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Oligosarcoma: A Rare Case Report With Distinct Features

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Abstract

Oligosarcoma is a recently identified entity characterized by sarcomatous changes originating from oligodendroglioma. As of our current understanding, sarcomatous components are infrequent in glial tumors. The World Health Organization (WHO) classification describes sarcomatous features as a rare pattern in grade 3 oligodendrogliomas. In this report, we present a 42-year-old man diagnosed with oligosarcoma. The patient initially presented with a lesion in the right parietotemporal area 9 years ago, and the pathological diagnosis was oligodendroglioma. Nine years later, a recurrent lesion in the same area was observed. Histomorphological evaluation of the recurrent lesion revealed distinct glial and sarcomatous components. The diagnosis of oligosarcoma was made based on histologic assessment; however, additional histochemical (reticulin-rich sarcomatous area), immunohistochemical, and molecular evaluations were also conducted. Immunohistochemical marker expression patterns in oligosarcoma have been reported variably in the literature. In our patient, the sarcomatous component exhibited p53 and OLIG2 immunohistochemical expression. Molecular analysis revealed IDH and TERT mutations, as well as 1p/19q and CDKN2A deletions.

Keywords: CDKN2A; IDH; TERT; oligodendroglioma; oligosarcoma.

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