Figure 1 Calf lesion swabbed on day 1 of presentation (white arrow).

Figure 2 Left preseptal cellulitis with associated crusting lesion.

similar skin lesions six weeks earlier, which settled spontaneously. Treatment was changed to oral linezolid and vancomycin eye drops. The periorbital erythema, oedema, and conjunctival injection improved gradually over the next three days. After two weeks of inpatient antibiotic treatment the patient was discharged on a further one week course of oral linezolid.

The patient re-presented with identical symptoms on two separate occasions one week after conclusion of the initial course, and again six weeks later. Nasal, groin, and conjunctival swabs from the left eye grew the same strain of community acquired MRSA. He was put on a 14 day course of vancomycin eye drops, oral linezolid, and oral rifampicin, again with a rapid clinical response. He also underwent an MRSA decolonisation regimen and dermatological evaluation of his eczema, with subsequent emollient treatment. His family members had no history of skin infections and were swabbed to investigate the recurrent nature of this infection but none was found to carry MRSA. Subsequent screening swabs from the patient have been negative to date.

Comment

Infections with MRSA tend to affect individuals with established risk factors and the involved strains have typical sensitivities. The MRSA isolate from this patient was resistant to flucloxacillin and fucidic acid but sensitive to ciprofloxacin and erythromycin. This unusual sensitivity pattern is similar to those of previously published Irish non-ophthalmic CAMRSA.¹ The atypical sensitivities and the history suggested a CAMRSA infection, so specimens were sent to the National MRSA Reference Laboratory for further testing. Polymerase chain reaction for the Panton-Valentine leukocidin cytotoxin gene commonly found in CAMRSA was positive. The antibiogram-resistogram type (AR) was unfamiliar, but similar to multilocus sequence (MLST) 80, which is the most commonly found genotype of CAMRSA in Europe.

CAMRSA with ophthalmic manifestations is rare. Rutar reported ophthalmic sequelae consisting of orbital cellulitis, endogenous endophthalmitis, panophthalmitis, lid abscesses, and septic venous thrombosis in a North American population with no evidence of recurrent disease.² Known risk factors for transmission of CAMRSA include end stage renal disease, recent hospital admission, an outpatient visit, nursing home admission, antibiotic exposure, chronic illness, and close contact with a person with risk factors including health care contacts.³ Our patient did not

have any of these, but did have contact with a fellow football player with similar pustular skin lesions.

Kazakova *et al* reported an outbreak of CAMRSA among professional football players.⁴ Infection was associated with turf abrasion sites and a high body mass index. Huijsdens reported an outbreak of ST80 CAMRSA infection in members of a Dutch soccer team.⁵ The recurrent nature of sport associated CAMRSA has also been documented previously.^{4,5} Management of this patient's eczema may have been an important factor in the prevention of subsequent infections. Physical contact with infectious lesions, skin damage that facilitates bacterial entry, and sharing of infected equipment, clothing, or personal items may all result in the transmission of MRSA infection in athletes. Our patient fits into this group.

To our knowledge this is the first report of a European patient with an ocular manifestation of CAMRSA from a population of young healthy athletes with no established risk factors. Physicians must be aware of the increasing incidence of CAMRSA infections and the new clinical challenges these cases will present.

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HIV and hepatitis B/C infections in patients donating blood for use as autologous serum eye drops

During recent years eye drops from autologous serum have become increasingly popular for treating ocular surface disorders such as persistent corneal epithelial defects and severe forms of dry eye.^{1–4} Although very successful, one potential disadvantage of this approach—especially because the drops are used in a domestic setting—is the possibility of transmission of viral infections by the erroneous application of the eye drops to the wrong recipient. In a diagnostic laboratory, one single droplet of serum has been reported to have transmitted HIV to a laboratory technician.⁵ However, serological testing of patients who donate autologous serum is not generally established and there has been no report published so far analysing the rate of unknown viral infections in potential donors of autologous serum eye drops.^{1–4}

Case report

We report the results of HIV and hepatitis-B/C serology testing in patients donating blood for the production of autologous serum eye drops at our centre. During the period August 2005 to November 2006, 88 patients with persistent corneal epithelial defects or severe forms of dry eye were referred to the department of transfusion medicine to donate autologous serum (156 visits, between one and 12 visits per individual patient). Table 1 shows the result of 88 patients tested for HIV, HBV, and HCV infection by serology in comparison with new blood donors in Germany in 2004.⁶ In our patients, positive results in screening tests were confirmed according to the procedures which are established for blood donors—that is, HIV immunoblot and HIV RNA NAT, HBsAg neutralisation assay and HBV DNA NAT, HCV immunoblot, and HCV RNA NAT.⁶ In summary, 2.3% of all patients showed previously unknown viral infections with hepatitis B or C virus. The finding of a comparably high rate of infections in our small number of autologous donors of serum eye drops is surprising, but in line with our previous report on patients undergoing preoperative autologous blood donation (PABD), where we found a rate of about 20% of patients with positive markers for HIV, HCV, HBV (including anti-HBc) or syphilis infection.⁷ In addition to the confirmed infections shown in table 1, we found that one of our patients was positive for anti-HIV (HIV RNA NAT negative, HIV immunoblot inconclusive), one patient had antibodies against *Treponema pallidum*, and three patients were positive for anti-HBc, resulting in an overall rate of 8% of

Table 1 Number of HIV, HCV, or HBV infections in patients intending to donate blood for use as autologous serum eye drops, compared with new blood donors in Germany in 2004⁶

	No of individuals tested	No of patients/donors with infection			Overall proportion of individuals with infection
		HIV	HCV	HBV	
Present study	88	0	1 (1.1%)	1 (1.1%)	2.3%
New blood donors ⁶	per 100 000	6.3 (0.006%)	102.7 (0.1%)	136.2 (0.1%)	0.2%

HBV, hepatitis B virus; HCV, hepatitis C virus; HIV, human immunodeficiency virus.

patients with positive infection markers in the study.

Comment

In blood transfusion, the risk of receiving a blood component which was intended for a different patient is about 1:10 000.⁸ This refers to a standardised procedure carried out by trained staff in a controlled hospital setting and led to the recommendation that all PABD patients in Germany should be tested for HIV, HCV, and HBV. In outpatient practice, discrepancies over the dosage of drugs, taking drugs that were not recorded, or not taking a recorded drug were reported in 76% of patients.⁹ Serum eye drops are normally used in an "uncontrolled" outpatient setting. This suggests that the risk that autologous serum eye drops are not given to the intended patient or are unintentionally used by someone else at home (for example, children), and therefore give rise to the transmission of viral infection, might be considerably greater than 1:10 000. This strongly suggests that virology screening should be carried out in all patients undergoing donation for autologous serum eye drops.

In conclusion, significant proportions of patients intending to donate blood for use as autologous serum eye drops show infections with hepatitis B and C virus and should therefore generally be tested for HIV, HCV, and HBV infection. Patients with viral infections should not be allowed to donate autologous serum eye drops, to prevent the risk of viral transmission by unintended use of autologous serum eye drops by a third party. This principle should generally be applied in all cases where autologous blood is drawn and stored for therapeutic purposes.

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Irreversible aneurysm-like ectasia of the optic nerve sheaths in a patient with bilateral subdural hematomata

The differential diagnosis of retrobulbar processes as detected by computed tomography or magnetic resonance imaging (MRI) comprise a variety of pathological processes. While the most frequent diagnoses are tumours or

inflammation, others are incidental findings that might point to an underlying cause. Among the latter is enlargement of the optic nerve sheath, an expansion of the cerebrospinal fluid space around the optic nerve that in some cases is linked to raised intracranial pressure.¹

The so called "optical nerve sheath ectasias" or meningoceles are a rare finding, with only around 40 documented patients.^{2–3} The appearance of these ectasias has been described as tube-like. Aneurysm-like ectasias of the optical nerve sheath have not been reported so far. We present a case of bilateral aneurysm-shaped ectasia of the optic nerve sheath associated with bilateral subdural haematomas and presumably with temporarily raised intracranial pressure.

Case report

A 36 year old female patient presenting with a history of focal Jackson seizures in her right arm two months ago, and being repeatedly beaten by her husband, complained of impaired vision and headaches for two days. Ophthalmoscopy revealed bilateral papilloedema, and MRI showed bilateral chronic subdural haematomas, empty sella, and bilateral, aneurysm-like ectasia of the optical nerve sheaths (fig 1). After neurosurgical evacuation of the subdural haematomas, the appearance of the optic nerve head normalised and clinical examination was unremarkable at three and six months after the intervention. On MRI, the ectasia of the optic nerve sheaths remained unchanged.

Comment

Ectasia of the optic nerve sheath is a rare finding in imaging studies, and various terms have been used to describe this entity: arachnoid cyst,⁴ optic hydrops,⁵ patulous subarachnoid space,⁶ and meningocele.²

Concerning pathogenesis and associated diseases, Shanmuganathan *et al*⁷ reviewed the literature and identified a patient group with associated progressive hyperopia and choroidal folds.

Lövblad *et al* reported three patients with neurofibromatosis type 1 and tube-like ectasia of the optic nerve sheath.⁸ In neurofibromatosis type 1, dural ectasias are a typical finding and are most often present in the spinal canal.^{9–10} In contrast to an enlargement of the optic nerve sheath by optic gliomas, which are also common in neurofibromatosis type 1, the ectasias are isointense to cerebrospinal fluid.

Hansen and Helmke¹ investigated the optic nerve sheath response to pressure during CSF absorption studies in 12 patients undergoing neurological testing, and found that changes in the diameter of the sheath followed changes in the intracranial pressure.

In our case, neither progressive hyperopia, choroidal folds, nor features of neurofibromatosis were present. The intracranial pressure was at least temporarily raised, but the morphological changes remained after normalisation of the intracranial pressure.

The morphology of the optic nerve sheath ectasia in our case is different from what has been reported previously. Whereas previous reports describe a tube-like enlargement, in our case it was aneurysm-like.

Vascular aneurysms usually arise from weak parts of the vessels, from the vascular division sites. In our case the aneurysm-like ectasia of the optic nerve may have been pre-existing and