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BONE PLATE FOR OSTEOSYNTHESIS IN SCREW FRACTURES

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According to the WHO, injuries rank 3-4th in the world in the incidence of the population. As a result of road accidents in the world about 250 000 people die every year, about 10 million victims remain crippled, and most of the victims are characterized by fractures of limbs of varying severity. For reliable and stable osteosynthesis - fixation of bone fragments with the subsequent creation of factors for their reliable fusion, it is necessary to comply with several mandatory conditions, the main of which are sufficient reposition and reliable, rigid fixation. Therefore, surgical treatment of fractures is becoming more common, providing a fairly fast, high-quality, without complications of fracture fusion and restoration of function of injured limbs. Analysis of modern medical and technical literature of domestic and foreign authors in the field of traumatology, sports medicine, military medicine, surgical treatment of bone fractures showed that bone osteosynthesis methods are effective and accessible to a wide range of victims, because bone osteosynthesis operations do not require expensive composition and operating equipment. Retainers for bone osteosynthesis are quite cheap and available compared to intramedullary and transosseous structures. Because there are a large number of types of fractures, one particular type of bone plates for osteosynthesis cannot meet all requirements and needs. It is desirable to use different in shape, size and design bone plates. Accordingly, bone plates other than rectangular shapes should be used to fix helical fractures, which would allow the bone fragments to be securely fixed in several planes.

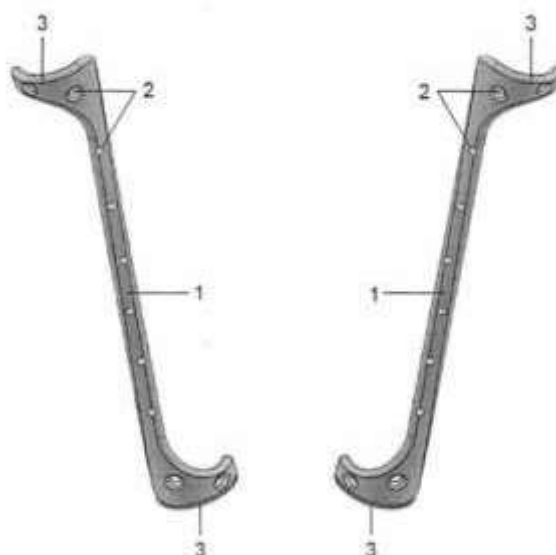


Fig. Bone plate for osteosynthesis in screw fractures

In Fig. the design of the bone plate for osteosynthesis in screw fractures (clockwise and counterclockwise) is presented. The bone plate (1) made of titanium or alloy 18H12N10T contains the required number of holes (2) of a special shape with one-sided slopes of their side walls for bicortical fixation of screws, which serve to "tighten" with a certain tension of the cortical surface of the bone to the bone fixator. "unilateral fixation and promotes uniform pressing of bone fragments to each other around the perimeter of the fracture surface. The bone plate has an S-shape with rounded ends (3) to cover at least half the diameter of the distal and proximal bone fragments.

Therefore, the proposed device allows efficient and reliable fixation of helical fractures of long bones due to its S-shaped shape with rounded ends to cover at least half the diameter of the distal and proximal bone fragments.