Selected Abstracts

Present Management of Closed Fractures of the Tibia (Notre attitude actuelle dans le traitement des fractures femees de jambe). I. Kempf. J.H. Jaeger, A. Grosse and others. Acta Orthop. Belg., 1977, 43:19.
Two methods are used to treat fractures of the shaft of the tibia. The first is by transcal-caneal traction for three weeks followed by a long leg unpadded walking cast for three months. This method is usually used in spiral and long oblique fractures with or without a torsion butterfly fragment. Isolated fractures of the tibia alone are treated with plaster cast.
Intramedullary nailing with a single large Kuntscher nail further stabilized, if necessary, by transverse screws inserted through perforations in the nail under image intensifier control is the method of choice in transverse, short oblique and comminuted fractures. If transverse screws are inserted both above and below the fracture, the fixation is named static; this is used when shortening or rotation of the fragments is anticipated. If transverse screws are inserted in one fragment only, the fixation is labeled dynamic, since it allows for impaction. A static assembly is frequently converted into a dynamic assembly by removing the transverse screws from the appropriate fragment after some callus formation is noted.
J.P. Moreau

Open Fractures of the Tibia; a Review of One Hundred and Two Cases. Gary J. Clancey and Sigvard T. Hansen, Jr. J. Bone Joint Surg. Am., 1978, 60:118.
One hundred and two patients with open fractures of the tibia were reviewed. All fractures were treated with antibiotics and primary debridement with the wounds left open.
Patients treated with casts were then compared with those treated by internal fixation. When the degree of soft tissue damage was minor, treatment by cast was preferred because of a lower rate of infection. With more severe injury to the soft tissue, rates of infection were high regardless of the method of treatment. However, stabilization and salvage of the limb were more likely to be achieved with internal fixation.
Rober P. Langen

Compound Fractures in Childhood (Offene kindliche Frakturen). H. Tscheme. Z. Kinderchir, 1977, 22:61.
The complication of primary or secondary infection with soft tissue necrosis is a serious problem in compound fractures. Recently, the basic concepts about primary closure and avoidance of primary internal fixation have been changed. The technique of secondary closure or partial transplant of free skin and immediate osteosynthesis enhances, in multiple fractures, the healing process and avoids soft tissue necrosis. Three fracture types are differentiated compound fracture, first degree, with perforation of one fragment without soft tissue damage, compound fracture, second degree, with contusion of skin and soft tissues from external force, and compound fracture with extensive soft tissue damage and nerve and vascular damages.
The care of open fractures in children consists of first aid, preoperative procedures and operation with wound excision, fracture management, wound closure and aftercare. The use of an airsplint to prevent post-traumatic edema and hematoma is recommended. Devitalized subcutaneous and muscle tissue is excised in toto, followed by rinsing with Ringer's and antibiotic solutions. Intramedullary nailing is contrain-dicated in multifragmented fractures; instead, rigid bone plate fixation in combination with bone marrow transplants is used, or osteosynthesis with compression devices. Primary osteosynthesis is

advocated to prevent later deformity caused by early callus formation. If tissue tension is present, primary closure is deferred. Postoperative immobilization in a cast is advocated. The use of antibiotics preoperatively is not recommended.
Ernest H. Bettmann

Deep Infection Following Total Hip Arthroplasty. J. Phillip Nelson. J. Bone Joint Surg. Am., 1979, 59:1042.
Sixteen patients with deep sepsis following total hip arthroplasty are described. Twelve patients had gram-positive organisms and four patients had gram-negative organisms. In this series, only complete removal of the foreign materials combined with six weeks of antibiotics administered intravenously resulted in clinical control of the infection.
James B. Roe

Exploration of the Articular Cartilage (Exploration du cartilage articulaire). P. Ficat, A. Maroudas, C. Ficat and J.F. Gourdou. Ann. Chir, 1979, 31:641.
The initial symptoms of arthropathies are often vague, such as pain, stiffness and creptia-tion, and include roentgenographic evidence of interrupted cartilaginous-osseous borders. The arthrogram for knee and hips reveis morphologic and physical properties of the cartilage and renders possible an earlier diagnosis than does standard roentgenography. Proliferation and degenerative changes can be analysed by light and electron microscopy. Arthrotomy allows complete diagnosis of the articular and synovial changes such as chondrosclerosis. Forage biopsy specimens taken by means of a chondrotome proved useful in diagnosis of pathology of the hip. The use of the electronmicroscope reveals the ultrastructures of reactive and proliferative processes with degeneration or necrosis. Results of biochemical studies can be used to analyze the basic chemical components of the articular cartilage, including water, collagen libers and the glycoproteins. Other substances are glycine, for synthesis of protein, glucosamine, proline and thymidine, indicating the synthesis of deoxyribonucleic acid and giving information about mitotic activity, and cystine, the indicator of ribonucleic acid.
Ernest H. Bettmann

Closed Intramedullary Nailing of Fractures of the Shaft of the Tibia; Indications Follow-up Studies. (L'enclouage a foyer ferme des fractures diaphysaires du tibia; nos indications et follow-up) D. Uyttendaele,
J. Van Dooren, R. Verdonck and H. Claessens. Acta Orthop. Belg., 1977, 43:29.
Thirty-seven fractures of the tibia were treated by intramedullary nailing without opening the fracture site. Reamers and a single nail were introduced through a patellar tendon-splitting incision under image intensifier control. A cast was applied only if there was rotary instability after nailing and in comminute fractures. Weight bearing was deferred three months. Return to duty occurred at an average of six months and solid bony union shown on roentgenograms at an average of seven months, regardless of whether the fracture was treated immediately or treatment was delayed as long as two weeks. Fractures with a large intermediary fragment and transverse fractures required an extra two months before complete healing.
J.P. Moreau