

# **Virological investigation of a hepatitis E epidemic in North India**

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## **Virological investigation of a hepatitis E epidemic in North India**

Kumar S<sup>1</sup>, Ratho RK, Chawla YK, Chakraborti A.

<sup>1</sup> Department of Virology, Post Graduate Institute of Medical Education and Research, Chandigarh-12, India.

### **Abstract**

**Introduction:** Hepatitis E virus (HEV) infection is of major public health concern in the developing countries, including the Indian subcontinent, due to epidemics of large proportions, increased morbidity and high mortality, especially in pregnant women. This study shows the findings of two different epidemics that occurred due to HEV.

**Methods:** Blood samples were collected from 116 suspected HEV patients. Sera were separated and tested for hepatitis A virus HAV immunoglobulin M (IgM), hepatitis B virus surface antigen, hepatitis C virus (HCV) antibody and HEV IgM by Micro ELISA. 15 acute samples were subjected to reverse transcriptase polymerase chain reaction (RT-PCR) for the detection of HEV ribonucleic acid (RNA).

**Results:** Of the 116 blood samples collected, 68 (58.6 percent) were positive for HEV IgM antibodies. Mixed infections of HEV with HAV and HCV were detected in three (4.4 percent) and five (7.4 percent) cases, respectively. 15 HEV IgM-positive acute blood samples subjected to RT-PCR showed the presence of specific 343 bp amplified HEV ORF1 gene product in five cases. No untoward effects were observed in the five HEV-infected pregnant women during their follow-up.

**Conclusion:** This study confirms the HEV aetiology and highlights a major disease outbreak that occurred due to mixing of drinking water with sewerage.

### **Reference**

Tandon BN, Joshi YK, Jain SK, Gandhi BM, Mathieson LR, Tandon HD. An epidemic of non-A, non-B hepatitis in North India. Indian J Med Res 1982; 75: 739-44.