Sir,

Subretinal *Pseudomonas* abscess in a patient with bronchiectasis

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Bacterial subretinal abscess is a rare clinical entity, previously reported in association with immunosuppression, septicaemia, and liver abscesses. Implicated organisms have included *Streptococcus*,[1] *Klebsiella*,[2,3] and in one case *Pseudomonas* was identified in an organ transplant patient.[4] Here we describe a subretinal infection resulting from chronic bronchial colonisation with *Pseudomonas* and presumed transient bacteraemia, in an otherwise immunocompetent host.

Case report

A 75-year-old Asian man presented with pain, foggy vision, and photophobia in the left eye of 24 h duration. He had a history of post-tuberculous cystic bronchiectasis and bronchial colonisation with *Pseudomonas aeruginosa*, although at presentation there was no clinical evidence of active pulmonary disease.

On ophthalmic examination, visual acuity was 6/6 in both eyes. Fundoscopy of the left eye revealed periphlebitis and a superonasal granulomatous-like haemorrhagic lesion of the choroid and retina. Blood tests, including full blood count, erythrocyte sedimentation rate, and angiotensin-converting enzyme levels, were normal. Syphilis and toxoplasma serology were negative. Blood cultures showed no growth. The patient was started on dexamethasone eyedrops, and as the differential diagnosis included ocular tuberculosis, he was put on a course of oral isoniazid and pyridoxine.

After 3 days, the vision in the left eye had deteriorated to 6/60 and a hypopyon was detected. Fundoscopy showed another granulomatous-like white lesion below the optic disc. A vitreous biopsy was carried out followed by intravitreal injections of 0.4 mg amikacin and 1 mg vancomycin. No organisms were grown from vitreal culture. Over the next 24 h, visual acuity in the left eye dropped to hand movements. No view of the fundus was now possible. The patient was then referred to a tertiary centre for further evaluation and management.

On presentation to Moorfields Eye Hospital, 10 days after the onset of symptoms, the clinical appearance was compatible with a left endophthalmitis. A vitrectomy was performed with injections of intravitreal amikacin and vancomycin. As there was still no improvement, a diagnostic transretinal biopsy was considered necessary. The abscess fluid grew a heavy growth of Gram negative rods, which were later confirmed as being *Pseudomonas aeruginosa* sensitive to ciprofloxacin. Antituberculous medication was stopped, and treatment continued with oral steroids and oral ciprofloxacin. However, an intense postoperative intraocular inflammatory response developed, resulting in an anterior chamber fibrinous infiltrate. Despite further injections of intravitreal antibiotics over the next 2 months, the visual acuity in the eye deteriorated to no perception of light. A left evisceration had to be performed as a consequence of uncontrolled inflammation and pain.

Currently, over a year after presentation, he has had no further ophthalmic problems. He continues to require cyclical antibiotics for recurrent infective exacerbations of pulmonary disease.

Comment

Bronchiectasis is characterised by irreversible dilatation of the bronchi with susceptibility to increased sputum production and recurrent bronchopulmonary infection. In clinically stable patients with bronchiectasis up to 17% have bronchial colonisation with *Pseudomonas* species.[5] The pathogenesis of chronic bronchial sepsis is usually dependent on impaired mucociliary clearance, by exogenous agents or genetic disease, rather than immunological deficiency. Metastatic infection from bronchiectasis to the eye, in this case presumably the result of transient subclinical bacteraemia, has not previously been reported. This case highlights that chronic bronchial sepsis should be considered as a possible source of ocular disease.

Among patients with Gram negative endogenous endophthalmitis, *Pseudomonas* is associated with the worst visual prognosis.[6] Most reported cases of subretinal abscess have also resulted in evisceration, enucleation, or death from underlying disease. The optimal management of the lesion has yet to be determined. The best visual outcomes have followed attempts to identity the pathogen and achieve sterilisation by early use of antibiotics, vitrectomy, and transretinal drainage, despite the attendant risk of retinal detachment. The only previously reported case of subretinal *Pseudomonas* abscess, described in an immunosuppressed patient presenting 1 month after bilateral lung transplantation, was successfully treated in this manner and a final visual acuity of hand movements was achieved.[4] However, the above case illustrates that even with aggressive medical and surgical therapy, subretinal *Pseudomonas* infection can follow an accelerated clinical course with rapid vision loss.

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NT Wijesekera[1], OM Kon[1] and C Pavesio[2]

[1]St Mary's Hospital
Praed Street
London W2 1NY, UK

[2]Moorfields Eye Hospital
City Road
London EC IV 2PD, UK

Correspondence: NT Wijesekera
Department of Chest & Allergy
St. Mary's Hospital
Praed Street
London W2 1NY, UK
Tel: +44 207 886 1344
Fax: +44 207 886 1613
E-mail: n.wijesekera@ic.ac.uk

Sir,

Regression of aneurysmal dilatations in a case of idiopathic retinal vasculitis, aneurysms and neuroretinitis (IRVAN) associated with allergic fungal sinusitis

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Idiopathic retinal vasculitis, aneurysms, and neuroretinitis (IRVAN) is a rare clinical entity characterized by bilateral retinal arteritis, numerous aneurysmal dilatations of the retinal and optic nerve head arterioles, neuroretinitis, and uveitis.[1,2] To the best of our knowledge, only 17 patients have been reported in the literature.[1–4] This syndrome typically affects young healthy individuals, it has a female predominance, and is not associated with any systemic abnormalities.[1–4] Visual loss is caused by exudative maculopathy and neovascular sequelae of retinal ischaemia.[2]

This report describes a patient who presented with features typical of IRVAN in whom medical evaluation disclosed allergic fungal sinusitis. Resolution of arterial sheathing, regression of several of the aneurysmal dilatations, and decrease in lipid exudate deposition were noted over a 3-year period follow-up.

Case report

A 16-year-old boy presented with a 12-month history of decreased vision in both eyes. The patient's medical history was significant for asthma, however, not on regular treatment. He had progressive nasal obstruction associated with headache, sneezing, and itching. Review of systems revealed no history of fever, weight loss, skin lesions, arthritis, or genital ulcers. On examination, visual acuity was 20/60 in the right eye, and 20/100 in the left. Intraocular pressure by applanation was 14 mmHg, bilaterally, and pupillary reactions were normal. External examination and slit-lamp biomicroscopy were normal with clear anterior chambers. There were trace vitreous cells present in both eyes. Fundus examination disclosed bilateral extensive peripapillary and macular lipid exudate deposition. Marked and extensive sheathing of retinal arterioles was present associated with periarteriolar intraretinal haemorrhages. Numerous aneurysmal dilatations were present on the optic nerve head and along the first- and second-order retinal arterioles. The optic discs showed swelling and hyperaemia. Fluorescein angiography accentuated the numerous aneurysmal dilatations on the retinal arterioles, and showed extensive leakage from aneurysmal dilatations on the optic nerve head and on the retinal arterioles, and late staining of the aneurysmal dilatations. Both optic nerve heads demonstrated leakage and stained in the later stages (Figures 1 and 2). Extensive areas of peripheral capillary nonperfusion and adjacent anomalous arteriovenous anastomosis were present in both eyes (Figure 3). The following laboratory investigations were requested: chest X-ray, complete blood count, erythrocyte sedimentation rate, routine blood chemistry, haemoglobin electrophoresis, serum protein electrophoresis, urinalysis, Venereal Disease Research Laboratory test (VDRL), fluorescent treponemal antibody absorption test, Mantoux test, antinuclear antibody, anti-double-stranded DNA antibody, antiphospholipid antibodies including anticardiolipin and lupus anticoagulant antibodies, anti-neutrophil cytoplasmic antibodies, and computed tomographic scan of the brain. A peripheral eosinophilia was present. There were no other laboratory abnormalities. Neurologic and cardiovascular examinations were normal. ENT examination revealed multiple left-sided nasal polyps. Computed tomographic scan of the