Reported conjunctivitis outbreak in Karachi, Pakistan: State of hand hygiene in a post-pandemic world

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Abstract

In this text, we detail the rise in conjunctivitis cases reported in Karachi, Pakistan over the month of August 2023 and assess the potential contributing factors, that include the city’s humid weather, worsening air quality and less-than-expected rainfall in the ongoing Monsoon season. Additionally, the practice of hand hygiene which was implemented rigorously during the COVID-19 pandemic is recognized to have had a positive impact towards control of various infections that spread in a similar fashion as the virus, including conjunctivitis. Since a decrease in compliance with hand hygiene measures in the post-pandemic world, this rise in ‘pink-eye’ cases calls for initiation of ground-level research led by ophthalmologists to obtain a true prevalence of the condition. This review will also serve as the foundation for the initiation of policies dictating hygiene implementation and planning of awareness campaigns for the general public that can serve as effective preventative measures in order to curb the spread of this condition.

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Conjunctivitis, commonly called pink eye, is a condition in which the transparent membrane covering the eye and eyelid becomes inflamed (1). Caused commonly by allergens or microorganisms, this condition is extremely contagious and is transmitted via direct contact or fomites (2).
Various agencies have reported a sharp rise in cases of conjunctivitis in Karachi, Pakistan’s largest city with a population of more than 16 million. In the last week of August, patients flooded hospitals under this condition, with some reports estimating that they consist of more than half of all outpatient cases (3, 4). Similarly, according to Google Trends for Karachi (5), internet search interest in ‘conjunctivitis’ and related terms reached its highest in early September.

Symptoms such as redness, irritation, and discomfort of the eye, accompanied by vision problems and eye discharge, are the most common. Allergic, bacterial and viral conjunctivitis may differ in presentation but the colloquial ‘pink’ eye is a common factor amongst them (1). According to some ophthalmologists, the current outbreak is more likely to be viral in nature (3). Pakistan, particularly Karachi, is very prone to an outbreak of this highly contagious disease as its humid weather conditions, especially during the current monsoon season, support the causative organisms’ survival. According to an ophthalmologist at Karachi’s largest public-sector tertiary hospital, the worsening of the air quality (currently with an AQI score of >100) due to little rainfall in the city has also contributed to the spread of not only pollutants but infections. Combined with poor hand hygiene and densely crowded settlements, these environmental factors make Karachi the ideal place for an outbreak (3).

The transmission of viral conjunctivitis is similar to COVID-19, the viral illness that caused the most-recent pandemic. At the start of the pandemic, personal hygiene measures, most importantly hand hygiene, were recommended as the first-line prevention of COVID-19 (6). In response, a paradigm shift, both inside and outside of healthcare institutions, took place to promote and enforce hand hygiene (7). As such, public-health interventions, including hand hygiene, lead to a noticeable decline not only in the transmission of COVID, but other illnesses as well, including conjunctivitis (8, 9).

However, even during the pandemic, hand hygiene compliance reduced between lockdowns/spikes in cases (10). Arguably, in a post-COVID world, hand hygiene may not receive as much attention or enforcement, and compliance may further decline, leading to recurrent outbreaks of other viral illnesses, like this one in Karachi. Therefore, the outbreak can possibly be attributed to a reduction in personal hygiene practices.

Currently, most of our understanding of this outbreak is based on subjective viewpoints of leading ophthalmologists in the city, which underlines the importance of collecting empirical data to evaluate the true prevalence of the condition. Similarly, ground-level research will also guide policy-making of the healthcare system and general awareness campaigns for the common people in order to tackle this issue. Importantly, it is imperative to keep underscoring the importance of hand hygiene and other practices in the public despite the end of the pandemic to prevent outbreaks.

References:


