

Total Humerus Endoprosthesis For Primary Oseous B-Cell Lymphoma

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INTRODUCTION:

Primary bone lymphoma (PBL) is an uncommon clinical entity and a rare presentation of non-Hodgkin's lymphoma (NHL). Little is reported about surgical management in patient with PBL. We report our experienced with a case of extensive primary non-Hodgkin's lymphoma of right humerus with pathological fracture treated with total humerus endoprosthesis.

CASE:

A 35 years-old guy with underlying primary Diffuse B-cell lymphoma of right humerus was referred to our center for extensive diaphyseal involvement of the tumor and nonunion over a pathological fracture of the humerus despite completing 6 cycles of chemotherapy (Figure 1). Due to extensive expansion of the tumor, nonunion of the right humerus, and disability of his right upper limb with severe malalignment, we aim to provide the patient tumour free limb with best possible upper limb function. He underwent resection of the right humerus and total humerus endoprosthesis (Figure 2).

RESULTS:

Post surgery at 18 months, he has good right elbow, wrist, and hand function. His Disabilities of the Arm, Shoulder, and Hand (DASH) score is 38.8% and Musculoskeletal Tumor Society Score (MSTS) is 75%.

DISCUSSION:

Primary bone lymphoma are rare disease, representing only 2 % of all bone tumours and 5 % of all extranodal lymphomas¹. Due to its rarity, very little is reported regarding the optimum surgical procedure². There is no standard surgical protocol in managing PBL patient. We needed to address 3 different issues in our patient; 1) Extensively involved humerus, 2) Pathological fracture with nonunion, 3) Severely malaligned humerus and 4) Poor upper limb function. Humerus resection with total

humerus endoprosthesis was considered the treatment of choice as it addressed all the 4 issues simultaneously. Among the major advantages of this procedure are high level of emotional acceptance, residual useful functional ability of the elbow and hand without compromising tumor clearance or high recurrence and complication rates³.



Figure 1



Figure 2

CONCLUSION:

Total humerus endoprosthesis is a treatment option in treating patient with extensive PBL of the humerus as it provides acceptable function with good tumour clearance.

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