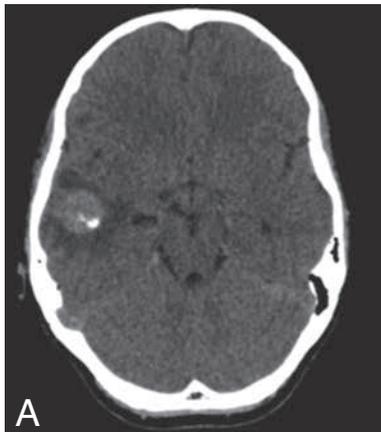


## IMAGES IN CLINICAL RADIOLOGY



### *Intraparenchymal meningioma in a child*

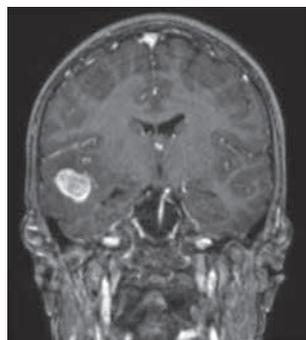
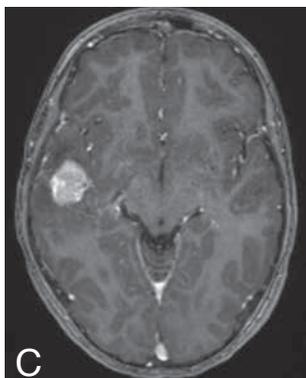
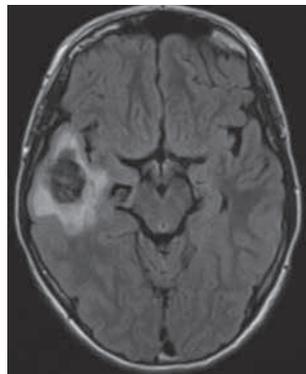
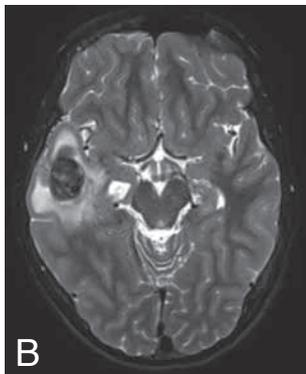
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A 13-year old boy presented with loss of consciousness, and 2 episodes of generalized convulsions on a short period of 2 days.

CT scan without intravenous contrast revealed a mild hyperdense lesion in the right temporal lobe. Intralesional calcifications and perilesional edema with a mass-effect on the right lateral ventricle were seen (Fig. A).

MRI identified a heterogeneously hypointense mass on T2 weighted images (WI) and FLAIR in the right temporal lobe (Fig. B). The mass was well circumscribed, measuring approximately 15 x 18 x 34 mm in its greatest craniocaudal, transverse, and anteroposterior dimensions respectively. An edematous rim surrounded the lesion. Following intravenous contrast administration, vivid and homogeneous enhancement of the lesion was shown on T1 WI with fat suppression (Fig. C). Coronal and axial MR imaging revealed no dural attachment, the mass appeared to be located intraaxial (Fig. C). The mass showed no restriction on diffusion WI. Multiple susceptibility artefacts were identified on gradient echo WI, compatible with the calcifications seen on CT.

Our differential diagnosis of this intraparenchymal temporal lobe mass with intralesional calcifications existed of ganglioglioma, gangliocytoma, or an atypical presentation of another tumor. The mass was resected and pathological examination revealed, to our surprise, a fibrous meningioma grade I. No other treatment was necessary.



#### *Comment*

Meningiomas arise from meningiothelial cells that line the arachnoid membrane. The vast majority of the meningiomas are dural-based. These typical meningiomas are typical slightly hyperdense and may show calcifications on CT. MRI typically identifies a vivid and homogeneous enhancement, and an edematous rim. These classic findings were also seen in our patient, but on a very unusual location. In rare cases, meningiomas occur without dural attachment, arising from ectopic meningiothelial cells within the stroma of the choroid plexus, tela choroidea or the pia mater. Meningiomas without dural attachment can be classified into 5 types: intraventricular meningioma, pineal meningioma, deep sylvian meningioma, intraparenchymal or subcortical meningioma, and others. Meningiomas of the pia-arachnoid arise from the stromal cells that surround the perforating blood vessels as they

enter the surface of the brain. They will appear either within the Sylvian cistern or within the brain parenchyma. Meningiomas are uncommon in childhood, but intraparenchymal meningiomas occur more frequently in children than in adults. Preoperative diagnosis is difficult, considering the rarity and the similarity of imaging findings to other, more common intra-axial lesions. Total removal and a long follow up are necessary.

#### *Reference*

1. Tekkök I.H., Cinel L., Zorludemir S.: Intraparenchymal meningioma. *J Clin Neurosci*, 2005, 12: 605-608.

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