

**FC-046****Cervicocapital prostheses of proximal humerus after the resection of tumors – 20 years of experience with own desing custom-made implant****J. Lesensky**, K. Nemec, Z. Matejovsky*Orthopaedic Clinic, Teaching Hospital Bulovka, Charles University, Prague, Czech Republic*

Background: Tumors affecting the proximal humerus are in total fairly frequent condition and present a common problem for orthopedic oncologist. The fundamental challenge is to provide the patient with a stable shoulder joint that would allow for daily activity. The most common options are allograft (or composite graft), spacer or prosthetic reconstruction. We have been using our own design custom-made tumor hemiarthroplasty of the shoulder (designed by prof. Z. Matejovsky) since the 1970s. However, the indication for hemiarthroplasty is lately being subsided by more sophisticated reverse shoulder arthroplasty. Nonetheless we believe that this type of reconstruction is still a good option for selected patients.

Materials and Methods: Altogether we found total of 80 patients who have received this type of reconstruction after proximal humerus tumor resections. We limited our retrospective study to only 20 years (1993 and 2013). Inclusion criteria were a minimum of a 1 year follow-up and surgery for oncological diagnosis. Patients who received this type of reconstruction for trauma or degenerative indications were not included in the study. We assessed demographic data, functional results and complications - both oncological and orthopedic.

Results: Total of 25 patients (15 male, 10 female) who met the inclusion criteria and for whom all the necessary data were available, were included in the study. Most of these patients were operated on for metastatic disease, followed by primary malignant bone tumors (7 patients), malignant soft tissue tumors (2 patients) and aggressive bone lesions (3 patients). The average active flexion was 65° (40 to 170), abduction 59° (10 to 165), extension 27° (10 to 45), external rotation 46° (10 to 90), internal rotation 77° (15 to 90). Three patients had no active movement in the shoulder. The most common complication was disease progression (22% of cases died of metastatic disease) and instability (18% of cases). We performed two revision surgeries for a local recurrence, two for mechanical complication and one for deep infection.

Conclusion: We believe that patients with adverse prognosis, especially patients with metastatic disease, where intralesional surgery is considered, can benefit from this procedure. It is faster and in most cases yields a stable shoulder with acceptable ROM and a functional hand. The fact, that the glenoid area is left intact limits the possible spread of local recurrence and facilitates the revision surgery, when reverse shoulder prosthesis can be implanted.