Sir,

Spontaneous suprachoroidal haemorrhage in a patient with age-related macular degeneration on excessive anticoagulation therapy

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Age-related macular degeneration (ARMD) is the leading cause of legal blindness in the elderly UK population. Anticoagulation is frequently used in this age group for a variety of medical conditions. Administration of this therapy can cause a variety of haemorrhagic complications. We describe a case of suprachoroidal haemorrhage in a patient receiving excessive anticoagulation with a history of ARMD.

Case report

An 81-year-old lady presented to the ophthalmology department with sudden onset of pain and loss of vision in her right eye. She was registered legally blind due to ARMD and her visual acuity had previously been counting fingers in both eyes. Five weeks previously she had coronary artery bypass and aortic valve replacement. At that time she had been commenced on warfarin for atrial fibrillation. One week prior to presentation at the ophthalmology department, her warfarin level had been increased from 2 mg to 3 mg due to a low international normalising ratio of 1.8. The intended therapeutic range for the international normalising ratio was between 2.5 and 3.0.

On initial examination, visual acuity was light perception in her right eye and counting fingers in the left eye. The right eye had a shallow anterior chamber, early iris bombe, no fundal view and intraocular pressure of 36 mmHg. The left eye had a normal anterior chamber, intraocular pressure of 16 mmHg and a macular disciform lesion. She had a history of bilateral pseudophakia. B-scan ultrasonography of the right eye showed a large suprachoroidal haemorrhage (Figure 1). The international normalising ratio was 6.3, which is more than twice the therapeutic level. There was no evidence of other systemic haemorrhage. Her blood pressure was 140/80 and she had not been commenced on any medication which may have interfered with her warfarin level.

Intravenous acetazolamide and a topical beta-antagonist were commenced. Laser iridotomies were performed in the right eye and the warfarin was withdrawn. It was decided that in view of the history of poor vision in the eye, surgical intervention would not be performed. Five days later, vision remained at

Figure 1 B-scan ultrasonography of the right eye at presentation.

light perception and the eye was comfortable. The anterior chamber had deepened and the intraocular pressure had settled to 8 mmHg. There was no fundal view, however B-scan ultrasonography revealed that the suprachoroidal haemorrhage had decreased in size. The international normalising ratio had dropped to 1.88 and following consultation with the cardiothoracic team, the warfarin was recommenced. The warfarin level was adjusted to keep the international normalising ratio below 2.4. The acetazolamide and topical beta-antagonist were stopped.

At follow-up, the right eye was comfortable, vision was no perception of light, there was subretinal fibrosis and residual vitreous haemorrhage. The intraocular pressure was 16 mmHg, the peripheral iridotomies were patent and the anterior chamber was deep.

Comment

Spontaneous suprachoroidal haemorrhage is a rare occurrence and is more often seen as a complication of anterior segment surgery. There are previous cases reported in the literature of spontaneous suprachoroidal haemorrhage associated with thrombolytic therapy, low-molecular-weight heparin and anticoagulant therapy.^{1–5} This case presented as angle-closure glaucoma with an international normalising ratio twice the therapeutic level.

Angle-closure glaucoma can occur in spontaneous suprachoroidal haemorrhage due to forward displacement of the lens–iris diaphragm. Initial treatment is to lower the intraocular pressure with medical therapy. Further management of the suprachoroidal haemorrhage depends on a number of factors including the visual potential for the eye. Surgical management with evacuation of the blood is

usually deferred for 1–2 weeks, although the timing is a controversial issue.⁶ For an anticoagulated patient on warfarin, this allows time for the warfarin to be stopped or the patient to be heparinised prior to surgery.

Our patient had systemic risk factors associated with suprachoroidal haemorrhage, namely advanced age and atherosclerosis. In this case, we hypothesize that the macular disciform lesion bled and the haemorrhage extended extensively due to the increased clotting time induced by the warfarin.

This case illustrates the risk of visual loss due to ocular haemorrhage in patients on anticoagulant therapy. Medical staff should be aware of the potentially devastating visual consequences of anticoagulation above the normal therapeutic range.

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Sir,

Orbital nodular-granuloma annulare in a juvenile diabetic

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Granuloma annulare is a benign granulomatous process of the dermis that commonly occurs in children and young adults, but may occur in any age group.¹ The common, superficial lesions consist of small, firm, asymptomatic papules grouped in a ring-like or circinate fashion.¹ The less common variants are: a generalised form consisting of hundreds of papules, perforating granuloma annulare, erythematous granuloma annulare, subcutaneous granuloma annulare and a very rare deep destructive granuloma annulare.¹ Granuloma annulare involving the peri-ocular dermis has been well documented.^{2–7} However orbital granuloma annulare is very rare.^{2,4,8,9} Although an association between dermal granuloma annulare and diabetes has been documented, orbital granuloma annulare in insulin-dependent diabetes had not been reported previously.^{10,11} We report a case of orbital, nodular-granuloma annulare occurring in a juvenile diabetic associated with a partial third nerve palsy.

Case report

A 29-year-old female insulin-dependent diabetic presented with a 10-day history of left-sided red eye, double vision, abnormally large left pupil and ptosis. The visual acuity was normal in both eyes. In the left proptotic eye, there was soft tissue mass bulging through the superior and inferior bulbar conjunctiva of the left eye (Figures 1 and 2). The eye was proptotic.

Figure 1 Photograph of the left eye showing the soft tissue mass bulging through the superior bulbar conjunctiva—left down gaze.