

Epidemic acute conjunctivitis

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Minor epidemics of conjunctivitis occur throughout the world. In 1971 a large-scale epidemic of acute conjunctivitis swept this part of India with alarming rapidity, affecting innumerable people from all walks of life and with all levels of personal hygiene. Non-medical people started calling it by a nickname "Jai-Bangla".

This paper concerns observations based on documented cases selected at random from the Eye Outpatients' Department.

Material and methods

Between May 12 and June 12, 1971, fifty cases were selected from the Eye Outpatients' Department of N.R.S. Medical College, Calcutta. Only those cases were studied which exhibited definite signs of the disease.

A detailed history of the mode of onset, symptoms, infection of other members of the family, and progress of symptoms had been elicited in each case. All the patients were examined by oblique illumination, corneal loupe, and slit lamp. Corneal sensitivity had been tested by a wisp of cotton wool in some cases. Evidence of acute coryza had been sought in almost every case. Palpation of the preauricular gland and examination of the throat were performed as a routine. A conjunctival swab was taken from one eye of each patient and sent for culture. A few of our students and doctors volunteered for further study in the Virology Department of the School of Tropical Medicine, Calcutta.

Observations

EPIDEMIOLOGICAL

Rapid person-to-person transmission suggests a short incubation period, and in most cases this was about 48 hours. Since many patients crowded the outpatient clinics and were seen almost everywhere, especially during the peak period during the last week of May and the first week of June, a rough estimation could be made of the rapid spread of the disease. The probable route was hand-to-eye, though spread by droplets could not be discounted. Lack of isolation, overcrowding, and unrestricted travel enhanced the rate of spread, and innumerable cases were reported to occur far and wide throughout West Bengal. The incidence seemed to fall with the onset of the monsoon. Those who suffered from mumps and measles in the same family were seen to have been spared.

CLINICAL

The signs and symptoms were more or less uniform. Onset was unilateral at first with rapid involvement of the fellow eye in nearly all cases. The characteristic early symptoms were grittiness, foreign body sensation, watering, redness, and a conjunctival discharge, at first serous but later mucopurulent, accompanied by painful puffy swelling of the eyelids extending to the nasojugal and malar folds. Photophobia, itching, and running from the nose were also usually present.

Varying degrees of malaise, feverishness, and sore throat were experienced. Later symptoms included difficulty in reading, troublesome photophobia, and serous conjunctival discharge. The disease lasted for 3 to 9 days in most instances. The cornea remained clear and visual acuity was unaffected after recovery.

The following signs were observed:

- (1) Congestion of the fornices, bulbar, and palpebral conjunctiva (50).
- (2) Subconjunctival haemorrhages (35). These were either petechial or blotchy, and the upper part of the bulbar conjunctiva near the limbus showed more extensive haemorrhages.
- (3) Oedema of the lids (46).
- (4) Follicles on the upper and lower palpebral conjunctiva (8).
- (5) Chemosis (10)—Boiled-egg appearance of conjunctiva.
- (6) Frank conjunctival discharge (45).
- (7) Preauricular lymphadenopathy on the affected side (30).
- (8) Pin-point haemorrhages on the base of the uvula with congestion of throat (5).

The severity was less marked and the duration was shorter in children and young people than in elderly patients.

LABORATORY INVESTIGATIONS

Bacteriology Culture of conjunctival swabs showed:

- (a) No growth—37 cases
- (b) *Staph. albus*—10 cases
- (c) *Staph. citreus*—2 cases
- (d) *Staph. aureus*—1 case

In a few cases smears from the conjunctival sac were examined, but these revealed no eosinophilic infiltration.

Virology The Virology Department of the School of Tropical Medicine, Calcutta, from the large series of cases studied, took the view that the disease was probably due to an adenovirus (Sarkar, 1971). The typing of the virus is yet to be done.

Treatment

Though the disease was self-limiting and the course short, the intense painful oedema of the lids and subconjunctival haemorrhage frightened the patients and forced them to seek advice. Our patients had been treated with 4-hourly irrigation with normal saline lotion followed by instillation of antibiotic eye drops (chloramphenicol or soframycin), a course of sulphonamides (Orisol) for 5 to 7 days, and analgesics whenever necessary. Dark glasses were imperative. Washing the eyes with cold water was restricted. Those who

could bathe in the sea were cured in one day, and some were cured by frequent irrigation with normal saline lotion only.

Complications

Most cases were completely cured, but a few became re-infected within 2 weeks or so. Among our documented series we had two cases of sloughing corneal ulcer (one bilateral and one unilateral), the latter following the use of Betnesol-N eye ointment.

Discussion

An almost parallel description of the epidemic acute conjunctivitis has been recently reported from Ghana (Chatterjee, Quarcoopome, and Apenteng, 1970a, b). Acute haemorrhagic conjunctivitis may be due to *Pneumococcus*, Koch-Weeks bacilli, or adenovirus. Since most of the patients showed either no growth or *Staph. albus*, a bacterial cause can be excluded. Intense oedema of the lids and conjunctiva may suggest an allergic conjunctivitis, but failure to demonstrate eosinophils in the conjunctival smear rules out this possibility.

The non-involvement of the cornea seems to discount an adenoviral keratoconjunctivitis. But it is known that a particular epidemic keratoconjunctivitis may be produced by different adenotypes and the same adenovirus may produce different clinical features (Yin-Coggrave and Loh, 1966). In our series the clinical features were the epidemic spread, follicle formation, serous discharge in the early stages, lymphadenopathy, and evidence of pharyngitis which are typical of an adenovirus infection, while the subconjunctival haemorrhage may be a further manifestation of the adenovirus. Further virological studies, which are still in progress, will determine the type of adenovirus involved.

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