

Title: Functional Outcome following “No Reconstruction” in Patients undergoing Periacetabular (Type-II) Pelvic Resection

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Place of Study:

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Background:

Limb salvage in malignant pelvic lesions is poorly reported in world literature. A lack of consensus in surgical techniques along with a difficult anatomical location makes them the one of the most challenging lesions to be treated surgically at any musculoskeletal oncological Centre. Besides, reconstruction options in Type II resections are limited and have been reported with significant complications.

Objectives: The main aim of our study was to evaluate the functional outcome in patients undergoing limb salvage for malignant lesions of the Pelvis without any reconstruction following Enneking’s Type II pelvic resection.

Methods: We retrospectively evaluate the results of limb salvage in Malignant lesions of the Pelvis. A total of 49 cases of different malignant Pelvic lesions treated at our Centre (over a period of eight years) were included in the study. Strict inclusion and exclusion criteria were set and patients who had undergone a Type I, Type III or a Type IV Pelvic resection were excluded from the study. All patients were classified as “no reconstruction” following pelvic resection. Patients were evaluated for age, type of tumor, survivorship and functional outcome using the MSTS scoring. Visual Gait score was also evaluated.

Results: There were 35 males and 14 females in the study. 27 patients had Chondrosarcoma, 8 had Ewings Sarcoma, 4 patients had malignant GCT, 3 patients had MFH, 5 had Osteosarcoma and one patient had Myeloma and Clear Cell sarcoma each. Metastatic lesions were excluded from the study. Patients underwent neo-adjuvant chemotherapy wherever warranted. Post excision, the hip was not stabilized by any prosthesis. The mean follow-up in the study was 49.5 months. The average age was 37.8 years. Oncological survival: after seven years a total of 24 patients were alive and they were evaluated for MSTS scoring and gait evaluation. The median MSTS score was 70% (17% to 100%). We compared our results with a historical cohort of patients who had undergone biological or prosthetic hip reconstruction post Type II pelvic resection. Mutivariate and univariate analysis was done. There was no significant difference in the functional outcome between the two groups.

Conclusions: Our study shows satisfactory results of limb salvage in malignant pelvic lesions that are considered to be dangerous lesions with poor acceptability of surgery both amongst the patients and orthopaedic surgeons. We also concluded that patients

with prosthetic reconstruction had significantly poorer MSTS Scores as compared to those who underwent reconstruction through biological means.