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# Morbidity associated with hepatitis E virus infection in endemic setting

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## Background

To determine the groups most affected by hepatitis E virus (HEV) during documented acute viral hepatitis (AVH) epidemics, trends in AVH-associated mortality rate (MR) per 100,000 over a 35-year period were examined.

## Methods

Reported AVH incidence data from 1971 to 2005 and AVH-associated mortality data from 1981 to 1995 were examined. Serologic markers for infection with hepatitis viruses A, B, D, and E were determined from a sample of hospitalized patients with AVH from an epidemic period (1987) and from a sample of pregnant women with AVH from a non-epidemic period (1992).

## Results

Two multi-year AVH outbreaks were identified: one during 1975-1976, and one during 1985-1987. During 1985-1987, AVH-associated MRs were 12.3-17.8 for the general population. Highest AVH-associated MRs occurred among children in the first 3 years of life (40-190 per 100,000) and among women aged 20-29 (15-21 per 100,000). During 1988-1995 when reported AVH morbidity was much lower in the general population, AVH-associated MRs were markedly lower among these same age groups. In 1988, AVH-associated MRs were higher in rural (21 per 100,000) than in urban (8 per 100,000) populations (RR 2.6; 95% CI 1.16-5.93;  $p < 0.05$ ). Serologic evidence of acute HEV infection was found in 280 of 396 (71%) patients with AVH in 1987 and 12 of 99 (12%) pregnant patients with AVH in 1992.

## Discussion

In the absence of the availability of confirmatory testing, inferences regarding probable hepatitis epidemic

etiologies can sometimes be made using surveillance data, comparing AVH incidence with AVH-associated mortality with an eye to population-based viral hepatitis control measures. Data presented here implicate HEV as the probable etiology of high mortality observed in pregnant women and in children <3 years. High mortality among pregnant women but not among children <3 years has been observed in previous descriptions of epidemic hepatitis E. The high mortality among younger children observed in an outbreak of acute viral hepatitis associated with hepatitis E merits corroboration in future outbreaks.

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