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Sir,

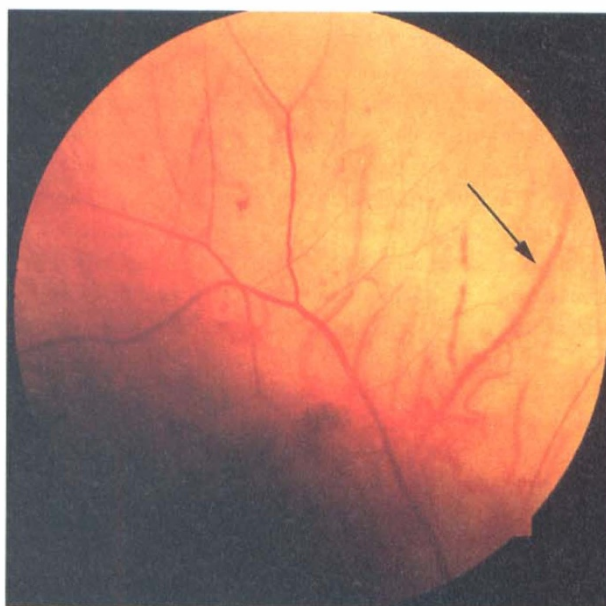
### **Siegrist's streaks: a rare manifestation of hypertensive choroidopathy**

The systemic manifestations of uncontrolled hypertension are diverse. Ocular involvement can be in the form of either a hypertensive retinopathy, hypertensive choroidopathy or a combination of both. Lesions due to hypertensive choroidopathy can be classified into pale yellow or reddish plaques in the peripheral fundus surrounded by pigmentary deposits, large patches of chorioretinal atrophy, Elschnig's spots and Siegrist's streaks.<sup>1</sup> Elschnig's spots, although clinically uncommon, have been described most commonly in the literature;<sup>2,3</sup> however, mention of Siegrist's streaks is rare.<sup>4,5</sup> A case of Siegrist's streaks in a patient with chronic hypertension is described.

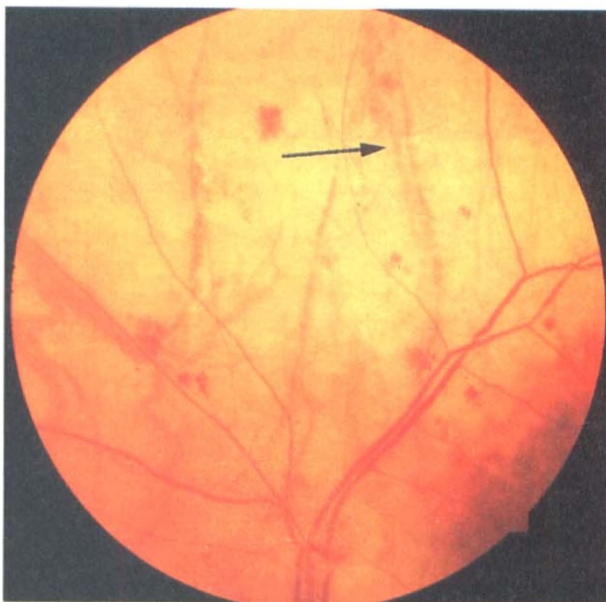
#### *Case report*

A 66-year-old man with hypertension, ischaemic heart disease, atrial fibrillation and asthma was referred for an ophthalmic opinion by his optician who noted scattered haemorrhages in his retina. The visual acuity was 6/9 right and 6/6 left with a normal anterior segment. The pupils were equal, and there was no relative afferent pupillary defect. The optic disc was healthy with a cup–disc ratio of 0.5:1 in each eye. There was generalised arteriolar narrowing with arteriovenous nipping and superficial and deep retinal haemorrhages. There were no cotton wool spots. There were sclerotic changes in the choroidal blood vessels with lines of retinal pigment epithelium along the blood vessels identified as 'Siegrist's streaks' (Fig. 1). The patient's blood pressure at this visit was 210/110 mmHg.

The patient was referred for further management of his hypertension and followed up in the ophthalmic clinic for over 1 year. During this period, following



(a)



(b)

**Fig. 1.** Fundus photographs of the right eye (a) and left eye (b) showing Siegrist's streaks (arrow).

improved control of his blood pressure, there was resolution of the haemorrhages but the appearance of the Siegrist's streaks remained unchanged.

#### *Comment*

Hypertensive choroidopathy is usually the result of an acute hypertensive crisis of accelerated hypertension in young adults and Siegrist's streaks are one of its rarest features. Siegrist's streaks are linear configurations of hyperpigmentation that develop over choroidal arteries in chronic hypertension.<sup>4–6</sup> Duke Elder<sup>1</sup> suggested that these changes are due to a patchy distribution of the sclerotic process in the choriocapillaris, consisting of hyperpigmentation over sclerotic choroidal vessels.

The pigmentation has been attributed primarily to hypertrophy but also mild hyperplasia of the retinal pigment epithelium. The streaks, as seen in the present case, radiate out to the periphery passing deep to the retinal vessels along the course of sclerosed choroidal vessels.<sup>7</sup> The precise stimulus for pigmentation adjacent to the choroidal vessels has not been identified.

The presence of Siegrist's streaks is of prognostic importance.<sup>8</sup> These lesions indicate the presence of fibrinoid necrosis, a manifestation of accelerated (malignant) hypertension, which is a medical emergency requiring admission to hospital for prompt treatment. It is therefore essential that following detection of this unusual finding the patient be immediately referred to a physician for appropriate management.

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Sir,

**Surgical exploration minimised by ultrasound biomicroscopy localisation of intraocular foreign body**  
Anterior segment foreign bodies can be difficult to localise. This case illustrates how precise ultrasound biomicroscopy (UBM) localisation of an iris foreign body allowed for pre-operative planning and surgical removal with minimal explorative trauma.

## Case report

A 40-year-old man presented with decreased vision in the right eye of about 2 months' duration. He gave a history of a foreign body sensation in the same eye 1½ years ago whilst supervising the cutting of metal sheets. He thought little of it as there was no pain or blurring of vision. No medical treatment was sought. Examination showed a small corneal scar close to the temporal limbus and associated with an underlying iris scar (Fig. 1a).

Dilatation of the pupil revealed the presence of a localised traumatic cataract adjacent to the scarred iris. A posterior subcapsular cataract was also present, accounting for his drop in vision. The posterior segment was normal. Both anterior and posterior segments were entirely quiet and no foreign body was as yet visualised.

A CT scan showed a radiopaque foreign body temporal and anterior to the right crystalline lens



(a)



(b)



(c)

**Fig. 1.** (a) Corneal entry wound and iris scar. (b) CT scan showing the foreign body temporal and anterior to the lens. (c) UBM showing the iris location of the foreign body.