

Posterior Sub - Tenon Injection of Triamcinolone in Non - Resolving Vitreoretinitis - A Case Report

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Abstract: ***Study design:** Case report. **Purpose:** To evaluate efficacy of posterior sub - tenon injection of triamcinolone in non - resolving vitreoretinitis. **Introduction:** Vitreoretinitis is the inflammation of vitreous and retina. In a non - resolving case of vitreoretinitis steroids are the mainstay of treatment. Steroids can be administered via various routes into the eye. Posterior subtenon injection of Triamcinolone acetonide is an effective treatment option for anatomical and functional improvement in intermediate and posterior uveitis. **Methods:** A 46 year old female presented to OPD with decreased vision in left eye since 3months. On examination she had BCVA of 6/60 in left eye. Fundoscopy showed vitreous haze grade 3 due to vitritis, multiple vitreoretinal tractional bands extending along both superior and inferior arcade, macular edema and a retinitis patch of less than half disc diameter size just above the superior arcade. Patient was positive for IgG antibodies to CMV and HSV. Patient was started on oral prednisolone 1mg/kgbw OD and topical prednisolone acetate 1.0%, nepafenac 0.3% and timolol 0.5%. Patient was given posterior subtenon injection of 0.5ml of triamcinolone acetonide 40mg/ml. **Results:** She had 6/12 BCVA at the end of 1month with resolving vitritis and macular edema. By the end of 3months she had with fully resolved vitreoretinitis with 6/6 vision. **Discussion:** Most steroids used in ophthalmology are glucocorticoids, which have anti - inflammatory and immunosuppressive activity.1 Triamcinolone Acetonide is a minimally water - soluble suspension. Triamcinolone crystals slowly dissolve into the vitreous.3 This creates a diffusional gradient from the vitreous to the macula with minimal systemic exposure. Our study also showed significant improvement in visual acuity and reduction in the macular edema with single posterior subtenon injection of triamcinolone acetonide. **Conclusion:** A subtenon injection of triamcinolone acetonide appears to be an effective treatment for decreased vision associated with intermediate and posterior uveitis without any significant side effects.*

Keywords: uveitis, macular edema, posterior subtenon space, triamcinolone acetonide

1. Introduction

Posterior subtenon injection of Triamcinolone acetonide is an effective treatment option for anatomical and functional improvement in intermediate and posterior uveitis.1 PST is usually given in the superotemporal quadrant by using a 26 - G needle in the Nozik technique². Triamcinolone can be taken in a 2 mL (or 1 mL) syringe with a 25–27 - G needle. Usually, the superotemporal quadrant is chosen and the patient is asked to look toward the nose. The conjunctiva and Tenon capsule is held with a Lim's forceps, and the needle is inserted with the entry site as much posterior as possible. The needle should be moved sidewise during the passage of the needle in the subtenon space to ensure that the sclera is not penetrated, and the eyeball should not move with the movement of the needle. Then, the drug is injected.2-5

2. Case Report

A 46 year old female presented to our out - patient department at Manjunatha Eye hospital, Kundapura, Udupi district with a history of decreased vision in her left eye since 3months. On examination she was found to have a best corrected visual acuity of 6/60 in her left eye and normal anterior segment and normal intraocular pressure. Fundus examination with indirect ophthalmoscope revealed vitreous haze grade 3 due to vitritis. There were multiple vitreoretinal tractional bands in the posterior pole extending along both superior and inferior arcade. Optic disc was normal and dull foveolar reflex with macular edema. There was a retinitis patch of less than half disc diameter size just above the superior arcade. (fig1, fig2)

Informed consent was taken from the patient.

Patient was evaluated with all necessary blood investigations and serological tests and she was positive for IgG antibodies

to Cytomegalovirus and Herpes Simplex virus with insignificant titres for IgM antibodies for the same. All the other investigations revealed negative results.

Patient was started on oral prednisolone 1mg/kgbw once a day and topical prednisolone acetate 1.0% 1drop 4times a day and nepafenac 0.3% once a day and timolol 0.5% once at night. Patient was given posterior subtenon injection of 0.5ml of triamcinolone acetonide 40mg/ml in inferior quadrant. Injection of 0.5 ml of 20 mg of the drug using a sharp tipped 27 - gauge needle that was inserted in the inferotemporal quadrant of the eye, bevel of the needle facing towards the globe, and needle advanced to the hub to obtain adequate placement of the drug into the posterior sub tenon space. Following injection, topical antibiotic was instilled and eye was patched for 2 hours.

She was followed up after 1 week post injection and later followed up 2 weekly for 1month. She was found to have a best corrected visual acuity of 6/12 with resolving vitritis and macular edema at the of 1month, with a normal intraocular pressure. She was advised to stop antiglaucoma medication and to continue oral prednisolone in weekly tapering dose and topical anti - inflammatory agents.

By the end of 3months, she had recovered completely with best corrected visual acuity of 6/6, maintaining normal intraocular pressure. Fundoscopy revealed clear media with no vitritis, no macular edema. (fig3) She had one vitreoretinal traction band along the inferior arcade. She was advised to continue the same medications. By the end of 6months she was completely recovered with 6/6vision, N6 (+1.50DS), normal fundus picture.

She was observed on monthly basis for the next 6months to look for any recurrence. She maintained same picture even after completely stopping all medications.

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3. Discussion

Most steroids used in ophthalmology are glucocorticoids, which have anti-inflammatory and immunosuppressive activity. Triamcinolone Acetonide is a minimally water-soluble suspension. Triamcinolone crystals slowly dissolve into the vitreous.³⁻⁸ This creates a diffusional gradient from the vitreous to the macula with minimal systemic exposure. While a portion of the drug targets the macula, another portion either clears through the retina or diffuses to the anterior segment where it can cause cataract or elevation of intraocular pressures (IOPs).¹⁰⁻¹⁵ Our patient improved significantly by the end of 1 month without any significant IOP elevation. Hence antiglaucoma medication was discontinued. By the end of 3 months, patient was fully recovered and did not require any further medications.

4. Conclusion

A subtenon injection of triamcinolone acetonide appears to be an effective treatment for decreased vision associated with intermediate and posterior uveitis without any significant side effects.

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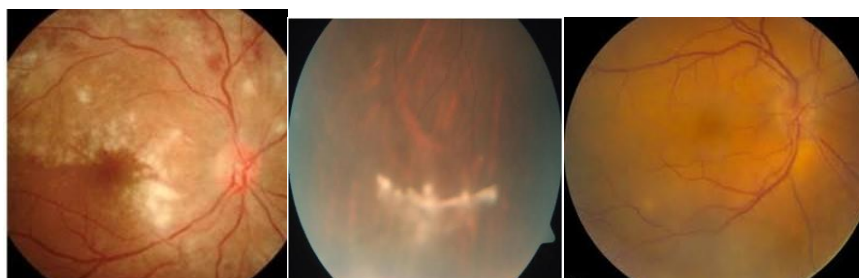


Figure 1

Figure 2

Figure 3