

A Review: Pink Eye Outbreak in India

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Abstract:- Conjunctivitis or 'Pink Eye' is the inflammation or infection of the Conjunctivitis, the membrane covering the white part of the inner eyelid. The Conjunctiva is the thin, clear, mucus membrane that covers the white of the eye and the inner eyelid. Viruses causes up to 80% of all cases acute Conjunctivitis. All broad- spectrum antibiotic eyedrops seen in general to be effective in treating bacterial Conjunctivitis. Acute bacterial Conjunctivitis is common in children, with more than 50% of conjunctivitis cases beings bacterial in origin as per the mentioned evidences the present Review was designed to study outbreak of pink eye in the years 2023 considering past 4 to 5 years consist in July 2023 conjunctivitis cases data in Gujrat [India]: 2.17 lac, Delhi NCR[India]:1032, Maharashtra [India]: 87.761 K, Lucknow [Up-India]: 40 to 46 Daily. The diseases cause normally 7 to 10 days.

Keywords:- Conjunctivitis, Disease Outbreak in India, Causes.

I. INTRODUCTION

Pink eye, or conjunctivitis, is the inflammation or infection of the conjunctiva, the membrane covering the white part of the eye and the inner eyelid.[1] Recently, cities like Delhi, Kolkata, Vadodara, and the northeastern state of Arunachal Pradesh have seen an increase in conjunctivitis cases, particularly among children.[2] In 1750, neonatal conjunctivitis (ophthalmia neonatorum) was first described by S.T. Quellmaz. It has been claimed that non-ophthalmologists, such as internists, family medicine doctors, pediatricians, and nurse practitioners, diagnose more than 80% of all acute instances of conjunctivitis. It is separated into two sections: the tarsal section, which covers the lids, and the bulbar portion, which covers the globe. It is typically translucent, but when it becomes inflamed, it can be injected and turn pink or crimson, giving rise to the nickname "pink eye."

II. TYPES OF CONJUNCTIVITIS

➤ Bacterial Conjunctivitis

More than half of episodes of conjunctivitis in children are caused by acute bacterial conjunctivitis. Moraxella catarrhalis, Streptococcus pneumoniae, and Haemophilus influenzae are among the frequently seen pathogens. Up to 70% of instances of bacterial conjunctivitis are caused by H. influenzae, especially the non-typeable variety. This is the most common cause of the illness.[3]

➤ Viral Conjunctivitis

Adenoviruses are responsible for a significant portion of cases of acute conjunctivitis and the vast majority of viral cases of conjunctivitis. A common presentation is a burning or gritty feeling accompanied by a watery discharge.[4] This usually starts suddenly, affects one eye first, then progresses to the other in a day or two. This may be accompanied by a viral prodrome that includes fever, pharyngitis, lymphadenopathy (particularly preauricular), and/or upper respiratory tract infection. Significant conjunctival injection with watery discharge and tarsal conjunctival follicularity are frequently seen on a clinical examination. Even though adenoviruses account for most of these cases, other viral origins need to be looked into.

➤ Allergic Conjunctivitis

A type I hypersensitivity reaction to environmental allergens, usually dust, pollen, dander, or mold, causes allergic conjunctivitis. This IgE-mediated mechanism triggers mast cell degranulation, which releases histamine and other pro-inflammatory mediators. Around 1 in 5 kids are impacted by this, and the peak age range for it is late infancy to adolescence.[4] Allergy-induced conjunctivitis is perhaps the most common ocular condition that pediatricians treat. Usually, it occurs at the peak of allergen concentrations, such pollen. The main characteristic that sets it apart is itching, which can happen in addition to other atopic symptoms including sneezing, coughing, or nasal congestion. The findings of the clinical examination resemble viral conjunctivitis, characterized by a follicular-appearing tarsal conjunctiva and a watery discharge.

III. OUTBREAK IN INDIA

Outbreaks of infectious conjunctivitis are extremely important for public health because they could be the first signs of a global pandemic. Although the exact culprit causing infectious conjunctivitis is rarely verified microbiologically, it is frequently assumed to have a viral aetiology. customary "gold- standard" Microbiology methods have a high risk of false-negative results; hence they might not be the best for diagnosing unanticipated infections.

In this era of unprecedented worldwide spread of new pathogens, impartial diagnostic methods like metagenomic RNA deep sequencing analysis (RNA-seq) enable the detection of unexpected pathogens such as bacteria, fungus, viruses, DNA, and anophelic While epidemics of conjunctivitis are rare in the United States, they are more prevalent and usually seasonal in other regions of the world, such as Asia and Africa.[5]

Around 75% of instances of infectious conjunctivitis are caused by viral conjunctivitis. This makes up the bulk of cases.[6-9]

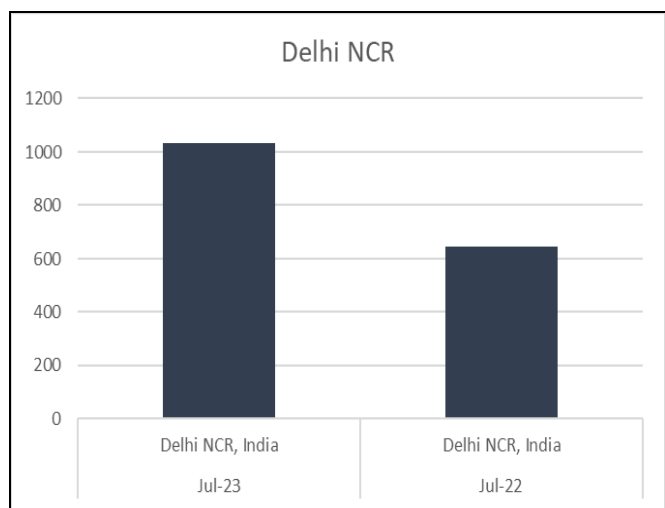


Fig 1 Cases Observed in Delhi

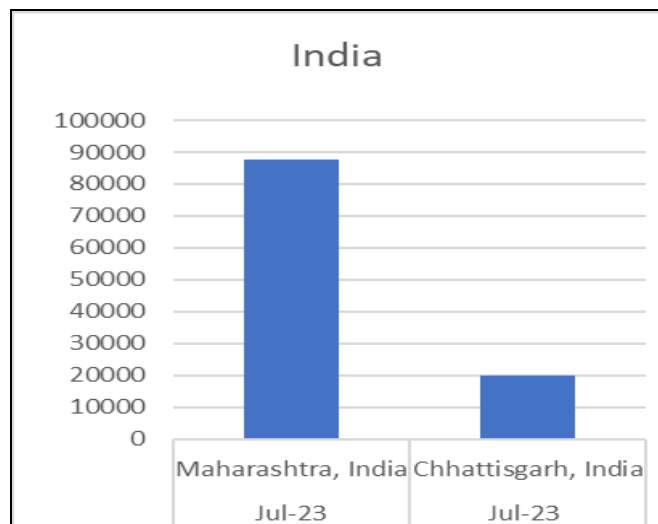


Fig 2 Comparative Analysis

IV. CONCLUSION

An eye infection is a disease of the eye that you get because microorganism like a bacterium, a virus or a fungus. The most common eye infection is pink eye (conjunctivitis). Viruses cause most cases of pink eye, but bacteria can cause pink eye, too. In conclusion, ‘Pink eye’ is can’t treat viral infections with antibiotics. In order to stop the spread of pink eye, it is imperative that Indian health authorities move quickly to contain the outbreak. They should do this by enforcing correct sanitation procedures, encouraging handwashing, and raising knowledge of hygiene. Furthermore, medical facilities need to be ready to treat afflicted patients promptly. Campaigns for public education can also be extremely important in increasing awareness and halting the infection's spread.

Table 1 Cases Observed in Last Five years

Month & Years	Place	Number of Cases	Reference
Jul-23	Chhattisgarh, India	19.8 K	By Deputy Chief Minister (T S Singh)
Jul-23	Maharashtra, India	87.761 K	By Financial express
Jul-22	Delhi NCR, India	646 in Delhi NCR 1202 in nationwide	By Mint media
Jul-23	Delhi NCR, India	1032 in Delhi NCR 1521 in Pan India	By Mint media
Jul-23	Gujarat, India	217000	By Health Minister of Gujarat (Rushikesh Patel)
Jul-18	Gujarat, India	1174	By republicworld.com
Jul-19	Gujarat, India	705385	By republicworld.com
March-July 2020	Gujarat, India	2090	By Mint media
March-July 2019	Gujarat, India	2563	By Mint media
March-July 2018	Gujarat, India	3242	By Mint media

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