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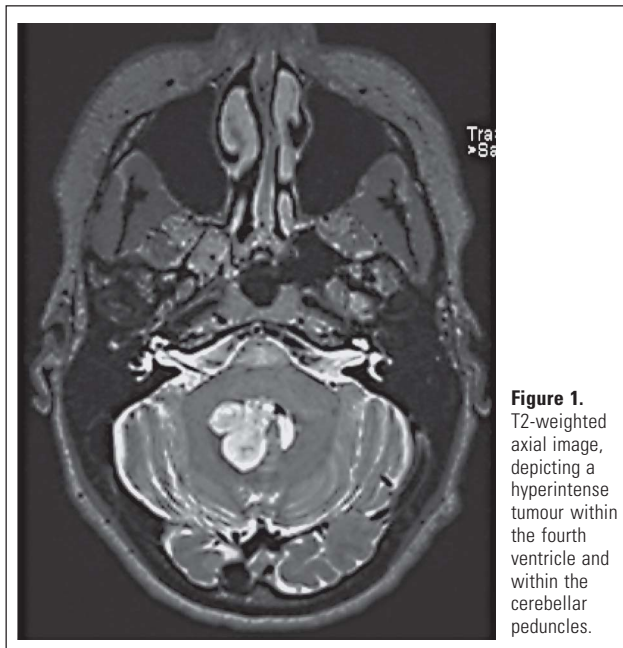
Rare Cerebellar Tumour in a Young Adult Bulging into the Fourth Ventricle

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■ Case Presentation

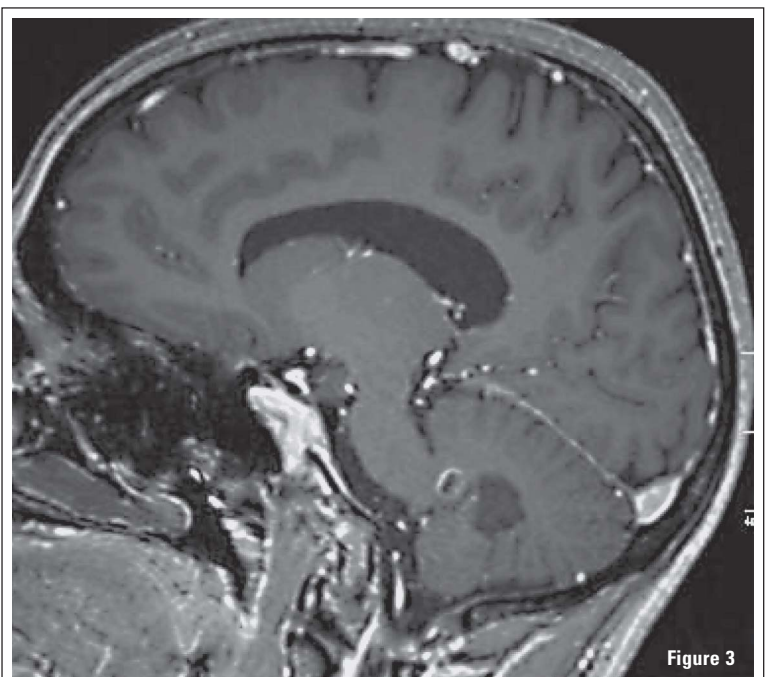
A 38-year-old female was admitted with suddenly appearing prickling in both hands. The neurological examination de-



monstrated no abnormalities. An MRI study of the head showed a mass lesion within the upper and middle cerebellar peduncles on the right side, measuring about 3 cm in diameter. The lesion bulged into the fourth ventricle and led to its partial occlusion. It appeared hypointense on T1-weighted images and exhibited a 1-cm slightly contrast-enhancing tumour part (Figures 1–3). Surgery was performed via median suboccipital craniotomy through the fourth ventricle using intra-operative electrophysiological monitoring of the lower cranial nerves. The tumour was significantly firmer than CNS substance and was removed gross-totally from the cerebellar peduncles by means of microsurgical technique. The postoperative course was uneventful besides transitory right-sided dysidiadochokinesia, intermittent dizziness, and vertigo.

■ Case Resolution: Rosette-Forming Glioneuronal Tumour of the Fourth Ventricle (RGNT)

Histological examination of the tumour revealed a rosette-forming glioneuronal tumour of the fourth ventricle (RGNT), a benign (WHO grade I) tumour of young adults, arising in the fourth ventricular region (Figures 4, 5). This rare tumour entity first described by Komori et al in 2002 [1] was included in the WHO classification of tumours of the central nervous



Figures 2, 3. T1-weighted axial and sagittal, gadolinium-enhanced images depicting a small enhancing tumour part.

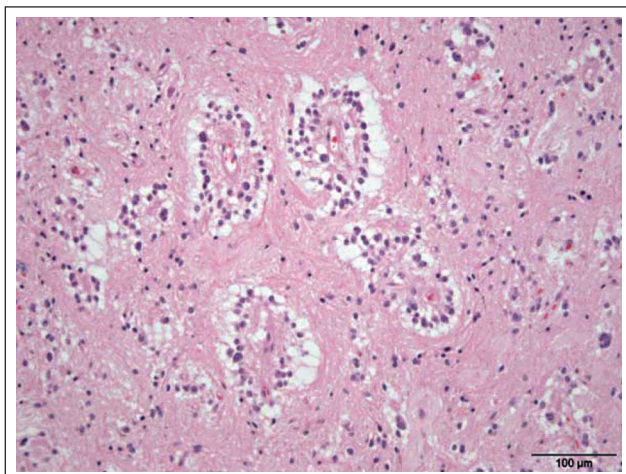


Figure 4. H&E-stained histological slide, showing perivascular pseudorosettes within the tumour.

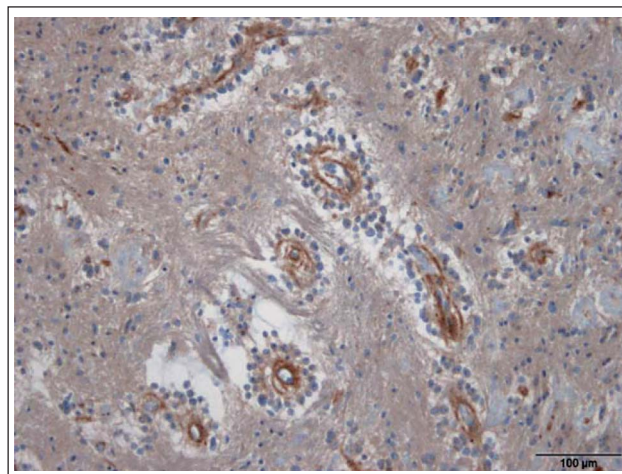


Figure 5. Synaptophysin immunoreactivity in the pericapillary space, confirming neuronal differentiation.

system in 2007. Histologically, it consists of 2 distinct components, one with uniform neurocytes forming rosettes and/or perivascular pseudorosettes, the other being astrocytic in nature and resembling pilocytic astrocytoma. More than 40 cases have been analysed and described since then. Mean age of patients was found to be about 30 years with a female-to-male ratio of 2:1 [2]. Despite the benign histology and post-operative long-term stability of the patients without additional therapy, long-term follow-up is advisable in the face of limited experience and seldomly reported recurrences.

References:

1. Komori T, Scheithauer BW, Hirose T. A rosette-forming glioneuronal tumor of the fourth ventricle: infratentorial form of dysembryoplastic neuroepithelial tumor? *Am J Surg Pathol* 2002; 26: 582–91.
2. Solis OE, Mehta RI, Lai A, et al. Rosette-forming glioneuronal tumor: a pineal region case with IDH1 and IDH2 mutation analyses and literature review of 43 cases. *J Neurooncol* 2011; 102: 477–84.

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