

**Title:** An Institution experience of Pelvic bone resections for pelvic bone tumours: Retrospective Analysis.

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**Background:** Hemipelvectomy is an uncommon procedure performed to treat various pelvic neoplasms. The most common indications are primary bony neoplasm and soft tissue sarcoma of the pelvis.

**Methods:** The demographic profiles, site of the tumour, type of the pelvic resection, approach of the surgery, histopathology, margin status, recurrence pattern were collected from the medical case records of all the patients who underwent pelvic resection at Cancer Institute (WIA), Chennai between 2000-2014 and statistically analysed.

**Results:** A total of 32 patients (Male-20 and female 12) were analysed in our case series with mean age of 28.2 years (7- 55 years). The predominant histopathology found in our series was chondrosarcoma (12 patients) followed by Giant cell tumour (5 cases), Osteosarcoma 3 cases, Ewing's sarcoma (4 cases) and soft tissue sarcoma (4 cases) and other histology including plasmacytoma, fibromatosis, osteochondroma and chondroblastoma with 1 case each. 6 patients had External Hemipelvectomy and 26 patients had Limb sparing pelvic resections.(6 patients had Type I Internal Hemipelvectomy, 4 had Type II Internal Hemipelvectomy, 1 patient had Type III Internal Hemipelvectomy, 10 Patients had Type I+IV Internal Hemipelvectomy, 2 patients had Type II +III Internal Hemipelvectomy, 1 had compound pelvic resection and 2 had Sacrectomy.)

18 (54.1%) patients had wound morbidity and all of them required surgical intervention and 2 patients (8.4%) had long term morbidity including prosthesis migration which required removal and the morbidity was higher in Type IV group. There were two anterior flap hemipelvectomies (2/6 cases) in our case series. 3 of our patients had positive margins in the final histopathology and 2 of them received post operative radiation. The mean hospital stay was 37.14 days (12-82 days).

In the subset analysis of 24 patients (treated before January 2013, with follow up duration of 2 years), there was recurrence in 8 patients (3 – local recurrence and 5 cases with distant metastasis) and the mean duration of recurrence was 10 months. The 5 year DFS for Benign and Malignant tumours are 85% and 43% respectively and the 5 year overall survival is 100% and 67% respectively. Patients who undergo external hemipelvectomy have poorer survival as compared to patients undergoing internal hemipelvectomy (Limb conservation). (33% vs 77%).

**Conclusion:** In spite of these surgeries needing higher technical expertise and are fraught with higher incidence of complications, the patients have better survival warranting these procedures.