

Expression of ezrin and metastatic tumor antigen in osteosarcomas of the jaw

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ABSTRACT

Aims and background. Ezrin is a membrane-cytoskeleton linker protein involved in regulation of the growth and metastatic behavior of cancer cells. Metastatic tumor antigen (MTA) is a potential metastasis-associated protein. The objective of this study was to evaluate the expression of ezrin and MTA and their correlation with clinico-pathological features in osteosarcomas of the jaw.

Methods. We analyzed ezrin and MTA protein levels by immunohistochemistry in 31 osteosarcomas of the jaw.

Results. The mean age at diagnosis was 39 years and half of the patients were male. The mandible (n = 19) was more frequently involved than the maxilla (n = 12). The predominant histological type was chondroblastic (58.1%) and 24 patients (77.4%) were classified as having a high grade of malignancy. Immunoreactivity for ezrin was identified in 6 of 31 cases (19.4%), while 77.4% displayed expression of MTA. All ezrin-positive patients had high-grade tumors. The high-grade tumors (n = 24) had a higher rate of MTA expression (42.9% vs 87.5%). Expression of ezrin and MTA was not significantly different according to age, sex, tumor site, histological type, and tumor ploidy. Follow-up information was available for 13 patients, with a mean follow-up time of 26.7 months (range, 6-48 months). At the time of last follow-up, 5 (38.5%) patients had died of disease and 8 patients (61.5%) were alive with no evidence of disease. Expression of ezrin and MTA was not significantly different according to the follow-up data.

Conclusions. In our study, high-grade tumors had a higher rate of ezrin and MTA expression. This expression pattern indicates that ezrin and MTA positivity can be additional prognostic markers in osteosarcoma of the jaw.

Key words: jaw, osteosarcoma, ezrin, MTA.

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