

## Quadrigeminal cistern lipoma

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A 10-year-old girl presented with recurrent episodes of headaches for the past 6 months. Her headaches were holocranial and throbbing and usually lasted 3–4 h. It is sometimes associated with vomiting, which usually relieves the headache. Headache is ameliorated by sleep and paracetamol. Headache frequency was roughly 1/week. There was no history of fever. A magnetic resonance imaging (MRI) brain was taken as requested by the parents, which showed quadrigeminal cistern lipoma (Figs. 1 and 2). The lesion was hyperintense in T1-weighted images, T2-weighted images, and fluid-attenuated inversion recovery images (FLAIR). She was treated with flunarizine 5 mg at bedtime and her headache markedly reduced in frequency and severity.

Intracranial lipomas are very rare tumors with an incidence of 0.1–0.5% of all intracranial tumors. They tend to be placed at the midline, most commonly in the pericallosal cistern (50%). The quadrigeminal/superior cerebellar lipomas account for 25% of the cases followed by suprasellar/interpeduncular (14%), cerebellopontine angle (9%), and sylvian (5%) cistern lipomas [1]. First described by Rokitansky in 1856, intracranial lipomas are very rare congenital malformations, characterized by an asymptomatic course. They are often detected incidentally when imaging is done for chronic headaches [2]. Patients rarely present with symptoms related to the location of the lesion such as cranial nerve deficit, seizure, intractable headache, visual hallucinations, and brainstem findings [3,4].

Intracranial lipomas are neither hamartomas nor true neoplasms; rather, they are congenital malformations. Intracranial lipomas result from abnormal persistence and mal-differentiation of meninx primitiva. Half of intracranial lipomas are associated with midline brain malformations of varying severity which include hypoplasia/aplasia of the corpus callosum and vascular abnormalities [5].

Lipomas are easily identified by virtue of their characteristic signals on MRI sequences. They are hyperintense in T1, T2, and FLAIR sequences. However, some lipomas also do show blooming on gradient echo which can be confused with hemorrhage. Other T1 intracranial hyperintense lesions that could

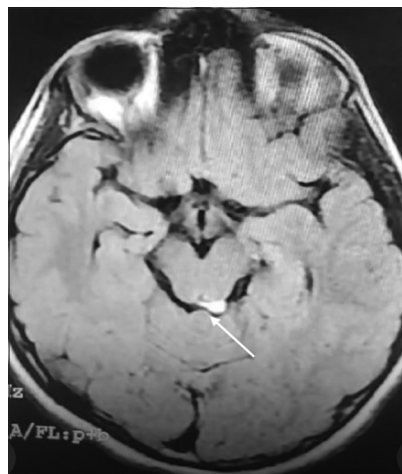


Figure 1: Axial fluid-attenuated inversion recovery images magnetic resonance imaging brain image showing quadrigeminal cistern lipoma on the left side

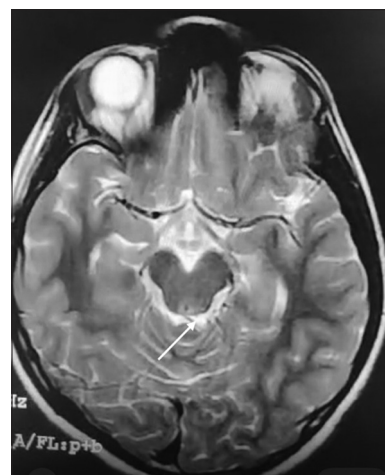



Figure 2: Axial T2 brain image showing T2 hyperintense lesion in the quadrigeminal cistern on the left side

be seen in this region are dermoids, teratoma, and thrombosed vascular structures. Only 20% of patients with lipomas of the quadrigeminal plate/ambient cistern are symptomatic. In cases of asymptomatic individuals or those presenting mild symptoms, it is necessary to consider conservative treatment in the first instance, due to the risks and difficulties of surgery [6].

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