

## Nasal cause of sixth cranial nerve palsy

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Dear Editor,

I read with great interest a report published in the recent issue of *Malaysian Family Physician* highlighting a case of isolated bilateral sixth nerve palsy as a complication of pansinusitis.<sup>1</sup> It is indeed a rare cause of diplopia seen in ENT setting with regard to the sinusitis.

Nasal or paranasal sinuses pathology often affects the cranial nerves. However, it is usually unilateral in nature. Bilateral or contralateral cranial nerve involvement is extremely rare.<sup>2</sup> The patient may present with diplopia. The nerves affected are the third, fourth, sixth and branches of the fifth cranial nerve. They are commonly affected due to their anatomical course in the cavernous sinus.

The cavernous sinus itself also can be thrombosed during a nasal skin infection episode. This is attributed to the venous drainage from the dangerous area of the face, which covers the midface region. Cavernous sinus thrombosis eventually will lead to ophthalmoplegia.

Anatomically the cavernous sinus is closely related to the sphenoid sinus and the nasopharynx. Sphenoid sinusitis, as demonstrated in the case can affect the nerves which are contained within it. Apart from the sinus, a direct extension from a nasopharyngeal lesion is commonly encountered to cause diplopia, owing to the sixth nerve involvement. The provisional diagnosis should be a nasopharyngeal carcinoma (NPC).

NPC is endemic in this part of the world. The commonest presentation is cervical lymphadenopathy, amounting majority of cases.<sup>3</sup> In a recent series of NPC in Sarawak, it was found that 80% of patients had neck swellings at the time of presentation.<sup>4</sup> Cranial nerve palsy is one of its manifestation in the advanced stage lesion (stage IV). The most commonly affected one is the sixth nerve.<sup>3</sup> It is well understood because the roof of nasopharynx is formed by the floor of sphenoid sinus and adjacent to the cavernous sinus. A case of bilateral nerve palsy have been reported from Malaysia as well.<sup>5</sup>

If a diplopic patient is seen in an outpatient setting, the diagnosis of NPC must be ruled out by doing nasal endoscopy and radiological imaging. It is wise to include a referral to ENT in a case of diplopia, especially if the primary cause is uncertain.

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