

Surgery of pelvic chondrosarcomas: a review of 309 cases from three Institutions

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Background. Treatment of pelvic chondrosarcoma (CS) is a challenge.

Purposes. Aim of this retrospective study was to review the long-term oncologic and functional outcome of surgical management in a large series of patients with pelvic CSs.

Patients and Methods. We analyzed 309 patients treated in three institutions (193 males, mean age 46 years). There were 136 central CSs, 109 peripheral CSs, 36 dedifferentiated CSs and other less frequent histotypes. Tumor involved iliac wing in 74 cases, iliac wing and sacro-iliac joint in 13, iliac wing and periacetabulum in 39, anterior arch and periacetabulum in 57 cases, anterior arch only in 35, acetabulum only in 42 cases and the entire hemipelvis in 49. Forty-nine patients had an external hemipelvectomy (16%), whereas 260 (84%) underwent a limb-salvage procedure (116 with and 144 without reconstruction). Margins were wide in 212 cases, wide but contaminated in 23, marginal in 50 and intralesional in 24 cases.

Results. Survival was 73% and 70% at 10 and 15 years respectively. At a mean of 9 years, 188 patients (61%) were continuously NED, 28 were NED after treatment of local recurrence (9%), 54 (17%) DWD, 13 (4%) died of other causes and 26 (8%) AWD. In central and peripheral CSs, high-grade tumors correlated with worse survival. Dedifferentiated CS had a worst prognosis ($p < 0.0001$). At multivariate analysis on survival, stage and grade statistically influenced prognosis. Incidence of local recurrence was 27.8%.

Conclusions: There was a significant correlation between histologic grade and survival. New medical treatments need to be investigated.