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Subretinal abscess

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DESCRIPTION

A 32-year-old man with a history of intravenous drug use was admitted to the hospital for evaluation of intermittent fever and chills over the course of several weeks. On examination, the temperature was 39.0°C and pulse rate 110 bpm. A grade 2/6 holosystolic murmur was appreciated at the left lower sternal border. Transthoracic echocardiography with agitated saline contrast demonstrated an echodensity on the septal leaflet of the tricuspid valve associated with mild tricuspid regurgitation and a right-to-left shunt. Blood cultures grew methicillin-resistant *Staphylococcus aureus*. On the third day of hospitalisation, mild conjunctival erythema of the right eye was observed, which was associated with discomfort and a subjective decrease in vision. Visual fields on confrontation revealed a large inferior scotoma. Bedside indirect ophthalmoscopy established the presence of a yellow, elevated subretinal mass ~10 times the diameter of the optic disc, adjacent to the superior-temporal vascular arcade, with associated intraretinal haemorrhage (figure 1). These findings were consistent with subretinal abscess. Such abscesses are vision threatening and can progress despite systemic and intraocular antibiotics. Severe cases can lead to retinal detachment and may require surgical intervention, including vitrectomy and retinectomy. In this case, the abscess progressively decreased in size following intravenous vancomycin and intravitreal injections of vancomycin and ceftazidime, with retention of 20/20 vision.



Figure 1 Indirect ophthalmoscopy demonstrating a large subretinal mass and associated intraretinal haemorrhage consistent with subretinal abscess.

Learning points

- ▶ Endogenous endophthalmitis, which results from haematogenous seeding, accounts for 2–8% of endophthalmitis cases. Subretinal abscess is a rare manifestation of endogenous bacterial endophthalmitis. It should be investigated in patients with risk factors (eg, intravenous drug use, diabetes, immunosuppression and malignancy) who present with loss of vision and vitreoretinal changes.¹ Early recognition and treatment reduces rates of retinal detachment and improves long-term visual acuity.²
- ▶ Endocarditis is the underlying source in ~10% of cases of endogenous endophthalmitis.¹ Tricuspid valve endocarditis is classically associated with septic pulmonary emboli, but paradoxical systemic septic emboli can occur in patients with right-to-left shunt.³
- ▶ Unilateral subretinal abscess is slightly more common in the right eye than the left, likely due to the proximal anatomy of the brachiocephalic artery providing a preferential embolic pathway.^{1 2}

Contributors JWY captured the clinical image. BP, JWY and AMM were involved in writing the manuscript.

Competing interests None declared.

Patient consent Obtained.

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