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Complete Resolution of a Giant Pigment Epithelial Detachment Secondary to Exudative Age-Related Macular Degeneration after a Single Intravitreal Ranibizumab (Lucentis) Injection: Results Documented by Optical Coherence Tomography

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Key Words

Age-related macular degeneration · Anti-VEGF · Pigment epithelial detachment · Ranibizumab (Lucentis) · Retinal pigment epithelium rip

Abstract

Aim: To describe a patient with a giant pigment epithelial detachment (PED) secondary to exudative age-related macular degeneration (ARMD) successfully treated with a single intravitreal ranibizumab (Lucentis) injection (0.5 mg/0.05 ml).

Methods: An 89-year-old woman presented with a six-day history of reduced vision and distortion in the left eye. Best-corrected visual acuity in that eye was 6/15. Fundoscopy revealed a giant PED and exudates temporally to the fovea. Optical coherence tomography showed a PED associated with subretinal and intraretinal fluid. Fluorescein angiography confirmed the diagnosis of an occult choroidal neovascularization. Treatment with intravitreal injections of ranibizumab (Lucentis) was recommended, although the increased risk of retinal pigment epithelium (RPE) rip was mentioned.

Results: Four weeks after the first intravitreal Lucentis injection, the visual acuity in the left eye improved to 6/7.5, with a significant improvement of the distortion and a complete anatomical resolution of the PED confirmed by optical coherence tomography.

Conclusion: Giant PED secondary to exudative ARMD can be successfully treated with intravitreal ranibizumab, despite the increased risk of RPE rip. To our knowledge, this is the first case presenting with complete resolution of PED after a single ranibizumab injection.

Introduction

Pigment epithelial detachments (PEDs) associated with choroidal neovascularization (CNV) due to exudative age-related macular degeneration (ARMD) have a bad prognosis. In the past, such PEDs were treated with laser photocoagulation and photodynamic therapy (PDT). More recently, they have been treated with intravitreal anti-vascular endothelial growth factor (VEGF) injections alone or in combination with PDT [1, 2].

Laser photocoagulation and PDT both yielded disappointing results in terms of visual acuity and size of the lesion after the treatment. However, intravitreal bevacizumab combined with PDT showed good functional and anatomical results for CNV associated with PED due to ARMD, and anti-VEGF intravitreally alone had even better results [3, 4].

Case Report

An 89-year-old woman with ARMD presented with a six-day history of reduced vision and distortion in the left eye. Best-corrected visual acuity in this eye was 6/15. Fundoscopy revealed a giant PED and exudates temporally to the fovea. Optical coherence tomography (OCT) also showed a giant PED with subretinal fluid and intraretinal cysts (fig. 1). Fluorescein angiography demonstrated early pooling of the dye suggestive of a PED and late mottled hyperfluorescence compatible with an associated occult CNV (fig. 2a, b).

Treatment with intravitreal injections of ranibizumab (Lucentis) was recommended, although the patient was warned about the increased risk of retinal pigment epithelium (RPE) rip. The patient agreed and consented for left eye intravitreal ranibizumab (Lucentis) injections.

The procedure was carried out in the intravitreal suite. Topical proparacaine hydrochloride 0.5% was applied to the ocular surface, followed by preparation with 5% povidone iodine. The intravitreal dose of ranibizumab (Lucentis) was 0.5 mg/0.05 ml.

Results

The patient was reviewed four weeks after the injection. The visual acuity in the left eye improved to 6/7.5, with a significant improvement of the distortion. Fundoscopy demonstrated some RPE changes and less exudates temporally to the fovea. OCT revealed complete anatomical resolution of the PED and disappearance of the subretinal and intraretinal fluid (fig. 3).

Another two intravitreal ranibizumab injections were given to the patient on a four to six week basis. Six months after the first presentation, the visual acuity in the left eye was unchanged and the condition was stable, without any signs of CNV reactivation or recurrence of PED.

Discussion

Tears of the RPE may occur in neovascular ARMD, especially in the presence of a PED [5]. It is well known that such tears may occur spontaneously or as a complication of a laser photocoagulation or a PDT with or without intravitreal triamcinolone or anti-VEGF injections [6–9].

In our case, a huge PED secondary to exudative ARMD was treated with intravitreal ranibizumab, resulting in a complete anatomical resolution of the PED and an improvement of the visual acuity and distortion just after a single ranibizumab injection of 0.5 mg/0.05 ml.

To our knowledge, this is the first time such a response is documented by OCT.

Disclosure Statement

No financial support was received for this study.

Fig. 1. Color fundus photograph and OCT at presentation.

Fig. 2. Early (a) and late (b) phase of fundus fluorescein angiography at presentation.

Fig. 3. Color fundus photograph and OCT four weeks after the first ranibizumab injection.

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