

# Epidemic haemorrhagic conjunctivitis in Ghana

## Further observations

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An epidemic of acute haemorrhagic conjunctivitis was reported from Ghana in 1970 (Chatterjee, Quarcoopome, and Apenteng, 1970a, b). A similar outbreak reported from Nigeria (Parrott, 1971) occurred when the Ghanaian epidemic had passed its peak and was subsiding. The disease is known to have occurred also in Togo, Dahomey, and Cameroun, and thus appears to have moved eastwards from Ghana. It has also appeared in South-East Asia and Japan (Mitsui, 1972) and London (Jones, 1972).

The main features of this disease are very high infectivity, severe ocular pain, marked photophobia and lacrimation, serous discharge, chemosis of the lids and conjunctiva, and single or multiple haemorrhages of the conjunctiva varying in size from petechiae to quite extensive "spontaneous" haemorrhages. Conjunctival follicles and preauricular lymphadenopathy were present in many of cases.

The reports from West Africa, referred to above, stated that there were no corneal lesions, and the disease was thus designated epidemic haemorrhagic conjunctivitis, most probably of virus aetiology. In view of the severity of the pain associated with the disease, it was felt that a further study was indicated. Fresh sporadic cases continue to be seen at the Eye Clinic, Korle Bu Teaching Hospital, Accra.

### Procedure

Patients seen with the typical picture of epidemic haemorrhagic conjunctivitis had fluorescein sodium 2 per cent. drops (Alcon) instilled into the eyes after they had been washed with sterile normal saline solution. Examination of the cornea and conjunctiva was carried out with a Zeiss slit-lamp microscope with a cobalt blue filter. This was repeated at subsequent visits until the eyes were quiet.

### Observations

A total number of 114 patients with epidemic haemorrhagic conjunctivitis was examined. 27 patients (26 per cent.) had no corneal lesions, on the first examination or subsequently. 87 patients (74 per cent.) showed fine punctate epithelial and subepithelial erosions and corneal infiltrates. In some cases larger opacities were seen amidst the fine opacities and these appeared to be agglomerates of the punctate lesions. This confluence of the punctate opacities was seen mostly in the more severe cases.

The corneal lesions were predominantly in the lower half of the cornea; there were some cases of involvement of the corneal stroma.

In five out of the 87 patients with positive corneal lesions, the corneae appeared normal on the first visit but showed the typical punctate staining on subsequent visits, usually within the next 5 to 7 days.

In the majority of patients the corneal lesions cleared completely in 7 to 14 days (average 10). There were no residual corneal opacities.

One patient who had had topical steroids elsewhere developed a corneal ulcer in one eye. Another patient who had had an attack of epidemic haemorrhagic conjunctivitis in the 1969 outbreak had a renewed attack in 1972.

### Discussion

There is a definite corneal involvement in a large percentage of patients who develop epidemic haemorrhagic conjunctivitis, so that the disease may be described as haemorrhagic keratoconjunctivitis. The corneal lesions almost certainly account for the intense pain complained of by most of these patients.

There appears to be some resemblance between this disease and the epidemic keratoconjunctivitis caused by Type 8 adenovirus, (Hogan and Zimmerman, 1962); there is, however, a definite difference in the severity of the pain, the fineness of the corneal lesions, and the haemorrhages. It appears that epidemic haemorrhagic keratoconjunctivitis is caused by a species of *picorna virus* (Jones, 1972; Mitsui, 1972).

### Summary

Corneal lesions were found in cases of the disease hitherto described as epidemic haemorrhagic conjunctivitis, and the conditions should thus be properly designated epidemic haemorrhagic keratoconjunctivitis. Sporadic cases have persisted since the initial epidemic, and one patient was seen with a second infection after an interval of 3 years.

### References

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