

may reflect the high protein content in the amorphous centre of the lesion, whereas the decreased signal intensity may indicate regions of fibrous tissue and crystals, haemosiderin deposition, or protein immobility. Although inconsistent, the majority of reports state a marked enhancement post-injection of i.v. gadolinium. Our patient did not show this.

This case has a very unusual and unexpected diagnosis. The patient was otherwise healthy, with no precipitating cause of hyperuricaemia. His serum urate and renal function were within the normal range and the case was discussed with the physicians.

To our knowledge there is no report in the literature of uric acid deposition presenting as a mass in the orbital region.

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Sir,

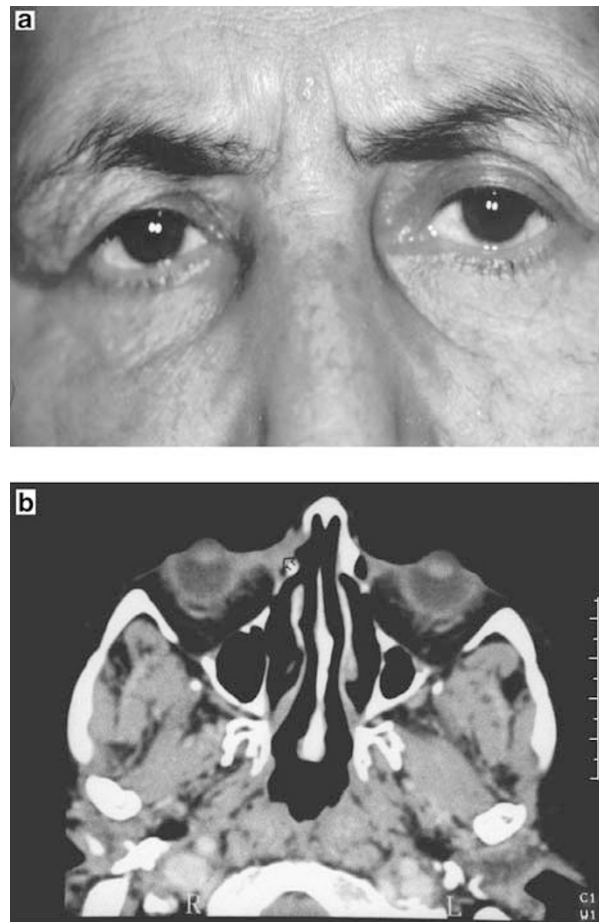
**A rare solitary fibrous tumour of the lacrimal sac presenting as acquired nasolacrimal duct obstruction**  
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Solitary fibrous tumour is a benign tumour arising from connective tissue in different organs. The most common

site of this tumour is the pleura, but it may develop in the sublingual and thyroid glands, breast, and upper respiratory tract.<sup>1</sup> Eighteen solitary fibrous tumours have been reported to occur within the orbit, of which only one was located in the lacrimal gland fossa.<sup>2,3</sup> Only a single study reported two patients with involvement of the lacrimal sac.<sup>4</sup> Our case involves this rare tumour within the submucosa of the lacrimal sac with unique clinical and staining features.

## Case report

A 67-year-old white female presented with chronic epiphora in her right eye for 10 years without history of acute or chronic dacryocystitis (Figure 1a,b). Her medical history was unremarkable except for cholelithiasis. On



**Figure 1** (a) External photograph of a 67-year-old patient after right dacryocystorhinostomy. Note the presence of cutaneous scar and the absence of right medial mass. (b) Axial computerized tomography scan at the level of the lacrimal sac fossa after right dacryocystorhinostomy. A minimal subcutaneous soft tissue swelling (outlined arrowhead) without a distinctive mass in the lacrimal sac is seen.

ocular examination, her visual acuity was 20/30 in each eye. Epiphora was noted on the right side. The puncta were patent and in normal position. No discharge was noted by pressing over the lacrimal sac and no distinctive mass was palpable. Probing and irrigation of the right nasolacrimal drainage system disclosed a complete blockage at the nasolacrimal duct. No other ocular pathology was noted.

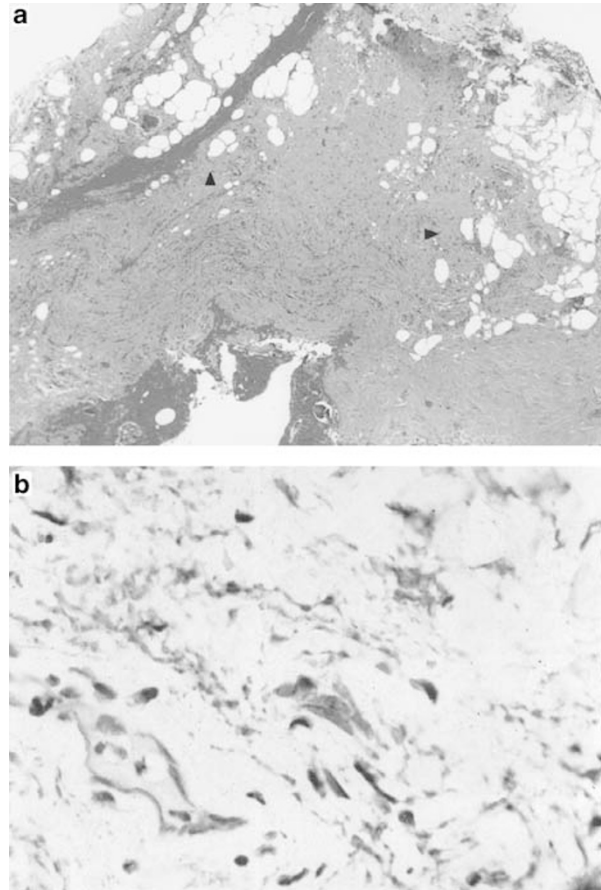
The patient underwent uneventful right dacryocystorhinostomy. A specimen of the lacrimal sac which appeared grayish was obtained during surgery. Histopathologic examination of the lacrimal sac revealed normal stratified epithelium containing goblet cells and surrounded by loose fibrous tissue. A noncapsulated area of approximately  $0.3 \times 0.4 \times 0.6$  cm of cell proliferation was found within the sac submucosa. The bland spindle cells were arranged in a 'patternless' pattern without a distinctive whorl or cord pattern (Figure 2a). These mesenchymal-like cells were uniform and had no pleomorphism, atypia, or mitotic figures. No areas of necrosis were observed. The tumour cells were immunostain positive for CD-34, CD-99, BCL-2 antigens and vimentin and negative for S-100 protein, desmin and keratin (Figure 2b), suggesting the possible diagnosis of solitary fibrous tumour.

Following the diagnosis of solitary fibrous tumour of the lacrimal sac, an orbital computerized tomography was performed and found normal. A dacryocystectomy was performed and the patient was followed up for 1 year without recurrences.

### Comment

Our report is the second describing a solitary fibrous tumour of the lacrimal sac. The diagnosis of this soft tissue tumour is challenging since its clinical and histopathological appearances do not have distinctive characteristic features.<sup>5</sup> Diagnosis is established mainly with immunohistochemical staining, and the intensity and pattern of staining allow its differentiation from other soft tissue tumours and scar tissue. The tumour is composed of spindle cells and vascular channels, and stains positively for CD-34, CD-99, BCL-2 antigens and vimentin and negatively for S-100 protein, desmin, cytokeratin and actin.<sup>5</sup> CD-99 and BCL-2 are two new markers differentiating between different types of soft tissue tumours. The first is a cell surface glycoprotein and the second is an inner mitochondrial membrane protein involved in the blockage of apoptosis. These immunostains were employed in this study but not in the first report of solitary fibrous tumour of the lacrimal sac.<sup>4</sup>

Although the tumour may resemble scar tissue, several features distinguished between the tumour presented



**Figure 2** (a) Histopathologic specimen of the lacrimal sac submucosa, showing a non-capsulated area of bland spindle cell proliferation in random arrangement infiltrating the surrounding tissues (arrowheads) (haematoxylin and eosin, original magnification  $\times 4$ ). (b) Positive pinkish cytoplasmic immunostaining for CD-34 antigen in the spindle mesenchymal-like cells (original magnification  $\times 200$ ).

in this study and the scar tissue. Clinically, the patient had never presented with symptoms or signs of acute or chronic dacrycystitis that may result in scarring. Histologically, the biopsy specimen was composed mainly of bland spindle cells without pleomorphism, atypia and without hypereosinophilic collagen bundles, which are more typical to scar. In addition, there were no areas of chronic inflammatory infiltrate, and only a few blood vessels without erythrocyte extravasation were disclosed. These findings are also atypical of scar tissue. CD-34, which was positively stained in our case, is a surface antigen expressed on normal haematopoietic progenitors and is normally not expressed in scar tissue.<sup>6</sup>

In our case, the tumour was confined to the submucosal tissue, while in the previous report, its specific location in the lacrimal sac could not be

identified because of extensive involvement of the sac.<sup>5</sup> The location of the tumour in connective tissues of other organs and the positive immunostaining for CD-34 antigen suggest that this tumour originates from primordial endothelial cells.

Our patient presented in her sixth decade in contrast to the presentation in the other two cases in the second and third decades.<sup>3</sup> The 18 reported cases of orbital tumour were between the second and seventh decade (mean 45.7 years);<sup>2</sup> thus it seems that solitary fibrous tumour may be presented in a wide range of ages.

In the previous report of solitary fibrous tumour of the lacrimal sac,<sup>4</sup> the tumour presented as a solid medial canthal mass, whereas in our case, the patient presented with acquired nasolacrimal duct obstruction. Although this is only one case report, and lacrimal sac tumours are infrequent,<sup>7</sup> the findings emphasize the importance of a biopsy of the lacrimal sac during dacryocystorhinostomy in cases of abnormal appearing lacrimal sac in addition to systemic malignancy and certain inflammations<sup>8</sup>.

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Sir,

**Reduced visual acuity following standard ETDRS macular laser for clinically significant macular oedema**  
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The early treatment diabetic retinopathy study (ETDRS)<sup>1</sup> showed that macular grid and focal laser therapy reduces the risk of moderate visual loss in diabetic eyes with clinically significant macular oedema (CSME). Although this treatment may not benefit every patient, side effects are fortunately uncommon. Reduction of visual acuity following treatment infrequently occurs because of subfoveal choroidal neovascularisation, subretinal fibrosis, macular haemorrhage and areas of capillary nonperfusion in continuity with the foveal avascular zone (FAZ).

A case is presented where loss of visual acuity occurred following focal laser treatment (in accordance with ETDRS guidelines) adjacent to an area of nonperfusion away from the fovea.

## Case report

A 65-year-old man with type II diabetes mellitus reported a gradual decrease in right visual acuity over 6 months. He was known to have moderate nonproliferative diabetic retinopathy in both eyes and had presented 2 years earlier with CSME in both eyes. He had received macular laser treatment once to his right eye and once to his left. Fluorescein angiography was performed prior to further treatment and showed leakage temporal to the fovea, superotemporal nonperfusion and drop-out of perifoveal capillaries temporal to the macula (Figure 1). On examination, corrected visual acuity was 6/60 right and 6/36 left. There was a right posterior subcapsular lens opacity and moderate nonproliferative diabetic retinopathy in both eyes but no CSME. Uneventful phacoemulsification was performed. Two weeks postoperatively, right visual acuity was 6/9 corrected but CSME was identified temporal to the fovea. This was treated with uneventful focal laser. One month later the patient returned with a right visual acuity of 6/24. Clinical findings were