

ultrasonography was however not able to demonstrate the exact extent of the mass.

The present case of a choroidal melanoma presenting as a haemorrhagic retinal detachment reemphasizes the fact that, although uveal malignancies are very rare in children, they should however be considered while evaluating an atypical presentation. Ocular ultrasound, although a useful aid in the diagnosis of choroidal tumours, can occasionally be nonconclusive, especially in the presence of a haemorrhage. MRI of the eye in these conditions is shown to be the investigation of choice in determining the nature and extent of the lesions.⁷

References

- 1 COMS report no. 4. Mortality in patients with small choroidal melanoma. *Arch Ophthalmol* 1997; **115**: 886–893.
- 2 Shields JA. *Diagnosis and Management of Intraocular Tumours*. CV Mosby: St Louis, 1983, pp 78–79.
- 3 Shields CL, Shields JA, Milite J, De Potter P, Sabbagh R, Menduke H. Uveal melanoma in teenagers and children—a report of 40 cases. *Ophthalmology* 1991; **98**(11): 1662–1666.
- 4 Barr CC, McLean IW, Zimmerman LE. Uveal melanoma in children and adolescents. *Arch Ophthalmol* 1981; **99**: 2133–2136.
- 5 Jensen OA. Malignant melanomas of the human uvea: 25 year follow up of cases in Denmark, 1943–1952. *Acta Ophthalmol* 1982; **60**: 161–182.
- 6 Paul EV, Parnell BL, Fraker M. Prognosis of malignant melanoma of the choroid and ciliary body. *Int Ophthalmol Clin* 1962; **2**: 387–402.
- 7 Comhaire-Poutchinian Y, Duchesne B, Collignon J, Reis M. Magnetic resonance imaging in the diagnosis of doubtful cases of small melanoma of the choroids. *J Fr Ophthalmol* 1996; **19**(2): 111–119.

P Puri, M Gupta, PA Rundle and IG Rennie

Department of Ophthalmology
Royal Hallamshire Hospital
Glossop Road
Sheffield S10 2 JF, UK

Correspondence: P Puri
Tel: +44 114 271 3056
Fax: +44 114 271 3682
E-mail: pankajpuri35@hotmail.com

Sir,

Uric acid crystals presenting as an orbital mass
Eye (2003) **17**, 427–429. doi:10.1038/sj.eye.6700334

Uric acid is a product of purine metabolism. The deposition of such crystals is seen in cases of hyperuricaemia that can present as gout. It is usually

idiopathic and caused by either an overproduction of uric acid (phosphoribosyl transferase deficiency) or reduction in renal urate excretion. It may also be due to secondary causes such as myeloproliferative disorders and blood dyscrasias. However, the deposits of such crystals in gout are usually in soft tissues of joints and the ear, although deposits in the eye¹ and deposits causing spinal cord compression have been described.² We describe the case of an orbital mass in a healthy man, which on histopathological analysis consisted of uric acid crystals.

Case report

A 41-year-old man presented with a 1-month history of an ache around the left eye associated with a left ptosis. On examination, the palpebral fissure measured 8 mm compared to 12 mm on the right. Visual acuity and ocular motility were unimpaired. There was loss of the upper lid sulcus and a soft mass palpable in the superolateral aspect of the orbit. This gentleman was fit and well with no serious past medical history or regular medications.

CT scan revealed a 2 cm superolateral mass extending into the frontal bone to lie in the medullary cavity of the skull. There was no intracranial extension. MR imaging was performed on a 1.5-T system (Philips Gyroscan ACS-NT) (Figures 1–3). This showed a well-demarcated but lobulated area of heterogeneous high signal intensity on all sequences arising from the bone of the upper outer orbit wall.

The patient consented for exploration and biopsy of the lesion with possible exenteration due to the



Figure 1 Coronal T1-weighted spin-echo (WSE) fat suppression scan. Lesion of left orbit demonstrating high signal intensity.

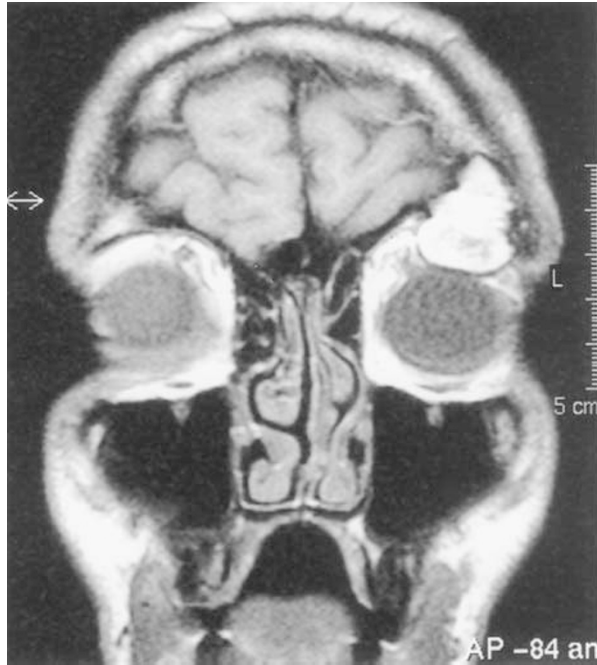


Figure 2 Coronal T1-WSE (post-gadolinium) scan.

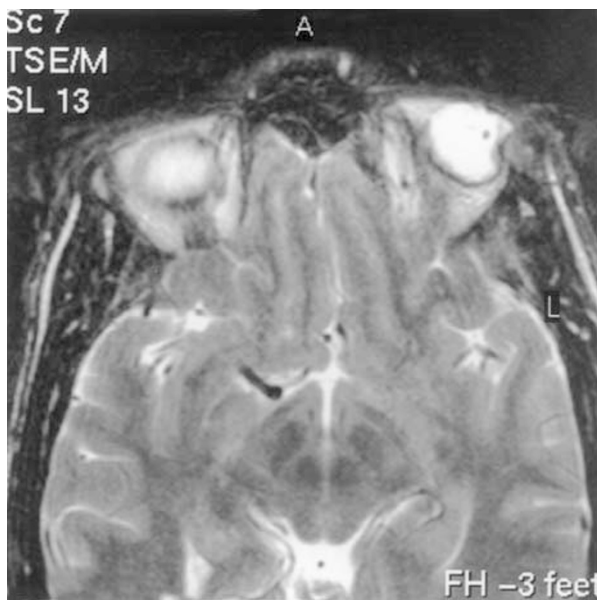


Figure 3 Axial T2-WSE scan.

possibility of neoplasia. Differential diagnosis considered were lacrimal gland carcinoma and dermoid.

Left frontal craniotomy, orbitotomy, and excision of the lesion were performed with a frozen section peroperatively. Histological examination revealed a granulomatous reaction to brown crystalline deposits. The crystals were rhomboid (Figure 4), with yellow to brown birefringence on polarised light (Figure 5). Multinucleated giant cells, lymphocytes, neutrophils, a few eosinophil and haemosiderin-laden macrophages

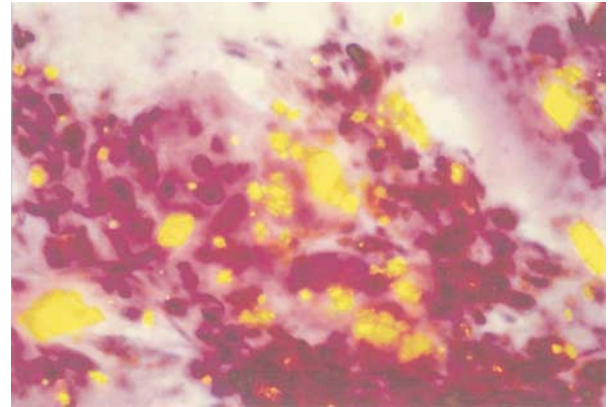


Figure 4 Haematoxylin and eosin $\times 400$.

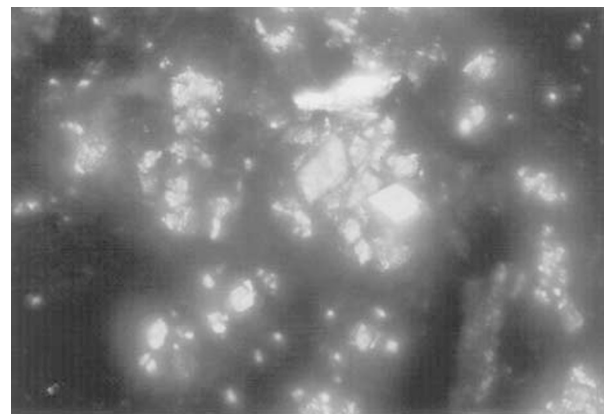


Figure 5 Polarising light $\times 400$.

were present. The crystals stain strongly positive with Gomori's silver stain, and electron probe analysis reveals the crystals to be of a carbon-rich organic composition, all consistent with crystals of uric acid.

The patient made a full and rapid recovery with no neurological sequelae. The left ptosis improved and there were no visual problems.

Comment

MR findings of gouty tophi within the appendicular³ and axial⁴ skeleton have been reported as intermediate (isointense to muscle) and occasionally of low signal intensity on T1-weighted images.⁵ The findings on T2-weighted images have been more variable. The findings in our patient on T1-weighted imaging (high signal) are not consistent with this description. The signal intensity of this lesion was hyperintense on the STIR sequence. Although there is no description within the literature, this would suggest a high water content possibly due to the necrosis or inflammation. On T2-weighted images, there was also high signal intensity. This hyperintense signal intensity on T2W SE images

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.

References

- 1 Burgos F, Capone RC. Ocular and systemic manifestations of gout. *Clin Eye Vision Care* 1996; **8**(3): 155–163.
- 2 St George E, Hillier CE, Hatfield R. Spinal cord compression: an unusual neurological complication of gout. *Rheumatology* 2001; **40**(6): 711–712.
- 3 Yu JS, Chung C, Recht M, Dailiana T, Jurdi R. MR imaging of tophaceous gout. *Am J Roentgenol* 1997; **168**(2): 523–527.
- 4 Miller LJ, Pruett SW, Losada R, Fruauff A, Sagerman P. Tophaceous gout of the lumbar spine: MR findings. *J Comput Assist Tomogr* 1996; **20**(6): 1004–1005.
- 5 Chen CK, Chung CB, Yeh L, Pan HB, Yang CF, Lai PH *et al*. Carpel tunnel syndrome caused by tophaceous gout: CT and MR imaging features in 20 patients. *Am J Roentgenol* 2000; **175**(3): 655–659.

NC Topping, A Cassels-Brown, A Chakrabarty, P Cronin, S Ross, J Russell and P Tesha

Department of Ophthalmology
Clarendon Wing
Leeds General Infirmary
Belmont Grove
Leeds LS2 9NS, UK

Correspondence: NC Topping
Tel: +44 (0) 1133922750
E-mail: NCTopping@ukgateway.net

Sir,

A rare solitary fibrous tumour of the lacrimal sac presenting as acquired nasolacrimal duct obstruction
Eye (2003) **17**, 429–431. doi:10.1038/sj.eye.6700366

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.¹ Eighteen solitary fibrous tumours have been reported to occur within the orbit, of which only one was located in the lacrimal gland fossa.^{2,3} Only a single study reported two patients with involvement of the lacrimal sac.⁴ 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

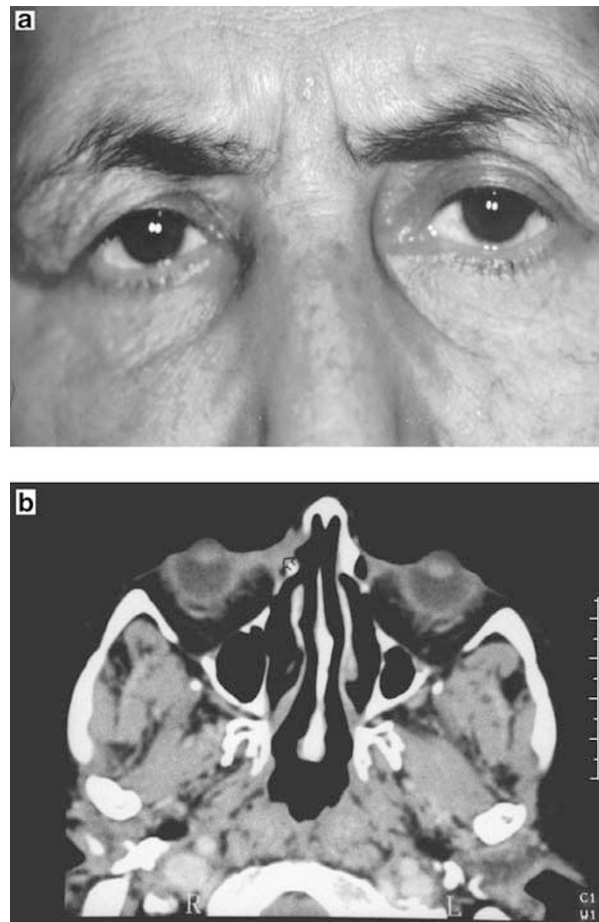


Figure 1 (a) External photograph of a 67-year-old patient after right dacryocystorhinostomy. Note the presence of cutaneous scar and the absence of right medial mass. (b) Axial computerized tomography scan at the level of the lacrimal sac fossa after right dacryocystorhinostomy. A minimal subcutaneous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