

Exposure Rate to Hepatitis A and E (IgG) in Children

Madam, We collected blood samples from 100 healthy children aged 7 months to 10 years from various schools and well baby clinics to see the exposure rate to hepatitis A and E using Abbott IgG antibodies as markers. Consent was taken from the parents and school principals prior to the collection of the blood. All children with a history of jaundice in the past were excluded. A total of 100 samples were collected from upper to middle socioeconomic groups. Family income of over Rs. 10,000, separate bath and bed rooms and the locality of residence were taken as the criteria of socioeconomic status. Tests were run using Abbott ELISA IgG kits for anti HAV and HEV. Two samples were discarded due to improper storage, leaving 98 samples for analysis. Eleven children were less than 12 months of age, 7 were between 13-24 months, 37 between 25-60 months and 43 in 61-120 months age group. Of 98 samples 80 were positive for anti HAV and 18 were positive for HEV. The exposure to the two viruses were low till 2 years of age after which it increased steadily with the advancement of age. All except one case who were positive for HEV were also positive for HAV indicating exposure to both hepatitis E and A virus. Only one case was positive for

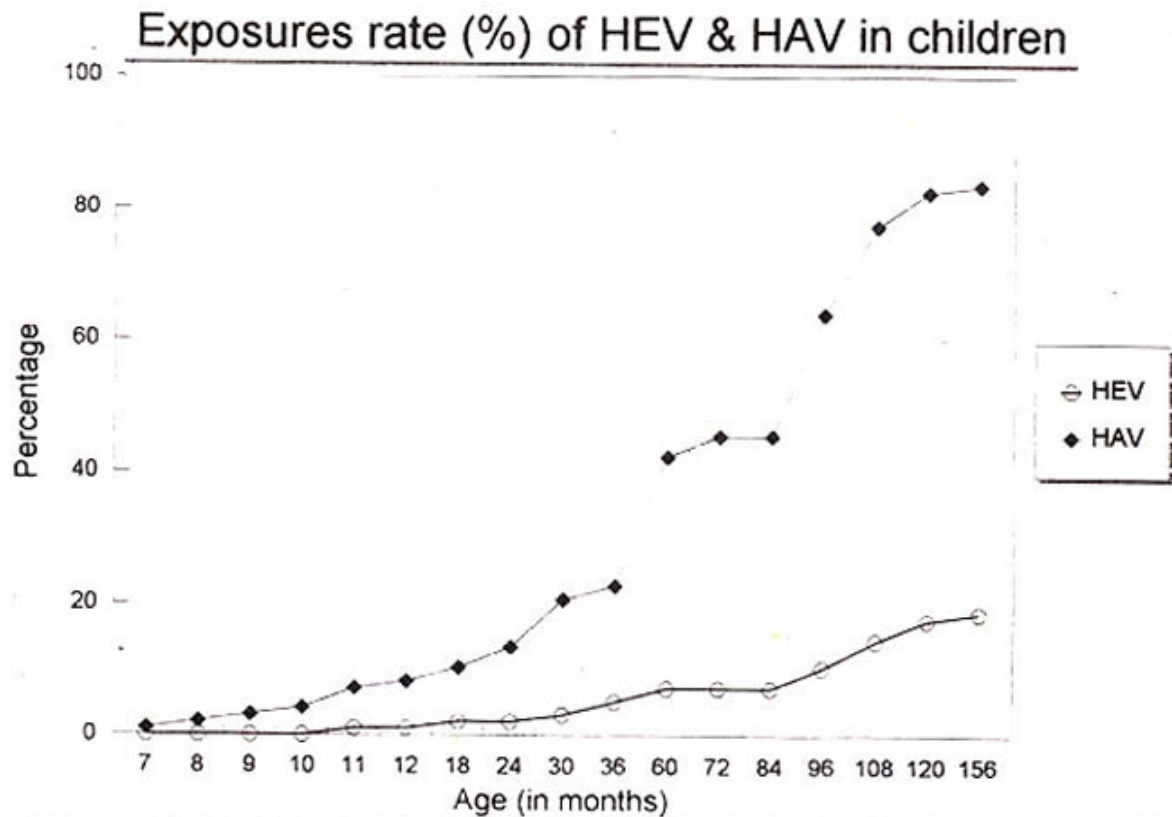


Figure.

Both hepatitis A and E are water borne infections. Previous studies at our centre and elsewhere have shown an almost 98% exposure to hepatitis A virus by the age of 15 years¹⁻³. Acute hepatitis A is a disease of children in Pakistan and more than 50% cases of acute viral hepatitis at

this age is due to hepatitis A⁴. Exposure rate to hepatitis A virus (IgG) in Pakistan has been studied at various ages starting from birth to 15 years. It was found that antibodies were high upto 2 years of age (maternal antibodies): once these antibodies are lost actual exposure to the virus occurs followed by appearance of protective antibodies which increase with the advancement of age¹. Similar was the situation in this study. Hepatitis E was found to be the cause of acute hepatitis in 77% adults and 30% children in a study in Pakistan⁵ and exposure rate to HEV in adults and children was found to be 16% and 19% respectively. As potable water is not available in Pakistan therefore exposure to both these water borne viruses is apt to occur more early and affect a larger population. All these children had no previous history of jaundice therefore the actual exposure rate to hepatitis A and E is likely to be higher than what is seen in this study.

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