Oligodendroglial tumors case reports

Murakami et al. reported a histological and genetic study of concurrent oligodendroglioma and a microscopic pleomorphic xanthoastrocytoma (PXA)-like lesion in a 48-year-old male. He presented with generalized seizure, and magnetic resonance imaging revealed a nonenhanced left frontal lobe mass suggesting low-grade glioma. The patient underwent craniotomy and tumor resection. Histopathological examination of the surgical specimen showed an oligodendroglioma with a PXA-like element; the latter measured 0.9 mm and occupied a Virchow-Robin space of the superficial cortex. The whole tumor had no elevated mitotic activity, microvascular proliferation or necrosis. Each component was immunohistochemically isocitrate dehydrogenase (IDH1)-R132H positive, p53 negative and ATRX positive. Genetic analyses clarified identical IDH1 G395A mutation, promoter C228T mutation and 1p/19q codeletion in both elements. Careful integration of histology and telomerase reverse transcriptase (TERT) molecular parameters revealed that this case was an oligodendroglioma showing PXA-like features, rather than a collision tumor. This case provides further insights into the gliomagenesis [1)].

Simultaneous osteosarcoma and renal cell carcinoma with BRCA1 mutation in a young male adult with prior oligodendroglioma [2)].

A 83-year-old man with an 11-year history of lentigo maligna melanoma who presented with impaired balance and cognitive slowing and was found to have rapid progression of a previously known indolent right frontal brain mass. Pathologic examination of the tumor after resection revealed the presence of both malignant melanoma and an oligodendroglioma WHO grade II. To the best of our knowledge, this is the first reported case of malignant melanoma metastasizing to an oligodendroglioma that has been confirmed by immunohistochemistry and genetic analysis [3)].

1)
Murakami C, Ikota H, Nobusawa S, Nakata S, Yamazaki T, Hashiba Y, Hirato J, Yokoo H. Oligodendroglioma showing pleomorphic xanthoastrocytoma-like perivascular microlesion: With IDH1, TERT promoter mutation and 1p/19q codeletion detected in both components. Pathol Int. 2019 Dec 19. doi: 10.1111/pin.12880. [Epub ahead of print] PubMed PMID: 31855307.
2)
Dhir A, Li R, Li G, Dean J, Robin NH, Alva E. Simultaneous osteosarcoma and renal cell carcinoma with BRCA1 mutation in a young male adult with prior oligodendroglioma. Pediatr Blood Cancer. 2019 Dec 18:e28116. doi: 10.1002/pbc.28116. [Epub ahead of print] PubMed PMID: 31850619.
3)
Giantini Larsen A, Grannan BL, Lee CK, Koch MJ, Williams EA, Frosch MP, Cahill DP. Malignant Melanoma Metastatic to Oligodendroglioma: Case Report and Literature Review of Tumor-to-Tumor Metastasis to Gliomas. J Neuropathol Exp Neurol. 2018 May 8. doi: 10.1093/jnen/nly029. [Epub ahead of print] PubMed PMID: 29746652.