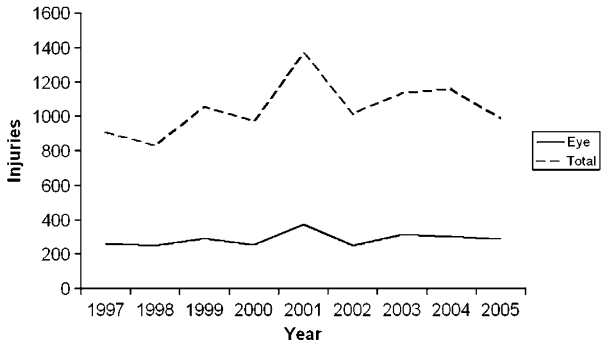

Figure 1 Number of firework-related injuries seen in the UK from 1997 to 2005. Injuries were counted in the same 4-week period (October–November) each year.[3]

upward trend in the years 1997–2005[3] (Figure 1). This is true for both the overall injury rate and the rate of ocular injury, which accounted for 27% of the injuries in this period. Appropriate public health interventions have been proved to be successful in reducing the rate of eye injury from various other causes such as road traffic accidents[4] and contact sport.[5] The authors mention the 'strict legislation regarding the use of fireworks in public areas in the UK'. The majority of firework-related injuries are now sustained in the private/domestic setting. Perhaps, it is time to reopen the debate on stricter legislation regarding the domestic use of fireworks.

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Eye (2008) **22,** 319–320; doi:10.1038/sj.eye.6703047; published online 30 Novembr 2007

Sir,

Metastatic prostatic adenocarcinoma to the orbit diagnosed by prostate-specific antigen staining

Although bone is the most common metastatic site, orbital metastases from prostatic carcinoma have been reported.[1–5] We report a prostate-specific antigen (PSA) stained orbital metastasis developing from an occult prostate adenocarcinoma.

Case report

A 72-year-old man was referred to us in February 2002 with a progressive enlarged mass in the left orbit (Figure 1). Examination revealed visual acuity correctable to 6/6 OU. Hertel measurements were 15 mm OD and 18 mm OS, and a base of 104 mm. Ocular motility in the left eye was mildly restricted in downgaze. Anterior and posterior segment examinations and intraocular pressures were normal. Computed tomography (CT) demonstrated soft tissue infiltration in the inferomedial left orbit (Figure 1). Incisional biopsy showed poorly differentiated adenocarcinoma. Systematic evaluations revealed an enlarged prostate and abnormal serum PSA (8.3 ng/ml). Transrectal ultrasound-guided (TRUS) biopsy of prostate showed benign prostate hyperplasia. Because extensive systemic evaluation failed to detect evidence of any other concurrent tumour, orbital exenteration was performed. Microscopically, the specimens showed a poorly differentiated adenocarcinoma with tumour emboli in the vessels (Figure 2). Immunoperoxidase stains were positive for CK7, PSA, and prostate acid phosphatase (Figure 2). The patient received adjunct radiotherapy for 5 weeks (total dose of 50 Gy over 25 fractions) with no radiation-related side effect. During the 4-year follow-up period, the serum PSA ranged between 8.30 and 9.37 ng/ml, and repeat TRUS biopsy and transurethral resection of prostate (TURP) showed benign prostatic hyperplasia. TRUS biopsy was performed again in May 2006, which revealed adenocarcinoma (Gleason's score 3 + 3). Pelvic CT and bone scan was unremarkable. He was transferred for adjunct radiotherapy (78 Gy). No tumour recurrence was noted after 1 year.

Comment

The current case is unique in that orbital metastasis might have occurred from an occult prostate adenocarcinoma, which was hardly detected. In Shields' series, the primary tumour remained obscure despite systemic evaluation in 10% of metastatic orbital tumours.[6] In the current case, immunoperoxidase stains for PSA in orbital lesions and abnormal serum PSA provide us a hint to make an effort to explore the primary prostate carcinoma by thorough evaluations and repeat biopsies. Although the survival rate for patients with metastatic prostate cancer at diagnosis is relatively poor (median survival was 2.5 years),[7] timely intervention based on early diagnosis may improve their prognosis.

In conclusion, a PSA immunoperoxidase stain should be performed in all men with orbital adenocarcinoma of unknown primary site. Careful and long-term follow-up is mandatory for these patients, because the orbital focus may originate from an occult prostate adenocarcinoma, which is hardly to be detected early.

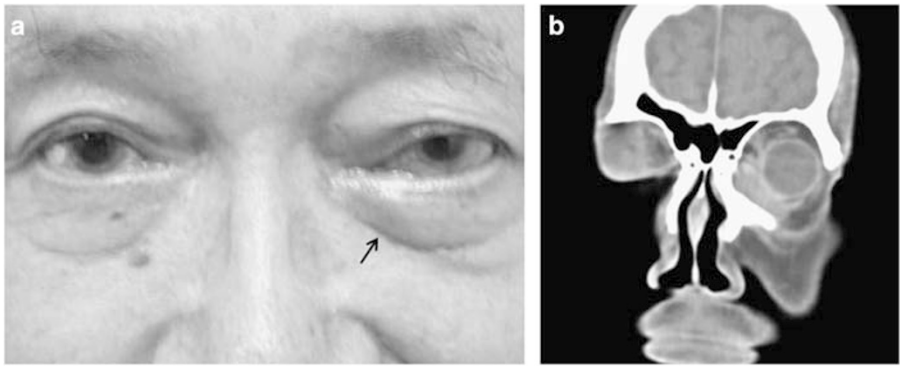

Figure 1 (**a**) Clinical photograph showing a palpable mass with superotemporal displacement of the left eye. (**b**) Coronal CT scan depicting a mass lesion infiltrating along the inferomedial left orbit without bony change.

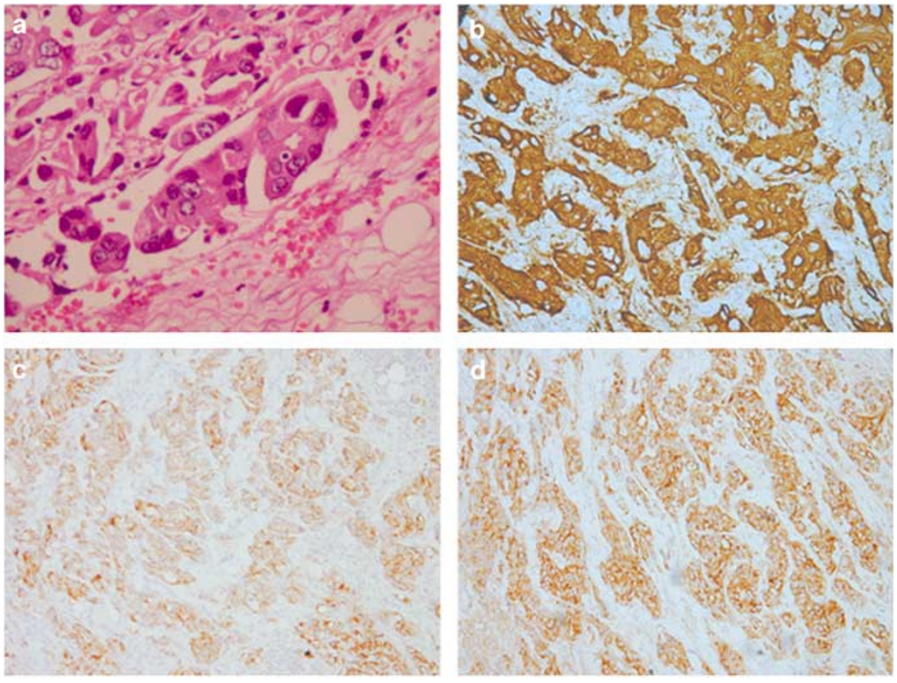

Figure 2 (**a**) Tumour emboli were noted in a lymphovascular channel (haemotoxylin and eosin, ×200). (**b**) The immunostains for CK7 were strongly positive (immunoperoxidase, ×100). (**c** and **d**): The immunoperoxidase stain for PSA and PSAP.

No public and private support was received. None of the authors have any commercial interest in the material mentioned herein.

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Eye (2008) **22,** 320–322; doi:10.1038/sj.eye.6703065; published online 7 December 2007