

Correspondence: CJ Roberts
Tel: +44 208 546 7711
Fax: +44 308 934 3266
E-mail: clare_roberts@doctors.org.uk

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Sir,

Optic neuritis: a rare manifestation of nasopharyngeal carcinoma

We read with interest a case report by Tsai *et al*¹ describing a case of optic neuritis as a presenting feature of nasopharyngeal carcinoma. As the authors have described, nasopharyngeal carcinoma commonly manifests as a neck mass, nasal obstruction, nasal bleeding, or hearing loss. Ophthalmologists are usually involved because of either the compressive or invasive effect of the tumour affecting one of the cranial nerves. Optic nerve involvement as described is usually because of direct compression or invasion of the nerve by tumour cells.² Neuroimaging aids in establishing the cause. Although a computed tomography (CT) scan can be used to access the relation of the mass to the nerve, magnetic resonance imaging (MRI), because of its superior soft-tissue contrast resolution and multiplanar imaging capabilities, is the investigation of choice in evaluating nasopharyngeal carcinoma.³ MRI has also been reported to reveal the extent of invasion of the tumour into the structures around the mass more accurately than a CT,⁴ and has been reported to be superior than a CT in demonstrating the lesions in the retropharyngeal node, skull base, intracranial area, carotid space, longus colli muscle, and levator palatani muscles.⁵ It has also been commented that infiltration and destruction of the skull base is more easily visualized on an MRI than a CT.⁶ It would therefore be very interesting to know if an MRI scan was performed to look for possible compression or invasion of the nerve by the tumour before postulating a dual pathology or a paraneoplastic effect, as it appears that such an important investigation has not been performed. Even so, a microinvasion of the nerve causing the neuritis cannot be ruled out. Improvement in the vision following methylprednisolone can be explained on the basis of the reduction in the compressive effect following treatment. A reduction in tissue oedema and a resultant reduction in tumour volume following treatment with steroids is a well-documented phenomenon.^{7,8} We have experienced a similar scenario in a 76-year-old lady who had presented with optic nerve inflammation that had

resolved on steroid treatment, but imaging revealed the cause to be a nasopharyngeal carcinoma. Further improvement following radiotherapy (which led to reduction in tumour volume) also supports the compressive hypothesis. Although a dual pathology or a paraneoplastic effect can be postulated as a cause, we believe that further imaging in the form of an MRI would provide vital clues regarding the exact relation of the mass and the nerve; however, microinvasion as a cause of optic neuritis can still not be ruled out.

References

- 1 Tsai CC, Ho HC, Ka DSC Hsu WM. Optic neuritis: a rare manifestation of nasopharyngeal carcinoma. *Eye* 2000; **16**: 501–503.
- 2 Prasad U, Doraiswamy S. Optic nerve involvement in nasopharyngeal carcinoma. *J Clin Neuro-ophthalmol* 1993; **13**: 24–26.
- 3 Casselman JW. The value of MRI in the diagnosis and staging of nasopharyngeal tumours. *J Belge Radiol* 1994; **77**: 67–71.
- 4 Xie C, Liang B, Lin H, Wu P. Influence of MRI on the T₁N staging system of nasopharyngeal carcinoma. *Zhonghua Zhong Liu Za Zhi* 2002; **24**: 181–184.
- 5 Ng SH, Chang TC, Ko SF, Yen PS, Wan YL, Tang LM *et al*. Nasopharyngeal carcinoma: MRI and CT assessment. *Neuroradiology* 1997; **10**: 741–746.
- 6 Chong VF, Fan YF. Skull base erosion in nasopharyngeal carcinoma: detection by CT and MRI. *Clin Radiol* 1996; **51**: 625–631.
- 7 Ikeda Y, Carson BS, Long DM. The effects of topical dexamethasone on experimental brain tumors and peritumoral brain oedema. *Acta Neurochir Suppl (Wein)* 1994; **60**: 397–399.
- 8 Hatam A, Bergstrom M, Yu ZY, Granholm L, Bweggren BM. Effect of dexamethasone on volume and contrast enhancement of intracranial neoplasms. *J Comput Assist Tomogr* 1983; **7**: 295–300.

P Puri¹, S Puri² and I Pepper¹

¹Department of Ophthalmology,
Royal Hallamshire Hospital, Sheffield, UK

²Department of Radiology,
Royal Hallamshire Hospital, Sheffield, UK

Correspondence: P Puri
Tel: +44 114 271 3056
Fax: +44 114 271 3682
E-mail: Pankajpuri35@hotmail.com

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