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Long-term results of endoprosthesis replacement of large joints in patients with bone tumors

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Background: We evaluated the long-term clinical results and the survival of the prostheses of patients who had a limb-sparing procedure by means of the implantation of a large-segment prosthesis. Function was evaluated with the revised 30-point classification system of the Musculoskeletal Tumor Society. The survival of the prostheses was analyzed with regard to several variables with use of Kaplan-Meier survival estimates.

Methods: During the period from 1979 to 2010 year in RCRC 1181 primary operations performed in the volume of replacement of large joints of various locations, among the interventions were resected bones forming the shoulder (n = 134), elbow (n = 10), hip (n = 167), knee (n = 786), and ankle joints (n = 8). Endoprosthesis with total hip replacement n = 50, humerus, n = 16, tibia n = 1. The defect is replaced by the individual and modular endoprosthesis. The defeat of the bones were due to primary tumors in 92% of patients, metastatic - 8%. The average age of patients was 28 ± 14 years (from 10 to 80 years), 53.5% were men, women - 46.5%. Osteosarcoma predominated (46%) in the remaining cases were diagnosed chondrosarcoma (10%), Ewing's sarcoma (5%), giant cell tumor (14%), other morphological forms consisted of 25%.

Results and Conclusion: The average follow-up was 10 years old. Overall survival is 61%. The recurrence rate was 12%. Among the complications of infection are marked (11%), instability of the prosthesis (13.7%). The prosthesis survival corresponded to 54%. Functional evaluation of MSTS score was 70% for operations on the shoulder joint endoprosthesis, 80% - for the hip. MSTS after arthroplasty of the femur consistent 58% - with its total replacement and 92% - of the distal resection, evaluation after resection of the proximal tibia - 75% and 72% at the distal.

Conclusion: Endoprosthetic reconstruction gave satisfying functional and oncological results and low rate of complications in most patients after long-term survival. Limb salvage surgery is the gold standard of modern onco-orthopedics

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