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COMPARATIVE STUDY OF 0.1% FLUOROMETHOLONE EYE DROPS VERSUS SUPRATARSAL INJECTION OF TRIAMCINOLONE ACETONIDE (20MG) IN THE TREATMENT OF PALPEBRAL TYPE OF VERNAL KERATOCONJUNCTIVITIS

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ABSTRACT: AIM: To compare the efficacy of 0.1% Fluorometholone eye drops versus supratarsal injection of Triamcinolone acetonide (20mg) in the treatment of palpebral type of vernal kerato conjunctivitis. **SETTINGS AND DESIGN:** Prospective study. **MATERIALS AND METHODS:** 60 patients with palpebral type of vernal kerato conjunctivitis were divided into 2 groups of 30 each. After an informed and written consent, 30 patients were treated with 0.1% Fluorometholone eye drops & 30 were treated with supratarsal injection of 0.5ml of Triamcinolone (20mg). All treated patients were followed up for a period of 4 weeks. Results were analysed with respect to symptoms and signs of improvement. **RESULTS:** Patients who were given supratarsal injection of Triamcinolone (20mg) showed effective therapeutic response in 1 to 2 weeks and patients who were given 0.1% Fluorometholone eye drops showed in 4 to 5 weeks. Patients with Triamcinolone showed higher rate of improvement of clinical response and low recurrence rate. **CONCLUSION:** Supratarsal injection of Triamcinolone (20mg) is an effective and safe method of treatment of refractory and severe cases of VKC.

KEYWORDS: Vernal keratoconjunctivitis, Fluorometholone, Triamcinolone acetonide, Supratarsal place.

INTRODUCTION: Vernal kerato conjunctivitis is a bilateral, recurrent, seasonal interstitial inflammation of the conjunctiva, which is frequently IgE/CMI mediated that occurs most commonly in warm weather in young males predisposed to atopy. The age at onset of the disease is generally from about 5 years, with 80% of the cases being younger than 14 years of age. About 1-2.5% of ophthalmology visits in outpatient departments have vernal kerato conjunctivitis.

VKC manifests itself in two overlapping forms: palpebral, limbal and combined form. Various therapeutic modalities for VKC include the conservative measures such as allergen avoidance, cold compresses & topical lubricants. Milder form of the disease can be treated with topical antihistaminics, mast cell stabilizers & combined preparations of antihistaminics & vasoconstrictors. More severe form of the disease may require NSAIDs, topical steroids, immune modulators like cyclosporine & tacrolimus. But these usual & routine modalities of therapy may not give satisfactory results in patients with giant papillae or corneal shield ulcer.

Currently, supratarsal injection of triamcinolone acetonide (20mg) is found to be beneficial in refractory cases of severe vernal kerato conjunctivitis. Our present study is intended to evaluate the efficacy of 0.1% topical fluorometholone eye drops & supratarsal injection of triamcinolone acetonide (20mg) by comparing the therapeutic response and absolute complications.

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MATERIALS & METHODS: SOURCE OF DATA: Sixty patients diagnosed to have palpebral type of VKC attending the outpatient Department, department of Ophthalmology, K. R. Hospital, attached To Mysore Medical College & Research Institute, Mysore fulfilling the inclusion criteria framed was included in the study.

Type of Study: Prospective type.

Duration of Study: August 2014 to January 2015.

Inclusion Criteria: All cases of palpebral type of vernal kerato conjunctivitis.

Exclusion Criteria: Other causes of allergic conjunctivitis, limbal and combined VKC.

Method of Study: Prospective analysis was done over a period of 6 months from August 2014 to January 2015. Sixty patients with palpebral type of VKC were divided into 2 Groups, with 30 patients in each group. Informed written consent was taken from All patients. Group A patients received topical 0.1% fluorometholone eye drops in A dosage of one drop 6 times/day for 2 weeks, which was gradually tapered & Stopped over a period of 4 weeks. Group B patients received supratarsal injection of 0.5ml Triamcinolone (20mg) followed by repeat injection after 1 month if required depending upon the therapeutic response.

Technique of Supratarsal Injection of Triamcinolone Acetonide: With the patient in supine position, the parts were painted with betadine & draped. One drop of proparacaine HCL 0.5% was instilled in the eye. After one minute the upper lid was everted gently then 0.5ml of triamcinolone acetonide was injected in the potential space between conjunctiva & Muller's muscle, 0.5 to 1mm superior to upper edge of tarsus with 2cc syringe with 26G needle in bevel up position, antibiotic eye drop was instilled and pad & bandage was applied for 1 hour.

RESULTS: Sixty patients with palpebral type of VKC were treated with 0.1% fluorometholone.

Eye drops & injection triamcinolone acetonide (20mg) at K. R. Hospital Mysore & Were followed up for a period of 4 weeks. Fourty two (70%) patients were male and 18 (30%)were female with age group between 8-15 years with mean age of 11.5 years.

Symptoms	Number (%)
Itching	60(100%)
Lacrimation	54(90%)
Photophobia	52(86.2%)
Pain	51(85%)
Mucus discharge	40(66.6%)

Table 1: Frequency of symptoms in prior to treatment in 60 patients with palpebral type of VKC in K.R. Hospital Mysore in 2014

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Signs	Number (%)
Hyperemia	60(100%)
Giant papillae	30(50%)
Thickening of limbus	15(25%)
SPK	20(33.3%)
Shield's ulcer	05(8.3%)

Table 2: Frequency of ocular signs prior to treatment in 60 patients with severe VKC, in K. R. Hospital, in 2014

The patients were followed up for a period of 4 weeks to check for the effective therapeutic response with the two modalities of treatment. In our study the patients were symptomatically better and reduced papillary reaction was seen in 48 cases (80%) within 1 to 2 weeks following supratarsal injection of 0.5ml Triamcinolone (20mg) compared to 6 cases (10%) in 4 to 5 weeks with topical 0.1% Fluorometholone eye drops.

DISCUSSION: Treatment of VKC is a difficult problem both for the patient & the physician. Due to the debilitating symptoms and signs of VKC, patients need effective treatment. Previously, severe cases of VKC were treated with cryotherapy or surgical excision of giant papillae that resulted in severe scarring and malfunction of the lid.¹ While VKC has wide geographical distribution, it is common in the tropics, including Mediterranean area, Balkans, North & South Africa, and the Indian subcontinent. Some patients develop severe recalcitrant disease which is unresponsive to standard treatment.

These patients develop disease related and/or iatrogenic complications with irreparable ocular morbidity and even blindness.² In the present study we found out that 2 doses of supratarsal injection of Triamcinolone was beneficial in palpebral type of VKC compared to topical 0.1% Fluorometholone eye drops with which most patients in our rural set up showed poor compliance to topical instillation of steroids because of long term therapy. Douglas et al in 1995 showed that they had no recurrence of VKC after short or intermediate acting steroid injection in supratarsal areas.³ Sing et al conducted a study on supratarsal injection of corticosteroids in the treatment of refractory vernal kerato conjunctivitis. They found significant improvement in all patients within three days of the supratarsal corticosteroid injection & this response was independent of the severity or duration of disease.⁴

A study conducted by Davood Aghadoost et al, showed that relief of symptoms (Burning, itching, lacrimation, and photophobia, ropy discharge) was dramatically seen in all patients, in first few days. Size of giant papillae, thickening of limbus, vascularisation of cornea decreased in the first month. No

Complication was noticed during the follow up. All patients tolerated the treatment well.⁵

Holsclaw et al in 1996 reported their initial experience in managing 12 refractory cases of VKC with supratarsal injection of corticosteroids. They noticed significant symptomatic and clinical improvement in all patients irrespective of type of corticosteroid used. Only one patient developed elevated IOP.³

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CONCLUSIONS: Conventional methods of treatment may not be effective in patients with giant papillae/corneal shield ulcer. With 0.1% Fluorometholone eye drops rural patients showed poor compliance because of long term therapy. Therefore in our study we found out that supratarsal injection of 0.5ml Triamcinolone (20mg) is well tolerated in young patients with prompt symptomatic relief, higher rate of improvement of clinical response, low recurrence rate with lack of complication suggest that this therapeutic modality is an effective and safe method of treatment of refractory and severe cases of VKC.

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