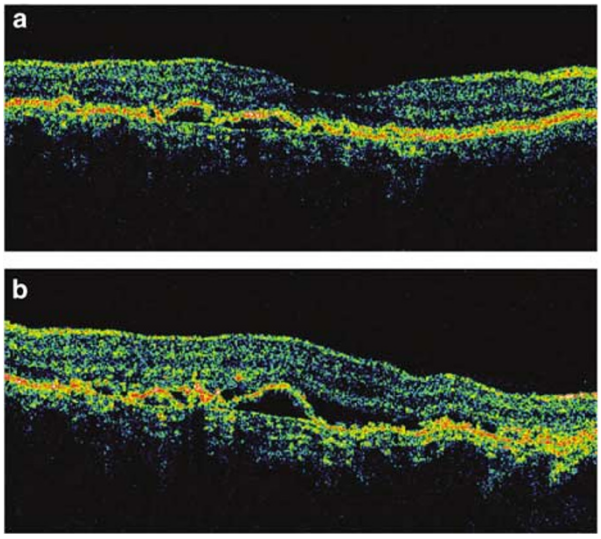

Figure 2 OCT scan showing RPE irregularities, modulations and small RPE detachments in (a) right; (b) left eye. Left eye also showing a large central RPE detachment, along with subretinal fluid collection in left eye.

widespread fundus involvement with no ocular symptoms. However, visual loss may occur due to development of central serous chorioretinopathy or a choroidal neovascular membrane in advanced cases.[3,4] Our patient had bilateral whitish yellow drusen like deposits scattered throughout the retina. He complained of diminution of vision in left eye. FFA did not reveal any features suggestive of choroidal neovascular membrane or central serous chorioretinopathy. OCT demonstrated a large RPE detachment with some subneurosensory fluid collection, which suggested a possibility of resolving central serous chorioretinopathy as no active leakage site could be demonstrated on FFA.

This report not only highlights the OCT findings of ocular association in this rare systemic condition, which seem to correlate well with histopathological changes in these eyes but also suggests that OCT may serve as a useful tool in evaluating the patients especially those with visual involvement. OCT may help in differentiating between RPE detachment, choroidal neovascular membrane, and central serous chorioretinopathy. In addition, OCT being noninvasive could be used more frequently for follow-up of these patients with end-stage renal involvement where frequent FFA or indocyanine green fundus angiography are not desirable.

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Sir,

Exudative retinal detachment after photodynamic therapy: a case report in an Asian patient

Randomized clinical trials have shown that photodynamic therapy (PDT) with verteporfin is associated with few ocular or systemic adverse events.[1–4] However, severe visual loss within 7 days after treatment has been reported in 4.4% from the Verteporfin in Photodynamic Therapy Study Group (VIP).[2,5] A few cases were reported from an Asian patient. We report one case of marked visual acuity deterioration within a few days after PDT.

Case report

A 51-year-old Thai female patient presented with blurred vision in the left eye for 1 year. Her visual acuity was 20/20 in the right eye and 20/200 in the left. The fundus examination showed central subretinal fluid,

haemorrhage, and exudates in the left eye. Fluorescein angiography demonstrated a juxtafoveal occult CNV. The diagnosis was presumed to be idiopathic choroidal neovascularization because there was no definite sign of age-related macular degeneration in either eye. The patient underwent argon-laser photocoagulation at the lesion and visual acuity improved to 20/25. At 10 months after laser photocoagulation, we found the recurrent lesion from the previous laser scar had extended into the foveolar area (subfoveal occult CNV) and her left visual acuity had deteriorated to 20/40. The patient was considered to be a candidate for treatment by PDT with verteporfin.

Method

The patient underwent PDT with verteporfin (visudyne^{TM} Novartis, Ophthalmics) according to the standard protocol.[1] At 2 days after PDT, she noted severe visual deterioration in the left eye. The best-corrected visual acuity was 20/100 and the fundus examination demonstrated exudative retinal detachment around the treated area (Figure 1). Nevertheless, the vision and subretinal fluid slowly improved and the visual acuity returned to 20/50 after 2 weeks. Fluorescein angiography revealed improvement of CNV leakage and showed intact retinal circulation (Figure 2). At 6 weeks after PDT, there was complete resorption of subretinal fluid and the best-corrected visual acuity was 20/50. The condition continued improving, and at month 3 after PDT, the visual acuity was 20/40. Fluorescein angiography demonstrated no leakage from the subfoveal CNV, so retreatment by PDT was deferred.

Discussion

The Treatment of Age-related Macular Degeneration with Photodynamic Therapy (TAP) and VIP Study Group reported severe visual loss (at least 20 letters of visual acuity compared with pretreatment acuity) within 7 days following treatment, with incidences of 0.7 and 4.4%, respectively.[5] From the VIP study group , 10 in 225 participants exhibited this degree of visual reduction, and two cases were associated with the development of extensive subretinal fluid.[2] A recent report from TAP and VIP study (TAP and VIP report No. 3)[5] demonstrated that most acute severe visual loss events occurring in patients with baseline visual acuity letters score better than approximately 20/50, regardless of lesion compositions.

Holz *et al*[6] reported two cases of marked central subretinal fluid accumulation associated with visual loss within 2 days following PDT with verteporfin. Both cases were diagnosed with age-related macular degeneration (AMD) associated with occult subfoveal CNV.

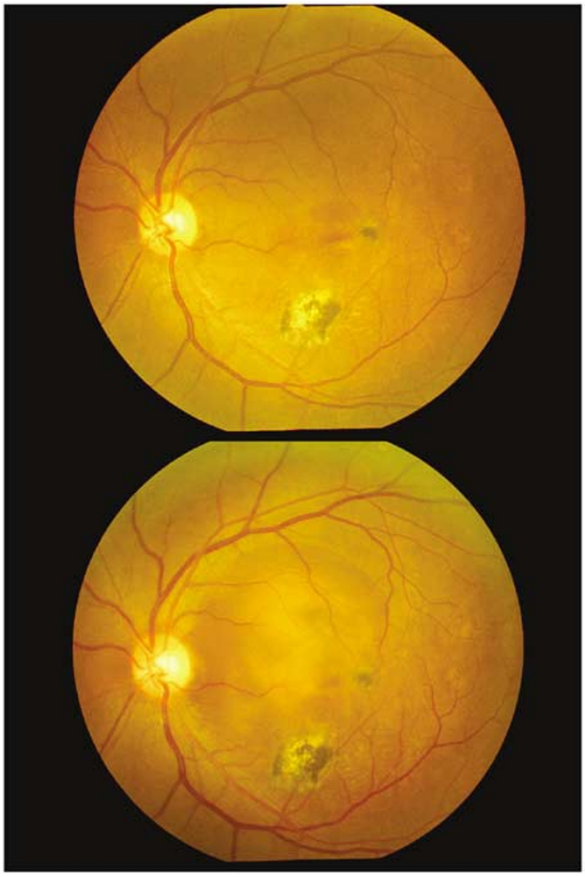

Figure 1 The fundus photograph demonstrated exudative retinal detachment after PDT: (top) before PDT; (bottom) 2 days after treatment.

Fluorescein angiography demonstrated intact retinal circulation and indocyanine green angiography showed diffuse hyperfluorescence in the late phase throughout the treated areas in both. The cases were observed and subretinal fluid resolved slowly over the following 2–3 months, with return of vision to near pretreatment levels. Rogers *et al*[7] and Costa *et al*[8] also reported the optical coherence tomography (OCT) and indocyanine green angiography (ICGA) findings of subretinal fluid accumulation following PDT. They suggested that acute inflammatory response was the main event within 7 days after the treatment.

In this report, the patient complained of visual acuity deterioration 2 days after PDT, similar to the report from Holz *et al*.[6] At 2 weeks after PDT, fluorescein angiography revealed intact retinal circulation and could not identify the origin of subretinal fluid. Therefore, we agree with the previous report[6–8] that sudden fluid accumulation after PDT might occur as a result of pumping impairment of retinal pigment epithelium (RPE) and/or abnormal permeability of the choroid from

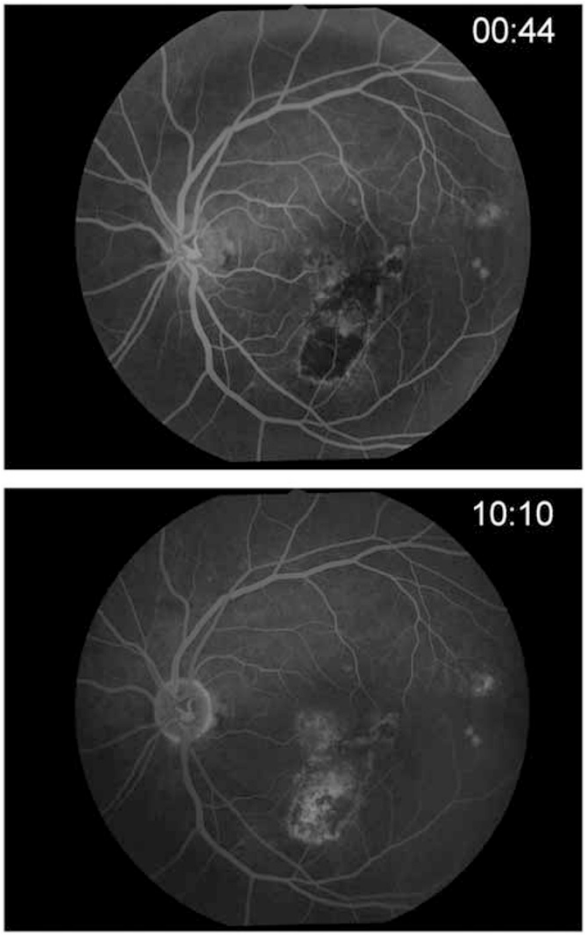

Figure 2 A fluorescein angiogram (FFA) at 2 weeks after PDT demonstrated intact retinal circulation: (top) FFA at 44 s; (bottom) FFA at late phase (10 min).

acute inflammatory response. This hypothesis is also supported in studies of animals that demonstrated RPE and choriocapillaris damage after PDT with verteporfin.[9] That study also demonstrated that verteporfin-targeted LDL receptors within RPE cells, after which, reactive oxygen species could be generated by PDT and result in cell damage with consequential impairment of fluid transport.

At the last follow-up in our case, the subretinal fluid had spontaneously resolved accompanied by the return of vision to near-pretreatment levels within 3 months. With respect to lesion composition, this report and others[2,5,6] have reported that most cases of subretinal fluid accumulation after PDT occur in the patients with occult lesions. Nevertheless, they suggest a severe visual loss event occurring in patients with good baseline visual acuity, regardless of lesion components.

In summary, although PDT has very few vision-threatening complications, the clinician should be aware of the possibility of sudden vision loss caused by a marked exudative response, particularly when dealing with relatively good baseline visual acuity and/or occult lesions.

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Sir,

Rothia genus endophthalmitis following penetrating injury in a child

We present a case of visual loss due to Rothia genus endophthalmitis following penetrating injury in a child.

Case report

An 11-year-old boy sustained a penetrating corneal injury in his right eye after walking into the edge of a door. The ocular perforation was not initially diagnosed at the local A&E department and he was brought to our Eye Casualty a week later with progressive right visual loss.

At presentation, visual acuity was perception of light in the right eye and 6/5 in the left eye. The iris was prolapsed through a paracentral corneal wound. There was hypopyon, posterior synechiae, and cataract. The patient underwent repair of the corneal laceration and lens aspiration the following day (Figure 1a). A vitrectomy with intravitreal injection of vancomycin, amikacin, and triamcinilone was performed a day later due to clinical evidence of endophthalmitis.

Gram-positive rods were present in the vitreous aspirate and identified as Rothia on incubation (API Coyne bacterial identification system). The organism was sensitive to vancomycin. The penicillin MIC was 0.32 mg/l. In the reference laboratory (Centre for Infections, HPA Colindale) the isolate was tested by gas chromatography of cellular fatty acids and partial sequencing of 16S rRNA. The results suggested an unnamed species within the genus Rothia.

The patient was further managed with oral coamoxiclav and topical penicillin. Visual acuity deteriorated to no perception of light 6 weeks postoperatively due to the development of a total retinal detachment with severe proliferative vitreoretinopathy (Figure 1b).

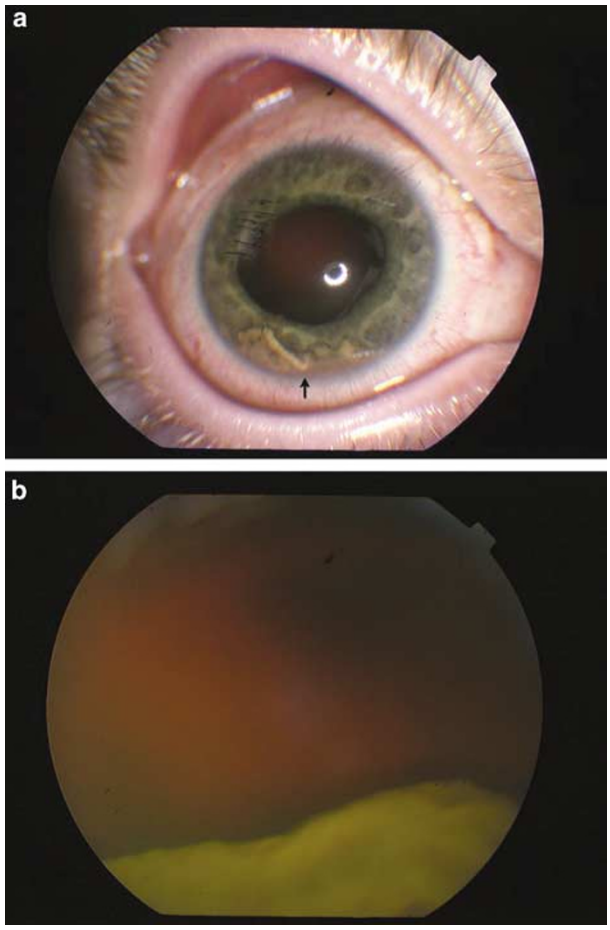

Figure 1 (a) Sutured corneal perforation, organised exudate in the angle (arrow). (b) Fundus photograph of posterior pole showing fibrosed detached retina.

Discussion

Rothia genus was proposed for a group of coccoid to diphtheroid to filamentous Gram-positive organisms isolated from the human oral cavity.[1] Rothia dentocariosa has been linked with human disease such as endocarditis, mycotic aneurysms, osteomyelitis, septicaemia, pneumonia, and peritonitis.[2–7] Endophthalmitis has been reported in an adult following multiple surgeries. The visual outcome was poor.[8] The diagnosis of Rothia genus infection is difficult as the organism can be confused with other bacteria. Penicillin is the antibiotic of choice, however, other agents such as aminoglycosides, vancomycin, cephalosporins may be effective. In our case, possible mode of transmission could be haematogenous spread or eye rubbing with dirty hands.

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