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Sir,

Iris heterochromia after vertical squint surgery in a patient with SLE

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Anterior segment ischaemia is a known complication of squint surgery particularly in those involving more than two recti muscles. Certain factors can increase this risk such as sickle-cell anaemia and hyperviscosity syndrome. To the best of our knowledge, there has been no reported case of anterior segment ischaemia following squint surgery in a patient with systemic lupus erythematosus (SLE). We present a case of iris heterochromia as the only feature of anterior segment ischaemia following two-recti-muscle surgery in a patient with SLE.

Case report

A 45-year-old lady diagnosed with SLE for 22 years was referred to the clinic with irritable and gritty eyes. She was diagnosed with keratoconjunctivitis sicca and prescribed ocular surface lubricants. During the consultation, she also mentioned a long-standing diplopia that she was able to control by tilting her head. There was no history of previous squint surgery. Recently however, the diplopia has become symptomatically worse following an episode of patching of the left eye for recurrent corneal erosion.

Examination revealed an abnormal head posture with head turn to the right, head tilt to the left shoulder and chin up. The right hypertropia measured 13 dioptres for near and 20 dioptres for distance. Hess chart and eye movements indicated a possible bilateral Brown's syndrome with the left eye more affected than the right (Figure 1a).

She was listed for squint surgery in the hypertropic eye. Traction tests under anaesthesia revealed limitation of both eyes on moving the globe up and consistent with bilateral Brown's syndrome. She underwent right inferior rectus resection 5 mm and right superior rectus recession 4 mm on an adjustable suture. The superior rectus was pulled forward on adjustment.

After a postoperative period of 8 weeks, the squint measured 3 dioptres of right hypotropia and there was a marked reduction of abnormal head posture (Figure 1b). The patient had noticed that her right eye was a lighter colour and the pupil mis-shapen. Slit-lamp examination showed segmental iris stromal atrophy superiorly and inferiorly corresponding to the site of the operated muscles (Figure 2). Anterior segment examination was otherwise unremarkable with normal intraocular pressure. Iris fluorescein angiography was done but was unhelpful on account of her dark irides.[3] Her sectoral iris hypochromia remains unchanged to date, despite a trial of topical and systemic steroids.

Comment

SLE is an autoimmune disease with multiorgan involvement, skin, joints and vasculature being the most commonly involved. It occurs worldwide (0.1% incidence in the UK[1]) and has a female preponderance. The presence of autoantibodies such as anti-double-stranded DNA and antismooth muscle antibodies is supportive but not diagnostic of the condition. The ocular manifestations of this disease include keratoconjunctivitis sicca, retinal vasculitis, iritis, optic neuritis, and papilloedema. Ocular motility disorders can originate from anywhere—from the cerebral cortex to the extraocular muscles.

Squint surgery involving recti muscles can permanently disrupt the anterior ciliary arteries in any patient and can lead to anterior segment ischaemia. Studies have documented that procedures involving the vertical recti are at the greatest risk of precipitating this.[2] Further

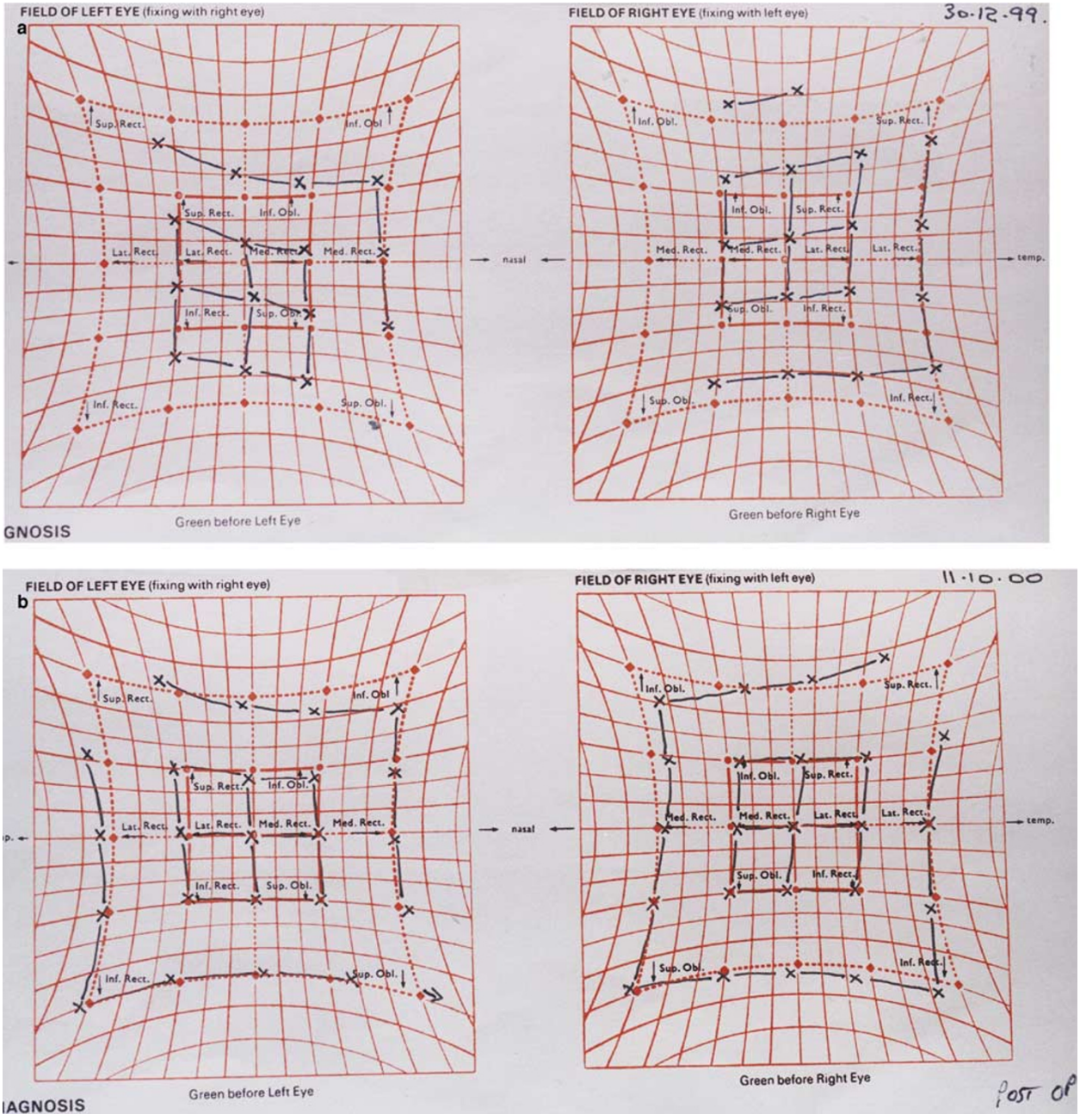

Figure 1 (a) Preoperative Hess chart showing bilateral inferior oblique underaction and left hypotropia. (b) Postoperative Hess chart showing marked reduction in degree of hypotropia.

compounding factors are alteration in blood viscosity, vessel wall integrity, and vessel lumen size. It can lead to sight-threatening complications such as corneal oedema and opacity, ocular hypotony, and phthisis bulbi. Less severe complications include iritis, iris hypochromia, and atrophy.

If iris hypoperfusion occurs following squint surgery, it can persist for 3–22 weeks; therefore, an interval of 2–3 months is recommended before any more muscle surgery is undertaken.[3] However, it should be noted that iris reperfusion does not necessarily ensure prevention of anterior segment ischaemia. In patients who are at risk of developing anterior segment ischaemia, alernatives to squint surgery such as prisms and botulinum toxin should be considered. Perioperative procedures that can minimise the risk include fornix-based conjunctival

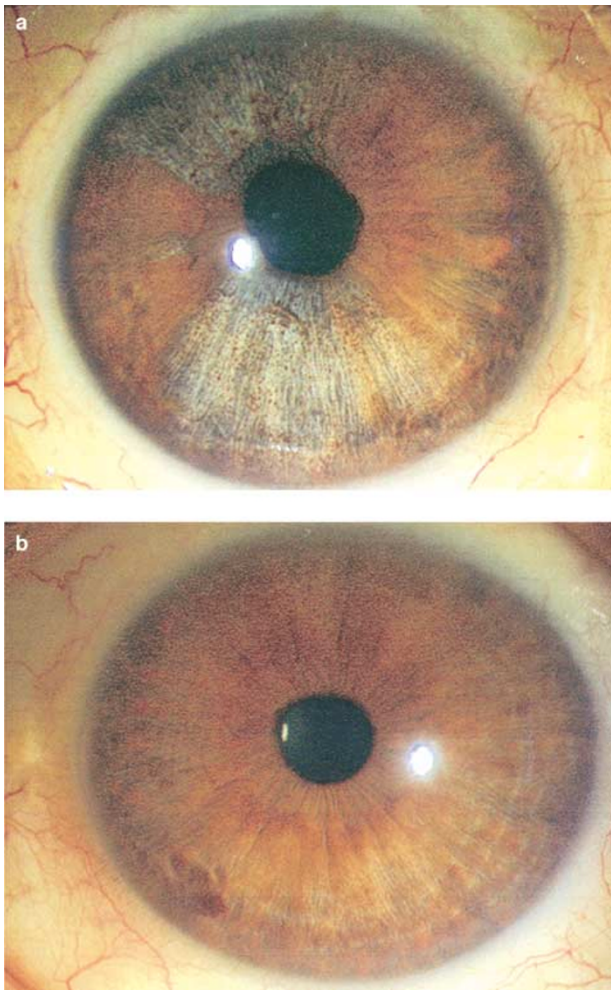

Figure 2 (a) Anterior segment photograph of right iris showing areas of segmental iris atrophy corresponding to the site of operated muscles. (b) Anterior segment photograph of fellow eye for comparison.

incision and the preservation of anterior ciliary vessels.[4] The latter is done by carefully dissecting them away from the recti muscles.

Our case is unique because there has been no reported case of iris hypochromia as the only feature of anterior segment ischaemia in a patient with SLE. It highlights the need to be aware of the possibility of precipitating anterior segment ischaemia in patients who may be at risk. There may be argument for assessing anterior segment circulation in this group of patients prior to squint surgery. Current methods include iris fluorescein angiography and, more recently, indocyanine green iris angiography,[3] both of which have their own limitations. The iris fluorescein angiogram is limited to lighter-coloured irides. Indocyanine green iris angiography overcomes this problem but the facility is of limited availability. However, good clinical examination preoperatively should be the first step in assessing at-risk patients. This may be the only step necessary in practice. The methods mentioned above can be used if appropriate.

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Sir,

Extrusion of a radon seed after 40 years, a case of mistaken identity

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A 43-year-old man was referred for the removal of a 'radium needle' extruding from the skin of his left upper eyelid. It was easily removed and subsequently proved to be a radon seed. Finding out why it was put there proved more elusive. 'Spent' radon seeds are not innocuous, and can make their presence felt even after 40 years.

Case report

The patient had initially presented to his GP with an erythematous and oedematous left upper eyelid. It was treated as preseptal cellulitis with oral antibiotics. As the swelling subsided a metallic object protruding from the