

Available online on 15.09.2014 at <http://jddtonline.info>**Journal of Drug Delivery and Therapeutics**

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RESEARCH ARTICLE

HISTOPATHOLOGICAL EXAMINATION OF CONJUNCTIVAL SCRAPPING – AN OBJECTIVE METHOD TO KNOW THE EFFICACY OF DRUG IN VERNAL KERATO CONJUNCTIVITIS*Dr Mohammed Ather¹, Dr Nasreen²¹Gandhi Medical College, Secunderabad, Telangana State, India²Osmania Medical College, Hyderabad, Telangana State, India**ABSTRACT:**

Aim: The study aims to test the efficiency of FML and Azelastine in the treatment of vernal kerato conjunctivitis by objective method of doing HPE of conjunctival scrapping before and 4 weeks after treatment with these two drugs.

Material and method: A double blind randomised study conducted at a tertiary eye care centre in Hyderabad with a study period from July 2004 and July 2005. 100 patients of vernal kerato conjunctivitis were randomly divided in 2 groups of 50 each. Group 1 was given FML eye drops 4 times daily for 4 weeks. Group 2 was given azelastine eye drops 4 times daily for 4 weeks. All patients with VKC were included in the study. Patients with other eye disorders, corneal involvement, glaucoma and patients who received treatment within 1 month were excluded. HPE of conjunctival scrapping's was done in both groups.

Result: At the end of four weeks HPE was repeated 50 patients in group 1 showed absence of eosinophils and mast cells, whereas in group 2 only 15 cases showed absence of eosinophils and mast cells.

Observation: Statistic chi square test show P value of 0 in group 1 and 0.3 in group 2 which is significant and proves that FML is superior to azelastine in the treatment of VKC.

INTRODUCTION:

Spring Catarrh is also known as vernal conjunctivitis¹. It is a type of bilateral seasonal allergic conjunctivitis. It is common in warm temperate climates during spring and summer season. Incidence is most common in young adults and children².

Spring catarrh is characterised by symptoms like itching, watering, foreign body sensation and Cobblestone like hypertrophied papillae on palpebral conjunctiva and limbal nodules with intense ropy and soapy discharge³.

Recommended therapies include topical steroids like prednisolone, FML and mast cell stabilisers and H₁ receptors antagonist like azelastine, sodium chromoglycate^{4,5}.

All studies in literature show that patient will be relieved of symptoms but signs will persist though in reduced intensity. So efficacy of drug is to be gauged by grading the symptoms, which is subjective and varies from patient to patient⁶.



Fig 1: Limbal Nodules

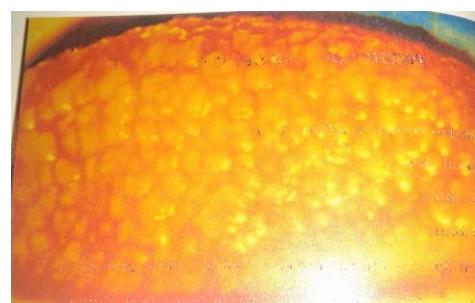


Fig 2: Cobble stone papillae

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Aims and Objectives:

Aims and Objectives of current study is to know the efficacy of FML and azelastine in spring catarrh by objective method of doing H.P.E of conjunctival scraping before and after treatment with the drug.

MATERIALS AND METHODS:

This is a randomised double blind study conducted on 100 patients of spring catarrh attended by outpatient department of Sarojini Devi eye hospital which is a tertiary eye care centre in Hyderabad. The study was conducted from July 2004 to July 2005. All patients were clinically diagnosed as spring catarrh by an experienced ophthalmologist after doing slit lamp exam. Patients were in the age group of 10 – 30 years, both males and females were selected in study.

Inclusion criteria:

All patients with spring catarrh who didn't receive any medication were included.

Exclusion criteria:

1. Patients of spring catarrh who received treatment within one month were excluded.
2. Patient with corneal involvement were excluded⁷.
3. Patients with glaucoma were excluded⁷.
4. Patients with any other eye disease were also excluded.
5. Patients who lost follow up were excluded from study.

Patients were randomly divided into two groups of fifty each both groups were subjected to conjunctival scraping after anaesthetizing conjunctiva with 4% Xylocaine drops.

Method of staining:

- Conjunctival scraping were spread on glass slide and allowed to dry⁸.
- Slide was flooded with Lieshmann stain. After two minutes double the volume of distilled water was poured on the slide and allowed to stay for 5 – 7 minutes.
- Then slide is washed with buffered water till it appears pink.
- Slide is allowed to dry and studied under microscope in high power field.
- High power field showed 25 – 30 epithelial cells from conjunctiva. 3- 4 eosinophils and 1 – 2 mast cells⁹.
- After doing conjunctival scraping Group 1 receives fluorometholone 0.25 % 1 drop 4 times daily for four weeks.
- Group 2 receives azelastine 0.05% 1 drop 4 times a day for 4 weeks.
- Both patient and pathologist were unaware of the drug they were receiving.
- At the end of four weeks again conjunctival scraping were taken for H.P.E.

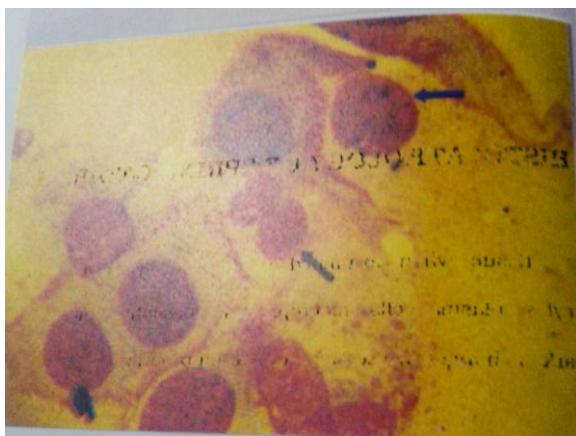


Fig 3: Arrow showing eosinophil with bilobbed Nucleus

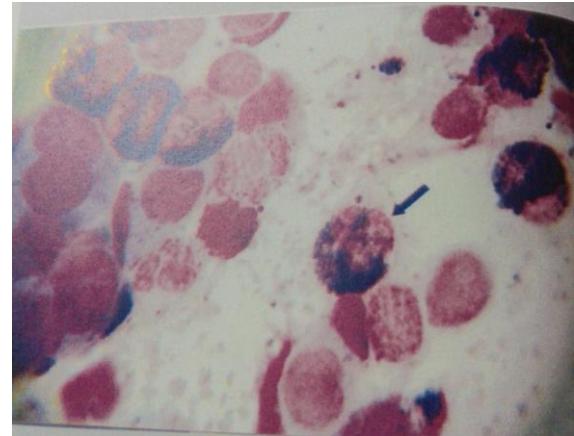


Fig 4: Arrow showing mast cell granules in Cytoplasm.

RESULT:

Group 1 who received FML showed absence of eosinophils and mast cells at the end of four weeks in all 50 cases.

Group 2 who received azelastine showed presence of eosinophils and mast cells in 35 cases (i.e. more than 50% of the cases).

DISCUSSION:

After 4 weeks of treatment with FML and azelastine the following observations were made. Group 1 which received FML was relieved of symptoms like itching, foreign body sensation and watering. There was relief from signs like reduction in size of limbal nodules and papillae. Group 2 which received azelastine showed less relief from symptoms and signs.



Fig 5: Before treatment showing eosinophil and mast cells

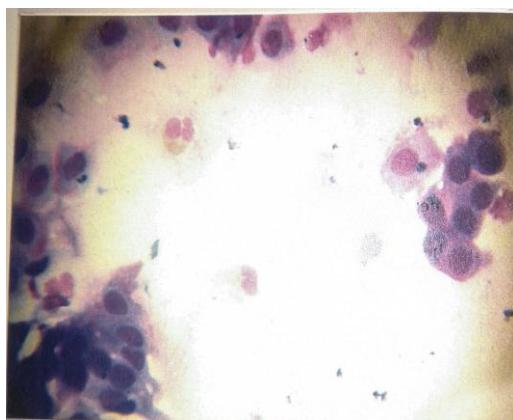


Fig 7: Four weeks after treatment with azelastine Still showing eosinophils.

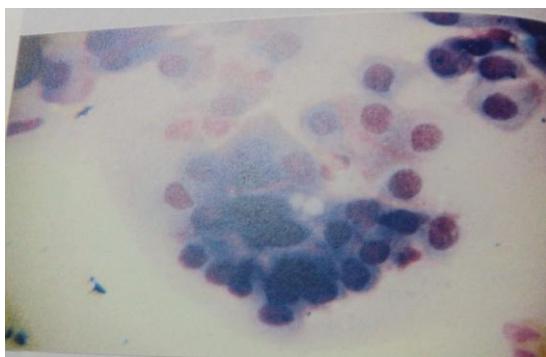


Fig 6: Four weeks after treatment with FML Absent eosinophil and mast cells.

CONCLUSION:

This study shows that FML is Superior to azelastine for managing symptoms and signs of spring catarrh. FML also scores over azelastine objectively by showing absence of eosinophils and mast cells in H.P.E. H.P.E can be used as objective method to test the efficacy of drug while treating spring catarrh. Statistically it shows group 1 has P value of 0 and group 2 has P value of 0.3.

Group 1:

Males	45
Females	5

Group2:

Males	45
Females	5

Group 1:

Number of cases	Number showing absence of eosinophils and mast cells
50	50

Group 2:

Number of cases	Number showing absence of eosinophils and mast cells
50	15

It is significant that drug used in group 1 is superior to drug used in group 2.

Note: Financial Interest Nil.

REFERENCES:

1. Duke elders, Leigh AG; Diseases of the outer eye, System of ophthalmology vol VIII Ed. St. Louis Morbyco 1965. 573.
2. L.C Dutta, Incidence of spring catarrh. Ocular allergies Review 2: 2000, 57.
3. Kansky Jack J, Clinical Features of VKC.4th Ed, Butterworth heinemann, 2000, 66-68.
4. International journal of Bio medical research. 10. 7439/ijbr.
5. Stefano et al ophthalmology vol 107, pages 1157 – 1163 June 2000.
6. Tabbara Alkharashi, Efficacy of FML in treatment of spring catarrh BJO 1999. Feb. 83 (2):180-184.
7. Ocular Complications of VKC. Canadian Journal of ophthalmology 1999, 34:88-92.
8. Essentials of clinical pathology, Sirish M Kawthalkar , Ed 2010 , Jaypee Bros , Pg 203.
9. Eye (London) 2004 April;18(4):345-351.