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ORIGINAL ARTICLE

Assessment of cases of allergic conjunctivitis- A clinical study

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***ABSTRACT*:**
Background: Inflammation or infection of the conjunctiva is known as conjunctivitis. The present study was conducted to assess cases of allergic conjunctivitis in tertiary care centre. **Materials & Methods:** The present study was conducted on 108 patients of both genders. A careful examination was performed in all patients. Symptoms such as tearing, photophobia, redness, watering, foreign body sensation etc. were analyzed. **Results:** Out of 108 patients, males were 48 and females were 60. Seasonal AC was seen in 20 males and 27 females and Perennial AC was seen in 28 males and 33 females. The difference was non- significant (P> 0.05). Tearing was seen in 98, photophobia in 54, watering in 83 and redness in 106 patients. **Conclusion:** The most common findings were tearing, photophobia, watering eyes and redness.
Key words: Allergic conjunctivitis, tearing, photophobia

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INTRODUCTION

Conjunctiva is a thin, translucent membrane lining the anterior part of the sclera and inside of the eyelids. It has 2 parts, bulbar and palpebral. The bulbar portion begins at the edge of the cornea and covers the visible part of the sclera; the palpebral part lines the inside of the eyelids. Inflammation or infection of the conjunctiva is known as conjunctivitis and is characterized by dilatation of the conjunctival vessels, resulting in hyperemia and edema of the conjunctiva, typically with associated discharge.[1]

According to the classification of ocular allergy proposed in 2006 by the International Ocular Inflammation Society (IOIS), based on immunopathological mechanisms, 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). This classification also includes other conditions such as atopic keratoconjunctivitis (AKC), vernal keratoconjunctivitis (VKC), giant papillary conjunctivitis (GPC) and contact dermatoconjunctivitis (CDC).[2]

Urbanization, industrialization and climate change have led to rapidly occurring changes to both the indoor and outdoor environment. This has significant implications on the prevalence and management of allergic disease, including AC. Rising temperatures, precipitation and more extreme weather have resulted in longer or earlier pollen seasons, thus increasing environmental carbon dioxide and temperature.[3] The present study was conducted to assess cases of allergic conjunctivitis in tertiary care centre.

MATERIALS & METHODS

The present study was conducted in the department of Ophthalmology. It comprised of 108 patients of both genders. All were informed regarding the study. Ethical approval was obtained from institute prior to the study.

General information such as name, age, gender etc. was recorded. A careful examination was performed in all patients. Symptoms such as tearing, photophobia, redness, watering, foreign body sensation etc. were analyzed. Results thus obtained were subjected to statistical analysis. P value less than 0.05 was considered significant.

RESULTS

Table I Distribution of patients

Total- 108		
Gender	**Males**	**Females**
Number	48	60

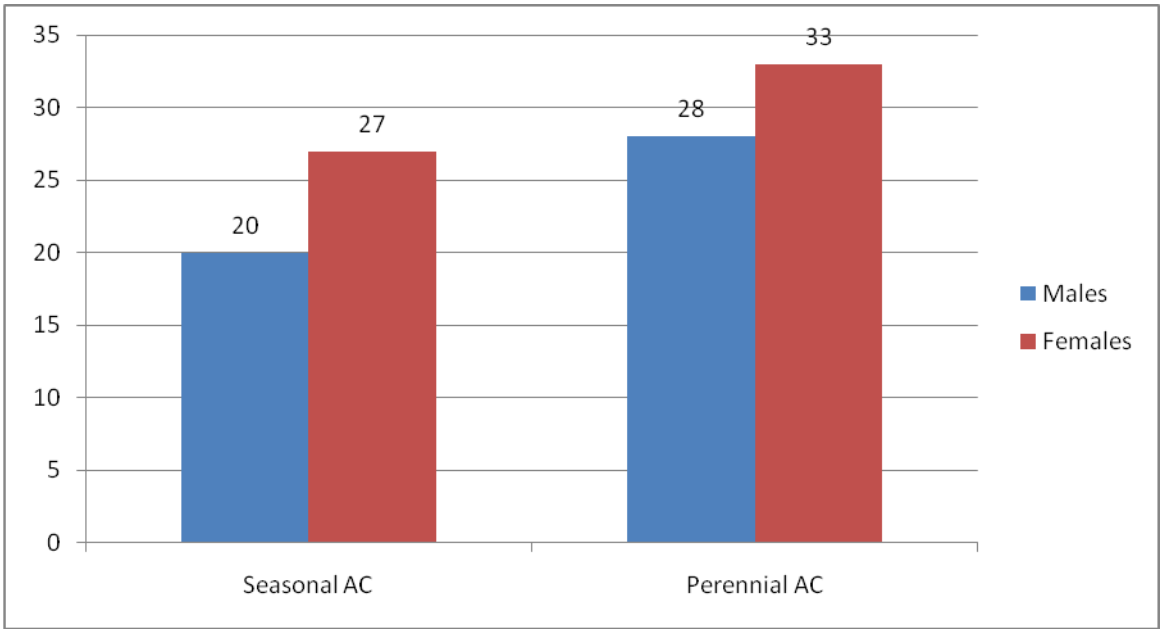
Table I shows that out of 108 patients, males were 48 and females were 60.

Table II Type of AC

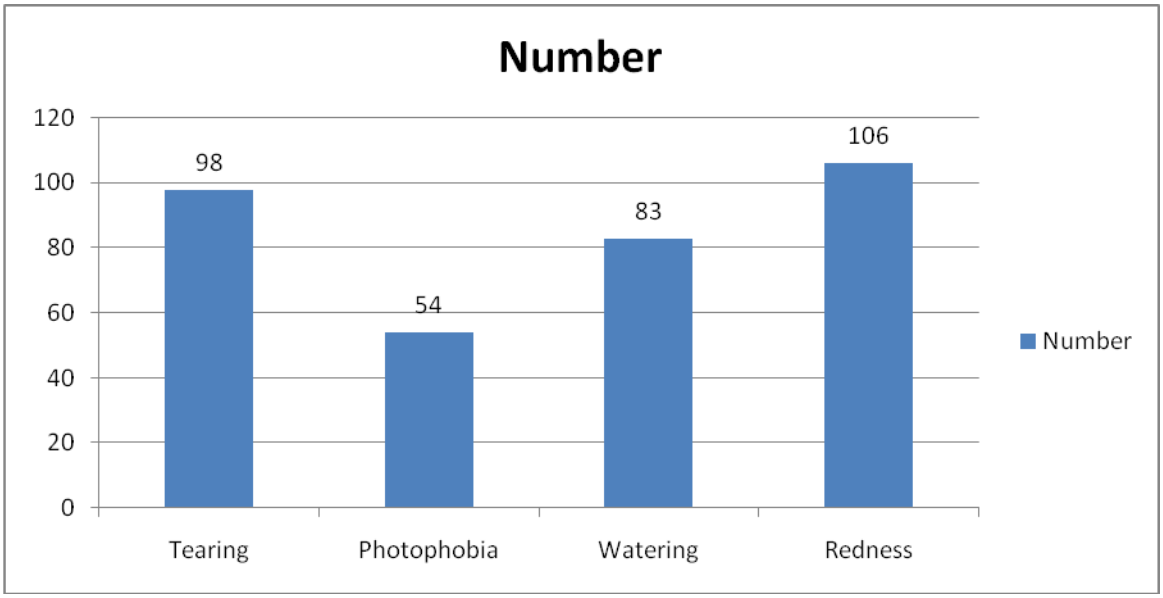
Type	Males	Females	P value
Seasonal AC	20	27	0.42
Perennial AC	28	33	

Table II, graph I shows that seasonal AC was seen in 20 males and 27 females and Perennial AC was seen in 28 males and 33 females. The difference was non- significant (P> 0.05).

Graph I Type of AC



Graph II Clinical findings



Graph II shows that tearing was seen in 98, photophobia in 54, watering in 83 and redness in 106 patients.

DISCUSSION

Ocular allergies affect 6%–30% of the general population. Allergic conjunctivitis (AC) which may be acute or chronic, is associated with allergic rhinitis (AR) in 30%–70% of affected individuals, where majority have few episodes of mild conjunctivitis annually. Up to 30% of AC sufferers may have frequent episodes with intense and persistent symptoms (especially seasonal AC). The most common presenting symptoms are red and itchy eyes, followed by burning, stinging sensation, swelling and tearing.[4]

Seasonal allergic conjunctivitis (SAC) and perennial allergic conjunctivitis (PAC) are usually mild, occurs in atopic individuals, with ocular inflammation driven by IgE-mediated mechanisms. Symptoms are intermittent in SAC and persistent in PAC.[5] The present study was conducted to assess cases of allergic conjunctivitis in tertiary care centre.

In present study, out of 108 patients, males were 48 and females were 60. Takano et al[6] conducted a study in which questionnaires from 3120 adolescents (mean 13.3 6 1.1 years) were analyzed. It was found that ocular itching in the past 12 months occurred in 1,592 (51%). The most frequent associated symptom was tearing (74%) followed by photophobia (50.1%) and foreign body sensation (37.1%). The prevalence of allergic conjunctivitis was 20.7% affecting more females. Moderate and severe interference in daily activities were reported by 66% and 21%, respectively. Diagnosis of AC was reported by 47% of them.

We found that seasonal AC was seen in 20 males and 27 females and Perennial AC was seen in 28 males and 33 females. Tearing was seen in 98, photophobia in 54, watering in 83 and redness in 106 patients.

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.[7]

The clinical presentation is often nonspecific. Relying on the type of discharge and patient symptoms does not always lead to an accurate diagnosis. Furthermore, scientific evidence correlating conjunctivitis signs and symptoms with the underlying cause is often lacking.[8] Outdoor air pollution is a major risk factor for rhinoconjunctivitis where key contributors are fuel combustion and dust storms because of changes in land-use and development. Relevant air pollutants exacerbating rhinoconjunctivitis include environmental tobacco smoke, pollutants derived from fuel combustion. Phthalates are plasticizers used in plastic products which may aerosolize and settle in dust especially affecting children. Air pollutants may be allergenic, irritant or a combination of both. Common pollutants include nitrogen dioxide, carbon monoxide, ozone, sulphur dioxide and particulate matter.[9]

CONCLUSION

Authors found that most common findings were tearing, photophobia, watering eyes and redness.

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