Selected Abstracts

Pages with reference to book, From 260 To 263

Early Detection and Classification of Collapse of Femoral Head After Transcervical Fracture. Cal Ru.nin and Nie Qiabn-de, Chinese Med. J., 1982 95: 25-30

THESE AUTHORS from the Beijing Institute of Traumatology and Orthopedics in Beijing present their observations of 103 instances of avascular necrosis of the femoral head following transcervical fractures. The authors emphasize that their method of detecting minimal femoral head collapse and of classifying the stages and types may aid in the early diagnosis and selection of the method of treatment, although the authors themselves have actually treated 20 per cent of the patients in this group. The method depends upon measuring the height of the femoral head, a procedure which is illustrated in the article and which allows the identification of a minimal stage, a progressive stage and quiescent stages occurring in three areas: collapse of the weight bearing area, subtotal collapse and total collapse. Some of the patients were analyzed in the quiescent stages and could be described as having the repair type, the sclerotic type or the absorption type of collapse of the femoral head.

-George L. Lucas.

Clinical Experience with the Variable Axis Total Knee Replacement.James R. Buchanan, Robert B.Greer III, Larry S. Bowman and others. J. Bone Joint Surg. Am., 1983, 64: 337-346.

THE THREE YEAR EXPERIENCE of the authors with the variable axis total knee prosthesis from the Milton S. Hershey Medical Center in Hershey, Pennsylvania, is reported upon. A variety of arthritic conditions were treated, and preoperative deformities of the knee ranged from 44 degrees of varus to 24 degrees of valgus with as much as 34 degrees of flexion contracture. Seventy-five per cent of the knees at rest had pain relief, and 96 per cent had pain relief while walking. It is believed that the angular deformities can be corrected by release of contracted ligaments, and the prosthesis has been used in severely deformed knees.

As in all other forms of implant arthroplasty, complications occurred several times. These included patellar dislocations in six patients, progressive collateral ligament instability in five patients, a loose tibial screw in one patient, a tibial fibular dislocation in one patient and a traumatic fracture of the methylmethacrylate in one patient. None of the components loosened, although nonprogressive radiolucent lines were observed in 38 per cent of the knees.

-George L. Lucas.

Fractures of the Proximal Humerus (Proximale Humerusfrakturen). R.P. Jacob and R. Ganz. Helv. Chir. Acta, 1982, 48: 595-6 10.

IN 80 PER CENT of fractures of the proximal humerus, good results can be expected if they are not displaced and are stable, thus allowing early mobilization. The other 20 per cent pose problems with reduction and, in adequate fixation, carry the risk of necrosis of the humeral head and painful ankylosis of the shoulder.

The classification of Neer has offered optimal guidelines for the use of osteosynthesis with four separate fragments because of the pull of the supraspinatus and subscapularis muscle. The risk of avascular necrosis increases with in-creasing numbers of detached fragments. The authors report good results in reduced but unstable fractures at the surgical neck using transcutaneous Kirshner wire fixation followed by ten days of Desault spiea immobilization. With multiple displacements, the authors use plate osteosynthesis with multiple screw fixation. Detachment of the greater and lesser tuberosity with marked vascular impairment frequently causes necrosis of the humeral head which is highest in the presence of dislocation and multiple fracture segments. The use of wire pull fixation,

single screws and small bone plates with minimal osteosynthesis is the best method; it is associated with less avascular damage and unlimited range of motion, even with uncorrected valgus impaction. The complication of osteonecrosis only becomes apparent after 12 to 24 months with the surgical technique.
-Emest H. Bettmann.

Recent Experience in Total Shoulder Replacement. Charles S. Neer II, Ketth C. Watson and F. Joann Stanton . J. Bone Joint Sur. Am., 1982, 64: 319-337.
OF 273 consecutive replacements of shoulder joints, 194 were evaluated and reported upon from 1973 to 1981. In this article, the techniques that evolved, along with the designs, indications, clinhcal findings and results, are discussed in reference to total shoulder replacements.
Infection and paralysis, which were extensive with complete loss of function of the deltoid muscle and rotator cuff, were considered contraindicators for the procedure. In the shoulder joint with a shallow glenoid socket and ligaments too loose to allow for greater motion, the muscles are critical for movement and stabffity. Thirty to 40 degrees of retroversion of the humeral head portion of this metal to plastic total glenohumeral unit is also needed.
It was believed that the length of the humerus should be preserved to allow adequate function of the deltoid muscle. The external rotator muscles of the shoulder must also be preserved to attain a good result. It was believed that, with proper technique in the shoulder replacement and rehabilitation, the procedure was probably not inferior to those replacements of other joints. As with patients with osteoarthritis, those with good shoulder muscles can be expected to achieve nearly normal motion. Late clinical loosening of the prostheses was not noted, even though 30 per cent of the194 patients showed a lucent line at the bone-cement interface. These lines were thought to be the result of faulty cementing techniques in most patients. In conclusion, it was thought that a completely constrained unit in the shoulder could not be expected to function as well as a minimally constrained unit.
-Louis P. Clark.

New Concepts in Diagnosis and Treatment of BackAilments in the Elderly. E.John Landherr and Mitchell. R. Smigiel, JR. Surg. Clin. North Am., 1982, 62: 291-295.
DISORDERS of the lumbar spine producing pain in the back and lower extremities are widely distributed throughout the age spectrum of patients and in both sexes. Unquestionably, injury to the back is the most common factor during the middle decades, but pathologic structural changes in elderly patients might present a greater problem. In particular, the syndrome of lateral nerve root entrapment due to enlarged facets, anterior or posterior osteophytes or unstable facets is being recognized, as is spinal stenosis; which may exist by itself or with lateral nerve root entrapment. The other diagnostic considerations in the older age group include tumor, trauma, fracture, infections, inflammatory disorders, disorders of the circulatory system and extraspinal disorders, such as tumors of the pelvis and disorders of the hip.
The development of computerized axial tomography has allowed much more accurate diagnosis of the causes of back pain in the elderly, and thus, more vigorous treatment has been carried out. The conservative treatment of disc protrusions or spondylosis is much less successful in the elderly than in the younger patients, and therefore, the authors have operated upon 70 patients who were over 70 years of age and had disc herniations, spondylosis or combined dis. orders. There was no operative mortality, and the rate of excellent short term results was 88.5 per cent, the rate of fair results was 10 per cent, and the rate of poor results was only 1.5 per cent. It is concluded that the outlook for the elderly patient with physically disabling disorders of the back is becoming much brighter.
-George L. Lucas.

A Preliminary Study of the Treatment of Trochanteric Fractures of the Femur with the

Kenwright Nail. J. K. Wright, G. Gelikkol, J.D. Torrance and B.G.S. Peach. In/wy, 1982, 13: 419-426.
IN THIS REPORT from England, a preliminary study of the results of treatment of 106 trochanteric fractures of the femur using an expanding compression nail-the Kenwright nail-is described. All fractures of the surviving patients have united, and the only complications beside the usual causes of death in patients of this age group, such as pulmonary emboli and bronchopneumonia, were for wound infections which healed satisfactorily. No nails cut out, and the authors contend that the Kenwright nail is a most successful device in the treatment of trochanteric fractures and owes its stability to the secure hold it obtains in the femoral head by the expanding compression nail. Early discharge from the hospital has been possible, and weight bearing has been allowed immediately.
-George L. Lucas.

Transcatheter Embolisation Therapy of an Ischial Aneurysmal Bone Cyst. William A. Murphy, William B. Strecker and Perry L. Schoenecker.J Bone Joint Surg. Br., 1982,64: 166-168.
A SINGLE INSTANCE of a very large aneurysmal bone cyst involving the ischium and a large portion of the medial wall of the acetabulum in an eight year old boy was successfully treated by embolization of its feeding arteries. Computer assisted tomographic studies has shown that resection of the tumor or curettage would sacrifice the hip joint. After a diagnostic arteriogram had outlined the feeding arteries, a two stage embolization of these arteries was carried out, with the patient under local anesthesia, through the contralateral femoral artery. Remarkable healing of the cyst and a restoration of the acetabulum with full and painless function of the hip occurred over a period of three years.
-J.P. Moreau.

Emergency Carotid Thromboendarterectomy for Stoke-in-Evolution.John Boey, Henry Ngan, John Wong and G.B.Ong. Southeast Asian J Surg., 1982, 5: 50-54.
IN THIS PATIENT REPORT, a Chinese man who had transient cerebral ischemic attacks that increased in frequency and a gradual, prolongation of the recovery time is described. A successful emergency carotid endarterectomy was performed. Timely operation upon a patient with mild reversible symptoms can reverse the usual course of stroke-in-evolution. Prompt radiologic diagnosis and early restoration of cerebral perfusion by means of carotid thromboendarterectomy are prerequisites for successful results.
-Dov Weissberg.

Thermography as a Screening Method in the Diagnosis of Deep Venous Thrombosis of the Leg. J.Wojciechowski and B.F. Zachrisson. Acta Radiol. Diagn., 1981,22:581-584.
TWO-HUNDRED AND THIRTY-TWO patients with the clinical diagnosis of deep venous thrombosis of the leg who were referred for ascending phiebography were first examined by means of thermography. The thermographic diagnosis wrs settled before the phiebographic examination was done. Most of the patients were examined with a thermographic unit with a thermal resolution of 0.15 degrees at 30 degrees C. object temperature. The images were recorded on Polaroid films.
Ascending phlebography was performed on the same day as the thermography using a modified technique with the patient in semi-upright position on a tilting table. The method involved a puncture of the dorsal medial vein of the big toe, a tourniquet around the ankle and an injection of 80 ml. of 45 per cent conventional contrast medium in the nonweight-bearing leg with possible thrombosis.
The incidence rate of thrombosis at phiebographic examination was 47 per cent. The thrombi were directly visible as defects in the vein in 91 per cent of the patients who had a phlebographic diagnosis of thrombosis. The remaining 9 per cent had indirect signs of thrombosis. The diagnostic agreement of the thermographic and phiebographic results was 70 per cent. However, if thermography is to be useful as a screening method, a low rate of false-negative results is more important. This rate was 7.2 per cent. The predictive value of negative results of a thermographic examination was 88 per cent. The rate of

false-positive results was high, 52 per cent, and the predictive value of results of a positive thermographic examination was only 62 per cent. The high rateof false-positive results of thermography was not surprising and may be due to several causes, such as coexisting varicose veins with and without skin changes, other abnormalities of the skin, trauma or postoperative status, rheumatoid arthritis or previous thrombotic disease. All of the few thrombi which were missed at thermography were minor and located in the calf. The extension of the thrombosis in a proximal direction did not correlate well with the extension of neat at mermograpfly. It me extension ot tne thrombus must be determined, phiebography is needed.

It was concluded that, negative results of a thermographic examination, when it is used as a screening method, have a predictive value of 88 per cent and will effectively exclude 30 per cent of the patients who are referred for suggested thrombosis. In these patients, phiebography is not necessary if the small risk of a minor thrombosis of the calf is accepted. Also, thermography as a screening method has a low specificity, and thus, a relatively high incidence of falsepositive results must be accepted.

-Marco A. Amendola.