

The invention relates to medicine, in particular to traumatology and plastic surgery, regenerative medicine and tissue engineering, and can be used for plasty of metaphyseal defects of tibia and other cancellous bones.

Summary of the invention consists in that in the first stage, an incision is made on the anteromedial side of the shin, namely from the greater tubercle of tibia to the medial 1/3 of the shin, the tibial periosteum is removed, an annular bone defect of a length of 3.0 cm is formed in the proximal 1/3 of the tibia, bone fragments are fixed with a metal plate and screws according to the longitudinal axis, and the cavity of the defect is filled with a cement spacer with an antibiotic, lavage is performed with antiseptic solutions and the wound is sutured in layers; in the second stage, namely two weeks later, the incision is repeated at the same level, the cement spacer is removed, and the remaining cavity is filled with demineralized bone xenograft and the wound is sutured in layers, after which into the bone graft is inoculated a preliminarily prepared alloculture of mesenchymal stem cells, extracted from the iliac bone marrow and cultured for 20 days, in a concentration of  $4.5 \times 10^6/\text{ml}$ , then on the 6th week is repeated the incision at the same level and are removed the plate and the screws, after which the wound is sutured in layers.

Claims: 1