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PREVALENCE OF ALLERGIC CONJUNCTIVITIS CAUSED BY DRY EYES

Introduction

Dry eye disease (DED) is a multifactorial disorder characterized by **tear film instability, inflammation, and ocular discomfort.** One of the common complications of DED is **conjunctivitis,** which manifests as **redness, irritation, and foreign body sensation** in the eye. The prevalence of allergic **conjunctivitis due to dry eyes has been rising**, particularly in urban populations where lifestyle habits, pollution, and prolonged screen exposure contribute to ocular surface disorders.

Goals

The primary objectives of this research are

To assess the risk factors associated with dry eye-related allergic conjunctivitis.

To evaluate the impact of lifestyle, environmental, and demographic variables on the prevalence of this condition.

To propose preventive measures and treatment guidelines based on the findings.

Material and Methods of research

This study was designed as a **cross-sectional observational study** conducted over a period of **1 months**. 80 participants were selected from **general population (students, corporate employees, teachers, parents etc.) from different places (Belarus, India, Sri Lanka, etc.)** where individuals were asked about their eye health and previous conjunctivitis history through survey in Google forms.

Study Population: 80 participants

Inclusion Criteria:

Individuals aged 18 years and above.

Patients mentioned the diagnose of dry eye disease (DED) based on the Ocular Surface Disease Index (OSDI).

Patients experiencing symptoms of conjunctivitis (redness, irritation, foreign body sensation, and tearing due to DED).

Exclusion Criteria:

Patients with infectious conjunctivitis (bacterial, viral, or allergic conjunctivitis).

Patients with autoimmune disorders affecting the eyes (e.g., Sjögren's syndrome).

Individuals with a history of ocular surgery in the past six months.

Results of research and their discussion

44/80 individuals (56%) were showing the strong symptoms of dry eyes with high risk of complications.

Furthermore, 32/80 individuals (40%) were diagnosed by infection (allergic conjunctivitis/ keratitis etc.) in previous years with the presence of dry eyes, and 40% were just uncertain.

Females (48.5%) were more affected than males (51.5%).

The highest prevalence was observed in the age group of 20–30 years (78.8%), followed by 30–40 years (6%), and above 40 years (12%).

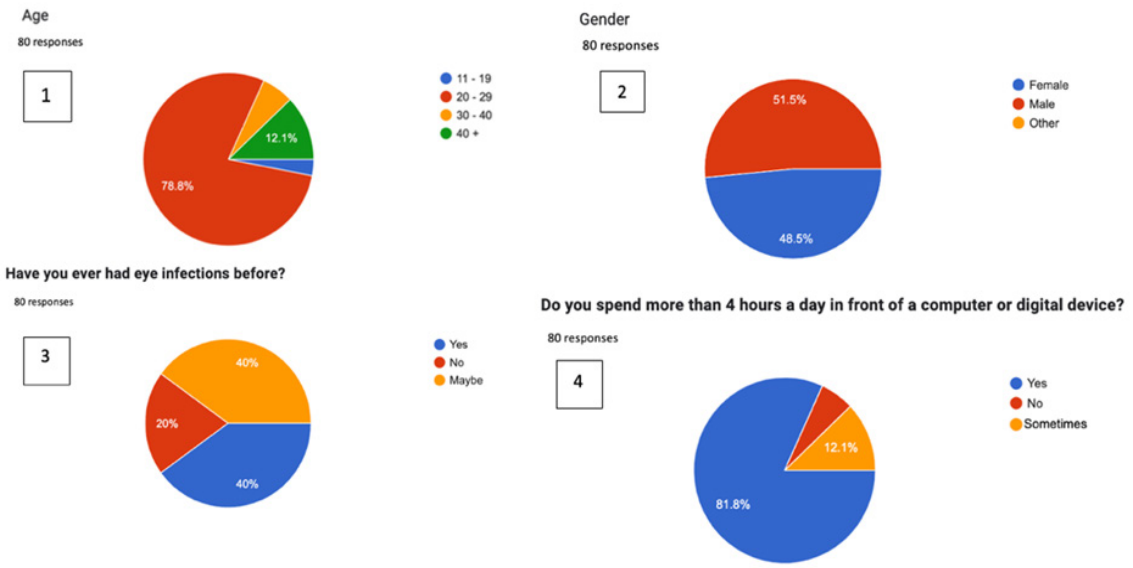

Figure 1 – Results out of survey [1 – Age, 2 – Gender, 3 – Infection prevalence, 4 – Screentime 4 hours +]

The results indicate a high prevalence of dry eye symptoms, with many participants experiencing burning, dryness, grittiness, and blurry vision, all of which are hallmark symptoms of dry eye-related allergic conjunctivitis. The rising use of digital devices is a key contributing factor, aligning with global trends showing increased ocular surface disease in younger populations.

A majority (81.8%) of participants spent more than 4 hours daily on screens, which eventually leads to ocular discomfort. 69.7% reported experiencing eye strain, consistent with findings that reduced blink rates and prolonged screen exposure contribute to tear film instability.

50% of participants had never consulted an eye doctor for their discomfort, indicating a lack of awareness regarding dry eye management.

Only 9.1% used eye drops regularly, despite high symptom prevalence. Lubricating drops like sodium hyaluronate were used by some, but many remained untreated, suggesting suboptimal healthcare-seeking behavior.

Symptoms such as burning, excessive tearing, and blurry vision are early indicators of conjunctival inflammation.

While only 32 participants had a history of diagnosed eye infections, many reported frequent irritation, which may suggest undiagnosed or chronic mild conjunctivitis cases.

Conclusion

The findings of this study underscore the significant prevalence of allergic conjunctivitis associated with dry eyes, particularly among young adults who frequently engage in prolonged screen use. Out of the 80 participants surveyed, 56% (44 individuals) exhibited strong symptoms of dry eyes, which are critical indicators of potential complications. Notably, 40% (32 individuals) had a documented history of eye infections, including allergic conjunctivitis, while the remaining participants expressed uncertainty regarding their symptoms.

The data revealed a striking gender distribution, with females affected at 48.5% and males at 51.5%. The highest incidence of symptoms was observed in the 20–30 age group, accounting for 78.8% of the affected individuals. This suggests a pressing need for targeted awareness campaigns aimed at younger populations, especially given that 81.8% of participants reported spending over four hours daily on screens, leading to increased complaints of eye strain (69.7%).

Alarmingly, half of the respondents (50%) had never consulted an eye care professional regarding their symptoms, indicating a significant gap in healthcare-seeking behavior and awareness about dry eye management. Furthermore, only 9.1% regularly used eye drops to alleviate their discomfort, despite the prevalent symptoms of burning, grittiness, and blurry vision.

The interplay between dry eye syndrome and allergic conjunctivitis presents a complex challenge for affected individuals, often exacerbated by environmental allergens. The study highlights the urgent need for educational initiatives to promote proper eye care and encourage individuals to seek treatment. Effective management strategies, including the regular use of lubricant eye drops and lifestyle modifications, can greatly improve the quality of life for those suffering from these conditions. Thus, raising awareness and fostering proactive man-agement of dry eye and allergic conjunctivitis are essential steps toward reducing the preva-lence and impact of these ocular disorders in the population.

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