

Proximal Femur Allograft Prosthetic Composite Reconstruction For Long Proximal Femur Segment following Tumour Resection: A Case Report

Abstract

BACKGROUND AND PURPOSE:

Bony metastasis of a tumor is increasingly encountered due to aggressive surgery and advance chemotherapy that have permitted improvement in survival of cancer patients. Various surgical techniques have been advocated for femur with extensive tumor involvement, but the two most widely used techniques for reconstruction after wide resection of a tumor in the proximal femur are modular prosthetic replacement and allograft-prosthetic composite reconstruction. We consider an allograft-prosthesis composite in the proximal femur as one of the better reconstructive options in this case because it combines the mechanical stability of prosthesis with the biologic reconstruction of the hip flexors and hip abductors, and it is a cheaper option in Malaysia.

PATIENTS AND METHODS:

We present a case of a pathological fracture of proximal femur with skip lesion at the diaphysis secondary to advanced breast carcinoma, with spinal metastasis causing cord compression, being operated with allograft-prosthesis composite after long segment femur resection and decompression and stabilization surgery for spinal metastasis. We obtained a gamma irradiated allograft from Hospital Kuala Lumpur. Head of femur was replaced with bipolar hemiarthroplasty while distal allograft-host junction was stabilized with titanium lockplate.

RESULTS:

Surgical wound well healed after 3 weeks. She was able to flex, extend, abduct and adduct her hip at 2 months. Patient is satisfy with the outcome and did not experience much pain.

DISCUSSIONS:

In this case host morbidity due to massive osseous defect after bone resection limits autograft availability, thus allograft is the next best alternative for her. Allograft is free in Malaysia. Total implant cost for her was RM6000, instead of RM40000 for modular endoprosthesis. Our main aim is to alleviate her pain and to provide her with good quality of life has achieved.

CONCLUSIONS:

Allograft-prosthesis composite can be provided as an alternative option to reconstruct a femur with massive osseous defect after tumor resection. It is a cheaper option and can provide a satisfactory functional outcome after reconstruction of the proximal femur.