small, fine, white keratic precipitates scattered on the endothelium of the cornea along with anterior chamber activity in both eyes. The intraocular pressures were found to be normal.

The betaxolol was stopped and the treatment changed to timotol 0.25% (Timoptol, MSD) twice a day and fluorometholone drops four times a day. The uveitis resolved over the next 4 weeks on the above treatment.

Granulomatous anterior uveitis has previously been reported with metipranolol (a non-selective beta blocker)<sup>1</sup> but not with other beta blockers, either selective or non-selective. Betaxolol is a cardioselective beta-1 blocker and the most notable feature of its adverse effect profile is transient local stinging and irritation.<sup>2</sup> Other reported ocular side-effects include decreased tear production,<sup>3</sup> chronic conjunctival inflammation<sup>4</sup> and dendritic ulcer.<sup>5</sup>

Our patient has rheumatoid arthritis, a condition making her more prone to developing uveitis. However, the uveitis started within 3 weeks of starting betaxolol, resolved promptly on stopping it in conjunction with weak steroid drops, and did not reappear on stopping steroids in the follow-up period of 6 months. This suggests that betaxolol is strongly associated with the anterior uveitis in this case.

This is, to the best of our knowledge, the first report of uveitis with betaxolol.

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#### Sir,

# **Retinal Changes in Scurvy**

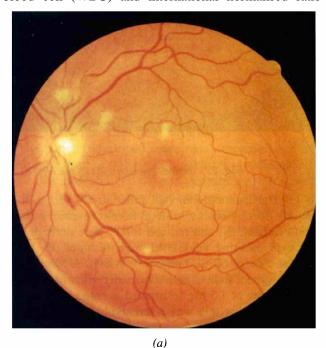
Scurvy is now rare in the United Kingdom and eye changes in scurvy are not extensively described. We present a case demonstrating retinal haemorrhage and exudates, which resolved on treatment.

## Case Report

A 48-year-old white unemployed divorcee presented with painful bruising in the leg muscles. He reported no visual disturbance but his gums had been bleeding and one tooth had recently fallen out. For 2 years he had eaten no fresh fruit or vegetables; he subsisted mainly on pasties and tinned soups with some boiled eggs, white bread and milk. He admitted to 20 cigarettes a day and 28 units of beer weekly.

Examination revealed jaundice, poor dental hygiene with gum haemorrhage, petechial and perifollicular haemorrhages on the limbs and extensive muscle bruising particularly affecting the thighs. Funduscopy (Fig. 1) showed flame haemorrhage and areas of soft exudate.

Investigations included a normal platelet count, white blood cell (WBC) and international normalised ratio





**Fig. 1.** Retinal photographs of the left (a) and right (b) eyes at presentation demonstrating exudate and haemorrhage.

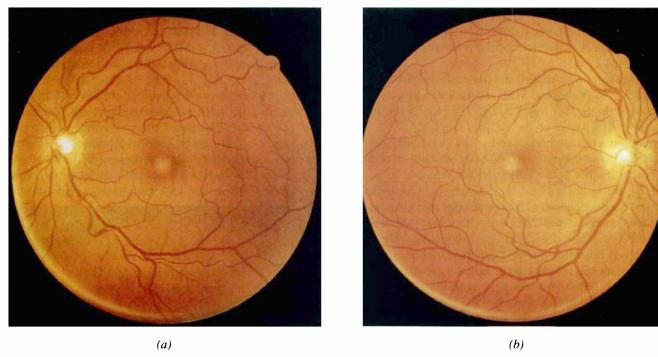


Fig. 2. Retinal photographs of the left (a) and right (b) eyes after 3 weeks of vitamin C treatment.

(INR). The haemoglobin had fallen from 11.1 g/dl to 6.4 g/dl over 3 weeks with a normochromic picture. Serum ferritin, B<sub>12</sub> and red cell folate were normal. The leucocyte ascorbic acid level was 42 nmol/10<sup>8</sup> WBC (reference range 60–300 nmol/10<sup>8</sup> WBC). A formal dietary assessment indicated that his daily vitamin C intake was very low at 4.5 mg (estimated average requirement 25 mg),<sup>2</sup> but that this was a remarkably selective deficiency and his folate intake was well above that recommended.

After vitamin replacement and dietary advice, his general health and retinal appearances returned to normal within 4 weeks (Fig. 2).

#### Comment

Scurvy in Britain is rare and now largely confined to elderly men in deprived circumstances, and drug addicts. Cases occur particularly in the spring because the vitamin C content of potatoes, an important source, wanes with overwinter storage.<sup>3</sup>

The main defect is impaired collagen synthesis in the basement membranes of capillaries. This leads classically to gum haemorrhages around teeth, perifollicular petechiae and bleeding into periostium, synovial joints and muscles. Death from cerebral haemorrhage is recorded.<sup>3</sup>

A variety of ocular changes in scurvy have been described<sup>1</sup> and include periorbital, conjunctival and retrobulbar haemorrhage, episcleritis and keratitis, central retinal vein thrombosis, papilloedema, optic atrophy and retinal detachment. Bloxham and colleagues<sup>4</sup> presented a case similar to ours with retinal haemorrhages and exudates. This case also had folate deficiency. In our case the satisfactory folic acid intake was due to the patient drinking beer.

We conclude that retinal haemorrhages and exudates are features of scurvy, presumably due to loss of integrity of the retinal vascular collagen support.

We would like to thank Mr Patrick Martin, FRCSE, for advice and Mrs Julie Hewitt for secretarial assistance.

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#### Sir.

### Ocular Injury Resulting from Bungee-Cord Jumping

Three cases of serious ocular injuries resulting from the activity bungee jumping have been reported. <sup>1-3</sup> These comprised retinal haemorrhages in the form of a foveal haemorrhage, <sup>1</sup> an isolated retinal haemorrhage which broke through into the vitreous <sup>3</sup> and a type of Purtscher's traumatic angiopathy. <sup>2</sup> In these case reports the vision improved to 6/12 or better in the affected eyes.