

Epidemic keratoconjunctivitis (Pink Eye) in South Sudan: A review

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Submitted: August 2024

Accepted: October 2024

Published: February 2025

ABSTRACT

Epidemic keratoconjunctivitis is an adenoviral infection that is highly contagious occurring in overcrowded settings where hygiene conditions are poor. Common symptoms include a gritty sensation, tearing, membranous conjunctivitis, and subconjunctival haemorrhage. It is a self-limiting disease but its spread can be limited by observing hygiene, avoidance of overcrowded spaces and not sharing fomites. Health education and isolation of the infected individual is recommended.

Key words: epidemic keratoconjunctivitis, hygiene, adenoviral infection, South Sudan

Introduction

There have been recent incidents in South Sudan of severe inflamed eyes accompanied by discomfort, tearing, burning sensation and bleeding on the conjunctiva observed in both children attending schools and adults, including hospital personnel. Identical conditions have been observed in travellers from Uganda and newspaper reports from Mozambique suggest a similar outbreak is underway. Medical evaluations confirm that the individuals are affected by Epidemic keratoconjunctivitis (EKC), also referred to as “Pink Eye”.

EKC is primarily an infection of the conjunctiva caused by an adenovirus,^[1] although it can be caused by other viruses including rubella, measles, *Herpes simplex*, and bacteria.

Clinical manifestation

Initial symptoms often resemble those of an upper respiratory tract illness, such as coughing, a sore throat, and general fatigue. These are shortly followed by ocular symptoms including eye redness, discomfort, a gritty feeling, burning, excessive tearing, fluid discharge from the eye, swelling of the eyelids, and sometimes a thick discharge indicative of a secondary bacterial infection - see Figure 1A. Subconjunctival haemorrhage and keratitis may also occur - see Figure 1B. Symptoms typically begin in one eye, but the other eye may become affected due to the transfer of the virus from the infected eye.

EKC is infectious, spreading from one individual to another through contaminated hands, objects, and close contact with an infected person. The condition tends to resolve on its own within one to two weeks. However, it is highly contagious and

Citation: Mena, Epidemic keratoconjunctivitis (Pink Eye) in South Sudan: A review, South Sudan Medical Journal, 2025;18(1):33-34 © 2025 The Author(s) License: This is an open access article under [CC BY-NC](https://creativecommons.org/licenses/by-nc/4.0/) DOI: <https://dx.doi.org/10.4314/ssmj.v18i1.7>

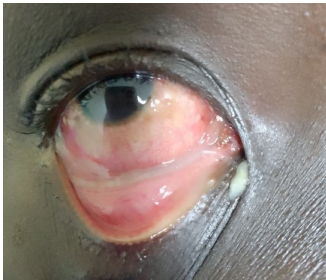


Figure 1A. Discharge (All Credit: Wani Mena)



Figure 1B. Subconjunctival haemorrhage



Figure 2. Pseudomembrane in the lower fornix

can disseminate quickly, especially in crowded settings such as camps, educational institutions, lodging facilities, and amongst health workers, and those overseeing border crossings. Potential complications include the development of a pseudo-membrane (see Figure 2), and epithelial keratopathy, which can lead to reduced vision if the cornea is significantly affected.

Diagnosis

Diagnosis is usually clinical and is based on the distinctive presentation that starts in one eye with symptoms of redness, excessive tearing, bleeding on the conjunctiva, membrane formation, and swelling around the eye. Adenoviral infections can be confirmed with serological tests using devices such as Adenoplus, where available, which offers high sensitivity (88%) and specificity (91%).

Prevention

As an infectious disease, transmission occurs through contact with contaminated hands and objects bearing ocular secretions. Regular hand washing, refraining from shaking hands, not sharing personal items like towels and handkerchiefs, and cleaning surfaces and instruments with alcohol-based cleaners can help mitigate transmission. Avoiding crowded locations and having schools exclude or isolate infected children helps to prevent the infection spreading.

Treatment

Although “Pink Eye” generally resolves on its own, lubricating ophthalmic solutions can be applied to alleviate discomfort and antibiotics may be used if a concomitant bacterial infection, indicated by a pus-like discharge, is suspected. Ocular cleaning with 2% povidone-iodine solution should be done after anaesthetizing the area to minimize discomfort.^[2,3] However, antiviral creams are not recommended as they do not shorten the duration of the infection. Steroids should not be used as they

can encourage viral growth and extend the contagious period. Providing health education about the likelihood of transmitting the infection, especially during the first ten days, is also crucial.

Conclusion

“Pink Eye” is a frequently seen adenoviral infection that has self-limiting characteristics but is highly contagious and prone to quick spread in densely populated areas with insufficient sanitation. The infection causes significant eye discomfort and morbidity, leading to requests for extended leave from work and a loss in productivity. Prevention measures to control the spread and prevent an epidemic are important, along with public health education. Clinicians should aim for swift diagnosis, immediate isolation and treatment while practicing good hygiene until patients are no longer contagious.

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