

The dissertation deals with fractures of the posterior malleolus of the tibia in ankle fractures. There is no consensus on the issue in the diagnosis and treatment of tibial posterior malleolus fractures in ankle fractures worldwide.

The experimental part of the study focused on the anatomy of the ankle joint, especially on the construction of the fibular incisure of the distal tibia as one of the key areas for ankle stability. The result was the determination of the ideal distance for the correct assessment of the position of the fibula in the incisure of the tibia.

In the clinical part of the study, the pattern of the fractures was evaluated on a basic group of patients with ankle fractures with concurrent tibial posterior malleolus fracture using preoperative X-ray and CT examination. This made it possible to determine the basic morphological types of posterior malleolus fractures. The resulting classification was verified on an extended group of patients. In clinical practice, it was used to choose the surgical approach and method of fixation. The correctness of the resulting classification was verified on an extended group of patients. The clinical application of the anatomical 3D CT classification achieved a good anatomical position by direct reduction and stable osteosynthesis from the chosen approaches, as well as good functional results. The performance of preoperative CT examination in three levels and subsequent 3D reconstruction was of fundamental importance for accurate identification, assessment of all lesions and for preoperative planning. Postoperative CT examination made it possible to evaluate the accuracy of the reduction of all fractures and the correct placement of the distal fibula in the incisure, and it was also possible to assess the effect of the reduction on functional results.

In our group, there were also specific and clinically very serious types of ankle dislocations with posterior malleolus fracture – Bosworth and Maissonneuve fractures.