Angiocentric glioma: clinical, morphological, immunohistochemical and molecular features in three pediatric cases.

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Abstract
Angiocentric glioma is a rare slow growing tumor. It is associated to seizures and is mainly diagnosed in children and young adults. We describe the clinical, histo-pathological and molecular (IDH1, IDH2 and BRAFV600E mutational status) features in 3 children, 2 girls (2- and 11-years old) and 1 boy (10-years old). The tumors were located at the left temporo-parietalinsular, left parieto-occipital and left subcortical paramedian region respectively. All 3 patients were operated. Two patients are well at 2 and 16 months of follow-up while the third still suffers from seizures at 7 years of follow-up. Histologically, all tumors were composed of spindle-shaped cells showing a prominent tendency to align around the blood vessels and to grow in the subpia space creating palisade-like structures. In one case the tumoral cells were embedded in a mucoid matrix and some microcalcifications were observed. In all the cases the neoplastic cells diffusely immunostained for GFAP and S-100. Punctate dot-like intracytoplasmic staining for EMA was also observed. All tumors resulted in wild type for the mutations investigated. Owing to the rarity of angiocentric glioma, we believe that each new case should be recorded to produce a better clinical, pathological and molecular characterization of this lesion.

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