Acute Hemorrhagic Conjunctivitis Epidemic

During July, August, and September 1981, Guyana, Suriname, Belize, Trinidad and Tobago, Guatemala, Honduras, Brazil, Costa Rica, and the United States reported the occurrence of large outbreaks of acute hemorrhagic conjunctivitis (AHC), possibly due to enterovirus 70 and/or adenovirus. Laboratory tests are now being performed at the Caribbean Epidemiology Center in Trinidad and at the Centers for Disease Control in Atlanta, Georgia, for confirmation.

Thousands of cases have been observed in some of these countries. In Suriname the epidemic started four months ago on the border with French Guiana and spread throughout the country to reach the border of Guyana within two months. The disease is mild with no reported cases of blindness or permanent sequelae.

Considering the epidemiology of acute hemorrhagic conjunctivitis and the limitations of available control measures, it is probable that the outbreak may reach additional areas of these and other countries.

Acute hemorrhagic conjunctivitis was first recognized in Western Africa in 1969. Outbreaks were seen in North Africa, England; Continental Europe, India, and South East Asia shortly thereafter. By 1971 large epidemics had been recorded in Singapore, Hong Kong, Indonesia, Japan, Malaysia, the Philippines, India, Korea, Thailand, Sri Lanka, Viet Nam, and the Republic of China (Taiwan). Enterovirus 70 has been the most frequently isolated etiologic agent in these epidemics, although a Coxsackie virus (A 24 variant) and adenovirus 11 have also been implicated.

In June 1981 India reported outbreaks of epidemic conjunctivitis in Calcutta, Madras, Bombay, and Delhi. This epidemic shows evidence of a viral etiology.

The disease is characterized by a short incubation period (under 24 hours), rapid involvement of both eyes, swelling of the eyelids, congestion and watering of the conjunctivae, and in a large percentage of the patients, subconjunctival hemorrhages. Follicular conjunctivitis and occasional punctate epithelial keratitis may also be seen on examination. There are usually no permanent ocular complications; however, radiculomyelitis has been noted on rare occasions. Steroids are not indicated for treatment and may, in fact, be harmful. Enterovirus 70 is highly contagious and is thought to be transmitted primarily by fomites from contaminated fingers, clothing, or towels. Large epidemics most frequently occur in densely populated, crowded, humid areas. Small outbreaks attributed to cross-contamination in medical facilities or physicians' offices have occurred in London, Moscow, and France.

Epidemic conjunctivitis due to enterovirus 70 infection (as well as adenovirus 11 and 8) occurred in 1975 on Guam among South East Asian refugees awaiting transportation to the United States. Conjunctivitis of unknown etiology occurred rarely among American medical personnel in intimate contact with those patients, and no documented acute hemorrhagic conjunctivitis infections were subsequently reported in the United States.

In mid-July 1980 an outbreak of conjunctivitis among South East Asian refugees arriving in Oakland, California, was reported. Following that report, a surveillance system was established on all charter flights arriving at that city and, later in the month, at all U.S. Quarantine Stations. Cases were found on 24 of the 220 flights carrying refugees, and as of 7 September, out of the 9,376 arriving refugees surveyed, 528 were found to have clinical conjunctivitis. Most of the cases were characterized by conjunctival infection, swelling of eyelids, and scanty white discharge in one or both eyes, with no systemic symptoms; 21 of the 528 cases had hemorrhagic manifestations. Viral cultures were taken from each refugee with hemorrhagic conjunctivitis and from a sample of refugees with no clinical evidence of hemorrhagic conjunctivitis. Four of the latter specimens revealed picornavirus; one of these was identified (by homologous-antibody neutralization) as enterovirus 70, the agent predominantly responsible for acute hemorrhagic conjunctivitis. This organism had not been previously isolated from a patient in the Western Hemisphere.

(Sources: Epidemiological Surveillance Programs, PAHO and WHO, and Morbidity and Mortality Weekly Report 29:37, 1980.)