

COST AND QUALITY OF LIMB SALVAGE SURGERY, 4 YEARS FOLLOW UP OF MODIFIED PROXIMAL HUMERUS IMPLANT

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Introduction: Proximal end of humerus is among the common site for bone tumour. Current treatment options are more favourable for limb salvage surgery than amputation, but reconstruction is one of the challenges.

Discussion: 18 years old boy presented with pain and swelling over shoulder. There is bony swelling over proximal arm with dilated superficial vein. X-ray showed sun ray appearance at proximal humerus, MRI suggestive of malignant bone tumour. Incision biopsy showed features of osteosarcoma and planned for shoulder girdle resection with reconstruction. In view of poor response to chemotherapy and metastasis, reconstruction with modified proximal humerus implant was decided. 19.5cm of proximal humerus was resected and reconstruction done using interlocking nail humerus. 4 year post-operation, patient completed chemotherapy and radiotherapy. Shoulder examination showed no recurrence of swelling. Hand functions are intact with Musculoskeletal Tumor Society Score (MTSS) of 60%.

Conclusion: Limb salvage surgeries have much better functional and cosmetic advantages compared to amputation. Achieving adequate oncological margins is the cornerstone of successful limb salvage surgery, but reconstructing resection gaps is the most challenging part (1) Ease of the procedure, morbidity, functional outcome and durability are the factors that need to take into consideration. Zile et al reported reconstruction using K-nail spacer provide adequate shoulder stability, thus improve the hand and elbow function (2). Awad et al reported there is no significant difference in overall functional outcome for both reconstruction (3). Most of the literatures reported the function ranged from 40% to 83% according to MSTS score.