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Osteosarcoma of the pelvis: a monoinstitutional experience in patients younger than 41 years

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ABSTRACT

Aims and background. Information is scarce on systemic treatment of pelvic osteosarcoma because most chemotherapy protocols for osteosarcoma include patients with extremity tumors and aged up to 30-40 years.

Methods. Data on patients <41 years of age with high-grade pelvic osteosarcoma were prospectively collected. Patients received two chemotherapy protocols consisting of methotrexate, cisplatin, doxorubicin (MAP) and standard-dose or high-dose ifosfamide.

Results. Forty patients between 11 and 36 years were included. The most frequent histological subtype was osteoblastic followed by chondroblastic (37.5%). Complete surgical remission was achieved in 65% of patients. Eighteen patients had MAP/standard-dose ifosfamide, 22 MAP/high-dose ifosfamide. Primary chemotherapy was given to 25 patients and 6 (24%) of them had a good histological response. Median follow-up was 32 months (range, 4-134). Five-year overall survival was 27.5%: 33% in localized and 0 in metastatic patients ($P = 0.02$); 45% in patients with complete surgical remission and 0 for patients without complete surgical remission ($P = 0.001$). Local recurrence rate was 46%. In patients with complete surgical remission, 5-year overall survival was 32% with MAP/standard-dose ifosfamide and 59% with MAP/high-dose ifosfamide regimen ($P = 0.3$).

Conclusions. Local control is the major issue in the treatment of pelvic osteosarcoma. Poor pathological response and high incidence of chondroblastic variant indicate different characteristics between pelvic and extremity osteosarcoma. Chemotherapy with MAP and high-dose ifosfamide might be beneficial in patients with pelvic osteosarcoma and warrants further investigation.

Key words: chemotherapy, high-dose ifosfamide, osteosarcoma, pelvic osteosarcoma.

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