Where lichen planus is asymptomatic and a chance finding, management may merely involve confirmation of the diagnosis and reassurance of the patient. In others with symptoms, advice to avoid highly spiced foods and to use a nonflavoured toothpaste may be beneficial. Candidiasis should be considered and treated with topical antifungal agents if present. Topical steroid applications, eg, triam-

cinolone in Orabase or betamethasone mouthwash are used to reduce inflammation. Tetracycline mouthwash may be useful in the management of erosive lesions. Experience suggests that lesions with an atrophic nature are the most likely to undergo malignant transformation and should be closely monitored.

Keywords: lichen planus; alopecia; oral lesions

- 1 Samman PD. Lichen planus and lichenoid eruptions. In: Rook A, Wilkinson DS, Ebling FJG, eds, *Textbook of dermatology*. Oxford: Blackwell Scientific, 1972; pp 1334–52.
- 2 Pindborg JJ. Diseases of the skin. In: Jones JH, Mason DK, eds, *Oral manifestations of systemic disease*, 2nd edn. London: Bailliere-Tindall, 1990; pp 537–92.
- 3 Scully C, El-Kom M. Lichen planus: review and update on pathogenesis. *J Oral Pathol* 1985;14:431–58.
- 4 Axell T. A prevalence study of oral mucosal lesions in an adult Swedish population (Thesis). *Odontol Rev* 1976; 27(suppl 36):1–103.

- 5 Kleinman DV, Swango PA, Niessen LC. Epidemiologic studies of oral mucosal conditions- methodological issues. *Commun Dent Oral Epidemiol* 1991;19:129–40.
- 6 Neumann-Jensen B, Holmstrup P, Pindborg JJ. Smoking habits of 611 patients with oral lichen planus. *Oral Surg Oral Med Oral Pathol* 1977;43:410–5.

A complication of intensive care

Mark Melzer, Sarah Craven, Robert Bagg

A 44-year-old woman with non-insulin-dependent diabetes mellitus presented with severe respiratory distress secondary to a suspected pulmonary embolus. She required immediate intubation, thrombolysis was administered and she was transferred to the Intensive Care Unit for ventilatory and inotropic support. A ventilation perfusion scan confirmed ventilation perfusion mismatch and she was subsequently anticoagulated. She appeared to be making an uneventful recovery until 7 days later when she developed a temperature. An abnormality of her right eye was noted and on ophthalmological review visual acuity was 6/36; funduscopy revealed multiple choroidal lesions.

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Figure

Questions

- 1 What is the abnormality seen in the right eye?
- 2 What are the possible causes?
- 3 What investigations were undertaken to confirm the diagnosis?
- 4 How was this condition managed?

Answers

QUESTION 1

A right eye hypopyon.

QUESTION 2

Bacterial endophthalmitis, whether endogenous or exogenous, may give rise to a hypopyon. Non-infectious causes include Beçhet's syndrome and, on occasions, the HLA B27 arthritides that are associated with anterior uveitis.

QUESTION 3

A fully sensitive *Staphylococcus aureus* was grown from blood taken centrally and peripherally and from a central line tip which had been inserted 5 days previously. As pathogens found in blood cultures and ocular fluid occur with equal frequency, no intravitreal specimen was obtained, although sampling the anterior chamber and vitreous is of importance when the diagnosis is in doubt.¹

QUESTION 4

The patient was treated for 6 weeks with flucloxacillin, initially intravenously then orally, and oral fusidic acid, and her hypopyon and choroidal lesions resolved. When last seen the patient was clinically well and visual acuity in her right eye was normal. Treatment with high-dose intravenous therapy is generally sufficient as the passage of organisms is thought to disrupt the blood-ocular barrier, although in severe cases intravitreal antibiotics and vitrectomy are advocated.^{2,3} As the condition is uncommon there are no controlled data suggesting that either intravitreal antibiotics or vitrectomy is better than more conservative treatment.

Discussion

Bacterial endophthalmitis is a rare but severe sight-threatening form of ocular infection. Exogenous endophthalmitis following ocular

surgery or trauma is more common than metastatic blood-borne infection (endogenous endophthalmitis). If left untreated, progressive reduction in vision and ultimately blindness will occur. In recent years the most common organisms causing metastatic endophthalmitis have become Gram-positive bacteria, replacing *Neisseria meningitidis*, the incidence of which decreased in the 1940s with the introduction of antibiotics. Certain organisms have a clear predilection for particular parts of the eye, with *S aureus* commonly originating in the posterior segment. It is, on occasions, associated with a reactive hypopyon (figure). With early systemic intravenous treatment, as in this case, focal posterior involvement has a good prognosis. This is in marked contrast to diffuse posterior involvement and panophthalmitis.⁴ Similar cases, though community acquired, have been reported in diabetics,⁵ dialysis patients,⁶ and in patients with lymphoma⁷ who, because of recurrent breaks in the skin, intravenous access and immunocompromised states, are more prone to staphylococcal bacteraemia. In addition to these predisposing factors concurrent non-ocular infection such as urinary tract infections,⁸ endocarditis and osteomyelitis, should be considered and may not present until after the onset of ocular infection.

In any patient with staphylococcal bacteraemia, metastatic infection of heart valves, joints and bones are well documented. Rarely, the posterior chamber of the eye may become infected and a hypopyon and choroidal lesions should not be overlooked.

Final diagnosis

Nosocomially acquired right eye endophthalmitis caused by a *Staphylococcus aureus* bacteraemia secondary to an infected central line.

Keywords: endophthalmitis; *Staphylococcus aureus* bacteraemia

1 Maxwell DP, Baber WB. Acute postoperative endophthalmitis associated with dual strains of *Staphylococcus epidermidis*. *Ophthalmol Surg* 1992;23:222-4.

2 Aguilar HE, Meredith TA, Drews C, et al. Comparative treatment of experimental *Staphylococcus aureus* endophthalmitis. *Am J Ophthalmol* 1996;121:310-7.

3 Mao LK, Flynn HW, Miller D, et al. Endophthalmitis caused by *Staphylococcus aureus*. *Am J Ophthalmol* 1993;116:584-9.

4 Greenwald MJ, Wohl LG, Sell CH. Metastatic bacterial endophthalmitis: a contemporary reappraisal. *Surv Ophthalmol* 1986;31:81-101.

5 Claes C, Maleux J, Zivovnjovic R. Bilateral endogenous *Staphylococcus aureus* endophthalmitis: a case report. *Bull Soc Belg Ophthalmol* 1995;257:87-91.

6 Smith KG, Ihle BU, Heriot WJ, et al. Metastatic endophthalmitis in dialysis patients. *Am J Nephrol* 1995;15:78-81.

7 Farber BP, Weinbaum DL, Dummer JS. Metastatic bacterial endophthalmitis. *Arch Intern Med* 1985;145:62-4.

8 Lander JH, Chappell CW. Bilateral metastatic endophthalmitis. *Retina* 1981;1:175-8.

A neonate with an unusual pulse discrepancy

Martial M Massin, Geneviève Franckart

A 38-week gestational age boy was admitted after birth by Caesarean section to a neonatal unit. At 6 hours of life, a dextrose infusion was started because of hypoglycaemia. At 36 hours he developed cyanosis and tachypnoea. Physical examination revealed tachycardia, 2/6 systolic murmur, weakly palpable limb pulses, hepatomegaly and pulmonary rales. Laboratory tests were within the normal range, except blood gas analysis which showed respiratory and metabolic acidosis. Management entailed fluid resuscitation, mechanical ventilation and antibiotic administration. Because of recurrent metabolic acidosis and unstable haemodynamics, the infant was transferred at 48 hours to our neonatal intensive care unit with a diagnosis of probable sepsis. On admission all limb pulses were absent but carotid pulses were weakly palpable and became strong after establishing stable haemodynamics with inotropic support. Chest X-ray showed cardiomegaly and pulmonary oedema. Echocardiography confirmed the clinical diagnosis. The clinical condition of the patient improved quickly after initiation of treatment. Twenty-four hours later he was catheterized because of associated lesions. Left ventricular angiography is shown in figure 1. Retrograde aortography with a balloon-tipped catheter passed from the main pulmonary artery through the ductus arteriosus into the descending aorta (figure 2) confirmed the diagnosis. He was then prepared for surgery.

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Figure 1 Left ventricular angiography: lateral view

Figure 2 Retrograde aortography, frontal projection

Questions

- 1 What is your diagnosis ?
- 2 What do left ventricular angiography and retrograde aortography demonstrate ?
- 3 What is the present drug of choice for treatment ?