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Review

Discovery of hepatitis E: The epidemic non-A, non-B hepatitis 30 years down the memory lane

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Abstract

Hepatitis E was first recognised during an epidemic of hepatitis, which occurred in Kashmir Valley in 1978. The epidemic involved an estimated 52,000 cases of icteric hepatitis with 1700 deaths. The disease had unique clinical and epidemiological features. The epidemic was water-borne with highly compressed epidemic curve. Following the epidemic, secondary waves of hepatitis did not occur. Clinical profile was characterized by cholestasis in around 20% of patients. The disease predominantly occurred in young adults. There was increased incidence and severity of the disease in pregnant women. A subset of patients had distinctive liver histology with bile plugs in the canaliculi and formation of pseudo-ductules by hepatocytes around the bile plugs. All surviving patients had self limiting disease. Sera lacked serological markers of acute hepatitis A and

hepatitis B. Based on these data, the possibility of another human hepatitis virus distinct from post-transfusion non-A, non-B hepatitis was postulated. [Balayan et al. \(1983\)](#) successfully transmitted the disease into himself by oral administration of pooled stool extracts of 9 patients from a non-A, non-B hepatitis outbreak which had occurred in a Soviet military camp located in Afghanistan. [Reyes et al. \(1990\)](#) cloned and sequenced hepatitis E virus genome. Over the years, hepatitis E was identified as a major health problem in developing countries with unsafe water supplies and poor sanitary disposal. Data from sero-surveys forced re-evaluation of the epidemiology of hepatitis E and gave an indirect indication to vocationally acquired HEV infections in industrialized countries. Soon, autochthonous hepatitis E was recognised as a clinical problem in such countries. Several animal species especially domestic swine, wild boar and wild deer were found to be reservoirs of hepatitis E virus genotype 3 & 4 in these countries. Human infections occur through intake of uncooked or undercooked meat of the infected animals and pig livers or sausages made from these livers and sold in supermarkets. Chronic hepatitis E resulting in rapidly progressive liver cirrhosis and end stage liver disease was described in organ transplant patients and those with other immunodeficiency states from many European countries. Two recombinant hepatitis E virus vaccines have successfully undergone phase 3 trials.



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Keywords

Hepatitis viruses; Hepatitis E; Hepevirus; Epidemics; Sporadic disease; Endemic disease; Discovery

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