

COXA VARA AND VALGA CORRECTION ON TELESCOPIC NAILS IN OSTEOGENESIS IMPERFECTA



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Background: Varus or valgus deviations of the femoral neck in Osteogenesis Imperfecta had been an ignored chapter because classic correction procedures were applied in medical practice with unsatisfying results. Until the use of telescopic rods, coronal deviations remained unsolved and the distal configuration of the proximal femoral extremity remained uncorrected or partially corrected which required extensive use of wheel chair or bed immobilization of the patient. The concomitant correction of complex deformities, coxa vara/valga and femoral integrated configuration, has been a progress which allowed patients to walk with or without support.

Purpose: The purpose of this study is to present the Burnei's technique, a therapeutic alternative in deformity corrections of the varus or valgus hip in children with Osteogenesis Imperfecta.

Material and methods: The paper is a retrospective study performed in a single center which analyses Burnei's technique and other procedures described in literature.

The content of the paper is based on a 12 years experience, on a series of 51 patients with Osteogenesis Imperfecta out of which 10 patients (13 hips) presented frontal plane deviations of the femoral neck.

Results: All patients with Osteogenesis Imperfecta which presented coxa vara or valga were submitted to investigations with the purpose to assess the possibility of extending the surgical intervention to the distal segment of the lower limb, to establish the association of severe deformities of the proximal extremity of the femur and the necessity of postoperative intensive care. Burnei's technique: The operation was first performed in 2002. A subtrochanteric osteotomy is made in an oblique cut, from the internal side to the external side and from proximal to distal for coxa vara, or using a cuneiform resection associated with muscular disinsertions. Only telescopic rods are used for osteosynthesis.

Conclusions: Burnei's technique is simple, it corrects concomitant with Sofield-Millar the varus and valgus deviations. Even though only a telescopic rod is used, no stress fractures were seen postoperative, deviation recurrence or assembly loss.

Keywords: Osteogenesis imperfecta, coxa vara, coxa valga, only rod correction, Burnei's technique.

OPEN OSTEOSYNTHESIS IN DIAPHYSEAL FRACTURES IN CHILDREN WITH POLYTRAUMA



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BACKGROUND: The objective of the study was to appreciate the combinations of diaphyseal fractures in children, surgical methods of treatment and their results.

METHODS: In a Level III trauma center we reviewed 13790 patients. Emergency trauma injuries were 33.9% (4687 children). 178 children were treated with multiple injury, which constitutes 3.7% of all children hospitalized with urgent injuries, which were performed 217 interventions.

RESULTS: Diaphyseal fractures in children with polytrauma in different combinations was detected in 64 children (35,9%), they were carried out 86 surgery. More commonly diaphyseal fractures were recorded combined and associated in next component humerus-humerus – 3 children (6 interventions), humerus-forearm – 10 children (12 interventions), humerus-lower thigh – 1 child, humerus-femur – 5 children (4 interventions), forearm-forearm – 6 children (8 interventions), forearm-leg – 4 children (5 interventions), femur-femur – 6 children (12 interventions), femur-femur-leg – 5 children (12 interventions), femur-leg-forearm – 2 children (2 interventions), femur-leg – 3 children (4 interventions), femur-wounds-brain trauma – 16 children (12 osteosynthesis), leg-leg – 2 children (6 interventions), leg-brain trauma – 1 case. It was need the humeral fixation in 13 cases, 19 cases of forearm, the femur osteosynthesis 39 cases and open fractures leg 15 cases. The open fixation of humerus fractures was the fixing with three brooches clasped 8 children, with screws – 2 children and 3 cases performed by fixing metal plate and screws. To 2 children was applied external fixation device as immobilisation. The open osteosynthesis in forearm fractures was performed centro-medullary with brooches Ilizarov in 12 cases and in 7 cases performed additional cortical fixation with brooches Kirşner. Femoral intramedullary osteosynthesis with nail metal were subjected 23 children, brooches added to 5 children and 6 cases with additional fixation- screw and wire in 5 cases osteosynthesis plate and screws in leg fractures. Osteosynthesis of leg fractures finished with Ilizarov device application