

**ORIGINAL RESEARCH**

# Comparison of management of allergic conjunctivitis

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**ABSTRACT**

**Background:** Over the past ten years, there has been a noticeable rise in the number of patients with ocular allergies, a condition that is frequently encountered in clinical practice. The present study compared management in cases of allergic conjunctivitis. **Materials & Methods:** 80 patients with allergic conjunctivitis of both genders were classified into 2 groups of 40 each. Group I patients were prescribed topical 0.1% Olopatadine eyedrops BID and group II patients were prescribed topical 0.25% Alcafatadine eyedrops BID. Itching, redness, discharge and foreign body sensation were recorded. **Results:** In group I, 14 patients and in group II 20 patients, on 1 day, 32 patients in group I and 36 patients in group II, and on 1 week, all 40 patients in both groups recovered from redness. The difference was significant ( $P < 0.05$ ). At 15 minutes, 1 day and 1 week, 7 patients in group I and 11 in group II, 35 in group I and 38 in group II and 40 in group I and II recovered foreign body sensation. The difference was non-significant ( $P > 0.05$ ). At 15 minutes, 4 patients in group I and 7 in group II, on 1 day, 17 in group I and 28 in group II and on 1 week, all 40 patients recovered from discharge. The difference was non-significant ( $P > 0.05$ ). **Conclusion:** Both medications were found to be efficient for allergic conjunctivitis patients.

**Key words:** Allergic conjunctivitis, management, redness

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**INTRODUCTION**

Over the past ten years, there has been a noticeable rise in the number of patients with ocular allergies, a condition that is frequently encountered in clinical practice. Numerous factors, including genetics, air pollution, pets, etc., have been proposed as explanations of this increase.<sup>1</sup> A type of ocular allergy, allergic conjunctivitis (AC) can be further classified into seasonal allergic conjunctivitis (SAC) and perennial allergic conjunctivitis (PAC) based on immunopathological mechanisms, as per the 2006 International Ocular Inflammation Society (IOIS) classification of ocular allergies. Other disorders like giant papillary conjunctivitis (GPC), contact dermatitis (CDC), atopic keratoconjunctivitis (AKC), and vernal keratoconjunctivitis (VKC) are also included in this categorization.<sup>2,3</sup>

The overall population is affected by 6%–30% of ocular allergies. In 30% to 70% of affected persons, allergic conjunctivitis (AC), which can be acute or chronic, is linked to allergy rhinitis (AR). The majority of these individuals experience a few bouts of mild conjunctivitis each year. Intense and persistent

symptoms may occur often in up to 30% of AC patients (particularly seasonal AC). The treatment of allergic conjunctivitis primarily involves avoiding allergens and lubricants.<sup>4</sup> Levocarbastine and other anti-histaminics diminish inflammation, whereas mast cell stabilizers stop mast cell degranulation in response to allergen exposure. Although topical corticosteroids are the most effective medications for managing inflammatory symptoms, using them is not without risk. Recently, topical medications with anti-histaminic and mast cell stabilizing properties have been developed.<sup>5</sup> The present study compared management in cases of allergic conjunctivitis.

**MATERIALS & METHODS**

The present study consisted of 80 patients with allergic conjunctivitis of both genders. All were informed regarding the study and their written consent was obtained.

Data such as name, age, gender etc. was recorded. Patients were divided into 2 groups of 40 each. Group I patients were prescribed topical 0.1% Olopatadine eyedrops and group II patients were prescribed topical 0.25% Alcafatadine eyedrops. A grading system was

employed, with 0 denoting no itching and 3 denoting a persistent want to scratch. Four points (0–3) were used to grade foreign body feeling and thirst, while five points (0–4) were used to evaluate ocular redness and discharge. A four-point scale (0–3) was used to grade the upper tarsal papillae in signs, with 0 denoting the absence of papillae and 3 denoting the

prevalence of big papillae. Similar to this, a 4-point grading system was used to assess limbal activity, with 0 denoting no limbal activity and 3 denoting Horner Tranta dots. Results were clubbed for statistical assessment. P value less than 0.05 was considered significant.

## RESULTS

**Table I Patients recovered from redness**

Duration	Group I	Group II	P value
15 minutes	14	20	0.04
1 day	32	36	
1 week	40	40	

Table I shows that in group I, 14 patients and in group II 20 patients, on 1 day, 32 patients in group I and 36 patients in group II, and on 1 week, all 40 patients in both groups recovered from redness. The difference was significant ( $P < 0.05$ ).

**Table II Patients recovered from foreign body sensation**

Duration	Group I	Group II	P value
15 minutes	7	11	0.82
1 day	35	38	
1 week	40	40	

Table II shows that at 15 minutes, 1 day and 1 week, 7 patients in group I and 11 in group II, 35 in group I and 38 in group II and 40 in group I and II recovered foreign body sensation. The difference was non-significant ( $P > 0.05$ ).

**Table III Patients recovered from discharge**

Duration	Group I	Group II	P value
15 minutes	4	7	0.69
1 day	17	28	
1 week	40	40	

Table III shows that at 15 minutes, 4 patients in group I and 7 in group II, on 1 day, 17 in group I and 28 in group II and on 1 week, all 40 patients recovered from discharge. The difference was non-significant ( $P > 0.05$ ).

## DISCUSSION

The conjunctiva is a thin, transparent membrane that lines the interior of the eyelids and the anterior portion of the sclera. Palpebral and bulbar are its two sections. The palpebral section lines the inner of the eyelids, whereas the bulbar portion starts at the edge of the cornea and covers the visible region of the sclera.<sup>6</sup> Conjunctivitis, an infection or inflammation of the conjunctiva, is defined by dilation of the conjunctival vessels, which causes hyperemia and edema of the conjunctiva, usually accompanied by discharge.<sup>7</sup> Conjunctival allergen challenge was used in the majority of previous investigations assessing the effectiveness of anti-allergy drugs. In this approach, participants have antigens injected into both eyes, and the effectiveness of anti-allergy drugs in easing symptoms is assessed afterwards.<sup>8,9</sup> This model can simulate an acute allergic reaction in a healthy person, but it won't precisely replicate an acute reaction in a patient who has a history of allergic conjunctivitis or in a patient who is predisposed to the condition.<sup>10,11,12</sup> The present study compared management in cases of allergic conjunctivitis.

We found that in group I, 14 patients and in group II 20 patients, on 1 day, 32 patients in group I and 36

patients in group II, and on 1 week, all 40 patients in both groups recovered from redness. 284 participants were registered by Greiner et al.<sup>13</sup> Researchers discovered that those receiving Alcaftadine had a mean overall itch score that was lower at 3, 5, and 7 minutes compared to those receiving olopatadine. For cases with mild to severe allergic conjunctivitis, Ono et al. (2013) evaluated the effectiveness of three topical medicines in 45 patients: 15 patients in each of the three groups; olopatadine (0.1%), bepotastine (1.5%), and alcaftadine (0.25%). Individuals diagnosed with mild to moderate allergic conjunctivitis were grouped according to when their symptoms and indications improved, and this was monitored for up to one month after the initial diagnosis. The patients with mild to moderate allergic conjunctivitis responded approximately equally to all three topical medicines, and the majority of them reported full relief after one week of treatment.

We observed that at 15 minutes, 1 day and 1 week, 7 patients in group I and 11 in group II, 35 in group I and 38 in group II and 40 in group I and II recovered foreign body sensation. At 15 minutes, 4 patients in group I and 7 in group II, on 1 day, 17 in group I and 28 in group II and on 1 week, all 40 patients

recovered from discharge. In a study employing a conjunctival allergen challenge, Ackerman et al.<sup>14</sup> performed comparison trials between 0.25% Alcaftadine and 0.2% olopatadine. Alcaftadine was found to be superior to olopatadine at the earliest time point (3 min post challenge). When it came to chemosis, only Alcaftadine offered noticeable alleviation 16 and 24 hours after injection. 108 patients of all genders had their instances of allergic conjunctivitis evaluated by Baiswar et al.<sup>15</sup> Analysis was done on symptoms including tearing, photophobia, redness, watering, feeling like a foreign body, etc. There were 48 male patients and 60 female patients out of 108 total. Twenty males and twenty females reported seasonal AC, while twenty males and thirty-three females reported perennial AC. There was no discernible difference. Watering was observed in 83 cases, photophobia in 54, tears in 98 and redness in 106 patients.

The limitation of the study is small sample size.

## CONCLUSION

Authors found that both medications were found to be efficient for allergic conjunctivitis patients.

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