Clinical Characteristics and Treatment Outcomes of Viral Conjunctivitis: A Prospective Observational Study.

Abstract:

Background - Viral conjunctivitis is a frequently encountered ocular infection and an important cause of red eye in ophthalmic practice. Due to its highly contagious nature, outbreaks are common in schools, workplaces, and healthcare settings. Understanding its clinical pattern can facilitate early diagnosis and appropriate management.

Aim - To assess the demographic profile, clinical manifestations, and treatment outcomes of patients presenting with viral conjunctivitis.

Methods - A prospective observational study was conducted on 100 patients diagnosed clinically with viral conjunctivitis in the outpatient department of M.L.B medical College, Jhansi over four months. Data regarding demographic characteristics, symptoms, ocular findings, treatment, and follow-up outcomes were recorded and analysed.

Results - Among the 100 patients studied, 58% were males and 42% were females. The majority of patients belonged to the 12–30-year age group. Redness and watering were the most common presenting complaints. Follicular conjunctival reaction was the predominant clinical sign. Most patients recovered completely within three weeks following supportive treatment.

Conclusion–Viral conjunctivitis predominantly affects young adults and generally follows a benign, self-limiting course. Recognition of characteristic clinical features and reinforcement of hygiene measures remain essential for effective disease control.

Keywords- Viral conjunctivitis, adenoviral conjunctivitis, follicular reaction, ocular infection, conjunctivitis.

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Introduction :

Viral conjunctivitis is the most common cause of infectious conjunctivitis worldwide and accounts for approximately 70–90% of all infectious conjunctivitis cases [1]. Adenoviruses are responsible for the majority of cases, particularly epidemic keratoconjunctivitis (EKC) and pharyngoconjunctival fever [2]. The disease is highly contagious and spreads through direct contact, contaminated instruments, ophthalmic solutions, and respiratory secretions [3].

Patients usually present with conjunctival hyperaemia, epiphora, foreign body sensation, photophobia, and eyelid edema [4]. Follicular conjunctivitis and preauricular lymphadenopathy are considered characteristic clinical findings and help differentiate viral conjunctivitis from bacterial conjunctivitis.[5]

Corneal involvement may occur in moderate to severe cases and can manifest as superficial punctate keratitis, epithelial keratitis, or sub epithelial infiltrates.[6] Although the condition is usually self-limiting, corneal complications may cause prolonged visual symptoms and reduced quality of life.

Diagnosis is primarily clinical, although laboratory methods such as polymerase chain reaction (PCR), viral culture, and rapid antigen detection tests may be useful in selected cases.[7] Management is mainly supportive and includes lubricants, cold compresses, and patient education regarding hygiene measures to prevent disease transmission.

Material and methods:

Study design: prospective observational study.

Study location: Department of ophthalmology ,M.l.b medical College, Jhansi

Study duration: four months

Sample size : 100 patients

Inclusion criteria:

- Patients with clinical features suggestive of viral conjunctivitis.
- Age greater than five years.
- Patients willing to participate in the study.

Exclusion criteria:

- Bacterial conjunctivitis.
- Allergic conjunctivitis.
- Ocular trauma.
- Contact lens-associated conjunctivitis.
- Patients with previous ocular surgery within six months.

Clinical evaluation:

Each patient underwent:

- Detailed ocular history.
- Visual acuity assessment.
- Slit-lamp biomicroscopy.
- Examination of conjunctiva and cornea.
- Assessment for preauricular lymphadenopathy.
- Fundus evaluation when required.

Management protocol:

Patients received:

- Lubricating eye drops.
- Cold compresses.
- Advice regarding hand hygiene and prevention of disease transmission.
- Additional therapy when clinically indicated.

Results:

Demographic distribution

Table 1 :Age distribution

Age group	No.of patient	Percentage
5-15	22	22%
16-30	38	38%
31-45	24	24%
46- 60	10	10%
Above 60	6	6%

The highest incidence was observed among young adults aged 12–30 years.

Table 2 : Gender distribution

Gender	Number	Percentage
Male	58	58%
Female	42	42%

A slight male predominance was observed.

Clinical presentation

Table 3: symptoms at presentation

Symptom	Frequency	Percentage
Redness	100	100%
Watering	94	94%
Foreign body sensation	74	74%
Itching	66	66%
Photophobia	40	40%
Blurred vision	23	23%

Redness and watering were the most frequently reported symptoms.

Table 4 : ocular signs

Clinical signs	Frequency	Percentage
Conjunctival congestion	100	100%
Follicular reaction	93	93%
Watery discharge	88	88%
Lid swelling	63	63%
Preauricular lymphadenopathy	42	42%
Corneal involvement	15	15%

Follicular conjunctivitis was the most characteristic examination finding.

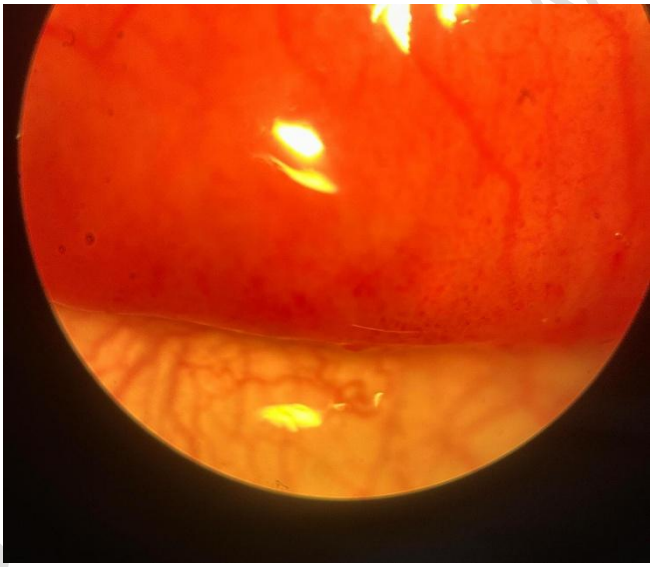

Fig 1 : slit lamp image showing punctate haemorrhagic spots on upper lid .

Fig 2 : image showing pseudomembrane which bleeds on touch .

Table 5 : Eye involvement

Involvement	**Number**	**Percentage**
Unilateral	28	28%
Bilateral	72	72%

Most patients eventually developed bilateral disease.

Follow up outcome

Table 6 : clinical outcomes

Outcome	**Number**	**Percentage**
Resolution within 2 weeks	68	68%
Resolution within 3 weeks	24	24%
Persistent corneal Infiltrate	8	8%

The majority of patients showed complete recovery within three weeks.

Discussion:

The present study demonstrated a predominance of viral conjunctivitis among young adults, which is consistent with previous epidemiological studies. Increased social interaction and occupational exposure may explain the higher incidence in this age group.[8]Redness and watering were the most common presenting complaints, similar to findings reported by Azari and Barney and Jhanji et al. Follicular conjunctivitis was the predominant clinical sign, reflecting the lymphoid response typically associated with viral infections.[9]The majority of patients in our study achieved complete recovery within three weeks. Similar outcomes have been documented in previous studies emphasizing the self-limiting nature of the disease and the effectiveness of conservative management.[10]

Conclusion:

Viral conjunctivitis remains one of the most common infectious ocular conditions encountered in clinical practice. Young adults constitute the most frequently affected group. Characteristic symptoms and slit-lamp findings allow diagnosis in most cases without laboratory testing. Conservative treatment combined with proper hygiene measures results in favourable outcomes in the majority of patients.

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