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USE OF A HEAD-NECK PROSTHESIS IN THE TREATMENT OF PERTROCHANTERIC FEMORAL FRACTURES IN GERIATRIC PATIENTS

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Treatment of geriatric patients should aim at quick ambulation. The head-neck prosthesis makes it possible to ambulate early with weight-bearing and may be indicated in cases in which other forms of stabilization may fail to tolerate early weight-bearing. Factors of importance in determining the indications are not only the limited life expectancy but also such conditions as Parkinson's disease or dementia.

Little has so far been published about this logical method of treatment. The data from the few available publications roughly agree with the results of a retrospective study performed at our department. The study concerned 33 patients with an unstable pertrochanteric femoral fracture (classified types 3 through 5 according to Evans). A head-neck prosthesis of the Weber type was used in the treatment of these fractures. The mean age of the 24 female and 9 male patients was 81.7 years. The mean hospital stay was 23.7 days. *Mortality*: 7 patients died within 6 weeks, and 8 died within 3 months. *Mobility*: postoperative hip function was good in 22 of the 27 patients whose preoperative mobility was fair to good.

There are several possible methods of treating a pertrochanteric femoral fracture; in most cases the choice will not be a head-neck prosthesis. Yet we believe that a head-neck prosthesis may be the correct choice if indications are determined with proper care.

ACENOCOUMAROL (SINTROM) AS THROMBOSIS PROPHYLACTIC IN ORTHOPAEDICS

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A retrospective survey was made of the results of systematic thrombosis prophylaxis with acenocoumarol in patients admitted to the orthopaedic department of the Nijmegen University Hospital over the period 1977-1981. Patients younger than 16 and older than 85 years, patients with rheumatic and liver diseases and demonstrable coagulation disorders, and most patients admitted for operations on the upper extremities were not given this prophylactic.

Of the 5583 patients admitted, 3268 were given acenocoumarol (Sintrom): 4 mg on the day of the operation, 3 mg the next day and subsequently doses determined on the basis of the thrombotest. Sintrom medication was generally continued for 6-12 weeks after the operation. Of the 5583 patients, 11 developed deep venous thrombosis (DVT), which led to a fatal outcome in two cases; 12 patients developed pulmonary embolism (PE), which was fatal in one case; 47 patients had a postoperative haemorrhage which resulted in a secondary infection in 18. The corresponding figures in the group with Sintrom prophylaxis (3268 patients) were seven DVT, 11 PE (one fatal) and 44 after-haemorrhages.

In order to establish the influence of the severity of the operation on the incidence of DVT, PE and after-haemorrhage, a severity classification was developed. The incidence of DVT, PE and after-haemorrhage is discussed. It is concluded that systematic Sintrom medication is a safe method of thrombosis prophylaxis.

ORTHOPAEDIC SURGERY ON AGED PATIENTS. A 5 YEAR SURGERY

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A survey is presented of the group of aged patients admitted to the orthopaedic department of the Nijmegen University Hospital over the period 1977-1981. Of a total of 5583 patients admitted, 714 aged 65 and over were given surgery. The age range of these patients was 65-96 years. The group consisted of 535 women and 179 men. The number of operations (in one or more sessions) was 6010 and 860, respectively. On the basis of a severity classification it is demonstrated that most of the operations performed on aged patients are in the severest category; more than 90 per cent of the operations involved the lower extremity. The mean hospital stay was 21.4 days in the aged groups (the mean stay in the entire group was 12.9 days). Preoperative concomitant diseases and postoperative complications (in about 45 per cent of the operations on aged patients) are discussed with reference to their influence on the duration of the hospital stay. Also discussed are the mortality (0.1 per cent of the total group) and the destination of the remaining patients after discharge from the orthopaedic department.

CERVICAL INTERCORPORAL FUSION. CORRELATION BETWEEN SOME CLINICAL DATA AND THE ULTIMATE RESULT

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The posttraumatic or degenerative cervical syndrome has three components:

- a. Pain in the neck;
- b. Pain in the neck and occipital region;
- c. Pain in the neck and arm.

A study was performed of the incidence of these three components before and after cervical intercorporal fusion, of the possibility of localizing the level by clinical neurological examination, and of the influence of foramen stenosis on the ultimate results.

The group studied comprised 72 patients treated by operation between 1976 and 1982 (36 with a posttraumatic and 36 with a degenerative cervical syndrome). Preoperative pain in the neck was present in 64 patients (34 with a posttraumatic and 30 with a degenerative syndrome). Pain in the neck still existed in 23 patients after the operation (5 with a posttraumatic and 18 with a degenerative syndrome). Pain in the occipital region was present in 50 patients (22 posttraumatic and 28 degenerative). It persisted after the operation in 8 and 13, respectively. Pain in the arm was

present in 56 patients (24 posttraumatic and 32 degenerative) and persisted after the operation in 8 and 15, respectively.

An exact dermatome pattern of radiation was found in 14 of the 24 posttraumatic patients with pain in the neck and arm; stenosis of the foramen was present in 6 and absent in 8 of these 14. Intercorporal fusion without foraminotomy produced similar results in the two groups. Of the 32 degenerative patients with pain in the neck and arm, 24 showed an exact dermatome pattern of radiation; 11 had a stenosed foramen, and 15 had not; 8 of the 11 and 6 of the 15 were symptom-free after intercorporal fusion.

CERVICAL INTERCORPORAL FUSION IN THE TREATMENT OF INTERVERTEBRAL DISC DEGENERATION. ANALYSIS OF POOR RESULTS

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A follow-up study was performed of 72 patients treated by cervical intercorporal fusion, in view of disc degeneration in 36 and in view of a posttraumatic cervical syndrome in 36. The latter group is not discussed here. Fusions were effected at 66 levels in the 36 patients of the former group. The mean age of this group was 46 years. The subjective results were: postoperative improvement in 61 per cent (a considerable proportion being entirely symptom-free) and no improvement in 39 per cent. The results of fusion at one level did not significantly differ from those of fusion at two levels. The results of fusion at three levels were decidedly less favourable. The results in patients under 50 were much better than those in patients over 50 years of age. Most patients under 50 were entirely symptom-free after the operation. Ten patients showed no improvement despite an excellent fusion. The results were not influenced by the duration of preoperative complaints or the follow-up period. There was no correlation between pseudarthrosis and the results

CLOSED INTRAMEDULLARY KÜNTSCHER NAILING OF SHAFT FRACTURES AND PSEUDARTHROSIS

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During and after World War II, G. Küntscher and L. Böhler developed the technique of intramedullary nailing of shaft fractures. The procedure proved to be highly suitable especially for femoral shaft fractures. The great advantages of the closed method were pointed out by Böhler as early as 1946. Closed nailing

of shaft fractures is technically quite simple with the aid of an X-ray image amplifier. The advantages of this method over open Küntscher nailing are:

1. Less extensive operation;
2. Shorter operation if adequate reduction has been achieved in advance on the traction table;
3. Less risk of infection;
4. Less blood loss;
5. Only a small scar at the greater trochanter.

The technique is discussed with special reference to its possible applications in the treatment of fresh shaft fractures and pseudarthroses.

FOLLOW-UP OF 80 FEMORAL FRACTURES TREATED BY INTRAMEDULLARY FIXATION WITH A KÜNTSCHER NAIL

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During the period 1974 through 1981, 80 femoral fractures were treated by intramedullary fixation with a Küntscher nail. This follow-up considers the type of fracture, type of accident, open or closed Küntscher nailing, maintenance of reduction achieved and duration of consolidation. Peroperative and postoperative complications are likewise discussed. The series included about 50 patients with multiple injuries. Finally, data are presented on the rate of reoperation, duration of the hospital stay and interval until resumption of work.

OPERATIVE THERAPY OF THE RADICULAR SYNDROME OF THE LUMBAR SPINE IN THE AGED PATIENT

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The radicular syndrome in the aged patient is due to mostly osseous changes which lead to stenosis of the spinal canal, the lateral recess or the intervertebral foramen.

The clinical features differ from those of a radicular syndrome due to herniated disc.

X-rays show extensive degenerative changes and myelography reveals bizarre lesions. Myelography supplies insufficient information and should be supplemented by CAT, preferably after injection of a contrast medium. Electromyography is likewise helpful in locating the pathological locomotor unit.

Operative therapy is indicated if conservative therapy fails, if the symptoms are of an individualizing nature, if objective neurological changes are demonstrable and if the radix involved can be identified by radiological examination and electromyography. The primary objective of the operation is total decompression of the radix.

Between 1974 and 1982 our department operated on a total of 28 patients older than 65 years for radicular syndrome of the lumbar spine. The lesion was located at level L4-L5 in 21, L5-S1 in seven and L3-L4 in two cases. In two patients the lesion was located at two levels.

Operative results were evaluated on the basis of the following three criteria:

- low back complaints
- neurological lesions
- the ADL level.

At follow-up 18 months after the operation, results were very good in 9, good in 16 and moderate in three patients.

Complications: irreversible peroneal dysfunction in one case and transient peroneal dysfunction in one case. One patient needed anterior spondylodesis in view of progressive spondylolisthesis 14 months after the operation.