

Unveiling Karachi's Viral Conjunctivitis Epidemic: A Comprehensive Study of the Recent Pink Eye Outbreak



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Abstract

Introduction: Conjunctivitis, commonly known as pink eye, is a widespread ocular condition caused by various agents such as bacteria, viruses, and allergens. This study focuses on a recent outbreak of viral conjunctivitis in Karachi, Pakistan, which led to a significant rise in hospitalizations during late August. The outbreak was characterized by redness, irritation, lacrimation, and vision problems. Viral conjunctivitis, similar to the spread of COVID-19, emphasizes the importance of hand hygiene in prevention.

Risk Factors: Factors contributing to conjunctivitis include age, seasonal allergies, allergen exposure, sharing contaminated items, and prolonged use of electronic devices. Contact lens wearers face an elevated risk. Effective prevention involves avoiding sources of contamination and promoting good hygiene practices.

Prevention and Hygiene: Preventing conjunctivitis involves avoiding exposure to known sources of infection and practicing regular hand washing. Proper hygiene, such as avoiding triggers and maintaining cleanliness, plays a crucial role in prevention efforts.

Conclusion: Regardless of its cause, pink eye remains the primary symptom of conjunctivitis. The recent viral conjunctivitis outbreak in Karachi underscores the importance of strict hygiene measures and patient isolation to curb disease transmission. Pharmacologic treatment primarily focuses on supportive care, utilizing artificial tears, corticosteroids, and anti-bacterial drops as necessary. This study highlights the significance of preventive strategies and emphasizes the need for public awareness and education to combat conjunctivitis outbreaks effectively.

Keywords: Conjunctivitis; Hygiene; Outbreak; Artificial Tears; Lacrimation

Introduction

Conjunctivitis, sometimes known as pink eye, is characterized by conjunctival irritation. This disorder, which can affect people of all ages, is typically brought on by bacterial, viral, or allergic causes. On a global scale, it accounts for a sizable portion—roughly 75%—of conjunctivitis instances [1,2]. The prevalence of conjunctivitis varies according to the underlying cause, which can be influenced by the patient's age as well as the time of year [3]. The most prevalent overall cause, which affects 15% to 40% of the population and is most prevalent in the spring and summer, is allergic conjunctivitis [4]. Viral conjunctivitis is thought to account for 20% to 70% of infectious conjunctivitis, and adenovirus is

thought to be responsible for 65% to 90% of viral conjunctivitis, which is most prevalent in the summer [3].

Depending on the agent responsible, conjunctivitis can have a variety of causes. Allergens, irritants, and poisonous chemicals can all result in noninfectious conjunctivitis. *Staphylococcus aureus*, *Streptococcus pneumoniae*, *Haemophilus influenzae*, *Neisseria gonorrhoea*, *Chlamydia trachomatis*, and diphtheria are common bacterial offenders [5]. Adenovirus, herpes simplex, herpes zoster, and enterovirus are examples of viral agents that are frequently encountered. When compared to bacterial conjunctivitis, viral conjunctivitis is more frequently seen in youngsters, while it is

more common in adults [6]. Vernal keratoconjunctivitis (VKC), atopic keratoconjunctivitis (AKC), and large papillary conjunctivitis are a few of the disorders that fall under the umbrella term of allergic conjunctivitis [7].

Acute or chronic conjunctivitis are other classifications for the condition. While chronic conjunctivitis is classified as lingering for more than 4 weeks, acute conjunctivitis often develops within 3 to 4 weeks of its Initiation [8]. Cases of viral conjunctivitis suddenly increased in Karachi during the latter week of August, according to reports from several agencies [9]. Under these circumstances, the hospital was overrun with patients, with some accounts estimating that more than half of all outpatient cases [10].

Redness, irritability, and lacrimation are signs and symptoms of viral conjunctivitis, which is also accompanied by vision issues. Although the symptoms of allergic, bacterial, and viral conjunctivitis vary, pink eye is a common component in all of them [7]. Viral conjunctivitis transmits in the same way as the COVID-19 pandemic. Hand hygiene is crucial in preventing the spread of conjunctivitis [11].

Risk factors

Conjunctivitis can develop for a variety of reasons. First off, age is a big factor, and kids are more prone to this ailment. Additionally, conjunctivitis bouts can be brought on by seasonal allergies, which frequently coincide with particular seasons of the year. Conjunctivitis can also be triggered by exposure to known allergens such pollen or pet dander. Additionally, sharing towels or linens with a person who has conjunctivitis might help the illness spread. Finally, people who wear contact lenses need to be aware of the elevated risk of conjunctivitis that goes along with it. Conjunctivitis risk is influenced by all of these variables taken together [7]. Long-term use of a smartphone, increased screen time, and extended gaming that could harm eyes are other risk factors that have been identified [12].

The type of conjunctivitis determines the medical approach. Artificial tears, antihistamine drops, and antibiotics for secondary infections are used to treat allergic and viral conjunctivitis [13]. While the type of organism producing the infection determines how bacterial conjunctivitis should be managed. But everyone uses broad-spectrum antibiotics [14].

Prevention and hygiene

Avoiding exposure to bacterial, viral, and known allergen sources of contamination is essential for preventing conjunctivitis. Regular hand washing is essential for lowering the risk of spreading infections. In conclusion, avoiding certain triggers and promoting excellent hygiene habits are the keys to preventing conjunctivitis [7].

Conclusion

In conclusion, regardless of the cause of conjunctivitis, pink eye is the most prevalent symptom. In Pakistan, particularly in the

metropolis of Karachi, viral conjunctivitis has become a pandemic. Disease transmission is greatly aided by strict hygiene regulations and the isolation of patients who are exhibiting symptoms. The main focus of pharmacologic treatment for viral conjunctivitis is supportive care, which may involve the use of artificial tears, corticosteroids, and anti-bacterial drops to treat underlying infections.

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Author Contribution

Moosa took on the responsibilities of crafting and conceptualizing the subject matter, whereas Munir focused on the editing process. Danesh, Saleh, and Muhammad Bilal collaborated to compose the abstract, summarizing the key points of the article. Rohan and Mehdi Raza were tasked with conducting the literature review, ensuring the paper was well-informed and grounded in existing research. Fazeel and Faizan played a crucial role in refining the content, conducting a final round of editing, and presenting the article in a structured and balanced format, ensuring it was ready for publication.

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