

## Unusual Cause for Unilateral Headache: A Quadrigeminal Cistern Arachnoid Cyst

### Dear Editor,

Young adults are frequently presented with headaches due to various causes. Atypical facial pain, renamed as persistent idiopathic facial pain (PIFP) is a poorly understood condition with the pain described as a persistent facial pain that does not have the characteristics of cranial neuralgias and which is not attributable to another disorder.<sup>1</sup> PIFP must be differentiated from other causes of headaches like migraine, trigeminal neuralgia (TN), cluster headache and temporomandibular joint syndrome.<sup>2</sup> TN which classically presents as severe, short-lasting and lancinating pain over the distribution of the fifth cranial nerve is the most common syndrome to be distinguished from PIFP. The most common causes of TN compression of the fifth nerve by a vascular loop at the root entry zone are cerebellopontine angle epidermoids, multiple sclerosis and tumours.<sup>3</sup> TN has also been associated with quadrigeminal and prepontine cyst-causing ipsilateral or contralateral symptoms.<sup>4</sup>

### Case Report

A 26-year-old male presented with a history of severe left-sided headache for the last 2 years. The headache which was usually caused by the exposure of the face to cold occurred at a frequency of 3 to 4 per week and lasted for 10 minutes to an hour. This was associated with throbbing pain and a feeling of altered sensation on the left side of the head. Initially the pain was resolved with paracetamol but it had gradually become worse and he was started on anti-depressants, anti-psychotics and codeine. Examination of the eye, ear, nose and throat did not reveal any cause for the headache. During the examination, he was alert, conscious with Glasgow Coma Score of 15 and had no motor deficits. The fundoscopy was normal and there was no loss of any sensory modality in the fifth cranial nerve distribution. The rest of the cranial nerves were all normal.

The routine haematology examination was normal. Magnetic resonance imaging (MRI) showed a large supratentorial arachnoid cyst in the quadrigeminal cistern displacing the brainstem inferiorly and extending anterolaterally into the prepontine cisterns (Fig. 1). The cyst fluid was of the same intensity as the cerebrospinal fluid. There was no hydrocephalus. Surgical intervention was advised but the patient opted for medical management. He was started on increasing doses of Carbamazepine which controlled the symptoms within 3 weeks. Follow-up for the last 1 year has been asymptomatic except for a few

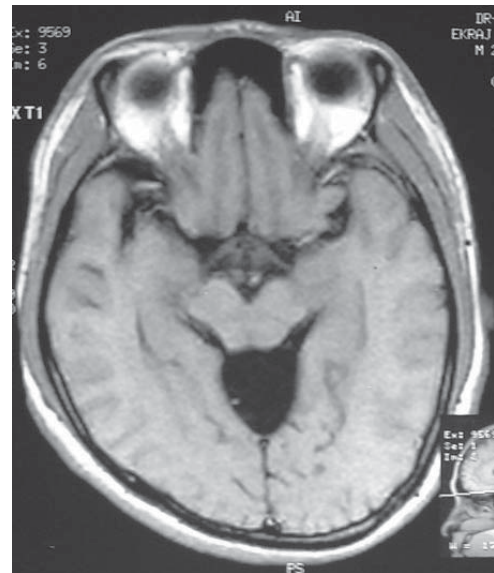


Fig. 1. MRI in T1 sagittal section showing a large trigeminal cistern arachnoid cyst at the supratentorial location with compression of the brainstem and the cerebellum.

short attacks of headache. Repeated scans have shown no increase in the size of the arachnoid cyst.

There are many causes of headache in young adults and if unilateral, the common differentials are either TN or PIFP. In the latter, the pain is a unilateral burning, aching or cramping and can extend into the upper neck or back of the scalp. Furthermore the pain is continuous for PIFP patients, with few, if any periods of remission. Unless the headache falls into the categories of some known disease like subarachnoid haemorrhage, tumour or hypertensive bleed, the patient is seldom investigated at the start of symptoms. This case is an example where the chronicity of the headache was attributed to psychotic disorder and the patient was started on anti-psychotic medication.

Arachnoid cysts are commonly found in the sylvian fissure, sella, cerebral convexity and posterior fossa. Most of them are asymptomatic or are presented with seizures, focal deficit, normal pressure hydrocephalus, lower cranial nerve pareses, bleeding into the cyst or trigeminal neuralgia.<sup>3-6</sup> Various factors like distortion of the pons with stretching of the trigeminal nerve, irregular demyelination within the root entry zone, or contact between the root entry zone and a vascular structure is the cause for pain.<sup>3,6</sup> Management of symptomatic cysts include surgery, either fenestration,

cystoperitoneal shunt, excision or endoscopically fenestration or excision.<sup>5,7</sup> Open surgery and endoscopic methods have both been proven to be effective in treating these cysts. In cases where the patients are unfit or who refuse surgery, medical management can help free patients from symptoms but it must be started early to prevent morbidity.

PIFP can be debilitating if left untreated. Many cases are labelled as having psychopathology when the diagnosis is not clear. The best treatment of PIFP is yet to be determined due to the lack of medical research relating to management of this condition. The aim is to control the pain with the use of drugs like anti-depressants and anti-convulsants. This can be aided with other forms of treatment like acupuncture and psychiatric treatment to give the best results.

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