provided the solution to this unusual problem.

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Sir,

Sphenoid sinus mucocoele presenting with optic neuropathy and abducens palsy: a late complication of radiotherapy to the head and neck

Sphenoid sinus mucocoeles are unusual lesions with few reported cases in the medical literature since Berg[1] first described them. Symptoms and signs are caused by local expansion of the mucocoele and include headache, visual disturbance, and ophthalmoplegia. Multiple theories have been proposed to describe the cause of the mucocoele;[2] however, an association between the mucocoele and radiotherapy has rarely been described.[3,4] We report the case history of a patient with sphenoid sinus mucocoele, which upon further investigation, was found to be associated with radiotherapy.

Case report

A 46-year-old Chinese male with history of nasopharyngeal carcinoma (NPC), treated by radiotherapy 7 years ago, was referred to our clinic complaining of progressive blurred vision and limited right gaze of 4 months duration in the right eye (OD). Further history revealed occasional epistaxis and headache. Clinical examination revealed a visual acuity of 20/60 OD and 20/20 on the left side (OS). Extraocular muscle examination revealed moderate right abduction deficit. Biomicroscopic examination revealed bilateral normal fundi, but an inferior altitudinal visual field defect was noted OD. Dyschromatopsia with Ishihara plates and a relative afferent pupillary defect were also found OD. In consideration of the past history of NPC, and the findings of an abducens palsy, a local recurrence had to be excluded. Further imaging study with a contrast computed tomography (CT) scan revealed an expanded homogenous nonenhancing hypodense lesion in the sphenoid sinus with erosion of the right posterior medial orbital wall and compression of the right optic nerve (Figure 1a, b), leading to the suspicion of a sphenoid tumour mass. There was no abnormality noted in the nasopharynx on the CT scan.

To confirm the diagnosis and rule out any possible tumour recurrence as well as to relieve the compressive effect of the tumour mass, drainage and biopsy of the sphenoid sinus through an endoscopic transnasal approach was performed. Biopsy of the mucosal lining revealed no tumour cells. No infection was demonstrated in the mucocoele. Immediate improvement of vision was noted 3 days postoperatively as the patient felt that 'everything becomes brighter.' Complete return of vision to 20/20 OD and normalization of the visual field OD were noted 2 weeks later. Ophthalmoplegia also

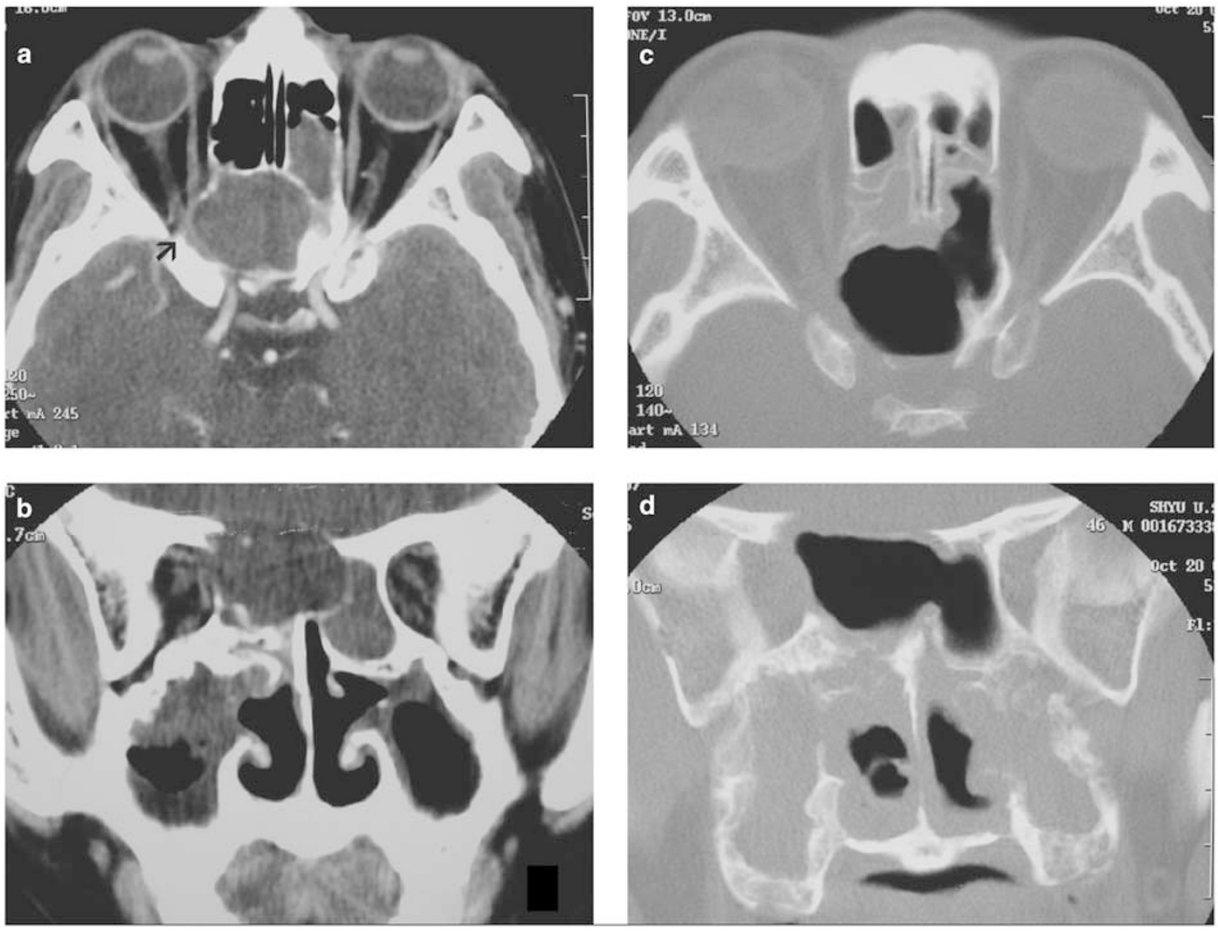

Figure 1 Preoperatively, axial (a) and coronal (b) contrast enhanced CT scan showed an expanded lesion in the right sphenoid sinus with thinning and erosion of the sinus wall into the right orbit. Optic nerve compression was noted (a, arrowhead). Postoperatively, axial (c) and coronal (d) CT scan without contrast showed a decompressed sphenoid air space with mucosal thickening, which was previously filled with mucocoele.

resolved. A CT scan conducted 1 month after the surgery showed an air space that was previously filled with mucocoele, indicating no accumulation of fluids (Figure 1c, d).

Comment

Sphenoid sinus mucocoele is a possible late complication of radiotherapy in patients with previous radiotherapy to the head and neck region. Porter *et al*[5] in a study that compare the pre- and post-radiotherapy CT scans of patients treated for NPC concluded that chronic sinus disease was a common complication of radiotherapy. Rejab *et al*[3] commented that scarring of the mucosa after radiotherapy may cause the occlusion of the sinus osteum, leading to the formation of a mucocoele. Besides mucocoele, local recurrences and radiation-induced neuropathy may also be responsible for the new cranial nerve lesions after radiotherapy for NPC. Radiation-induced neuropathy was excluded in our case because of the absence of optic disc oedema, onset of symptoms greater than 3 years after completion of the therapy, and CT evidence of visual pathway compression.[6] Local recurrence was also unlikely in our patient in consideration of the normal nasopharyngeal findings on the CT scan and long time (7 years) after the radiotherapy. Lee *et al*[7] previously reported only a 9% recurrence occurring later than 5 years after radiotherapy. In our case, a biopsy was also performed to rule out a local recurrence.

Although rare, this case behooves us to recognize sphenoid sinus mucocoele as a possible late complication in patients presenting with compressive symptoms following radiotherapy to the head and neck region. It is also emphasized that the biopsy of any lesion detected is necessary whenever a diagnosis is in doubt.

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Sir,

Optical coherence tomography findings in benign concentric annular dystrophy

Benign concentric annular dystrophy (BCAD) is a rare autosomal dominant condition first described by Deutman[1] in 1974. We present the first report of the ocular coherence tomogram (OCT) findings in this condition suggestive of new pathological abnormalities. We also describe the clinical, fluorescein, and electrophysiological findings in what is only the second case ever reported in a British journal.[2]

Case report

A 50-year-old Caucasian woman complained of blurred vision of gradual onset and was noted to have an abnormal macula appearance by her optometrist. She had no symptoms of nyctalopia and gave no history of chloroquine ingestion or the long-term use of other drugs. Her mother and sister were unaffected, but her father had had undiagnosed visual difficulties as an adult and is no longer alive. Remarkably, her best-corrected visual acuity was 6/9 OD and 6/6-3 OS with a low myopic correction. Her colour vision was 11/13 Ishihara plates OD and 9/13 OS. Over a 1-year period, there has been no change in symptoms or signs.

Anterior segment examination and intraocular pressures were normal. Fundoscopy showed bilateral annular hypopigmented areas around each fovea with central sparing. In the right macula, there was a flat well-demarcated pigmented area (Figure 1, top). Less well-demarcated pigment abnormality was seen in the left

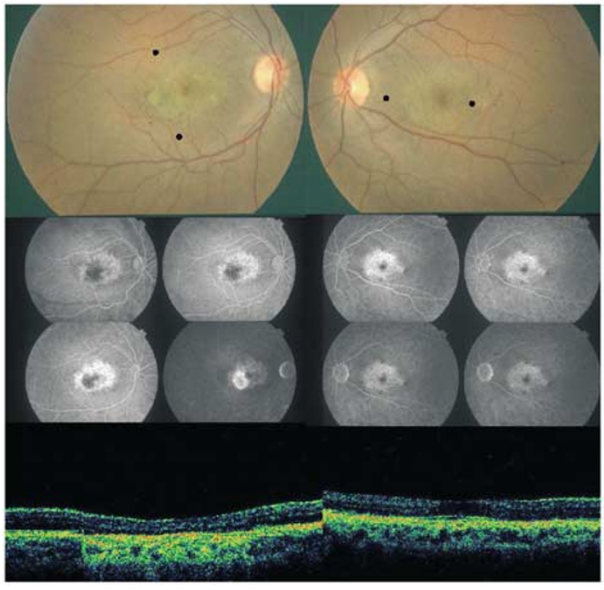

Figure 1 (Top left) Colour picture of right fundus showing pigmented macular lesion and Bull's eye macular dystrophy. (Dots refer to OCT images.) (Top right) Colour fundus photograph of left fundus showing Bull's eye macular dystrophy. (Dots refer to OCT images.) (Middle left) Fluorescein picture of (left) right fundus. and (right) left fundus.(Bottom left) OCT image of right macula on a meridian passing through the pigmented lesion between the two black dots shown on the colour photograph. (Bottom right) OCT image of left macula on a meridian passing through the fovea between the two black dots shown on the colour photograph.