Outcome Of Pelvic Bone Sarcomas In Children

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Abstract

Malignant tumours of the pelvis in children are rare and their behaviour is poorly defined. The aim of this study was to evaluate the outcome of primary tumours of the pelvis in children

113 patients under 16, comprising 58 females and 55 males were treated between 1983 and 2014. Tumours comprised Ewing's sarcoma in 88 (77.9%) or osteosarcoma in 25 (22.1%). Metastases at diagnosis were present in 36 (31.9%). The mean follow up was 5.2 years (2-16).

For patients with Ewing's sarcoma, the overall survival was 37.1% at 5-years and 33.5% at 10-years and 31.7% at 5- and 10-years in patients with osteosarcoma. Local recurrence occurred in 24 patients with Ewing's sarcoma (27.3%) and 7 patients with osteosarcoma (43.7%). Chemotherapy response was a predictor of local recurrence in Ewing's sarcoma with the lowest incidence seen in those with a good response to chemotherapy treated with a combination of radiotherapy and surgery Patients with Ewing's sarcoma with a poor chemotherapy response treated with radiotherapy alone had superior local control compared to those treated with surgery. In patients with osteosarcoma, both surgical margin and chemotherapy response influenced local control.

Attaining a wide surgical margin should be the aim of treatment for all children with primary bone tumours of the pelvis. However, in Ewing's sarcoma, chemotherapy response has a greater influence on disease free and overall survival. Patients who demonstrate a poor response to chemotherapy should be considered for subsequent radiotherapy. Effort should be directed towards identifying non-histological methods of assessing chemotherapy response.