

# Proximal humerus reconstruction using endoprosthesis after tumour resection - Penang experience.

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## INTRODUCTION:

Proximal humerus is common site for occurrence of tumour. The study aimed to report our experience on proximal humerus reconstruction using endoprosthesis and its outcome.

## MATERIALS & METHODS:

This is retrospective case series of patients in Penang Hospital, underwent tumour resection followed by proximal humerus reconstruction using endoprosthesis, with minimum of 12 months follow up. All patients were treated with chemo or radiotherapy based on appropriate treatment protocol. The outcome measures were local recurrence, perioperative complications and functional status.

## RESULTS:

Total of 12 patients (6 males, 6 females) were included in the series, with the mean age of 36.1 years. The diagnosis involved 8 primary tumours and 4 metastases.

The mean follow-up duration was 2.2 years. Post-operatively, all patient achieved mean total MSTS score of 72.2%. One local recurrence was detected - in a patient who presented with pathological fracture, subsequent required adjuvant radiotherapy. The same patient also had surgical site infection, which was controlled with antibiotic and dressing until he succumbed. Two patient sustained soft tissue failure with inferior subluxation, whereas one patient sustained aseptic loosening. No revision surgery or amputation required in the series.

**Table 1: Histological diagnosis of patient in the series**

Primary tumour	Metastasis
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Osteosarcoma	4	Renal cell carcinoma	2
GCTB	2	Breat carcinoma	1
chondrosarcoma	1	Nasophargeal carcinoma	1
Malignant perivascular epithelioid cell tumor	1		

## DISCUSSIONS:

Common complication seen in the study was soft tissue failure with inferior migration. The phenomenon was explained by significant tissue loss during resection of tumour. Sande et al suggested deltoid, rotator cuff and axillary nerve sparing to preserve shoulder integrity.

## CONCLUSION:

Our early to midterm outcome for proximal humerus endoprosthesis is good, comparable to published data from other institutions.

## REFERENCES:

1. van de Sande, M. A., Dijkstra, P. D., & Taminiau, A. H. (2011). Proximal humerus reconstruction after tumour resection: biological versus endoprosthetic reconstruction. *International orthopaedics*, 35(9), 1375–1380. <https://doi.org/10.1007/s00264-010-1152-z>