

EDITORIAL

Pink eye: A rose by any other name

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Epidemic keratoconjunctivitis (EKC), popularly known as pink eye, is a viral infection affecting the conjunctiva and cornea, with the potential to cause visual impairment. A distinctive characteristic of EKC is the formation of delayed-onset subepithelial infiltrates (SEIs) within the cornea. These SEIs lead to sensations of a foreign body in the eye, sensitivity to light, glare, and compromised vision. Despite treatment, these infiltrates may persist or recur over several months to years. EKC's onset is marked by symptoms such as excessive tearing, conjunctival swelling, increased follicular tissue growth, discharge, and the development of punctate and/or irregular epithelial keratitis. Known by several monikers, it is as varied as its presentation. Moreover, the historical trajectory of the evolution of the disease's nomenclature exemplifies how unquestioned scientific assumptions can impede advancements in comprehending the disorder and devising effective therapies.

In the late 19th century, Austrian physicians Fuchs and von Stellwag initially referred to the condition as “superficial punctate keratitis” and “nummular keratitis,” respectively.

In the summer of 1941, the disease, labeled shipyard eye, affected more than 10,000 workers in the naval yard of Pearl Harbor, Hawaii, soon spreading to the Western Coast of USA.^[1,2] More baffling was the fact that the family members, and close contacts of the workers, were spared. The inadvertent spread of the virus was traced to contaminated tonometers in the clinics of eye care practitioners who were treating shipyard personnel. The disease spread quickly from shipyards to workers in other industrial complexes seriously impairing the American war efforts during 1941–1942.

Its current moniker, EKC, was coined by Crawford and Hogan, in their comprehensive review of a 125 cases.^[3] A bacterial etiology was soon ruled out, and the disease was found to be caused by the “virus of epidemic keratoconjunctivitis”. The primary culprit behind EKC is now known to be the human adenovirus (HAdV) infection, particularly HAdV serotypes 8, 4, 19, 37, 53, 54, 56, and 64.^[4,5]

In India, EKC is known as Joy Bangla. The origins of the name can be traced to the 1971 war between India and Pakistan, and the liberation of Bangladesh. During the war, there was a massive influx of refugees from Bangladesh who were fleeing the death and destruction in their country. They carried with

them the viral conjunctivitis, which spread quickly in the squalor of their makeshift camps and tenements, soon becoming an epidemic in West Bengal and Assam. The disease then spread to the rest of India – earning for itself the nomenclature of Joy Bangla^[6,7] – literally, Hail Bengal – which was the war cry of those fighting for Bangladesh's independence.

An EMR-driven big data report from India concluded that EKC is seen in less than one percent of patients seeking eye care in India have EKC in at least one eye. It is usually self-limiting, often unilateral, and predominantly affects males (62%). These patients usually present with redness (64%), and watering (42%). The authors also reported that about one-third of the patients have corneal involvement, which usually does not persist beyond 4 weeks.^[8]

The recent epidemic of EKC in Northern, and parts of Southern and Eastern India, however, was more vicious as compared to the annual outbreak of the disease during monsoons. While it may be attributed to a particularly virulent strain of the virus, the self-imposed isolation during the 3 years of the COVID-19 pandemic, may also have lowered the herd immunity to the newer strains of the adenovirus.

The initial step in advancing management for any ailment, especially epidemics, is an honest evaluation of the prevalence, prevention, and treatment of the disorder. While instances of pink eye are encountered routinely by eye care professionals worldwide, its true prevalence cannot be ascertained as many patients with “red eyes” never reach eye doctors, and almost none are reported, except in extreme circumstances. EKC is a prevalent affliction worldwide, and the absence of confirmed efficacy in existing treatments underscores a significant unmet requirement.^[9,10] In fact, the existing evidence is currently inadequate to establish whether any of the available treatments offer a benefit over steroids or artificial tears in terms of eradicating the virus or preventing its transmission to unaffected fellow eyes.^[11,12] It also remains humbling how much of the biological intricacies and corneal mechanisms linked to HAdV remain shrouded in mystery. Robust epidemiological and virological surveillance systems are therefore required to track these EKC outbreaks and to better understand the disease pattern and severity.

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