Original Article

Supratarsal Injection of Triamcinolone for Vernal Keratoconjunctivitis

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Purpose: To find out safety and effectiveness of supratarsal injection of Triamcinolone in Vernal Keratoconjunctivitis (VKC).

Material and Methods: This study was conducted from 1st February 2006 to 15th July 2007 in Department of Ophthalmology BVH, Bahawalpur. Eight hundred and eighty eyes of 440 diagnosed patients of VKC, of either sex and all ages were included in the study. Patients with raised IOP, post-herpetic corneal scar, tightly closed eyelids were excluded from the study. It was a prospective, uncontrolled trial. The patients were enrolled and given the first supratarsal injection of Triamcinolone. Their record was maintained and all the patients were followed up for obtaining the data about effectiveness and side effects of therapy.

Results: We treated 880 eyes of 440 patients, out of which 81.82% were males. Mean age was 16 years (Range: 2—42 years). All of the patients had itching of eyes and the rest of the clinical features were redness, cobble-stone papillae and Tranta's dots. Mean duration of disease was 18 weeks (Range: 4 weeks to 6 months). Patients were followed up and multiple injections were given to control the disease. Transient redness was most common among the side effects of injection therapy. Study shows 100% effectiveness of supratarsal injection of Triamcinolone acetonide in VKC although recurrence was seen.

Conclusions: Supratarsal injection of Triamcinolone is safe, cost-effective and simple way of management of VKC. Curative treatment for VKC still remains elusive.

VKC is a bilateral, recurrent, interstitial inflammation of the conjunctiva[1] which affects children and young adults[2]. About 1- 2.5% of ophthalmology visits in outpatient clinics have VKC[3,4]. More than 80% of patients are below 18 years of age[5]. Boys are affected twice more than girls[6]. 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, lodoxamide tromethamine, excimer laser, and surgical therapy have also been used[7-11].

However, most of these newer treatment modalities have been found relatively ineffective. Systemic therapy with high doses of aspirin relieve some signs and symptoms, but tarsal cobblestone papillae and shield ulcers remain relatively unaffected[12]. 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 day[15]. We have conducted this study 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 study was conducted from 1st February 2006 to 15th July 2007 in Department of Ophthalmology BVH, Bahawalpur. Eight hundred and eighty eyes of 440 diagnosed patients of VKC, of either sex and all ages were included in the study. Patients with raised IOP post-herpetic corneal scar and tightly closed eyelids were excluded from the study.

It was a prospective, uncontrolled trial. The patients were enrolled and given the first supratarsal injection of Triamcinolone. Their record was maintained and all the patients were followed up for obtaining the data about effectiveness and side effects of therapy. Following procedure of supratarsal injection was adopted as shown in Fig. 1-7.

Fig. 1

Fig. 2.

Fig. 3.

Fig. 4.

Fig. 5.

Fig. 6.

Fig. 7.

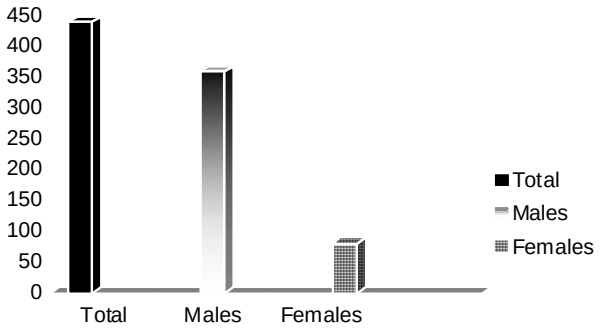

Fig 8: Sex distribution

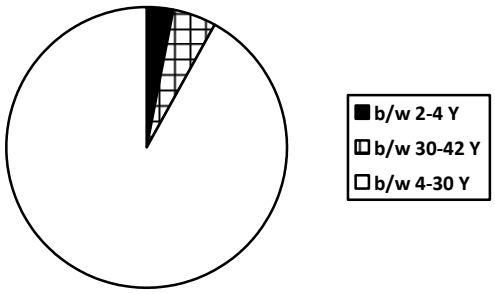

Fig. 9: Age distribution

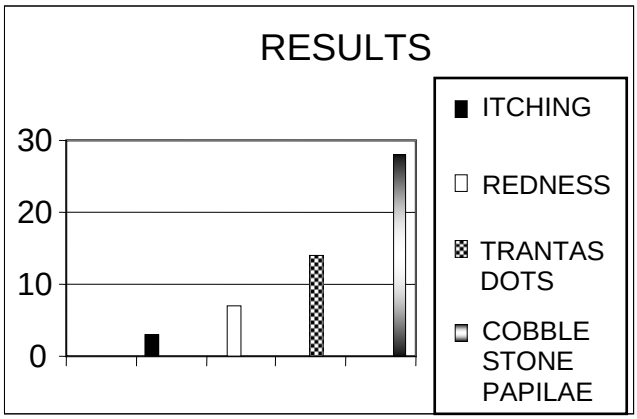

Fig 10: Results

- Every patient was explained about the course of treatment.
- Informed consent was taken.
- Conjunctiva was anesthetized with Proparacaine 0.5% eye drops.
- Upper eyelid was everted.
- One ml syringe with 26 gauge needle was used.
- Patient was asked to look down.
- Needle was inserted through conjunctiva.
- One ml of Triamcinolone acetonide 40 mg/ml (Kenacortr – A) was injected.
- Pressure by pad was applied for 2 to 3 minutes.
- Topical combination drops were then instilled.

RESULTS

Mean duration of disease was 18 weeks (Range: 4 weeks to 6 months). Patients were asked for follow up visits after 1 day, 1 week, 1 month, 6 months and 1 year. Injection was repeated at 24 to 72 hours on recurrence of symptoms. Multiple injections were given to control the disease. Repeat injections were given 4 to 12 months apart (average 4). 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.

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[16] because these patients develop disease related and/or iatrogenic complications. 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 cyclosporin have been used previously. More recently, topical ketotifen fumarate, mipragoside levocabastatine hydrochloride, lodoxamide tromethamine, excimer laser, and surgical therapy have also been used[7-11]. Holsclaw et al[13] reported successful use of supratarsal injection of steroid in VKC. Saini et al[14] also observed similar results. Satvir Singh studied the effectiveness and side effects of supratarsal injection of steroids and labelled it as safe therapy[5]. Recent studies have also shown that Triamcinolone is equally effective than any other corticosteroid given as supratarsal injection[14,16].

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.
- Curative treatment for VKC still remains elusive.

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