

**FC-048****Extra articular resection of sarcomas of the shoulder girdle. Comparison of clinical and functional outcomes of forequarter amputation, Tikhoff-Linberg procedure and reconstruction with endoprosthesis**

Z. Khan, H. Shakir, **L. Gaston**, L. Jeys, R. Tillman, S. Carter, R. Grimer, A. Abudu
The Royal Orthopaedic Hospital, Birmingham, Birmingham, United Kingdom

Introduction: The shoulder girdle is a common site for primary sarcomas. The hyaline cartilage provides a natural barrier to tumor cells spread into the joint and in cases where it does spread, the surgical option is extra articular resection of sarcoma in the form of either forequarter amputation or limb sparing surgery. Limb sparing surgery can be performed after extra articular resection of these tumours followed by the use of either an endoprosthesis or Tikhoff-Linberg reconstruction. We present our clinical and functional outcomes for these three subgroups of patients after undergoing extra articular resection of sarcomas.

Methodology: Data was obtained retrospectively from a large prospective sarcoma database for patients undergoing extra articular resection for sarcomas of the shoulder girdle and patient notes were evaluated. Patient demographics along with diagnosis, neo adjuvant and adjuvant treatments, grading and staging of tumours, surgical treatment along with margins, complications, oncological outcomes and MSTS and TESS scores were collected. Survivorship analysis was undertaken for each surgical treatment and results were compared.

Results: A total of 68 patients were included in our study with high grade Osteosarcoma being the commonest diagnosis. Forty one patients underwent forequarter amputation and twenty seven had limb sparing surgery. Of the patients who had limb sparing surgery, fourteen had reconstruction with endoprosthesis and thirteen had Tikhoff-Linberg type reconstruction.

Patient demographics for age, gender, laterality, location and type of sarcoma along with neo adjuvant and adjuvant therapies were collected from the medical notes. Staging of tumors and grading after biopsy along with surgical margins and post treatment necrosis were also recorded. Any post operative complications and subsequent surgical procedures that were performed were recorded. Clinical, oncological and functional outcomes using the TESS scores at last follow up were also recorded.

Kaplan-meier curves will be constructed to present the survivor ship analysis of the sub groups and comparative analysis will be presented.

Conclusion: Extra articular resection for proximal humerus sarcomas is a challenging surgical procedure particularly in limb sparing surgery. Traditionally amputation has been plagued with poor functional and psychological results. To our knowledge this is the only study in literature comparing the clinical and functional outcomes of forequarter amputation, reconstruction with endoprosthesis and Tikhoff-Linberg type reconstruction for intra articular spread of sarcoma into the shoulder joint.