Letter to Editor

# Microscopic perivascular pseudorosettes in a child with fourth ventricular tumor

Sir,

Histopathology plays an important role in confirming the specific diagnosis in many cases of suspected intracranial neoplasms. We are reporting an atypical presentation of posterior fossa tumor with seizures in a child where the specific diagnosis was made by classic histopathology findings.

A 4-year-old female presented with episodes of jerky movements of upper and lower limbs with transient loss of consciousness and post episodic paralysis of limbs for 1 week. The child was conscious, alert, active, and afebrile. Central nervous system, respiratory and cardiac system examination was normal. Fundus examination showed bilateral papilloedema. MRI brain showed mixed intensity lesion of 3.5 cm × 3 cm arising from the floor of the fourth ventricle causing obstructive hydrocephalus. Hematological investigations were normal. Ventriculoperitoneal shunt for acute obstructive hydrocephalus was done to decrease raised intracranial pressure. Intraoperatively, the tumor was soft, friable, irregular, and gray-white arising from the floor of the fourth ventricle. Total resection of the tumor was attempted. Histopathological examination showed moderately cellular tumor composed of monomorphic cells with fibrillary cytoplasm, round-to-oval nucleus with salt and pepper chromatin. There were numerous perivascular pseudorosettes and areas of calcification [Figures 1 and 2].

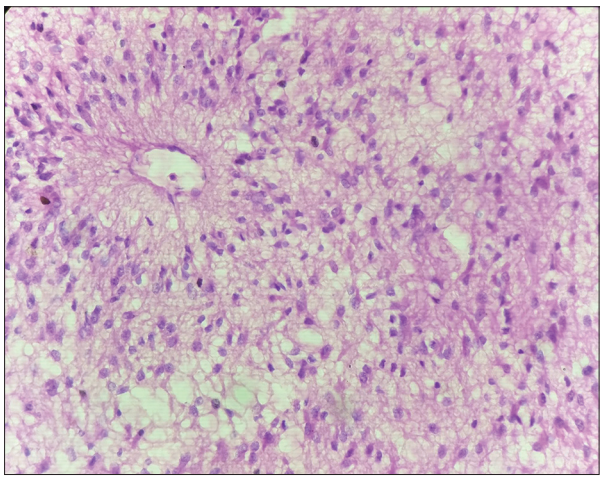

**Figure 1:** Photomicrograph showing moderately cellular tumor composed of monomorphous cells arranged diffusely and as perivascular pseudorosettes (H and E, ×400)

There were no mitotic figures and features of anaplasia. Diagnosis of classic ependymoma WHO grade II was made based on the age of the child, site of the tumor and histopathological features.

Ependymoma, medulloblastoma, juvenile pilocytic astrocytoma, and brainstem glioma are important differential diagnoses for posterior fossa mass in children.[1] Posterior fossa tumors usually present with vomiting, headache, cerebellar signs (if located in the cerebellum), and hydrocephalus, while seizures as presenting symptoms are rare.[2] Tumor cells resemble normal ependymal cells but are arranged in unique perivascular pseudorosettes. In pseudorosette formation, the tumor cell nuclei are located at a distance from a central vessel with delicate processes radiating toward the vessel wall.[3]

In conclusion, we are presenting a child with posterior fossa ependymoma presenting with seizures which was diagnosed by classic histopathology findings.

## Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient (s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal.

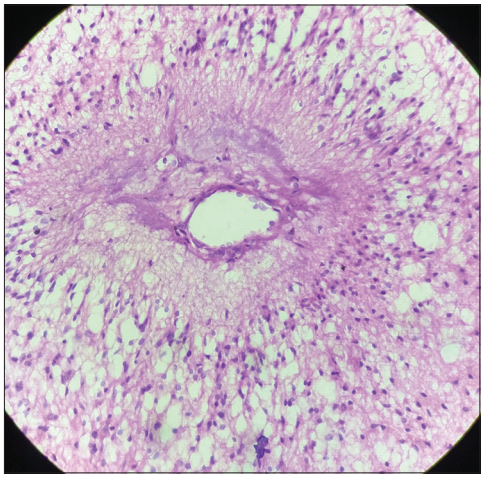

**Figure 2:** Photomicrograph showing perivascular pseudorosette composed of the nuclear-free cytoplasmic fibrillary zone of tumor cells around capillaries with monomorphic round to oval nuclear and salt and pepper chromatin (H and E, ×400)

The patients understand that their names and initial s will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Nil.

## Conflicts of interest

There are no conflicts of interest.

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