

Epidemiology of endemic viral hepatitis in an urban area of India: a retrospective community study in Alwar.

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Epidemiology of endemic viral hepatitis in an urban area of India: a retrospective community study in Alwar.

Singh J¹, Prakash C, Gupta RS, Bora D, Jain DC, Datta KK.

¹National Institute of Communicable Diseases (NICD), Delhi, India.

Abstract

In a community study during a reference period of 1 year, 192 cases of jaundice were detected in an urban population of 69,440 in Alwar, Rajasthan. Detected by paramedics and confirmed by physicians, these cases gave an annual incidence of 2.76 (95% CI: 2.37-3.15) per 1000 population. At least one of these patients died, giving a case fatality ratio of 0.6%. The jaundice cases occurred in all areas investigated, and affected all socioeconomic strata. About 94% of the affected families had only single cases. Although cases occurred throughout the year, more than 59% occurred during June-September, which are the summer and monsoon months. The incidence was highest (5.23 per 1000) among under-5-year-olds and declined progressively and significantly thereafter. Males had a higher incidence than females at all ages; the differences were not significant. Blood samples from 56 cases who had jaundice in the last 3 months of the reference period were tested for markers of viral hepatitis. Of these, 18 (32.1%), 1 (1.8%), 0, 2 (3.6%), and 4 (7.1%) were found to have hepatitis A, B, C, D and E, respectively. The etiology of the remaining 31 cases (55%) could not be established; previously, they would have been included in the NANB (non-A, non-B) category, inflating its proportion. Hepatitis A (HA) was the predominant type; being comparatively mild, it is perhaps underrepresented in hospital-based data. Many HA cases were in adults, which may be the beginning of an age shift of HA to the right owing to improvements in living standards of the study population. Five cases were carriers of hepatitis B virus (HBV), indicating the importance of HBV infection in India as well. Finally, the study found the annual incidence of laboratory-supported cases of viral hepatitis to be 1.24 (95% CI: 0.98-1.5) per 1000 population, which suggests that it is a major public health problem in India.

PIP: To improve understanding of the epidemiology of endemic viral hepatitis in urban India, a retrospective analysis was conducted of the prevalence of this disease in 69,440 residents of Alwar, Rajasthan State, in 1994. A total of 192 cases of jaundice were detected during the 12-month study period, for an annual incidence of 2.76/1000 population. Almost 60% of these cases occurred during the summer and monsoon months (June-September),

suggesting a feco-oral mode of transmission. Jaundice incidence was highest (5.23/1000) in children under 5 years of age, but no patterns emerged on the basis of socioeconomic status. 26 (14%) of those with jaundice had 1 or more risk factors for parenterally transmitted viral hepatitis (e.g., multiple injections, surgery) within 6 months of the onset of jaundice. Analysis of serum samples from 56 cases whose jaundice had appeared in the previous 3 months confirmed viral hepatitis in 25 (44.6%), for an annual incidence of 1.24/1000 population. The incidence of hepatitis markers in these cases was as follows: hepatitis A (18 cases, or 32.1%), hepatitis B (1 case, or 1.8%), hepatitis C (no cases), hepatitis D (2 cases, or 3.6%), and hepatitis E (4 cases, or 7.1%). The etiology of the remaining 31 cases (55%) could not be established. A follow-up of 181 jaundice patients in 1995 indicated that 1 had died (case fatality ratio, 0.6%) and 3 still had jaundice. The finding in this population-based study of a preponderance of hepatitis A infection stands in contrast to the high rate of hepatitis B found in hospital-based studies and suggests that the incidence of the relatively mild hepatitis A infection may have been underestimated in the latter studies.

Reference

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