

Efficacy of Supratarsal Injection of Triamcinolone Acetonide (Corticosteroid) for treating severe Vernal Keratoconjunctivitis (VKC) refractory to all Conventional Therapy

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ABSTRACT

Aim: To determine the efficacy of Supratarsal injection of Triamcinolone Acetonide for treating severe Vernal Keratoconjunctivitis (VKC) patients' refractory to all Conventional Therapy.

Methods: The study was conducted at eye unit I BVH Bahawalpur from June 2016 to May 2017. Eighteen patients of Vernal Keratoconjunctivitis (VKC) resistant to all conventional therapy were included in the study. The patients presenting with signs and symptoms of the disease were clinically evaluated. They were given 0.5ml (20mg) of supratarsal injection of Triamcinolone Acetonide (Corticosteroid). These cases were then evaluated and followed for the relief of symptoms and signs up to one year.

Results: All Patients experienced dramatic symptomatic relief from the disease. Reduction in cobblestone papillae by 50% was noted within three weeks after giving injection of corticosteroids in all patients. There was reduction in shield ulcer in 20% of patients and limbal involvement in 33% of patients in one to three weeks. No complications or side effects were observed.

Conclusion: The Dramatic clinical improvement, symptomatic relief from the disease and lack of increase in intraocular pressure suggest that supratarsal injection of corticosteroids may be a valuable therapeutic approach for the treatment of refractory VKC.

Keywords: Keratoconjunctivitis, conventional therapy, supratarsal injection

INTRODUCTION

VKC typically a condition effecting young people at an average age of 12 years with a predilection to young boys¹. Wide range of therapeutic modalities is available for its treatment². Milder cases can often be treated with cold compresses tear substitutes, topical vasoconstrictors^{3,4} or topical antihistamines⁵. More advanced cases may be treated with topical non steroidal anti inflammatory agents^{6,7} mast cell stabilizers^{8,9,10} and topical corticosteroids¹¹. The treatment of severe VKC remains a difficult problem for the patient and physician. Papillae, Severe limbal involvement, or a shield ulcer which is rare but serious complications¹², pose especially difficult problem because they are often markedly symptomatic and debilitated by their condition². Due to the general frustration with the treatment of the refractory patients, new therapeutic agents have been tried and used in the treatment of aspirin^{13,14} and suprofen¹⁵ have been used. It alleviate some signs and symptoms of recalcitrant VKC. More recently topical ketotifen fumarate, levocabistine hydrochloride and lodoxamide appear to provide some relief in mild and moderately affected patients.

However their efficacy has been similarly disappointing when applied to patient with severe refractory disease. There is a scant literature on this topic. We carried out a study in our department to use a technique of supratarsal injection of corticosteroids, which in our experience has been an effective and safe adjunct in the treatment of these patients whose disease is difficult to treat.

MATERIAL AND METHODS

Total of 18 patients were included in the study with the signs and symptoms of severe VKC refractory to maximum medical therapy with systemic disease, history of 5 to 25 years. Any patient with systemic disease, history of ocular surgery, follow up less than 4 months and age below 5 and above 25 years were excluded from the study. Each patient was treated by a stepwise protocol before selection for the study. All patients received topical sodium cromoglycate 4%, lodoxamide 0.1%, prednisolone acetate, 0.125%. No patients were treated with topical cyclosporine or oral therapy. Despite this treatment patients had symptoms including severe itching, foreign body sensation, ropy mucus discharge or photophobia that interfered with their daily routine. Inadequate control of clinical signs included persistent severe giant cobblestone papillae, shield ulcer, persistent limbal conjunctival thickening and oedema. Such patients

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were then subjected to supratarsal injection of corticosteroid. Written consent was taken from the patients or parents .Injection was given either in local (L.A or Topical) or general (G.A) anesthesia. With a cotton tipped applicator the superior tarsus was lifted away from the globe .A 27 gauge needle was used to inject 2.5 ml of 2% lidocaine with epinephrine. The needle was placed subconjunctivally 1 mm superior tarsal border as shown in (FIG .2), to avoid marginal arcade blood vessels which produced a ballooning of the potential space between conjunctiva and Mullers’s muscle.

After the injection patients were maintained on topical sodium cromoglycate 4 % four times a day. Resolution of shield ulcer was defined as complete healing of the epithelial defect. Patients were also observed for the potential complications including blephropotosis, skin depigmentation, infections, motility-disturbances, conjunctival scarring and increase in intraocular pressure.

RESULTS

Total of 18 patients were included in the study. Age groups are shown in Table 1. Sex and presentation of VKC are shown in Table 2.

Table 1

Age Group (Years)	n
5-10	8 (44.4%)
10-25	10 (55.5%)
Total	18 (100)

Table 2

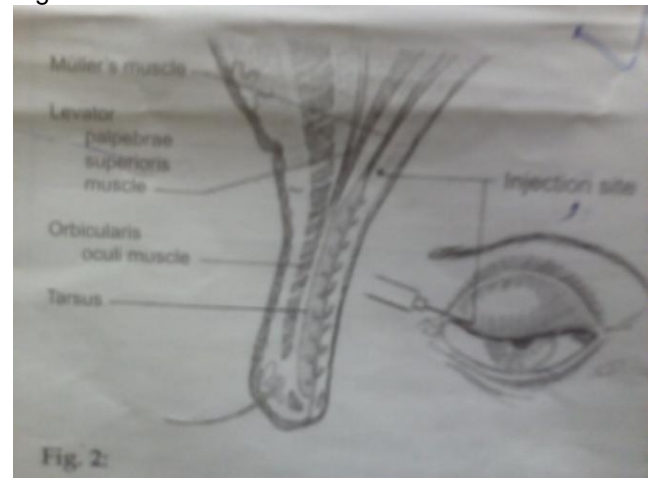
Gender	n
Male	13 (72.22)
Female	5 (27.77)
Presentation	
Limbal VKC	6 (33.33)
Shield Ulcer	4 (22.22)

All patients were treated with 0.5 ml of Triamcinolone Acetonide (20mg) and followed up for a minimum of four months to two years after injection. All patients experienced prompt and dramatic response of their debilitating symptoms especially photophobia after one to five days. Potential complications including blephropotosis, skin depigmentation, infection, motility disturbances, conjunctiva scarring, and increase in intraocular pressure have not been observed.

Figure 1



Figure 2



DISCUSSION

We used Supratarsal Injection of Triamcinolone Acetonide (Corticosteroid) as a new therpeutical modality for treating refractory VKC. The procedure is well tolerated even in young patients. In our experience this technique provided prompt symptomatic relief in 100 % of severe debilitated patients. Clinically resolution of such varied features as large cobblestone papillae limbal edema and shield ulcer was attained in the patients. The substantial improvement in this small series of patients combined with the apperant lack of side effects, leads us to suggest that Supratarsal Injection of Triamcinolone Acetonide (Corticosteroid) may

prove to be a valuable addition to our therapeutic approach in treating refractory VKC.

CONCLUSION

The results of our study are very encouraging. The dramatically clinical improvement, relief from disease and lack of increase in intraocular pressure suggest that supratarsal injection of corticosteroids may be a valuable therapeutic approach for the treatment of refractory VKC. Since the study is on small scale and single center, we recommend that the study should be done at multicenter and high scale to reach a definite conclusion.

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