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A glioneuronal tumor with neurocytic rosettes harboring FGFR1 internal tandem duplication – A report of a unique case

[Jiri Soukup](#)^{1 2 3}, [Nikola Hajkova](#)³, [Veronika Hajkova](#)⁴, [Marian Svajdler](#)^{4 5 6}, [David Netuka](#)⁷, [Martin Majovsky](#)⁷

Affiliations

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Abstract

Rosette-forming glioneuronal tumors (RGNTs) with FGFR1 tyrosine kinase domain internal tandem duplication (FGFR1 ITD) is exceedingly rare, with only a few cases reported in the literature. Hereby we present a case of a tumor with RGNT morphology occurring in area of septum pellucidum of 43-year-old male. The tumor showed FGFR1 ITD, no PIK3CA, PIK3R1 or NF1 alterations and inconclusive methylation profile with match for class of "low-grade glial/glioneuronal/neuroepithelial tumors". No areas characteristic of dysembryoplastic neuroepithelial tumor were identified. A brief review of literature on discrepancies between morphological diagnosis of RGNT and molecular profile of the entity is provided.

Keywords: FGFR; Rosette forming glioneuronal tumor; dysembryoplastic neuroepithelial tumor; glioneuronal tumors; pilocytic astrocytoma.

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