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ORIGINAL ARTICLE

Comparison of management of conjunctivitis

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ABSTRACT:

Background: A frequent eye ailment that represents 1% of all primary care visits is conjunctivitis. The present study was conducted to compare treatment modality in patients with conjunctivitis. **Materials & Methods:** 80 patients of conjunctivitis of both genderswere divided into 2 groups of 40 each. Group I patients were given combination of neomycin sulphate 3500 lU/mL, polymyxin-B sulphate 6000 lU/mL with dexamethasone 0.1% and group II were given 0.1% dexamethasone. Baseline ocular signs and symptoms were noted for each patient. Itching, lacrimation, photophobia, and foreign body sensation were recorded at baseline and 7th day. **Results:** Group I had 22 males and 18 females and group II had 17 males and 23 females. The mean score at baseline and 7th day for conjunctival discharge was 0.75 and 0.25 in group I and 0.59 and 0.31 in group II, for bulbar conjunctiva hyperaemia was 1.7 and 0.49 in group I and 0.79 and 0.28 in group II, for lacrimation was 1.07 and 0.59 in group I and1.00 and 0.47 group II, for foreign body sensation was 0.79 and 0.24 group I and 0.57 and 0.37 group II, for itching was 0.76 and 0.45 group I and 0.64 and 0.38 group II, for photophobia was 1.35 and 0.68 group I and 1.25 and 0.53 group II, for erythema was 1.49 and 0.64 group I and 1.52 and 0.69 in group II respectively. The difference was significant (P< 0.05). **Conclusion:** In order to effectively cure conjunctivitis and manage germs, it was more effective to utilize a fixed dose combination steroid-antibiotic medication.

Key words: Conjunctivitis, hyperaemia, steroid-antibiotic

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INTRODUCTION

A frequent eye ailment that represents 1% of all primary care visits is conjunctivitis. Either infectious or non-infectious conjunctivitis can occur. Bacterial or viral infections are infectious, whereas allergic, mechanical, toxic, immune-mediated, and neoplastic conditions are not.[1] One of the main causes of adult cases of acute infectious conjunctivitis is adenoviral conjunctivitis. Most infections resolve on their own and don't need to be treated with antibiotics. Although there isn't a recognized cure, topical corticosteroids can help reduce adenoviral conjunctivitis symptoms and, in more extreme situations, possibly avoid scarring. It comes with a heavy price tag in terms of symptoms and financial hardship.[2]

Whereas Maxidex just contains dexamethasone, Maxitrol is a multiple dosage ophthalmic suspension that also contains neomycin, polymyxin B sulphates, and dexamethasone.3. Neomycin sulfate is generally ineffective against gram-negative pathogens, such as Pseudomonas aeruginosa, but it exhibits a broad antibacterial spectrum when it comes to gram-positive species. When it comes to Pseudomonas aeruginosa and other gram-negative bacteria, polymyxin B sulphate is effective.[3] All combined therapy are unpleasant, but combinations of antibiotics and steroid eye drops are particularly unfavorable for multiple reasons. When antibiotic therapy is not needed, there is a risk that the patient will become resistant to the medication and not react when an antibiotic is desperately needed.The combination of neomycin and polymyxin B is considered to be synergistic.[4,5] The present study was conducted to compare treatment modality in patients with conjunctivitis.

MATERIALS & METHODS

The present study comprised of 80 patients of conjunctivitis of both genders. All gave their written consent to participate in the study.

Data such as name, age, gender etc. was recorded. Patients were divided into 2 groups of 40 each. Group I patients were given combination of neomycin sulphate 3500 lU/mL, polymyxin-B sulphate 6000 lU/mL with dexamethasone 0.1% and group II were given 0.1% dexamethasone. Baseline ocular signs and symptoms were noted for each patient. Itching, lacrimation, photophobia, and foreign body sensation were among the parameters that were noted. Results thus obtained were subjected to statistical analysis. P value less than 0.05 was considered significant.

RESULTS

Table I Distribution of patients

Groups	Group I	Group II
M:F	22:18	17:23

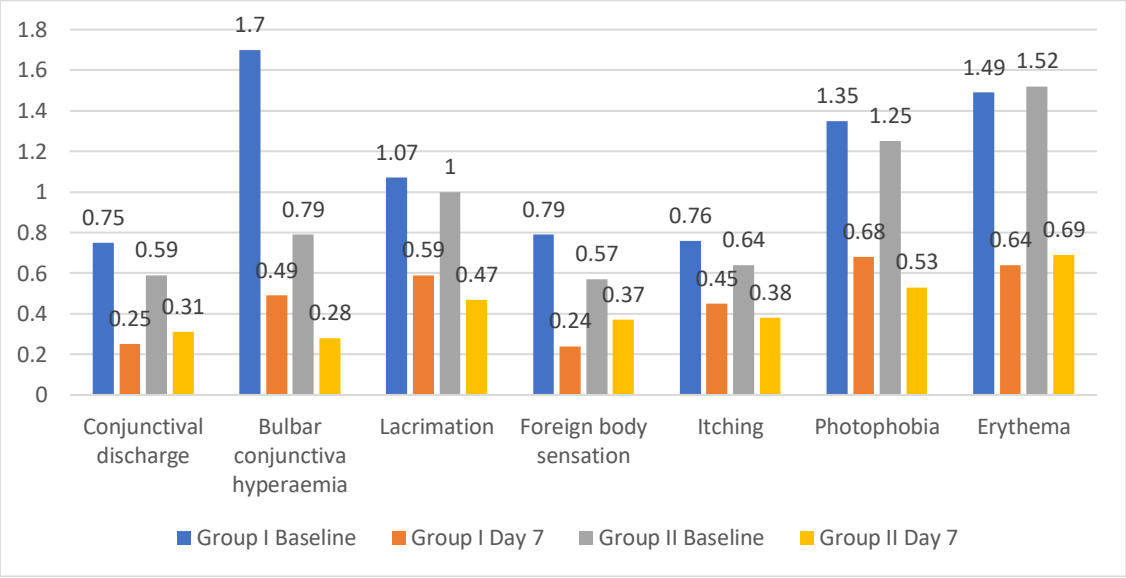
Table I shows that group I had 22 males and 18 females and group II had 17 males and 23 females.

Table II Assessment of symptoms at baseline and 7th day

Symptoms	Group I		Group II		P value
	Baseline	Day 7	Baseline	Day 7	0.01
Conjunctival discharge	0.75	0.25	0.59	0.31	
Bulbar conjunctiva hyperaemia	1.7	0.49	0.79	0.28	
Lacrimation	1.07	0.59	1.00	0.47	
Foreign body sensation	0.79	0.24	0.57	0.37	
Itching	0.76	0.45	0.64	0.38	
Photophobia	1.35	0.68	1.25	0.53	
Erythema	1.49	0.64	1.52	0.69	

Table II, graph I shows that the mean score at baseline and 7th day for conjunctival discharge was 0.75 and 0.25 in group I and 0.59 and 0.31 in group II, for bulbar conjunctiva hyperaemia was 1.7 and 0.49 in group I and 0.79 and 0.28 in group II, for lacrimation was 1.07 and 0.59 in group I and1.00 and 0.47 group II, for foreign body sensation was 0.79 and 0.24 group I and 0.57 and 0.37 group II, for itching was 0.76 and 0.45 group I and 0.64 and 0.38 group II, for photophobia was 1.35 and 0.68 group I and 1.25 and 0.53 group II, for erythema was 1.49 and 0.64 group I and 1.52 and 0.69 in group II respectively. The difference was significant (P< 0.05).

Graph I Assessment of symptoms at baseline and 7th day



DISCUSSION

The symptoms of acute and chronic bacterial superficial ocular inflammation, which include burning, itching, and irritation of the eyelids, are prevalent.[6] In addition to changes to the ocular surface, the accompanying presence of greasy or dry scales on the margins of the upper and lower lids is a direct result of bacterial colonization and secondary immune-mediated events.[7] Years may pass between episodes of chronic disease, particularly blepharitis, necessitating protracted treatment.5. Although topical antibacterial therapy is normally chosen due to its shorter infectious duration and speedier cure of clinical signs and symptoms, mild bacterial conjunctivitis usually resolves on its own.[8,9] Treatment for allergic conjunctivitis usually consists of antihistamines and mast cell stabilizers; however, topical corticosteroids may be used if symptoms worsen. Corticosteroidsare extensively used to treat ocular inflammatory conditions and are among the most prescribed class of drugs in ophthalmology.[10]The present study was conducted to compare treatment modality in patients with conjunctivitis.

We found that group I had 22 males and 18 females and group II had 17 males and 23 females. In 95 patients with bacterial blepharitis or conjunctivitis, Shulman et al[11]compared topical Maxitrol (neomycin sulphate 3500 lU/mL, polymyxin-B sulfate 6000 lU/mL with dexamethasone 0.1%) with those of Maxidex (dexamethasone 0.1% alone). Most patients (N=80) suffered from persistent blepharitis. Bacterial counts were reduced by 90% and bacterial elimination by 50% after receiving Maxitrol treatment as opposed to 34% and 17% with Maxidex. While both treatments were equally successful in relieving other ocular signs and symptoms, the reduction in conjunctival discharge that resulted from Maxitrol treatment was much greater than that of Maxidex treatment. In treating patients with chronic blepharitis and conjunctivitis, it was found that using a fixed dose combination steroid-antibiotic medication was more beneficial for

bacterial control and therapeutic efficacy thansteroid alone.

We found that the mean score at baseline and 7th day for conjunctival discharge was 0.75 and 0.25 in group I and 0.59 and 0.31 in group II, for bulbar conjunctiva hyperaemia was 1.7 and 0.49 in group I and 0.79 and 0.28 in group II, for lacrimation was 1.07 and 0.59 in group I and1.00 and 0.47 group II, for foreign body sensation was 0.79 and 0.24 group I and 0.57 and 0.37 group II, for itching was 0.76 and 0.45 group I and 0.64 and 0.38 group II, for photophobia was 1.35 and 0.68 group I and 1.25 and 0.53 group II, for erythema was 1.49 and 0.64 group I and 1.52 and 0.69 in group II respectively. Jonisch et al[12] in their study of 5,283 patients encounters for conjunctivitis, 3,841 (72.7%) resulted in an ophthalmic antibiotic prescription. Concurrent diagnosis with acute otitis media (adjusted odds ratio [aOR] 0.20 (95% CI, 0.16-0.25) and later study year (2018-aOR = 0.76 [95% CI, 0.65-0.89]; 2019- aOR = 0.57 [95% CI, 0.48-0.67]) were associated with reduced odds of prescribing. Compared with those evaluated in pediatric clinics, patients evaluated in family medicine (aOR = 0.69 [95% CI, 0.58-0.83]) or optometry/ophthalmology clinics (aOR = 0.06 [95% CI, 0.02-0.14]) were less likely to have antibiotics prescribed, whereas, patients evaluated via telephone had a 5.43 (95% CI, 3.97-7.42) greater odds of being prescribed ophthalmic antibiotics.

CONCLUSION

Authors found that in order to effectively cure conjunctivitis and manage germs, it was more effective to utilize a fixed dose combination steroid-antibiotic medication.

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