

Number 11217:

Presenter:

YL Lam, Queen Mary Hospital

Co-authors:

R Yau Queen Mary Hospital

WY Ho Queen Mary Hospital

KL Mak Queen Elizabeth Hospital

ST Fong Queen Elizabeth Hospital

TYC So Queen Elizabeth Hospital

Hip sparing resection in peri-acetabular primary malignancy

Background

Primary malignancy in peri-acetabular region is usually managed by Enneking PII resection. There are various ways to perform the subsequent hip reconstruction. Unfortunately, there is no consensus as to the best management. The average functional outcome is around 15/30 by MSTS scoring system.

Questions/ Purpose

1. Is hip sparing resection an alternative in peri-acetabular primary malignancy surgery?
2. What is the surgical and functional outcome of this group of patients?

Material and Methods

This was a retrospective study of patients suffering from periacetabular primary malignancy. The hospital records were retrieved and reviewed. From 2008 to 2014, we had 12 patients suffering from peri-acetabular malignancy requiring acetabulum resection. They all had pre-operative computer-aided-surgery software 3D planning to identify the exact extent of lesion and the design of resection. Five of the resections could spare the weight-bearing portion of acetabulum. They could be treated by partial acetabular resection. Three patients were female and the other two were male. Four were chondrosarcoma while the other one was synovial sarcoma. Ages ranged from 46-60 years of age (average 53 years of age). For all except one, the intra-operative bone osteotomies were navigated by computer-aided surgery.

Result

For the five patients undergoing hip-sparing resection, two of them had allograft augmentation to increase the coverage of the hip. The others did not have any bone reconstruction. There was no intra-operative or early post-operative complication. The histology margins were clear from tumour involvement. The average follow up was 37months. No local recurrence was detected. The average functional score (MSTS) was 28/30 (ranged 27/30-30/30).

Discussion and conclusion

The roof of the acetabulum is the weight-bearing portion of acetabulum. It also maintains the stability of the hip. With precise pre-operative planning of the resection and accurate execution of the pre-operative planning, the hip sparing approach through partial acetabular resection can be performed in some selected peri-acetabular tumour cases. It minimizes the amount of bone resection and improves the functional outcome. From the oncological point of view, there is no difference from the PII resection.

Limitation

There were only a few suitable tumour cases of partial acetabulum involvement. Therefore, ours like most of the previous reports consisted of only a few patients. Moreover, whether partial loss of the acetabulum in the long run will contribute to microscopic instability or accelerated osteoarthritis is still unknown to us.