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#### **CHONDROSARCOMA OF THE PELVIS: A REVIEW OF FIFTY-SIX CASES BETWEEN 1990 AND 2014**

**Background:** Treatment of pelvic chondrosarcoma is a difficult problem for the musculoskeletal oncologist. Poor rates of survival and high rates of local recurrence after surgical treatment have been reported in previous studies. The present study was designed to review the long-term oncologic outcomes of surgical management in a large series of patients with pelvic chondrosarcoma who were treated in a single institution.

**Methods:** The cases of 56 patients with localized pelvic chondrosarcoma that had been surgically treated between 1990 and 2014 were reviewed retrospectively. The study was limited to patients who had received no previous treatment for chondrosarcoma. There were 32 male and 24 female patients who had a mean age of 37.5 (range, 15 to 75 years). The patients were followed for a minimum of one year or until death. The mean duration of follow-up for the living patients was 63.5 months (range, 12 to 264 months).

**Results:** At presentation, 23 (41.1%) out of 56 patients were diagnosed with grade-I chondrosarcoma, 29 (51.8%) patients with grade-II and 4 (7.1%) patients with grade-III. Three patients underwent external hemipelvectomy to achieve local tumor control, whereas 53 patients underwent a limb-salvage procedure. The resection margins were wide in 49 patients and less than wide in 7 patients. Seven patients (12.5%) had local recurrence, and 9 (16.1%) had distant metastases. At the time of the final follow-up, 47 patients (83.9%) were alive, 9 (16.1%) had died. Overall survival rate was 93.4%, and disease

free survival was 80 % at 5 years. High-grade and advanced stage tumors correlated with worse survival rates. Due to small number of cases in “less than wide resection” group (7 patients) and “less than 5 cm” group (12 patients), the impact of marginal status and tumor size on oncological outcome did not yield statistically significant results.

**Conclusions:** Tumor grade is the most important prognostic factor for oncological outcome in pelvic chondrosarcomas. Although pelvic tumor resection is a challenging procedure, preoperative planning is one of the most important steps for preserving surgical margin. Limb salvage procedures can be applicable for pelvic chondrosarcomas with advanced imaging modalities.