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CHANGE OF THE SHAPE OF THE PROXIMAL METAEPHYSIS OF THE FEMORAL BONE AFTER CORRECTIVE OSTEOTOMY

ABSTRACT. Background. The changes of the shape of the proximal part of the femur due to the pathological process and consequences of osteotomy have the significant influence on the steps of surgical intervention and on the choice of the construction of endoprosthesis stem. **Objective.** To determine the shape of the proximal part of femoral channel after the correcting osteotomy from the viewpoint of the following hip joint replacement. **Methods.** Criteria of evaluation of changes of the shape of the proximal part of the femur were proposed by authors. It allows evaluating the grade of deformity and the necessity of the surgical manipulations on the proximal methaepiphysis. This work was based on the analysis of the data of examination of 30 patients, which were undergone the hip joint replacement after correcting osteotomy. **Results.** The main criterion of the deformity of the proximal methaepiphysis of the femoral bone was determined by the grade of deviation of the proximal fragment from the femoral axis. It was noted, that after the correcting osteotomy of the proximal part of the femur the significant changes of the shape of methaepiphysis and bone channel had formed. The basic criteria of the evaluation of osteotomy influence on the normal antropometrical parameters after hip joint replacement was the angle of deviation of the proximal methaepiphysis from the femoral axis. **Conclusion.** The x-ray-morphometric data analysis of the proximal part of the femur after correcting osteotomy revealed that in case of deviation of the axis of the proximal methaepiphysis of the femur at the angle more than 10° from the axis of femoral diaphysis and also in all cases of combined osteotomies the reosteotomy for the implantation of standard endoprosthesis stem is recommended.

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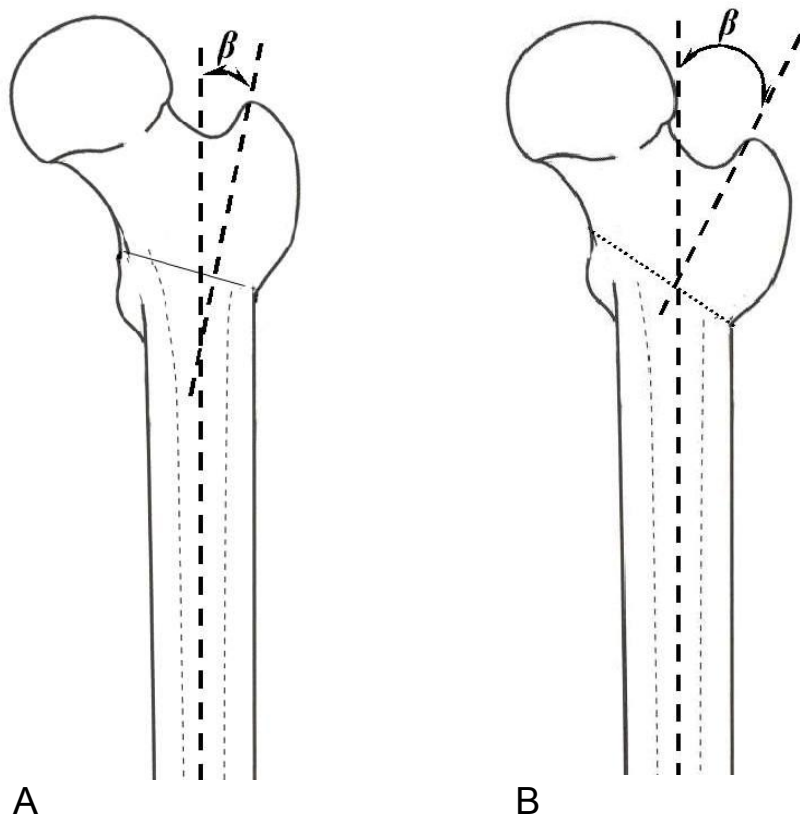


Fig. 1. Changes of shape of the femoral bone proximal division in frontl plane. A – angle β less than 10° ; B – angle β greater than 10° .

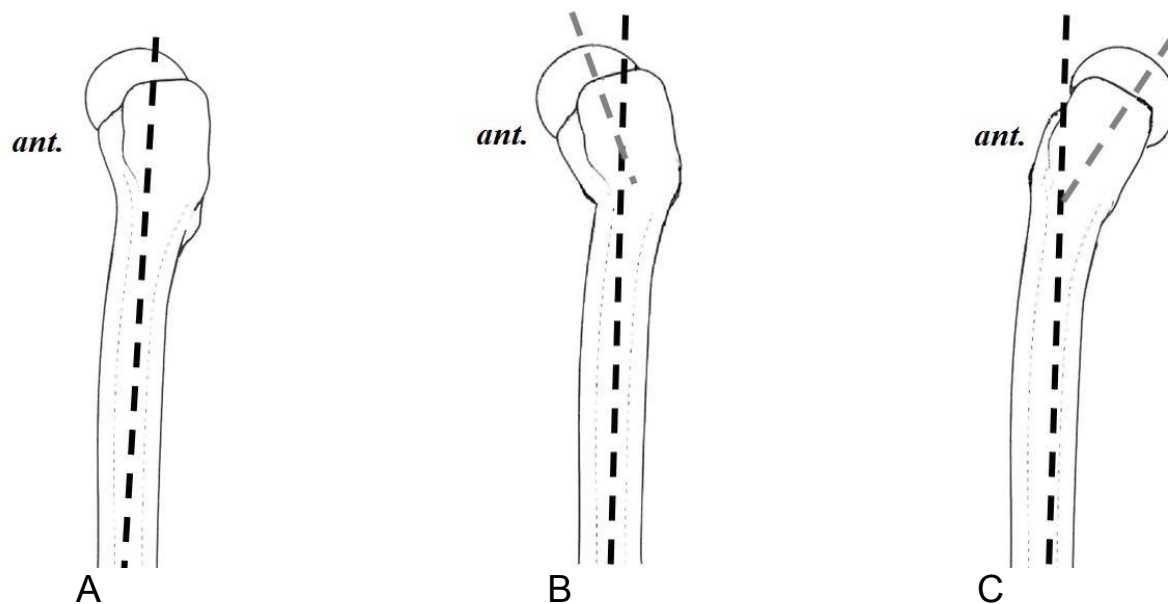


Fig. 2. Axis of femoral bone in sagittal plane in norm (A) and the character of its changes in combined extension (B) or flexion (C) osteotomy.

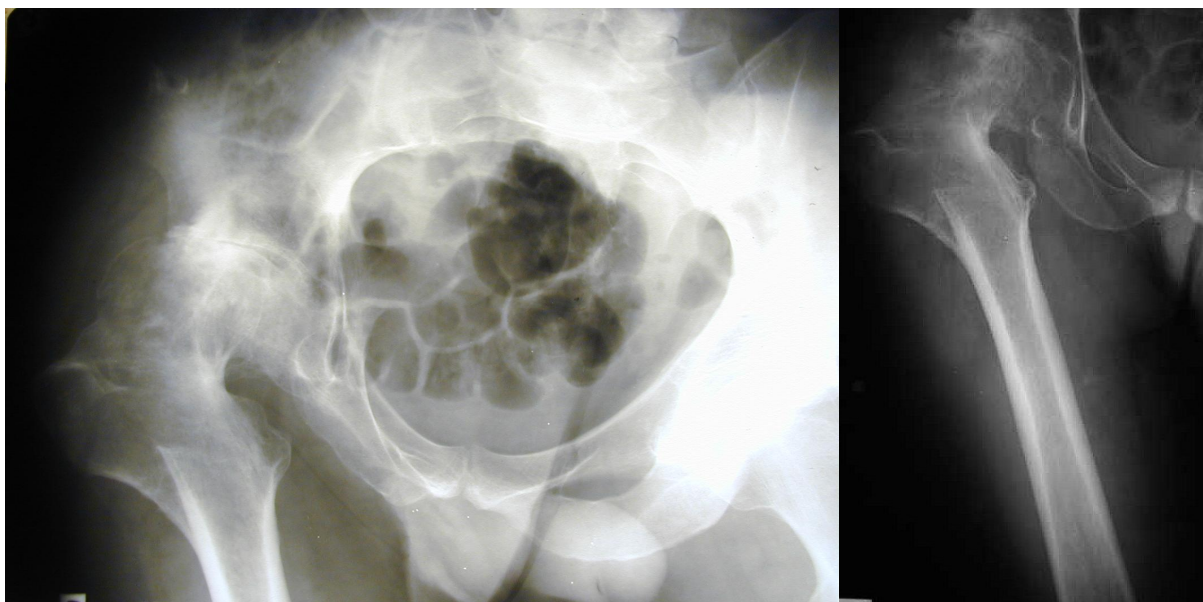


Fig. 4. X-ray films of male patient M., angle $\beta = 23^\circ$.

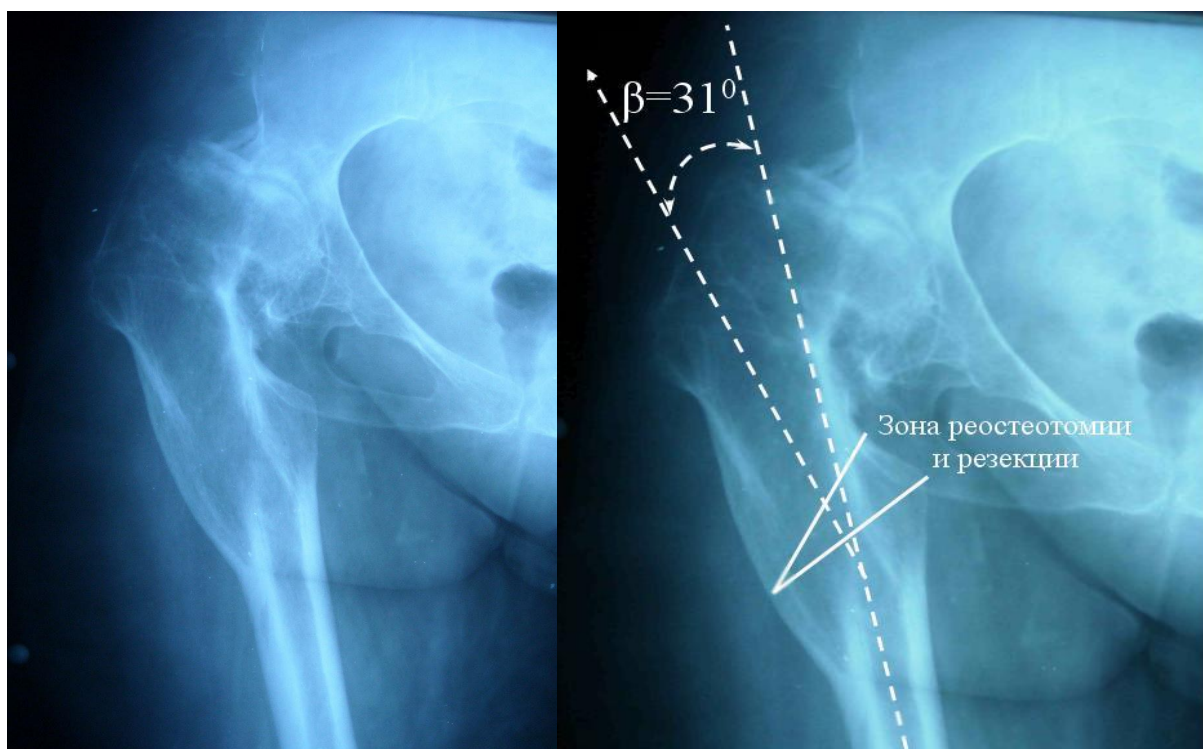


Fig. 5. X-ray films of female patient Zh., angle $\beta = 31^\circ$.

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