Papillary glioneuronal tumor with an unusual bilateral intraventricular localization.

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Abstract

Papillary glioneuronal tumor (PGNT) is a rare brain tumor (World Health Organization grade I) with a glioneuronal dual nature. It has a characteristic morphological pattern composed of astroglial pseudopapillary structures and interpapillary neurocytic elements. The tumor usually occurs in the supratentorial region in children and young adults, with a predilection for the temporal lobe. It is typically localized within the deep white matter adjacent to the lateral ventricles and rarely invades the ventricular cavities. Predominantly intraventricular localization of PGNT is uncommon. We report our experience with a PGNT that was bilaterally localized within the lateral ventricles of a 27-year-old woman. Magnetic resonance imaging demonstrated a solid, partially cystic mass in the left and right lateral ventricles. Part of the tumor was removed by surgery, followed by radiation therapy. Histopathological studies revealed typical pseudopapillary structures, created by glial fibrillary acidic protein (GFAP)-immunopositive cells, arranged around hyalinized blood vessels. The interpapillary component was composed of small, uniform, neurocyte-like cells with strong synaptophysin reactivity. Mitoses were rare, and necrosis was absent. The MIB-1 labeling index was low. The tumor was diagnosed as a PGNT. To our knowledge, this is the only report of this rare entity being located bilaterally in both cavities of the lateral ventricles.

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