

ORIGINAL ARTICLE

A comparative study of olopatadine and bepotastine in cases of allergic conjunctivitis

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ABSTRACT:

Background: Ocular allergy is a commonly encountered pathology in clinical practice, with an increase in number of patients noticed in the last decade. The present study compared olopatadine and bepotastine in cases of allergic conjunctivitis. **Materials & Methods:** The present study was conducted on 68 patients of allergic conjunctivitis of both genders. Patients were divided into 2 groups. Group I were given topical 0.1% Olopatadine eyedrops BD and group II were given topical 1.5% Bepotastine eyedrops BD. Ocular redness and discharge were scored using 5-point scale (0–4), where 0 indicated no redness or no discharge and 4 indicated severe redness or copious discharge. **Results:** Out of 68 patients, males were 36 and females were 32. The mean itch score of group I at presentation was 2.3, in group II was 2.1, after 1 day was 1.4 and 1.3 in group I and group II respectively and at 1 week was 0.6 and 0.7 in group I and group II respectively. Redness was seen in 12 in group I and 10 in group II, discharge seen in 16 in group I and 15 in group II, foreign body sensation 20 in group I and 17 in group II and watering in 16 in group I and 18 in group II. The difference was non-significant ($P > 0.05$). **Conclusion:** Authors found that both Olopatadine and Bepotastine eyedrops are effective in cases of allergic conjunctivitis.

Key words: Allergic conjunctivitis, Bepotastine, Olopatadine

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INTRODUCTION

Ocular allergy is a commonly encountered pathology in clinical practice, with an increase in number of patients noticed in the last decade. Number of causes has been considered for this increase such as genetics, air pollution, pets, etc.¹ Various forms of conjunctivitis such as seasonal allergic conjunctivitis, perennial allergic conjunctivitis, vernal keratoconjunctivitis (VKC), atopic keratoconjunctivitis, and giant papillary conjunctivitis are included in ocular allergy, sharing some common markers of allergy. Seasonal and perennial conjunctivitis are in response to exposure to specific allergen and are predominantly mediated by IgE antibodies activating the mast cells. VKC is in response to non-specific allergens and is mediated mainly by Th2 cells, but mast cells and eosinophils also play a major role. Atopic conjunctivitis occurs in patients predisposed to atopy. It is mediated by both Th2 response and mast cells.²

Allergic conjunctivitis (AC) is a type of ocular allergy which in turn can be subdivided into seasonal allergic conjunctivitis (SAC) and perennial allergic conjunctivitis (PAC).³ This classification also includes

other conditions such as atopic keratoconjunctivitis (AKC), vernal keratoconjunctivitis (VKC), giant papillary conjunctivitis (GPC) and contact dermatitis conjunctivitis (CDC) – with different manifestations, different clinical courses, different immunopathological characteristics, and variable responses to treatment.⁴ Recently, introduced topical agents have both anti-histaminic and mast cell stabilization action. Their use can control acute symptoms and prevent relapses as well. These agents such as olopatadine, bepotastine, and alcaftadine are FDA approved for use in allergic conjunctivitis.⁵ The present study compared olopatadine and bepotastine in cases of allergic conjunctivitis.

MATERIALS & METHODS

The present study was conducted in the department of Ophthalmology. It comprised of 68 patients of allergic conjunctivitis of both genders. They were informed regarding the study and written consent was obtained. Ethical clearance was taken prior to the study. General information such as name, age, gender etc. was recorded. Patients were divided into 2 groups. Group I

were given topical 0.1% Olopatadine eyedrops BD and group II were given topical 1.5% Bepotastine eyedrops BD. Ocular redness and discharge were scored using 5-point scale (0–4), where 0 indicated no redness or no discharge and 4 indicated severe redness or copious

discharge. Patients were subjected to slit lamp examination. Results thus obtained were subjected to statistical analysis. P value less than 0.05 was considered significant.

RESULTS

Table I Distribution of patients

Total- 68		
Gender	Males	Females
Number	36	32

Table I, graph I shows that out of 68 patients, males were 36 and females were 32.

Graph I Distribution of patients

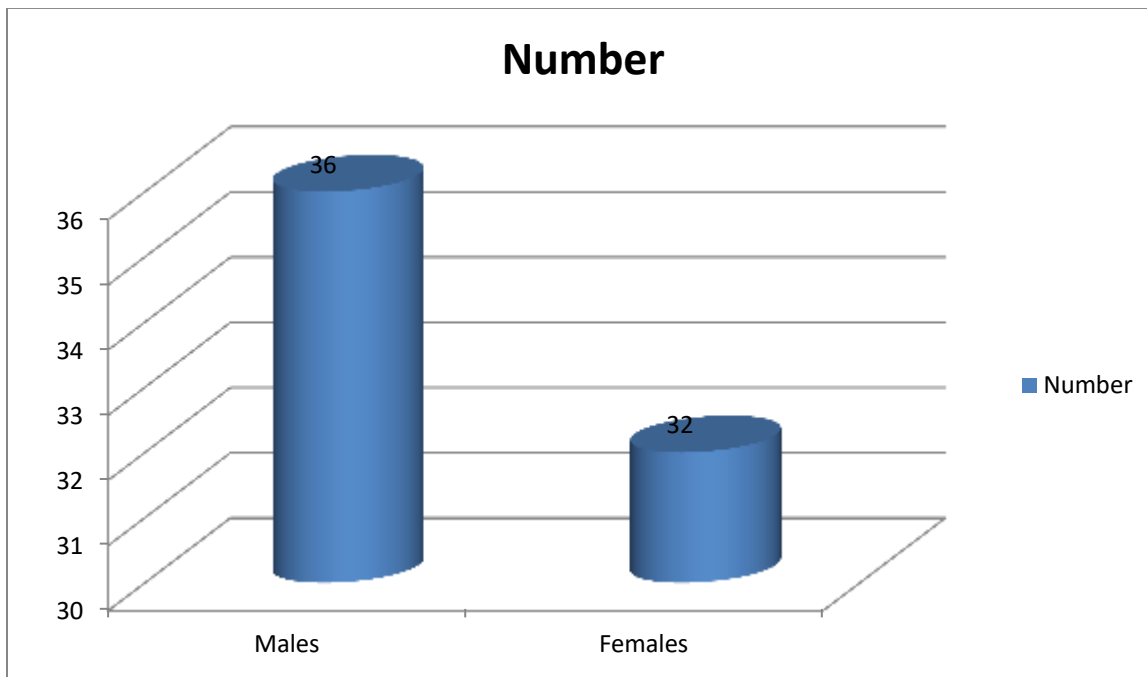


Table II Comparison of itch score in both groups

Itch score	Group I	Group II	P value
At presentation	2.3	2.1	0.05
1 day	1.4	1.3	
1 week	0.6	0.7	

Table II, graph shows that mean itch score of group I at presentation was 2.3, in group II was 2.1, after 1 day was 1.4 and 1.3 in group I and group II respectively and at 1 week was 0.6 and 0.7 in group I and group II respectively. The difference was non- significant (P> 0.05).

Graph II Comparison of itch score in both groups

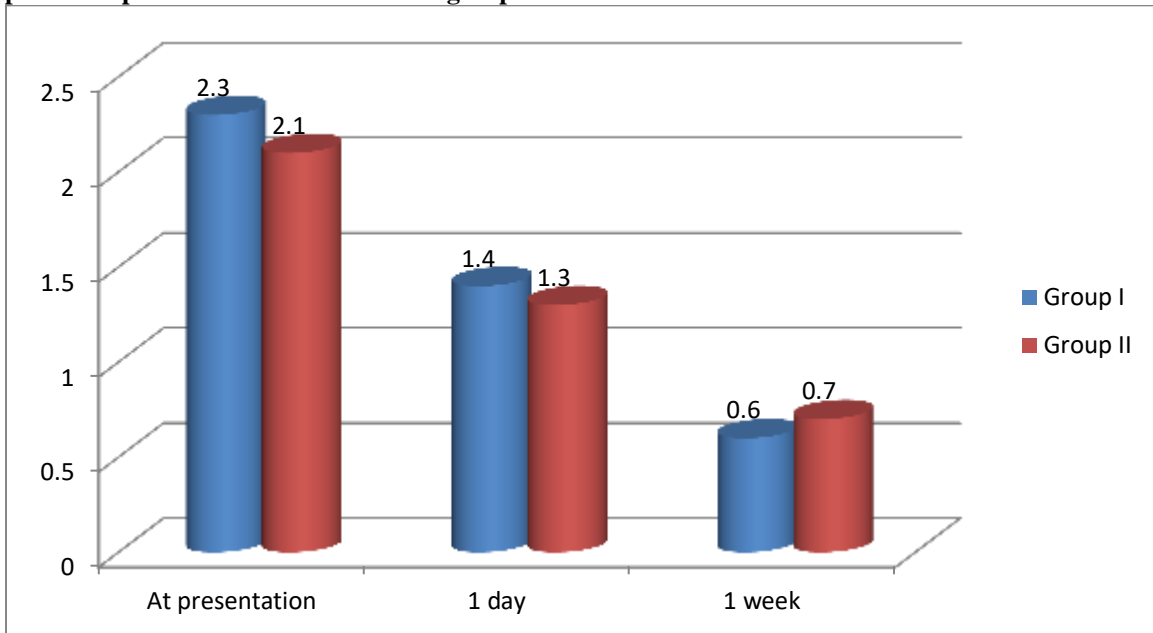
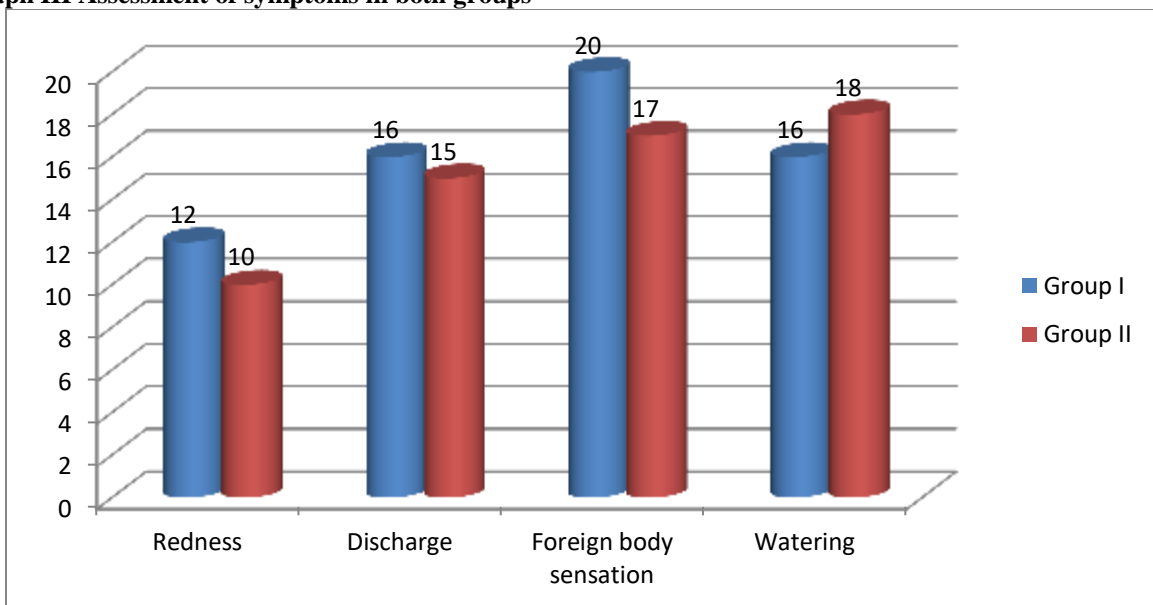


Table III Assessment of symptoms in both groups

Symptoms	Group I	Group II	P value
Redness	12	10	0.5
Discharge	16	15	0.9
Foreign body sensation	20	17	0.4
Watering	16	18	0.5

Table III, graph III shows that redness was seen in 12 in group I and 10 in group II, discharge seen in 16 in group I and 15 in group II, foreign body sensation 20 in group I and 17 in group II and watering in 16 in group I and 18 in group II. The difference was non-significant ($P > 0.05$).

Graph III Assessment of symptoms in both groups



DISCUSSION

AC can affect both children and adults, often coexisting with other allergic diseases such as asthma, atopic dermatitis or food allergy, though it is particularly associated to allergic rhinitis.⁶ Indeed, the term “rhinoconjunctivitis” is used in joint reference to both disorders, thereby complicating knowledge of each individual disease condition⁷. Although AC is regarded as the most benign form of all ocular allergic conditions, it may limit patient quality of life – affecting daily life activities and psychosocial relations, and generating important economic costs that vary from one country to another, depending on the existing healthcare model and the characteristics of the study sample. The quality of life of patients with AC can be affected by the intense itching, causing dryness sensation, vision fatigue and even reading difficulties.⁸ The present study compared olopatadine and bepotastine in cases of allergic conjunctivitis.

In present study, out of 68 patients, males were 36 and females were 32. The mean itch score of group I at presentation was 2.3, in group II was 2.1, after 1 day was 1.4 and 1.3 in group I and group II respectively and at 1 week was 0.6 and 0.7 in group I and group II respectively.

McCabe et al⁹ in their clinical trial enrolled 45 patients with 15 patients in each of the three groups. Patients with mild to moderate allergic conjunctivitis were sequentially assigned to respective groups, and relief of symptoms and signs were noted upto 1-month follow-up. All three topical medications faired almost equally in resolving symptoms of the patients with mild to moderate allergic conjunctivitis, and most of them reported complete relief after 1 week of use of medication. Few cases with limbal or palpebral papillae reported symptomatic relief after use of medication, but the resolution of these signs was not noted in all three groups.

We found that redness was seen in 12 in group I and 10 in group II, discharge seen in 16 in group I and 15 in group II, foreign body sensation 20 in group I and 17 in group II and watering in 16 in group I and 18 in group II. Allergic conjunctivitis is a bilateral and self-limiting inflammatory process. The inflammation is fundamentally caused by an IgE-mediated immune mechanism or immediate hypersensitivity mechanism resulting from direct contact of the allergen with the conjunctival surface in sensitized patients – triggering mast cell activation and the release of different

mediators. However, other mechanisms and mediators are also implicated in this inflammatory process, such as the neurogenic mechanism, adhesion molecules, and other systemic immune mechanisms that contribute to the appearance of the signs and symptoms that characterize the disease.¹⁰

CONCLUSION

Authors found that both Olopatadine and Bepotastine eyedrops are effective in cases of allergic conjunctivitis.

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