

Ilizarov apparatus was incorrectly fixed in 2 patients with diaphyseal humeral fracture; wrong technique in osteosynthesis of intraarticular fractures of the elbow was recorded in 6 patients. Some mistakes in diagnosis were recorded in 3 children with forearm fractures-dislocations. Postoperative osteitis was present in 11 children at various sites after osteosynthesis (clavicle, humerus, femur, leg, astragalus). Pseudoarthrosis following osteosynthesis developed in 38 patients, in the majority after diaphyseal fractures and osteosynthesis with screwed plates, intramedullary rods, and bolts. There was found fracture of the metal fixator at the level of the primary fracture in 8 cases, which certainly proves the presence of post-traumatic pseudoarthrosis.

Discussions. All cases of pseudoarthrosis developed after performing metal osteosynthesis. Also, purulent complications occur after osteosynthesis, being life-threatening complications (damage to subclavian vessels during surgery with a fatal outcome, migration of the pin end into the mediastinum, aorta and pericardium, etc.). In this regard, the indications for surgical treatment should be strictly selected and surgery has to be performed by the specialist who will avoid possible complications. In diaphyseal fractures of the humerus, forearm, femur and leg, it is necessary to comply with osteosynthesis requirements in order to avoid major removal of periosteum from the bone, endosteal trauma, therefore osteosynthesis has to be performed with fine and relatively stable devices. Osteosynthesis of elbow fractures must be made through an anatomical-functional approach, neither muscles and tendons sections, nor olecranon osteotomy. Delicate surgical technique, protection of the tissues adjacent to the joint, maximum possible limitation of wound exposure are among the factors of preventing complications.

Keywords: osteosynthesis, complications and failures, prophylaxis.

OSTEOSYNTHESIS IN METAPHYSEAL FRACTURES IN CHILDREN



Iuri Sandrosean**, Stati Leo*, Mihai Popa**, Anatol Moraru**, Victor Buruiian***

*State University of Medicine and Pharmacy "Nicolae Testemițanu", Republic of Moldova

MSPI IM and C, *MSPIDH Hîncești, Republic of Moldova

Objective of study. To implement the method of fine osteosynthesis in the metaphyseal open fracture, fractures with neurovascular disturbances, intraarticular fractures.

Material and methods. During 5 years in the Clinic of Orthopedics and Traumatology of the Mother's and Child's Institute 547 children with metaphyseal fractures were treated surgically: 75 children had proximal metaphyseal fractures of the shoulder, 290 children suffered from distal metaphyseal fractures of the arm, 35 kids were with distal metaphyseal fractures of the hip and 147 children had proximal and distal metaphyseal fractures of the thigh. The osteosynthesis was performed with Ilizarov and Kirschner pins.

Results. Postoperatively plaster casts were applied for the 4-8 weeks depending on the age of the patient and of the fractured segment. Unsatisfactory results were observed in patients from vulnerable families, possibly because of not respecting the orthopedic regimen, and consisted from angular deformities after repeated traumas and inflammation around pins.

Discussion. The majority of metaphyseal fractures are treated conservatively. In some cases surgery is absolutely indicated. In our clinic metaphyseal fractures are treated surgically using fine and minimally invasive osteosynthesis with pins. Osteosynthesis with pins allows adequate stabilization of the bone fragments. In children with metaphyseal fractures the osteosynthesis with Ilizarov and Kirschner pins was used, 2-4 pins depending on fractured segment, age of the patient and fracture complexity. The pins are introduced crisscross, transcutaneously and transosteally. The tactics and techniques of the surgical intervention is individualized in each case, depending on the fractured segment, type of the fracture, character of displacement, and age of patient. The external immobilization – plaster casting is applied for 4-8 weeks depending on the fractured segment and the patient's age, and the orthopedic regimen should be strictly respected.

Conclusions.

1. In metaphyseal fractures osteosynthesis should be fine and minimally invasive.
2. Using of huge metallic plates compromises the fractured segments grow.
3. The tactics and technique of surgical intervention should be individualized depending on level and type of fracture, displacement of fragments and kid's age.
4. External cast provides perfect stability of the osteosynthesized fragments.

Keywords: osteosynthesis, metaphyseal fractures, children

TRANSPEDICULARY OSTEOSYNTHESIS AND PARTICULARITIES OF CORRECTION OF CHILDREN WITH SEVERE AND VERY SEVERE SCOLIOSIS



Nicolae Shavga, Nicolai Shavga

State University of Medicine and Pharmacy "Nicolae Testemițanu", Republic of Moldova