

10870 - Better Outcomes Are Achieved on Articulation Surface Preserving Surgery on Scapular Tumors

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Background.

Musculoskeletal tumors tend to happen in the proximal articulations of limbs and in axial skeleton, as well as close to the more fertile physis of long bones. In shoulder girdle, they usually affect the proximal humerus. Nevertheless, scapula usually supposes a challenge for resection and reconstruction. Our objective is to compare clinical outcomes between glenoid preserving surgery with glenoid resection in scapular tumors.

Purpose

To compare outcomes between scapular tumors when the glenoid surface is resected or preserved.

Material and methods.

All scapular tumors treated at our center between 2007 and 2013 were reviewed from the Musculo Skeletal Tumor Unit registry. Tumors affecting humerus were discarded. Only those cases where an isolated total or partial scapulectomy were performed met the study criteria. Sex, age, type of tumor, localization, Enneking classification for extension, Malawer classification for resection, survival, and Musculo Skeletal Tumor Society Score were recorded.

Results.

11 cases were managed surgically with total or partial scapulectomy from 2007 to 2013. 7 patients were men and 4 women. Median age was 35.1 years (range 16-60). There were 3 chondrosarcomas, 2 osteosarcomas, 2 synovial sarcomas, 1 aneurismatyc bone cyst and 1 case of metastatic clear cell sarcoma of kidney, 1 Ewing sarcoma and 1 nerve sheath sarcoma.

7 cases had only affected the scapula whereas 4 cases were also extended to the proximal humerus The Enneking classification of tumors was: 1 type IA, 4 type IIA, 5 type IIB and 1 type IIIB.

According to Malawer classification, 6 partial scapulectomy were performed (type II resection) and 5 intrarticular total scapulectomy (type III) were done. No bone defect reconstruction was done in all cases. 7 patients received adjuvant chemotherapy or immunotherapy.

Only 1 patient died one year after the surgical procedure. The remaining patients were free of local disease at the end of the follow-up period (12 to 96 months). At the end of the follow-up, average MSTS score was 26.2 points for glenoid preserving surgery group and 19.2 for those where a glenoid resection was performed.

Conclusions

Musculoskeletal tumors affecting scapula are rare, and it is not well established what is the limit of resection for glenoid preservation. It is well known that extrarticular resections undergone worse outcomes, especially when abductor muscles are affected. Our study suggests that partial scapulectomy show better function and MSTS score than total scapulectomy resection in patients with scapular tumors with excellent survival rate.