Abstract

AIMS: To study the expression of Bcl-2, Bcl-x, as well the presence of cleaved caspase-3 in neurofibromas and malignant peripheral nerve sheath tumors. The expression of Bcl-2 and Bcl-x and the presence of cleaved caspase-3 were compared to clinicopathological features of malignant peripheral nerve sheath tumors and their impact on survival rates were also investigated.

MATERIALS AND METHODS: The evaluation of Bcl-2, Bcl-x and cleaved caspase-3 was performed by immunohistochemistry using tissue microarrays in 28 malignant peripheral nerve sheath tumors and 38 neurofibromas. Immunoquantification was performed by computerized digital image analysis. CONCLUSIONS: Apoptosis is altered in neurofibromas and mainly in malignant peripheral nerve sheath tumors. High levels of cleaved caspase-3 are more common in tumors with more aggressive histological features and it is associated with lower disease free survival of patients with malignant peripheral nerve sheath tumors.

Keywords

Apoptosis regulatory proteins, malignant peripheral nervous sheath tumors, neurofibroma, Neurofibromatosis 1.