Sir,

Spontaneous involution of choroidal neovascularization secondary to rubella retinopathy

Rubella retinopathy is the most frequent ocular complication in children whose mothers contracted rubella during pregnancy.[1] In these children, there are retinal pigment epithelium (RPE) alterations and visual acuity is usually not affected.[2] However, severe vision loss may occur secondary to choroidal neovascularization (CNV).[1–3] Herein, we report an unusual outcome of a case of CNV associated with rubella retinopathy, with emphasis on optical coherence tomography (OCT) features.

A 10–year-old girl was referred because of poor vision in her right eye for four weeks. Her mother contracted rubella during pregnancy. At birth, neither ocular nor systemic abnormalities were detected. At presentation, visual acuity was 20/200 in both eyes. A serohaemorrhagic elevation of the macula was seen in the right eye, and there was a whitish subretinal lesion in the left fovea. Mottling of the RPE was evident in both eyes. Fluorescein angiography showed an active subfoveal neovascular lesion in the right eye and staining of the subretinal lesion in the left (Figure 1). OCT revealed thickened and elevated retinal layers at the macula due to subretinal fluid and an extrafoveal protruding hyper-reflective mass in the right eye (Figure 2, left). After extensive discussions with her parents about the possible risks and benefits of the available treatments for CNV, including photodynamic therapy with verteporfin, a decision for observation was taken initially. Vision improved spontaneously to 20/20 in the right eye by 12 months of follow-up, and OCT revealed contraction of the mass and resolution of the fluid (Figure 2, right).

Few cases of CNV secondary to rubella have been reported and its natural history remains unclear, thus making the establishment of an appropriate treatment difficult, if any, for CNV in this setting. In this study we document with OCT, one case of CNV, which presented spontaneous involution during the course of one year. The underlying mechanisms related to the spontaneous involution of CNV, in particular of inflammatory causes, occasionally observed in the younger population remain unclear. Histopathologic examination performed by Gass, in a case of spontaneous type-2 CNV resolution associated with good visual acuity in a young woman with presumed ocular histoplasmosis, showed an atrophic layer of RPE 'encircling' the previously active neovascular lesion except where it communicated with the choroid.[4] The morphological peculiarities observed at baseline on OCT, which were consistent with a type-2 (above the RPE) CNV emanating from the extrafoveal region with a relatively well-preserved pattern of reflectivity of the RPE/choriocapillaris complex at the fovea, coupled with fluorescein angiography findings

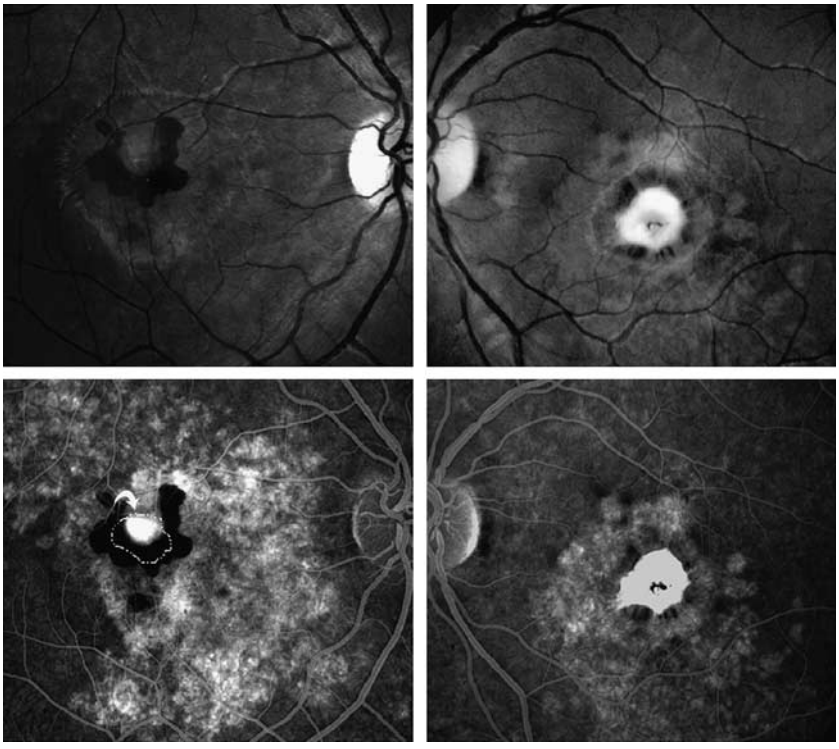

Figure 1 Red-free fundus photography (top) and mid-phase fluorescein angiography (bottom) at baseline in a 10-year-old girl with rubella retinopathy. Top. Pigmentary fundus changes in both eyes, associated with a serohaemorrhagic macular elevation in the right eye and a whitish subretinal macular lesion with radiating clumps of hyperplastic RPE in the left eye, were seen at presentation. Bottom. Fluorescein angiography showed mottled hyperfluorescence caused by RPE changes in both eyes. In the right eye, a subfoveal neovascular complex (dashed line), characterized by an extra-foveal classic CNV component (curved arrow) and elevated blocked fluorescence due to associated thick blood, was seen. In the left eye staining, but no leakage, of the subretinal lesion was seen.

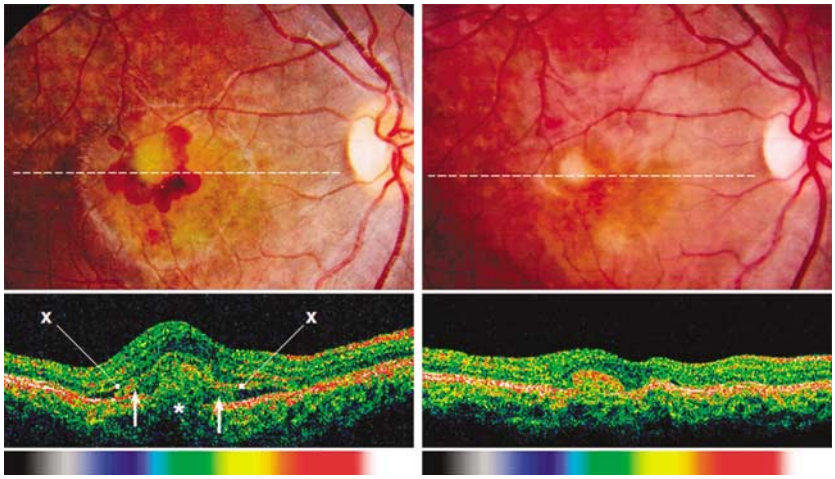

Figure 2 Colour fundus photography (top) and optical coherence tomography (OCT) evaluation (bottom) at baseline (left) and at 12 months (right) of the right eye of a 10-year-old girl with rubella retinopathy complicated with choroidal neovascularization. (Left) Diffuse mottling of the retinal pigment epithelium throughout the macula, and a serohaemorrhagic elevation of the macular region was seen in the right eye. On OCT, retinal layers were slightly thickened due to intraretinal fluid and elevated (outer boundary of the neurosensory retina marked as x) because of subretinal blood (arrows) and fluid as well as the presence of an extrafoveal protruding hyper-reflective mass at the level of the retinal pigment epithelium/choriocapillaris complex (asterisk). Right. Spontaneous resolution of the serohaemorrhagic maculopathy was observed 12 months after presentation and OCT revealed contraction of the hyper-reflective mass and favourable macular remodelling.

suggesting the presence of an extrafoveal ingrowth site of the neovascular lesion,[5] may provide clues when considering observation rather than treatment for CNV in a particular clinical setting.

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Sir,

Vitreofoveal traction associated with the use of pilocarpine to reverse mydriasis

We present a case of vitreofoveal traction induced by one drop of pilocarpine given for reversal of mydriasis.

Case report

A 64-year-old white female was dilated for a routine eye examination. No retinal abnormalities were detected and her vision was 20/20. She requested that her dilation be reversed and she was given one drop of 2% pilocarpine in each eye. Shortly after she was given the drops, she noted the onset of a small scotoma at fixation in her left eye. She was referred for an urgent retinal evaluation and has found to have a vision of 20/25 and a small yellow-white spot at her fovea (Figure 1 lower left). Optical coherence tomography (OCT) demonstrated irregularity in the foveal anatomy (Figure 1 upper left). After 4 months, her vision was unchanged and she had developed a vitreous detachment. The foveal spot had disappeared (Figure 1, lower right). Repeated OCT testing demonstrated vitreofoveal separation with resolution of the defect seen on the original OCT, although there was a suggestion of a very subtle defect in the continuity of the outer segment layer (arrow, Figure 1, upper right).

Comment

Pilocarpine can be associated with retinal tears and detachments. [1] The mechanism for this is thought to be related to drug-induced forward displacement of the lens which causes anterior movement of the vitreous and results in traction to areas of the retina that have significant vitreous adherence. There has also been one case of chronic pilocarpine causing a