Short communication

Intravitreal bevacizumab in the treatment of idiopathic juxtafoveal telangiectasis type 1

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ABSTRACT

Clinical case: We report a case of a 42-year-old male with a macular edema due to idiopathic juxtafoveal retinal telangiectasis type 1, treated with 3 sequential injections of intravitreal bevacizumab (1.25 mg in 0.05 ml). Anatomical improvements were observed after one year of follow up.

Discussion: There is currently no general consensus regarding the treatment of unilateral idiopathic juxtafoveal telangiectasis. The therapeutic options are, grid laser photocoagulation, intravitreal triamcinolone, verteporfin photodynamic therapy, or anti-VEGF. Visual acuity and anatomical improvements were observed in this case after intravitreal bevacizumab. Thus, intravitreal bevacizumab seems to be effective to treat macular edema in idiopathic juxtafoveal telangiectasis type 1.

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Bevacizumab intravitreo como tratamiento de las telangiectasias yuxtafoveales idiopáticas tipo i

RESUMEN

Caso clínico: Se presenta el caso clínico de un paciente varón de 42 años de edad con edema macular quístico secundario a telangiectasias yuxtafoveales idiopáticas tipo i. Se inicia tratamiento con bevacizumab intravitreo (1,25 mg en 0,05 ml) cada cuatro semanas hasta un total de tres inyecciones, obteniéndose una mejoría funcional y anatómica que se mantiene durante el primer año de seguimiento.

Discusión: Actualmente no existe consenso en el tratamiento de las telangiectasias yuxtafoveales idiopáticas. Entre las opciones terapéuticas se encuentra la fotocoagulación con láser en rejilla, la corticoterapia, la terapia fotodinámica con verteforfríno (Visudyne)


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la terapia antiangiogénica. En nuestro caso clínico observamos un beneficio tanto funcional como anatómico tras la inyección de bevacizumab que se mantiene durante los 12 primeros meses de seguimiento.

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Introduction

Idiopathic juxtafoveal telangiectasia (JfT) represent a rare cause of visual loss in the middle-aged population. It is characterized by irregular dilatation and incompetence of the vascular wall leading to progressive visual loss, mainly due to persistent macular edema or, less frequently, to subfoveal neovascularization.\(^1\)

There is currently no consensus for treating JfT. Laser photocoagulation, intravitreal triamcinolone and photodynamic therapy with verteporfin (Visudyne) have been described as therapeutic options for macular edema.\(^2\)

We report a case of a patient with JfT type I treated with intravitreal injection of bevacizumab (Avastin, Genentech Inc., San Francisco, CA, USA).

Clinical case

A 42-year-old male patient with decreased visual acuity (VA) in the left eye (OS) of 2 months of progression. His relevant medical history listed poorly-controlled hypertension.

Corrected VA was 20/20 in the right eye and 20/80 in the OS. Biomicroscopic examination of the anterior segment was normal and intraocular pressure was within normal limits.

Ocular fundus had an area with macular thickening, vascular tree dilatation and intraretinal hemorrhages around the fovea. Fluorescein angiography showed early initial telangiectatic dilation in the parafoveal retinal capillaries, with later fluorescein leakage leading to a diagnosis of type I JfT. Optical coherence tomography (OCT) revealed a cystic macular edema with a central foveal thickness of 630 \(\mu\)m (Fig. 1).

Given the situation of the symptoms, treatment is initiated with intravitreal injection of bevacizumab (1.25 mg in 0.05 ml). Patient received one intravitreal bevacizumab injection every 4 weeks in the OS, for a total 3-dose cycle. Upon completion of this regimen, VA improved from 20/80 to 20/20 and OCT revealed macular edema reduction with a decrease in central foveal thickness from 630 to 237 \(\mu\)m (Fig. 2).

At a 12-month follow-up, VA and macular edema were stable.

Discussion

Bevacizumab is a potent angiogenic that works by inhibiting biological activity of vascular endothelial growth factor (VEGF). VEGF plays an important role in angiogenesis and vascular permeability of various diseases. Therefore, anti-VEGFs are increasingly used as intravitreal therapy for various diseases associated with increased vascular permeability and fluid accumulation in the macula. JfT pathophysiology is not known in depth, although it has been suggested that VEGF may play an essential role.\(^1\) Thus, bevacizumab can reduce retinal vessel permeability and, consequently, macular edema.

Currently, there is no consensus for the treatment of JfT. Treatment options include grid laser photocoagulation, corticotherapy, verteporfin photodynamic therapy (Visudyne) or angiogenesis inhibitor therapy. Park et al.\(^2\) noted that grid

Fig. 1 – (A) Retinography of the left eye prior to treatment. (B and C) Fluorescein angiography at early and late times. (D) Pretreatment OCT.
laser photocoagulation to treat macular edema in patients with bilateral IJT did not seem to improve AV and could even cause intraretinal fibrosis. Due to the proximity of telangiectasia, the center of the macula and possibility of producing an absolute scotoma, we have searched for new therapeutic alternatives.

Recently, some authors have studied the effect of intravitreal triamcinolone without good results. Moreover, intravitreal triamcinolone has potent side effects, such as steroid-induced glaucoma and cataract progression. Li et al. demonstrate that intravitreal triamcinolone may have a role in the treatment of unilateral IJT, at least in the short term, and should be considered if conventional laser photocoagulation fails. Kotuola et al. reported benefits from photodynamic therapy in a patient with IJT (type IA).

We decided on treatment with three injections of intravitreal bevacizumab. After the first intravitreal injection of bevacizumab, we observed an improvement in VA and central foveal thickness. However, macular edema was not resolved completely and needed two new injections. Moon et al. proposed intravitreal bevacizumab injection to treat macular edema associated with IJT type IA. Gamulescu et al. published a paper on 3 cases with IJT: one type I and 2 type II. They concluded that patients with IJT type I can benefit from bevacizumab injections, while type II shows no improvement in visual function despite repeated injections.

In conclusion, intravitreal bevacizumab appears to be effective for the treatment of macular edema IJT type I. However, further studies to better understand the efficacy and safety of this therapy are needed.

Conflict of interest

The authors declare that they have no conflicts of interest.

REFERENCES