Magic of Intravitreal Triamcinolone and Dexamethasone in a Patient with Uveitic Macular Edema with Treated Ocular Tuberculosis

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ABSTRACT

A 40-year-old woman with uveitic macular edema (UME) in a treated case of ocular tuberculosis (TB) is the subject of our unusual case study. She had full remission with a single intravitreal injection of triamcinolone and dexamethasone. Anti-inflammatory drugs, topical steroids, and anti-tubercular therapy were used to address the patient's history of recurrent anterior and intermediate uveitis in past. When intravitreal corticosteroids were administered, the big macular cysts and related retinal thickness that were seen on the optical coherence tomography (OCT) results disappeared.

KEY WORDS

Anterior uveitis, Dexamethasone, Intermediate uveitis, Intravitreal injection, Optical coherence tomography (OCT), Ocular tuberculosis Triamcinolone

INTRODUCTION

One of the main causes of vision impairment in uveitis patients is uveitic macular edema (UME). The buildup of fluid in the macula, which causes retinal thickness and possibly cyst formation, is a characteristic of UME. Both anterior and intermediate uveitis are known to be caused by ocular tuberculosis (TB), which is frequently treated with a mix of systemic immunosuppressive drugs, topical steroids, and anti-tubercular therapy. When compared to oral steroids, intravitreal corticosteroid therapy offers a focused therapeutic option for macular edema in uveitic patients, with the potential for a quicker resolution and fewer systemic adverse effects.

CASE REPORT

A 40-year-old woman presented with decreased vision and redness in her right eye for past two weeks. Topical steroids and anti-inflammatory drugs along with nine months course of antitubercular therapy (2HRZE+ 7HR) had been used to manage her recurrent bilateral anterior and intermediate uveitis. On ocular evaluation, she had best corrected Visual acuity of 6/18 in RE and 6/6 in left eye. Anterior segment examination of RE showed 2+ anterior chamber cells (SUN classification) with few mutton keratic precipitates dispersed in the inferior cornea. Posterior segment showed 2+ vitreous haze and macular edema was found on dilated fundus examination, which was confirmed

by the use of optical coherence tomography (OCT). The right eye's OCT scan revealed a big macular cyst of 609 µm in height and 806 µm in breadth. It also demonstrated diffuse retinal thickening and several smaller cysts in the outer plexiform layer at the fovea (Fig. 1a).

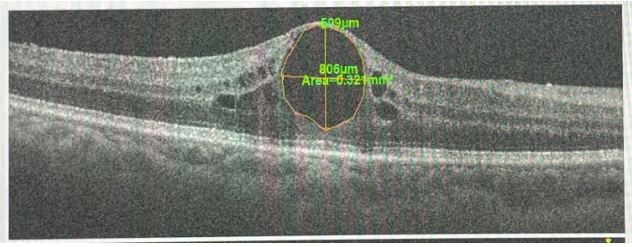

Figure 1a. Optical coherence tomography (OCT) of the right eye (RE) showing large macular cysts along with multiple smaller cystic spaces.

A single intravitreal injection of triamcinolone (4 mg/0.10 mL) and dexamethasone (0.4 mg/0.10 mL) was administered according to the patient's history of uveitis and the severity of the macular edema. Additionally, the patient continued her topical steroid treatment.

Repeat OCT imaging at the 2-weeks follow-up visit revealed that the macular cysts had completely resolved and there were no signs of retinal thickness or edema (Fig. 1b). The patient reported significant improvement in her vision and absence of ocular discomfort.

DISCUSSION

Uveitic macular edema (UME) is a major side effect of uveitis that can cause severe vision loss. Retinal thickening and the development of macular cysts are the results of fluid accumulation in the macula. Inflammatory diseases like anterior and intermediate uveitis, which can result from systemic infections such as ocular tuberculosis, are frequently linked to UME. In this instance, the patient had received the proper anti-tubercular treatment, and the Mantoux and QuantiFERON-TB tests confirmed her history of ocular TB.

Systemic immunosuppressive treatments, such as corticosteroids, are usually used to treat UME to lower

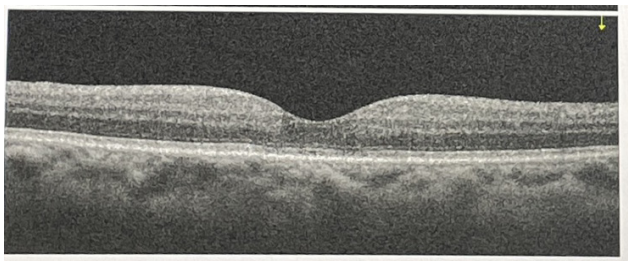

Figure 1b. 2 weeks follow up OCT of the RE demonstrating resolution of macular cysts following intravitreal steroid injection.

inflammation. These therapies do, however, carry the risk of systemic adverse effects.[1-3] Intravitreal corticosteroid injections, which deliver specific medication directly to the site of inflammation, are one recent development in treating UME. Compared to oral steroids, intravitreal corticosteroids, such as triamcinolone and dexamethasone, have been demonstrated to be less likely to cause systemic side effects while also being successful in lowering retinal inflammation, improving visual acuity, and resolving macular edema. Intravitreal injections are an effective therapy for patients with uveitic macular edema, as clinical research and trials have shown their effectiveness in managing the illness.[4,5]

In patients with uveitis, especially those with ocular tuberculosis, where systemic therapy may not always be adequate or may require close monitoring due to the risk of complications, intravitreal corticosteroid therapy's success in this particular case supports its potential as an effective treatment for macular edema.

In a specific case, a patient with recurrent anterior and intermediate uveitis due to ocular TB had macular edema which completely resolved after receiving a single intravitreal injection of triamcinolone and dexamethasone. For uveitic macular edema, intravitreal corticosteroid therapy is a useful treatment option because it provides quick symptom relief and reduces the need for systemic therapies, which can have serious adverse effects. To improve UME treatment regimens and investigate the long-term effects of intravitreal steroid injections in this patient group, more research is required.

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