



## CLINICAL PROFILE OF EPIDEMIC KERATOCONJUNCTIVITIS AT A TERTIARY EYE CARE CENTER IN BUNDELKHAND REGION.

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### ABSTRACT

**Purpose:** To study the clinical profile of patients with epidemic keratoconjunctivitis in Department of Ophthalmology at M.L.B Medical College Jhansi. **Materials and Methods:** Prospective study of 200 patients of epidemic keratoconjunctivitis present in Department of Ophthalmology at M.L.B Medical College Jhansi. **Results:** A total of 200 patients were examined out of which 192(96%) patients present with congestion, 180(90%) patients present with eye pain, 172(86%) patients present with chemosis, 162(81%) patients present with purulent discharge, 146(73%) patients present with itching, 132(66%) patients present with lid swelling, 56(28%) patients present with subconjunctival hemorrhage. **Conclusion:** Most commonly patients were presents with congestion and eye pain, followed by chemosis, purulent discharge, itching, lid swelling and least common with sub conjunctival hemorrhage.

**KEYWORDS :** Epidemic, conjunctivitis, congestion, eyepain.

### INTRODUCTION-

Epidemic keratoconjunctivitis (EKC) is caused by the adenovirus pathogen.<sup>1,2</sup> Adenoviral conjunctivitis is known to be the most common cause of red eye in the world.<sup>3</sup> A study at the Wills Eye Hospital emergency room found a 62% prevalence of adenoviral conjunctivitis amongst all patients presenting with a clinical diagnosis of infectious conjunctivitis, while various other studies have demonstrated a prevalence of between 15% and 70% of all conjunctivitis worldwide.<sup>1,3</sup> More than 50 different adenovirus serotypes have been identified and divided into six distinct subgroups.<sup>2,4,5</sup> Specific adenovirus serotypes are associated with various types of ocular infection.<sup>1,2</sup> The most common types of adenoviral conjunctivitis include EKC, pharyngoconjunctival fever and nonspecific follicular conjunctivitis (simple adenoviral conjunctivitis).<sup>1,6</sup> EKC is commonly associated with adenovirus serotypes 8, 19 and 37.<sup>2,4,6-8</sup> EKC is considered a more critical form of adenoviral keratoconjunctivitis because of the adverse consequences it may have on visual acuity.<sup>8</sup>

Due to the epidemic nature of EKC, outbreaks have been studied in hospitals and health-care settings.<sup>9-11</sup> EKC may occur in crowded living conditions and places where people come into contact with one another, such as schools and medical practices.<sup>1,9</sup> Transmission of the virus occurs by direct contact through ocular and respiratory secretions or by indirect contact with contaminated instruments or solutions.<sup>11</sup> Viral particles have been shown to be infectious on nonporous surfaces for upwards of one month and there is evidence that transmission can occur through inanimate vectors, such as door handles and tonometer heads.<sup>4,9</sup>

The dilemma with a virus such as EKC is that patients who have contracted the disease are asymptomatic during the incubation period and may inadvertently spread the virus.<sup>9</sup> This is how eye doctors may unknowingly act as vectors and contribute to the spread of EKC from patient to patient.<sup>9</sup> The current literature demonstrates that evidence-based medicine has yet to proffer a sufficient therapeutic method to treat EKC.<sup>5</sup> The fact remains that EKC is highly contagious.<sup>9,12</sup>

### MATERIAL AND METHOD

This was a Prospective study that involved 200 patients of complaining of pain, redness, discharge and swelling. Patients were recruited from the OPD of MLB medical Jhansi, Uttar Pradesh and followed from 10 July 2023 to 25 July 2023. It was performed under the Helsinki Declaration of 1975, as revised in 2000. The necessary from the Ethical and Research Committee was obtained for the study.

### Inclusion Criteria

All patients who presented to the OPD of MLB Medical College Jhansi with the complaint of pain, redness, discharge and swelling.

### Exclusion Criteria

1. Patients with ocular diseases that could affect conjunctiva and cornea.

2. Patients with other ocular disorders.
3. Patients with recent intraocular surgery.
4. Patients with the history of trauma.

All patients were subjected to a detailed history taking. All patients had complete ophthalmic examination including Biomicroscopic slit lamp examination.

### RESULT

A total of 200 patients were studied. We included eyes with complaint of pain, redness, discharge and swelling.

### Table

symptoms	percentage
Congestion	192 (96%)
Eyepain	180 (90%)
Chemosis	172 (86%)
Purulent discharge	162 (81%)
Itching	146 (73%)
Lid swelling	132 (66%)
Subconjunctival hemorrhage	56 (28%)



**Image:** Above patient present to our opd as a case of epidemic keratoconjunctivitis with complaint of redness, pain, discharge and swelling.

### DISCUSSION

EKC is an ocular surface infection associated with a marked inflammatory reaction, and symptoms of redness, irritation, tearing, blurry vision and sensitivity to light.<sup>4</sup> Clinical signs include eyelid edema, follicular conjunctivitis, conjunctival edema and hyperemia, epithelial keratitis and often preauricular lymphadenopathy.<sup>6</sup> The onset of EKC may seem rapid to the patient, but in reality, there is an incubation period of about one week before the clinical symptoms present.<sup>12</sup> The second eye is often affected days later to a much lesser degree.<sup>13</sup> The period of communicability is from late in the incubation phase up to 14 days after the onset of the disease.<sup>14</sup>

This acute phase of EKC is marked by a severe conjunctivitis and lasts from two to four weeks.<sup>14</sup> After the conjunctivitis appears, there is a period of viral shedding where the self-limiting virus is gradually

cleared from its host.<sup>12</sup> However, before the virus is completely shed, the inflammatory reaction of the conjunctiva can become so intense that it results in a pseudomembrane and potentially permanent symblepharon formation or punctual occlusion.<sup>6,12</sup>

The symptoms and duration of EKC can vary widely; however, it is distinguished from other adenoviral infections when the cornea becomes affected by the development of multifocal subepithelial infiltrates (SEIs)<sup>6</sup>. The hallmark of the second, more chronic phase of EKC is the corneal involvement.<sup>14</sup> The patient's presentation of multifocal subepithelial corneal infiltrates (SEI) supports the diagnosis of EKC, as the presence of SEIs are considered, pathognomonic for the diagnosis of EKC.<sup>6</sup> These infiltrates are typically observed within seven to ten days after the onset of the initial signs of infection.<sup>6</sup> It is possible for the infiltrates to persist for extended periods of time ranging from months to years, and their presence can also cause reduced visual acuity.<sup>4,12</sup> A study by Butt and Chodosh found that 25.9% of patients demonstrated chronic corneal inflammation with symptomatic SEIs present for more than 45 days from the first examination.<sup>4</sup>

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