# ACUTE HAEMORRHAGIC CONJUNCTIVITIS

Pages with reference to book, From 61 To 62

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Acute Haemorrhagic Conjunctivitis (AHC) is a new form of infectious eye disease that first appeared in epidemic form in 1969. The disease typically has a sudden onset and is characterized by painfully swollen and red eyes, superficial keratitis, sub-conjunctival haemorrhage, palpebral follicles and excessive lachrymation. The disease usually lasts for 1-2 weeks with rapid recovery usually without complication. Secondary bacterial infection may occur in a small number of cases when the course of disease may be prolonged.

AHC has been given variety of names like “Apollo 11 disease”[1] “Epidemic haemorrhagic conjunctivitis”, “Acute Conjunctivitis”, “Joy Bangla Epidemic Conjunctivitis”, ‘Picorna Epidemic Conjunctivitis” and “Singapore Epidemic Conjunctivitis (SEC)”. The disease was given the name of Acute Haemorrhagic Conjunctivitis (AHC) by Kono and colleagues in 1972[2]. The term AHC is well established and remains an appropriate designation for the disease.

There are many interesting features of AHC. The disease is apparently new, it has preference for coastal, tropical cities with high humidity and a population density conducive to fomite - finger -eye spread and its main causative agents are picorna viruses that might have evolved from a domestic animal reservoir. Thus, not only are disease and its associated epidemiological features unique but new and possibly reawakened old viruses have been found to be the etiologic agents.

The picorna viruses causing human disease include Polio Viruses (Type 1,2,3) ECHO, Coxsackievirus (Taye A and B) and new Enteroviruses 68,69,70 and 71. However, as far as AHC is concerned Enterovirus type 70 (EV 70) and Coxsackievirus A 24 variant are the most important agents. Other picorna viruses like Echovis type 7, 11 and Coxsackie B have also been isolated from eyes in sporadic cases.

Besides picorna viruses other important viruses causing eye disease are Adeno viruses and type 8 is responsible for epidemic Kerato conjunctivitis. Adeno virus type 3 more commonly is the cause of Pharyngo Conjunctival fever which less commonly is also caused by type 7. Adeno virus type 11 is also reported to have been isolated from cases of AHC. Herpes virus is a less common cause of conjunctivitis.

Enterovirus type 70 has been responsible for two pandemics. The first epidemic started in 1969 possibly at two foci, one in Ghana and the other in Java. The disease assumed epidemic proportions and spread to Western and North African countries by 1971. The disease appeared in middle eastern and far eastern countries also. Pakistan is reported to have been swept by the Pandemic of 1971 but no epidemiological records are available.[3] North and South America remained free from AHC.[4] Kono and Uchida [5]were the first to investigate the aetiological agent of AHC and it was put under the group of new enteroviruses and named as Enterovirus type 70 (EV 7Ø) [6] A large epidemic of acute conjunctivitis occurred in Singapore in 1970 when over 60,000 cases were reported during September and October of that year.[7] This epidemic was caused by a different enterovirus which was later characterized as a variant of Coxsackie virus type A 24. [8] The virus has been responsible for localised epidemics in Hong Kong, Malaysia and India.

In the beginning of 1981 another outbreak appeared in Nigeria and Zaire, Africa. The epidemic reached India in early May and appeared in Pakistan in the city of Karachi by mid June.[9] The disease appeared to have swept the entire country and disappeared by end of August. The aetiological agents was isolated and characterized as Enterovirus type 70[10] The AHC caused by EV 70 besides being responsible for occular problem can give rise to serious neurological complications such as cranial

nerve palsies, lumbar radiculomyelitis and paralysis. However, no such case has been recorded in Pakistan till now except for one case of paralysis who had low level of antibodies to EV 70.Another important aspect of the 1981 Pandemic was that the disease affected the Americas also.

AHC due to variant Coxsackie virus type A 24 has not been recorded in Pakistan. It was in July 1986 that an epidemic of conjunctivitis started in the city of Karachi which soon spread to other parts of the country.

The occurrence of aetiological agents of AHC are important for the Opthalmologists, General Practitioners and Epidemiologists as both the newer enterovirus described elsewhere in the world are responsible for disease in Pakistan. The isolation of Coxsackie virus A 24 variant in Pakistan exposes another dimension in the epidemiology of AHC as it was understood till now that this virus causes disease, mostly in epidemic form in hot-humid climate in coastal areas and among congested groups of population where formite-finger to eye spread can easily take place. Perhaps this is the first time that the new virus reached the relatively cooler places like Abbottabad and the dry arid areas of Peshawar. The situation like this demands that every eye epidemic whether small or large should be thoroughly investigated as it is recorded in history that serious eye diseases have occurred in the past which lead to loss of vision and caused other serious complications in a large number of cases.[4]

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