Sir,
Disseminated Nocardia infection with subretinal abscess

Immunodeficient or iatrogenically immunosuppressed patients are at increased risk of infection by unusual micro-organisms and these may involve the eye. An

Figure 1 A lower thoracic CT scan showing a cavitating pulmonary lesion in the right lower lobe (arrow).

illustrative case of sub-retinal abscess is presented and the differential diagnosis and management is discussed.

Case report

A 32 year-old woman presented with gradual painless blurring in her left, amblyopic eye. She had idiopathic aplastic anaemia and had undergone bone marrow transplantation but remained immunodeficient and was using prednisolone 20 mg/day. She developed productive cough, pyrexia, night sweats and neutrophilia. Imaging revealed nodules, some cavitating, in liver, lung (Figure 1) and brain (Figure 2).

On presentation three weeks after the development of her systemic illness the visual acuity was right 6/6, left Hand Movements with an afferent pupil defect. The right eye was normal. The left media were clear but a very large, creamy-white subretinal mass occupied the posterior pole (Figure 3).

Intravitreal amikacin and vancomycin were injected. Vitreous sampling produced no growth on culture, aerobic or anaerobic. However, 10 days later both lymph node and CT-guided lung biopsy revealed *Nocardia asteroides*, sensitive to cotrimoxazole, linezolid, co-amoxiclav and ciprofloxacin.

She was effectively treated with systemic cotrimoxazole, linezolid and ciprofloxacin, the latter for more than one year. The subretinal abscess resolved leaving extensive chorioretinal scarring, with visual

Figure 2 Two sections of brain CT showing ring-enhancing lesions near the anterior horn of the right ventricle, and posterior horn of the left ventricle (arrows).

Figure 3 The left fundus showing an extensive, multi-loculated subretinal abscess with patchy intra-retinal haemorrhage. The vitreous was clear.

acuity of 1/36. Further ophthalmic surveillance was performed, but two years later she succumbed to a different infection and died.

Comment

Nocardia are filamentous actinomycete bacteria. *N. asteroides* or *N. farcinica*¹ infection is well-recorded in patients who are immunodeficient, and may cause endophthalmitis or subretinal abscess,² the latter being rare, although *Nocardia* may be its most common bacterial cause.³

Nocardia infection may present with ocular involvement, but at least one other site is invariably affected,⁴ often lung or brain. Sub-retinal biopsy was not performed for our patient as the diagnosis was rapidly clarified by tissue sampling elsewhere, and resolution followed systemic antibiotic treatment.

The differential diagnosis of sub-retinal abscess includes infection by *Klebsiella* spp.,³ *Pseudomonas* spp.,⁵ *M. tuberculosis*, *Staph. Aureus* and *Strep. viridans*. Microscopy of *Nocardia* requires Ziehl-Neelson or Gomori methanamine silver staining, but identification may be difficult. Culture requires 10% carbon dioxide. Antibiotic sensitivity is variable, but staples include cotrimoxazole, amikacin, ampicillin, cefotaxime, vancomycin and linezolid. Combination treatment is usual, continuing for one year to avoid recrudescence.

Unusual intraocular infection is a feature of the immunodeficient patient and this may present acutely with endophthalmitis, or sub-acutely with a sub-retinal focus. *Nocardia* should be part of this differential diagnosis.

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Sir, Bilateral papillitis in ocular toxoplasmosis

Optic nerve involvement is well described in ocular toxoplasmosis, occurring in different situations: (1) associated to an active juxtapapillary retinochoroiditis lesion, (2) papillitis, associated to a healed toxoplasmic lesion, (3) neuroretinitis, associated to a swollen disc with serous macular detachment, and (4) swollen optic disc in the presence of a distant active lesion.¹ We report a case of ocular toxoplasmosis presenting with bilateral swollen discs and no associated retinochoroidal involvement, initially mistaken as a possible manifestation of intracranial hypertension.

Case report

A 64-year-old woman, with no past medical history presented with acute, isolated, painless, bilateral visual loss. Best-corrected visual acuity was 6/18 OU, with relative central scotoma in both eyes and colour vision deficits on Ishihara testing (6/20 errors OD, 3/20 errors OS). The remainder of the examination was normal, except bilateral, asymmetrical optic disc swelling with splinter haemorrhages (Figure 1), and mild vitritis. There were no other signs of intraocular inflammation, confirmed by fluorescein angiography. A general and neurological examination was normal. Routine laboratory investigations were normal, as well as ANA and ACE levels. A cerebral and orbital MRI with contrast was normal, and lumbar puncture showed normal cerebrospinal fluid biochemistry, and normal opening pressure. Serologies were negative for HIV and syphilis.

Serum ELISA IgM and IgG were positive for toxoplasmosis (titres IgG >300 IU/ml, IgM >5.54 AE/ml, VIDAS, BioMérieux, Marcy l'Etoile, France). The IgG-avidity ratio was 0.026, the Sabin–Feldmans dye test titre was 1:1250, and the ISAGA IgM (ImmunoSorbent Agglutination Assay; BioMérieux, Marcy l'Etoile, France) was 12 arbitrary units, suggesting a recent toxoplasmosis infection. Enzyme-linked immunosorbent assay (ELISA) was performed, using polymorphic polypeptides, specific to three clonal lineages, GRA6 II, GRA6 I/III,