

VERNAL KERATOCONJUNCTIVITIS;

Supratarsal injection of triamcinolone

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ABSTRACT...Purpose: To find out safety and effectiveness of supratarsal injection of Triamcinolone in cobble stone papillae in Vernal Keratoconjunctivitis (VKC). **Design:** Prospective, uncontrolled trial. **Period:** June 2009 to January 2010. **Setting:** Department of Ophthalmology KMC Institute Of Medical Sciences Hospital KDA Kohat. **Material and Methods:** One hundred and fifty diagnosed patients of VKC, of both sexes and age group between 5–40 years were included in the study. Patients with glaucoma, or steroid responder, post-herpetic corneal scar, active infection of cornea or conjunctiva, tightly closed eyelids, patients who lost follow-up, and patients unwilling to be enrolled in this study were excluded from the study. The patients were enrolled and informed consent was taken. Supratarsal injection of Triamcinolone was given. Their record was maintained and all the patients were followed up for six months for evaluating their effectiveness and side effects. **Results:** We treated two hundred and seventy five eyes of one hundred fifty patients. Among them 80% were males. Mean age was 14 years (range: 5—40 years). All of the patients had itching of eyes, redness, watering, photophobia, cobble-stone papillae and Tranta's dots. Mean duration of disease was 27 weeks (Range: 4 weeks to 10 months). Patients were followed up and multiple injections were given for controlling disease. Transient redness was the most common side effect of injection therapy. Study shows 100% effectiveness of supratarsal injection of triamcinolone acetate in VKC although recurrence was seen. **Conclusions:** Supratarsal injection of Triamcinolone is safe, cost-effective and simple way of management of VKC.

Key words: Vernal Keratoconjunctivitis, cobble-stone papillae, Supratarsal, Triamcinolone injection.

Article Citation

Muhammad L, Qadir A, Iqbal A, Khan U, Vernal Keratoconjunctivitis; Supratarsal injection of triamcinolone. Professional Med J 2013;20(3): 399-402.

INTRODUCTION

Vernal Keratoconjunctivitis (VKC) is a bilateral, recurrent, interstitial inflammation of the conjunctiva¹ which affects children and young adults². About 1-2.5% of ophthalmology visits in outpatient clinics have VKC^{3,4}. More than 80% of patients are below 18 years of age⁵. Boys are affected twice more than girls⁶. Wide range of therapeutic modalities are currently available for the treatment of VKC. Most of the patients show mild symptoms, usually relieved by over the counter medication. More severe cases may need topical nonsteroidal anti inflammatory drugs (NSAID), or topical steroids, mast cell stabilizers, or even oral steroids and cyclosporin. More recently, topical ketotifen fumarate, mipragoside levocabastatine hydrochloride, Iodoxamide tromethamine, excimer laser, and surgical therapy have also been used⁷⁻¹¹. However, most of these newer treatment modalities have been found relatively ineffective. Systemic therapies with high doses of aspirin relieve some signs and symptoms, but tarsal cobblestone papillae and

shield ulcers remain relatively unaffected¹². More recently, successful use of supratarsal injection of corticosteroids has been reported in severe and refractory VKC^{13,14}. Triamcinolone is one of the effective corticosteroid in VKC and its role in ocular therapeutics is increasing day by day¹⁵. We have conducted this study in our department to find out safety and effectiveness of supratarsal injection of Triamcinolone in VKC. We also made an attempt to gauge its effectiveness by the age of the patient and by the severity and the duration of disease.

MATERIAL AND METHODS

This prospective, uncontrolled trial was conducted from June 2009 to January 2010 in the Department of Ophthalmology KMC IMS Hospital KDA Kohat. Two hundred and seventy five eyes of one hundred fifty patients of VKC, of both gender and age group from 5–40 years were included in the study. Patients with glaucoma, or steroid responder, post-herpetic corneal scar, active infection of cornea or conjunctiva, tightly

closed eyelids, patients who lost follow-up, and patients unwilling to be enrolled in this study were excluded from the study. The patients were enrolled and given the first Supratarsal injection of Triamcinolone. Their record was maintained and all the patients were followed up for evaluating about the effectiveness and safety of triamcinolone side effects of therapy.

Every patient was explained about the course of treatment.

- Informed written consent was taken.
- Conjunctiva was anesthetized with Proparacaine 0.5% eye drops.
- Upper eyelid was everted.
- One ml syringe with 26 gauge needle was taken.
- Patient was asked to look down.

Needle was inserted through conjunctiva.

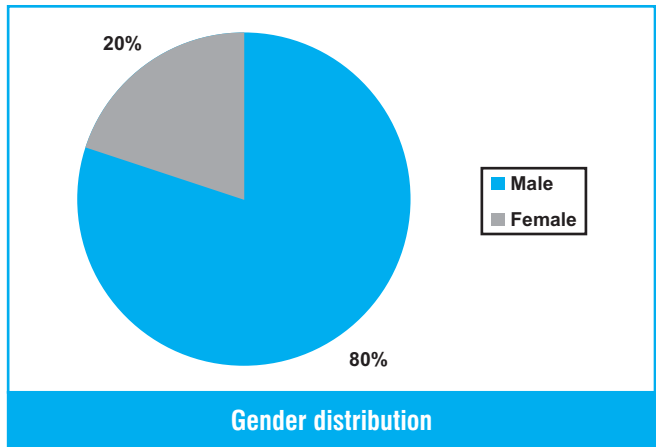
One ml of Triamcinolone acetonide 40 mg/ml (Kenacort – A) was injected at multiple sites at the upper tarsal plate. Pressure pad was applied for 3 to 5 minutes. Topical combination of tobramycin 0.3% and dexamethasone 0.1% eye drops were instilled after the injection.

RESULTS

We treated two hundred and seventy five eyes of one hundred fifty patients, out of which 80% were males. Mean age was 14 years (range: 5—40 years). All of the patients had itching of eyes, redness, watering, photophobia, cobble-stone papillae and Tranta's dots. The patients were selected for injections were common in the age group 11 – 15 years which were 60 in numbers, followed by age group 5 – 10, 24 patients and age group 16 – 20 years were 22 patients. In table I. Gender distribution shows that the disease is more common in males. Single or multiple injections depend upon the severity of the disease were given to control the disease. Repeat injections were given 4 to 6

months apart (average 5 months). 75 patients responded (decrease sign and symptom) to a single injection followed by 40 patients who responded after third injection, while 30 patient responded to two injection of Triamcinolone acetonide. shown in table II.

Mean duration of disease was 27 weeks (Range: 4 weeks to 10 months). After supratarsal injection patients were asked for follow up visits after 1 day, 1 week, 1 month, 3 months, 6 months and 10 months. During follow-up history and clinical examination were recorded at each visit. Duration between repeat injections was more in patients who avoided rubbing and sunlight. Transient redness was most common among the side effects of injection therapy.



Age range	Number of patients
5 - 10	24
11 - 15	60
16 - 20	22
21 - 25	17
26 - 30	13
31 - 35	08
36 - 40	06
Total	150

Table-I. Age distribution (N-150)

Number of injections	Number of patients
Single injection	75
Twice injection	35
Thrice injection	40
Total	150

Table-II. Number of injection to a single patient: (N-150)

DISCUSSION

VKC has got wide geographical distribution. It is more common in teenagers, especially boys. Mostly it presents mild symptoms and does not attract much attention of either patient or the doctor. But severe symptoms are really disturbing to the patient as well as treatment of severe VKC is a difficult problem for the ophthalmologist because these patients develop disease related and/or iatrogenic complications¹⁶. Wide range of therapeutic modalities are currently available for the treatment of VKC. Topical nonsteroidal anti inflammatory drugs (NSAID), or topical steroids, mast cell stabilizers, or even oral steroids and cyclosporine have been used previously. More recently, topical ketotifen fumarate, mipragoside levocabastatine hydrochloride, Iodoxamide tromethamine, excimer laser, and surgical therapy have also been used⁷⁻¹¹. Holsclaw et al reported successful use of Supratarsal injection of steroid in VKC¹³. Saini et al¹⁴ also observed similar results. Satvir Singh studied the effectiveness and side effects of supratarsal injection of steroids and labeled it as safe therapy⁵. Recent studies have also shown that Triamcinolone is equally effective than any other corticosteroid given as supratarsal injection¹⁴⁻¹⁶. Our study shows its 100% effectiveness although it needed multiple injections. Response was independent of age of the patient and of the severity and duration of disease. Side effects were infrequent and well tolerable. Recurrence was seen in all cases.

Although Triamcinolone given as a Supratarsal injection is effective in severe VKC yet as we have seen

in this study that VKC recurred in all cases. So the curative treatment for VKC is still elusive. It needs further experimentation and research on the subject.

CONCLUSIONS

Supratarsal injection of Triamcinolone is safe, cost effective and simple way of management of VKC. It is worth-considering in patients with poor compliance to drugs and those showing side effects/complications.

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Article received on: 09/01/2013
Accepted for Publication: 27/01/2013
Received after proof reading: 15/03/2013

*A man will fight harder for his interests
than for his rights.*

Napoleon Bona parte