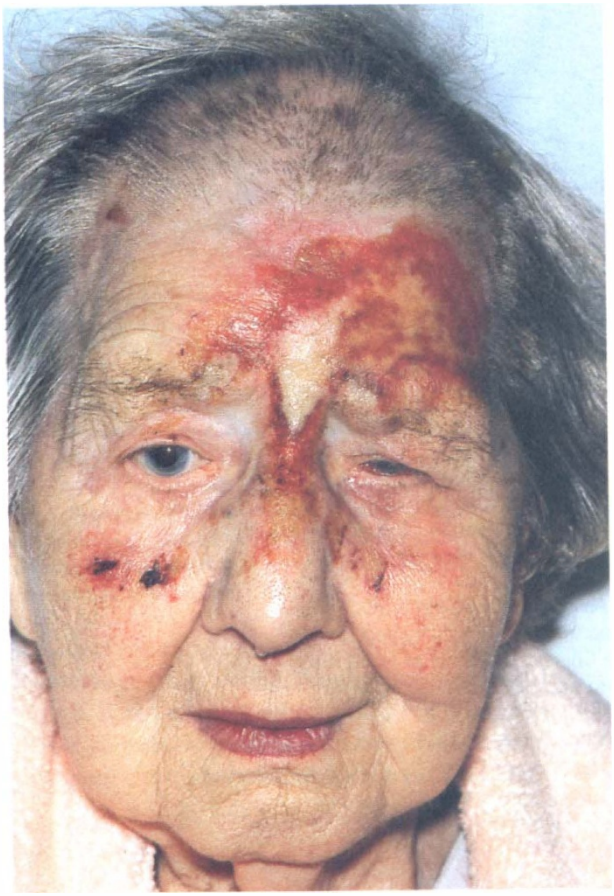

Fig. 1. *Burns due to an eye pad catching fire in an elderly lady.*

in our dressing clinic. The burnt area healed with dressings in 8 weeks without any significant scar contractures or eyelid dysfunction.

Comment

There are numerous reports of burns to the eye and surrounding structures. Unusual causes reported are injury due to explosion of microwaved eggs[1] and alkali burns due to deployment of airbags.[2] We report another unusual cause of a burn around the eye. This case report highlights the danger of smoking in patients wearing potentially flammable eye patches, who may have visual impairment. They should be appropriately informed about this risk before discharge from hospital. Flame burns due to ignition of an eye patch can result in significant burns to the eyes, periorbita and surrounding structures with considerable morbidity.

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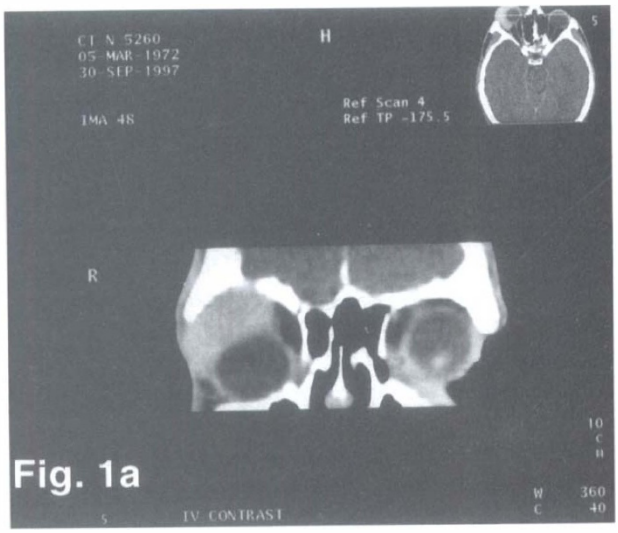
Sir,

Solitary fibrous tumour of the orbit

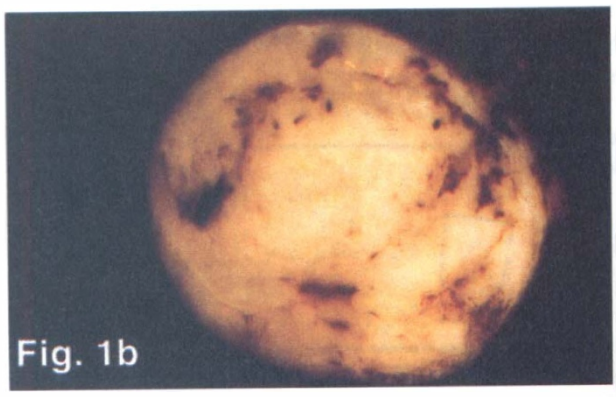
Solitary fibrous tumour is a rare tumour of mesenchymal origin. It was first recognised and most commonly occurs in the pleura.[1] It has now been recognised in many extrapleural sites including pericardium, mediastinum,[2] nasopharynx, thyroid gland, major salivary glands[3] and the liver. Eleven orbital cases have been reported in the literature to date.

Case report

A 25-year-old man presented with a 16 month history of a gradual protrusion of his right eye. On examination there was a painless rubbery mass palpable in the superotemporal quadrant of the right globe. The globe was proptosed non-axially downward and inward. A CT scan confirmed the presence of a well-encapsulated soft

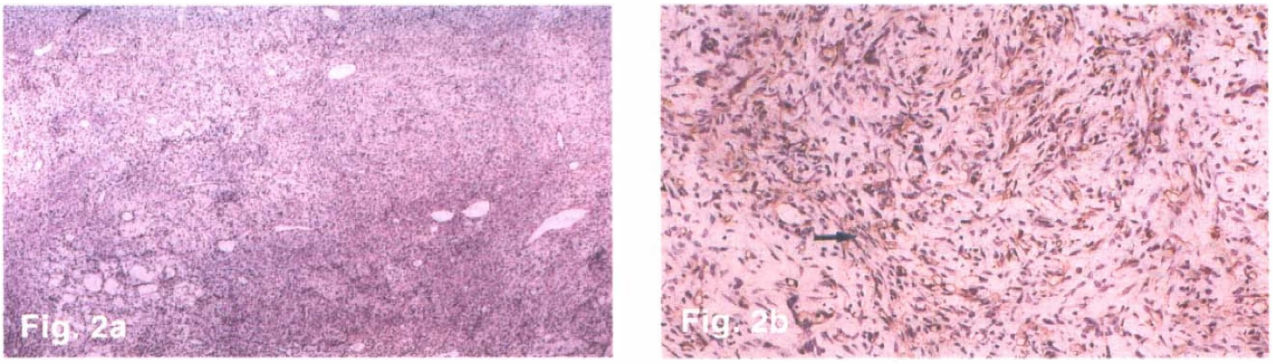


(a)



(b)

Fig. 1. *(a) Coronal CT scan showing a soft tissue mass in the lacrimal fossa of the right orbit. (b) Macroscopic appearance of the resected tumour measuring 4 cm by 3 cm by 1.5 cm.*



(a) (b)

Fig. 2. *(a) Solitary fibrous tumour showing dilated vascular spaces and illustrating the cellularity of the tumour (haematoxylin and eosin, ×40). (b) Solitary fibrous tumour showing spindle cells staining strongly positive for CD34 on immunostaining (×200).*

tissue mass in the lacrimal fossa. The clinical differential diagnosis was of a lacrimal gland tumour or a dermoid cyst.

A lateral orbitotomy was performed. The tumour was resected intact. The specimen was an encapsulated, glistening, rubbery mass measuring 4 cm by 3 cm by 1.5 cm. It had a homogeneous, whorled, white cut surface.

Microscopic sections revealed a circumscribed tumour composed of bland spindle cells with twisted spindle-shaped nuclei. The mitotic rate was 1 per 10 high-power fields. Moderate cellular pleomorphism was seen. The cells were arranged in compact fascicles in some areas and in others were loosely arranged with abundant myxoid stroma. Branching vessels with a staghorn pattern reminiscent of a haemangiopericytoma were seen.

Immunohistochemical staining of the paraffin sections of the tumour was performed using antibodies to CD34, vimentin, desmin, glial fibrillary acidic protein, Cam 5.2, S-100 and actin. Immunoperoxidase staining of lesional cells was negative for epithelial markers (cytokeratin) and neural markers (S-100). Immunohistochemical staining showed that lesional cells were strongly immunoreactive for CD34, which is characteristic of solitary fibrous tumour.[4] Immunostaining was also positive for vimentin
(a mesenchymal marker) and focally positive for desmin (a smooth muscle marker).

In our case, full macroscopic excision was achieved. The case has been followed for 2 years with no evidence of recurrence.

Comment

Solitary fibrous tumour (SFT) is a rare and usually benign spindle cell neoplasm. The diagnosis rests on its histological appearance. The classic features include spindle to plump cells that grow in a haphazard fashion in a variably cellular stroma, labelled a 'patternless pattern'. The stroma is often heavily collagenised with bands of collagen interspersed between the tumour cells. Branching staghorn vascular channels are sometimes a prominent feature, similar to the vascular spaces seen in haemangiopericytoma. The tumour is strongly immunoreactive for CD34.[4]

SFT can mimic inflammatory fibrous pseudotumours or other spindle cell tumours of the orbit. The more commonly recognised spindle tumours at this site include fibrous histiocytoma, meningioma, orbital schwannoma and haemangiopericytoma. SFT differs from inflammatory fibrous pseudotumour by its circumscription and the lack of a prominent inflammatory infiltrate including lymphoid follicles which is characteristic of pseudotumour. Immunostaining of SFT can be very helpful in distinguishing these entities where excision is incomplete.

SFT is distinguished from fibrous histiocytoma by the absence of a storiform growth pattern, multinucleated histiocytes or foam cells. Dense collagenisation, a feature of SFT, is not seen in fibrous histiocytoma. Meningioma is arranged in syncytial sheets and in whorls of cells. It is strongly positive for epithelial membrane antigen, unlike SFT. The orbital schwannoma is an encapsulated tumour and is distinguished by the presence of slender spindle cells, Verocay bodies, Antoni type A and B areas, fibrillar stroma and S-100 positivity. The most difficult differential diagnosis is haemangiopericytoma. CD34 is strongly expressed in SFT and is weakly and patchily expressed in haemangiopericytoma. Other distinguishing features include the keloid-like collagenisation and varying cellularity that occurs in SFT.

Most SFTs are benign, but local invasion or recurrence of the tumour at non-orbital sites has been demonstrated and, rarely, distant metastases have been reported.[2,5] Malignant behaviour has been documented in 13–20% of pleural cases.[1,5] Histological features associated with malignant behaviour include increased cellularity, high mitotic counts (over 4 per 10 high-power fields), pleomorphism and necrosis.

Eleven cases of SFT of the orbit have been reported in the literature since 1994.[4,6–12] These comprised 6 men and 5 women with an age range from 23 to 76 years, mean age 55 years. Eight cases presented with painless progressive proptosis and 3 with a mass in the orbit. The size of the tumour was documented in only 4 cases. They

ranged between 1.5 cm and 4 cm. All but one was treated with local excision. The remaining case had had an enucleation for a presumed neurofibroma 20 years previously and had an exenteration for recurrence of SFT.[12] Clinical follow-up ranged between 9 months and 20 years in six reports and was not documented in the other 5 cases. Local recurrence of tumour occurred in 2 cases.[6,12] Dorfman *et al.*[6] described recurrence 4 years after the initial excision and again 2 years later. Ing *et al.*[12] reported recurrence of SFT in the orbit 20 years after an enucleation for a presumed 'neurofibroma'. These reports highlight the potential for misdiagnosis because of the variability of its morphological appearance.

The behaviour of this tumour in the orbit is uncertain. Orbital SFT is thought to behave usually in a non-aggressive fashion, similar to SFT in other sites in the head and neck. However, histological features are not entirely predictive of behaviour and resectability of the tumour is an important prognostic factor in other sites.[5] Only one reported orbital case recurred locally.[6] Distant metastases have not been described. Long-term follow-up of these patients is essential. Further cases of orbital SFT need to be documented before definite statements on malignant potential can be made.

We highlight the need for recognition of this lesion as a distinct entity and its inclusion in the aetiological differential diagnosis of unilateral proptosis.

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