDER ARTHROGRAPHY AS A METHOD FOR DIAGNOSIS OF ROTATOR CUFF LESIONS

Erik Martin Jensen

The diagnosis of traumatic as well as degenerative shoulder pain can be difficult. Shoulder arthrography, which can be performed in the ambulatory patient without risk or appreciable discomfort, is an important diagnostic tool.

Out of 175 shoulder arthrographies only eight resulted in mild discomfort.

Shoulder arthrography in a group of 18 patients with long-term loss of mobility after shoulder injury showed rotator cuff lesion in 16 cases. The patients had been treated initially in an emergency room without the diagnosis having been made clinically. The prognosis was poor as eight patients never attained active mobility, and three patients only attained active mobility up to 90°.

The importance of an early diagnosis of rotator cuff lesions must be emphasized even when operative treatment is not being considered.

A FOLLOW-UP STUDY OF TIBIAL SHAFT FRACTURES: COMPARISON OF CONSERVATIVE TREATMENT AND OSTEOSYNTHESIS WITH CONVENTIONAL PLATES AND ASIF-PLATES

J. Steen Jensen, F. Wang Hansen & J. Johansen

A total of 238 tibial shaft fractures were reviewed after a mean observation time of 3.5 years. 102 fractures were treated conservatively. Osteosynthesis was performed using conventional plates in 41 cases, ASIF-plates in 64 and other methods were used in 31 cases.

At the follow-up, malpositioning was encountered in 21 per cent of the conservatively treated and in 10 per cent with conventional plates.

In closed fractures there was non-union in 6 per cent of the conservatively treated and in 8 per cent of those treated with conventional plates. There were 4 per cent with deep infection with conventional plates as against 5 per cent with ASIF-plates.

In compound fractures, conservative treatment led to 21 per cent with non-union and 3 per cent with deep infection. With ASIF-plates there were 11 per cent with deep infection and with conventional plates 24 per cent with non-union and 12 per cent with deep infection.

ASIF-plate osteosynthesis was found to be justified in the treatment of tibial shaft fractures.

SCOLIOSIS TREATED WITH HARRINGTON INSTRUMENTATION

E. Hørlyck & E. Thomasen

Since 1972, at the Orthopaedic Hospital in Aarhus, 37 cases of scoliosis have been treated with posterior fusion and internal fixation using Harrington instrumentation. The average preoperative curve was 73°. The results in 25 patients with an observation period of more than 1 year show an average initial postoperative correction of 45 per cent of the preoperative angle. Walking with a Millwaukee brace is started after 6 weeks, and the brace is used for 1 year after the operation.

During the first year the loss of correction varied from 0 to 23°, so that the final average correction was 33 per cent of the preoperative angle. There were no cases of pseudarthrosis.

ATLANTO-AXIAL INTERLAMINAR FUSION

K. Harry Sørensen & Jakob Husby

Thirty-six patients were treated with atlanto-axial interlaminar fusion utilizing a special technique and team-work between neurosurgeon and orthopaedic surgeon. Two bone-grafts from

the iliac crest with grooves for the two laminae were fixed with steel wires.

Twenty-one patients had a fracture of the dens axis (5 pseudoarthrosis), and 10 rheumatoid arthritis (7 horizontal and 5 vertical dislocation); 8 had medullary symptoms. Five had other lesions.

All fusions were solid at follow-up at least 1 year after the operation. Great relief of symptoms was achieved with a minimum of restriction of movement of the cervical spine.

ANTERIOR LUMBAR INTRACORPOREAL FUSION

K. Harry Sørensen

Ninety-eight patients had fusion performed (extraperitoneal technique). Indications were incapacitating low-back pain caused by degeneration of the 4th/5th lumbar discs or spondylolisthesis. 135 discs were degenerated, 114 were fused. There were no complications in 75 per cent. However, 11 had thrombophlebitis, 2 fatal pulmonary embolism, 4 slight infarctions and 3 severe atelectasis.

At follow-up, 3–8 years later, the fusions were solid in 91 per cent and after re-operation in 94 per cent. Healing was not achieved in 21 per cent of the patients with spondylolisthesis. 73 per cent felt better or cured. 31 patients had constant pain (21: somatic explanation). 60 per cent of patients, operated upon after the age of 45, received disablement pension.

MODULAR KNEE PROSTHESIS

N. O. Christensen

In contrast to the hinge type of knee prosthesis (Waldius, Guepar, etc.) the modular type of prosthesis (Marmor, St. Georg) uses minimal amounts of foreign material and allows for only one compartment of the joint to be replaced, as this is generally sufficient. Severe instability and angulation can be treated effectively in this way. The patients are walking after 1–2 days. In rheumatoid arthritis both compartments must be replaced in most cases.