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Sir,

Histology of xanthelasma lesion treated by argon laser photocoagulation

Xanthelasma palpebrarum is characterised by yellow lipomatous plaques found on the eyelids, particularly in middle-aged women.[1] Although surgical excision is the most commonly used treatment, it is of limited use in larger lesions, where eyelid closure may then become compromised.[2] Both CO_2 lasers, and more recently argon lasers, have been successfully used to treat xanthelasma.[3–5] We present the histological changes in a case of xanthelasma palpebrarum following argon laser treatment, which to the best of our knowledge have not previously been described.

Case report

A 49-year-old woman presented with a 2-year history of yellow plaque-like lesions on the nasal aspect of her upper eyelids, which troubled her cosmetically. There was no other significant ophthalmic or medical history of note.

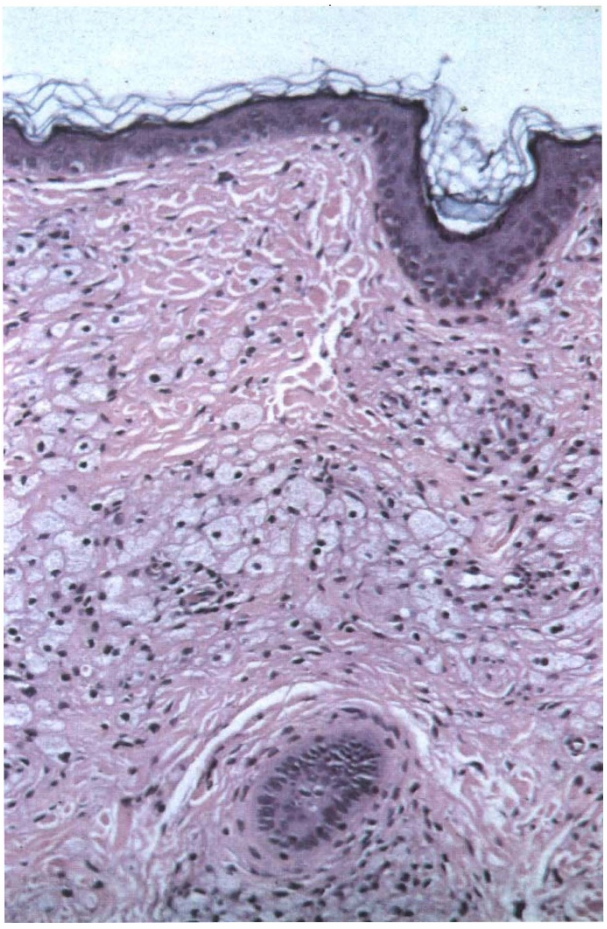

Fig. 1. *Typical pre-laser appearances of xanthelasma showing large, pale, lipid-containing macrophages scattered throughout the dermis. (H&E, original magnification ×200).*

On examination visual acuities were 6/9 in both eyes. The lesions were clinically evident as xanthelasma, that on the right measuring 8 × 5 mm while that on the left measured 6 × 4 mm. No other abnormalities were found on ophthalmic or medical examination. The results of serum haematological and biochemical investigations, including the fasting lipid profile, were within normal limits.

The left lesion was excised under local anaesthetic and showed histological features typical of xanthelasma, with a number of large, pale, foaming, lipid-laden macrophages in the dermis (Fig. 1). The depth of the lesion was less than 1 mm. No chronic inflammation was present. The right lesion was treated under local anaesthesia by confluent photocoagulation with an argon laser (Argon-Green, energy 600 mW, spot size 1 mm, continuous mode). Three weeks later the lesion was biopsied and a 4 × 4 × 2 mm sample sent for histological analysis (Fig. 2). This showed mildly thickened epidermis with some perinuclear cytoplasmic clearing. The underlying dermis showed mild scarring with plump fibroblasts and a mild diffuse chronic inflammatory infiltrate. No lipid-laden macrophages were noted. These striking changes presumably represent laser-induced damage. The 3 week period was chosen to assess the changes to the lipid-laden

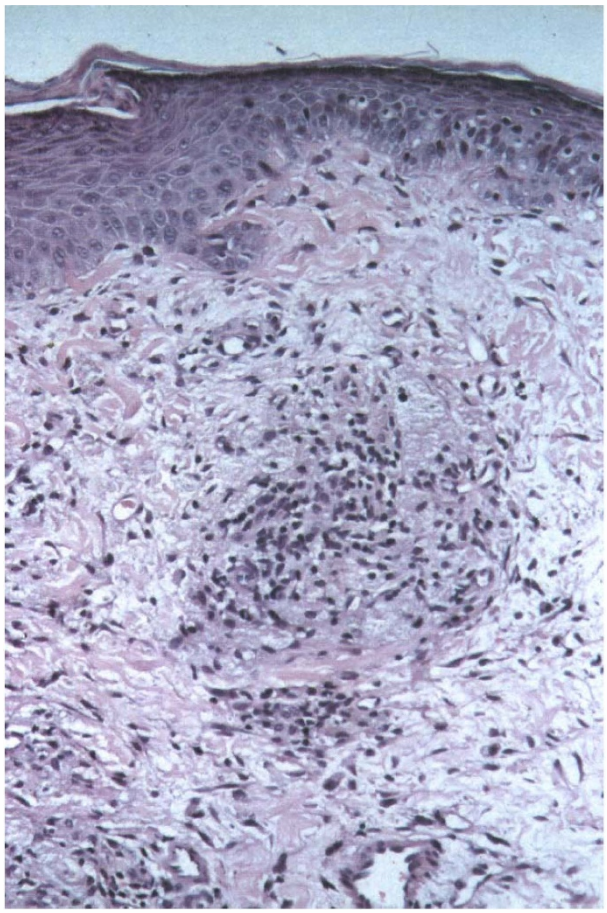

Fig. 2. *The post-laser appearances showing a diffuse chronic inflammatory infiltrate within the dermis. While some of the cells present may represent the original large staining cells, these are no longer easily distinguishable within the inflammatory foci. (H&E, original magnification ×200).*

macrophages and the inflammatory response. The patient has been followed-up for 6 months post-treatment, with satisfactory result.

Comment

Argon laser photocoagulation has recently been shown to be an effective method of treating xanthelasma lesions without major complications.[5] The CO_2 laser has also been used with satisfactory results, although occasional pigmentary changes have been noted. The obvious advantage of the argon laser is its widespread availability and familiarity to ophthalmologists. The advantages over surgery are its use in larger lesions and that the technique is easy and fast to perform.

The histological changes described are consistent with a superficial photocoagulation of the upper skin levels to a depth of 1 mm of dermis, preserving dermal appendages and aiding in the rapid healing of the wound.[4,6] Observation of port-wine stains treated by argon laser have proven such changes to be permanent and stable, suggesting little or no risk of future malignant changes.[6] Xanthelasma is usually an obvious clinical diagnosis, but very rarely other lesions such as xanthogranuloma can simulate the appearances, and if there is any doubt about the nature of the lesion it is better treated with surgical excision. Patients need to be followed-up for up to 6 months to check for immediate recurrence or residual lesion and for the occurrence of scarring. We expect the use of argon laser to treat xanthelasma lesions to become widely accepted in the future.

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Sir,

We welcome the comments made by Mr Adam Booth regarding the family that we recently described.[1] We became aware of the autosomal dominant iridogoniodysgeneses only after submission of our own manuscript, hence their omission from our differential diagnosis. As suggested by Mr Booth, we hope to use the known loci for these conditions as a starting point for our own investigations.

Reference

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Sir,

Central retinal artery occlusion and optic disc drusen

Central retinal artery occlusion is unusual in young adults.[1] Systemic investigation is indicated to check for migraine, cardiac valvular disease, atrial myxoma, intravenous drug abuse, coagulopathies and collagen