Sir,

Glaucoma mimicked by carotid-ophthalmic artery aneurysm: a rare insidious cause of progressive visual loss

Carotid-ophthalmic artery aneurysms are a rare but serious cause of visual loss, resulting from direct compression of the optic nerve or chiasm. These aneurysms may mimic other causes of optic atrophy such as glaucoma. The coexistence of two causes of optic atrophy may lead to difficulties in diagnosis. The following case illustrates the value of a relative afferent pupillary defect as an indicator of optic nerve dysfunction.

Case report

A 40-year-old healthy Caucasian woman presented to the ophthalmic department of Good Hope Hospital with a 3 week history of pain, redness and blurred vision affecting the left eye. There was no significant past ophthalmic history. Best corrected visual acuity was 6/5 and 6/4 in the right and left eyes respectively. There was no relative afferent pupillary defect (RAPD). Slit-lamp examination revealed cells and flare in the left anterior chamber. Intraocular pressure measured 18 mmHg in the right eye and 22 mmHg in the left eye. Slit-lamp biomicroscopy demonstrated a degree of optic disc asymmetry (Fig. 1). Ocular examination was otherwise normal. A diagnosis of left acute anterior uveitis with mildly elevated intraocular pressure was made. Topical steroids and cycloplegics were prescribed.

The uveitis resolved. Over a 3 month period, the intraocular pressure measured between 18 and 24 mmHg in the right eye and between 21 and 26 mmHg in the left eye. Humphrey visual field analysis demonstrated a normal right visual field and a left superonasal visual field defect. The patient developed a left RAPD.

It was felt that the appearance of a RAPD was inconsistent with her clinical course and that the RAPD and the visual field defect in the left eye could not be explained on the basis of the previous uveitis and mild elevation of intraocular pressure in both eyes. Imaging of the optic nerves demonstrated the presence of a left carotid-ophthalmic artery aneurysm compressing the left optic nerve (Fig. 2).

The patient was referred for neuroradiological assessment and underwent radiographic placement of platinum coils within the aneurysm, followed by endovascular balloon occlusion of the left internal carotid artery. The aneurysm was successfully closed. Subsequent follow-up confirms that the patient is fit and well and that her ocular status is stable, with no change in visual acuity or visual field.

Comment

Cerebral arterial aneurysms occur in about 5% of the adult population, and are responsible for the majority of cases of spontaneous subarachnoid haemorrhages.¹ Carotid-ophthalmic artery aneurysms are rare: there was a 5.4% incidence in 2672 patients with single cerebral aneurysms in the Cooperative Study of Intracranial Aneurysms and Subarachnoid Haemorrhage.²

Symptoms relating to cerebral aneurysms include acute, gradual or fluctuating visual loss due to compression of the optic nerve, by supraclinoid carotid or ophthalmic artery aneurysms.³ One-third of patients with intracerebral aneurysms, located in close proximity to the optic chiasm or optic nerves, experience visual loss.⁴ It is important that intracerebral aneurysms are considered in the investigation of visual loss.

The case described illustrates how every clinical sign must be evaluated carefully. A 40-year-old woman presented with left anterior uveitis, mild elevation of intraocular pressure, a small degree of optic disc

Fig. 1. Optic disc asymmetry noted at presentation. Cup/disc ratios: 0.3 (right), 0.6 (left).

(a)

(b)

Fig. 2. (a) Posteroanterior view left internal carotid angiographic study confirming a large (14 mm) aneurysm pointing superonasally. (b) MR angiogram indicating the presence of an aneurysm arising from the terminal carotid artery just above the cavernous sinus.

asymmetry and an arcuate scotoma. During a 3 month follow-up period the intraocular pressure did not differ significantly between the two eyes. She subsequently developed a left RAPD. This was felt to be inconsistent with the previous clinical signs. Unilateral left optic nerve dysfunction was diagnosed and the possibility of optic nerve compression was raised. The presence of a carotid-ophthalmic artery aneurysm, compressing the left optic nerve, was established with MRI.

A RAPD is most typically an indicator of unilateral optic nerve dysfunction. Retinopathy or maculopathy can also cause a RAPD.⁵ However, such a RAPD is usually less pronounced than that found with optic neuropathy.

High-resolution MR angiography is a valuable additional, non-invasive technique, and may demonstrate small aneurysms not evident on standard images.⁶

This case demonstrates the need for planar scanning in cases of suspected optic nerve compression. It also demonstrates that a RAPD may be the only sign of serious unilateral optic nerve dysfunction and emphasises the need to test for this sign in all patients presenting with visual loss.

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Sir,

Acute angle closure glaucoma presenting in a young patient after administration of paroxetine

Recently, a small number of cases have been reported of elderly patients developing acute angle closure glaucoma after starting the selective serotonin reuptake inhibitor (SSRI) paroxetine for treatment of depression.¹⁻³ We describe the first documented case of acute angle closure glaucoma occurring in a 40-year-old man with p<?lateau iris configuration, 2 weeks after starting paroxetine.

Case report

A 40-year-old emmetropic man presented himself in the early evening to the eye casualty department with a 2 h history of blurred vision and discomfort in his right eye. He also complained on haloes around light sources. Two