

### Is a vaccination program against hepatitis A needed in India?

Hepatitis A virus (HAV) infection is endemic in India. A similar situation was prevalent in developed countries a few decades back, and recently in some developing Southeast Asian countries.<sup>1</sup> Because of control of the possible transmission factors, they achieved a marked reduction in the prevalence of the virus.<sup>2</sup> But this has led to the emergence of a large population of nonimmune susceptibles who can develop hepatitis A if infected. Assuming a similar situation in India, we undertook a study to determine the seroprevalence of IgG anti HAV antibody (AHA) status in a hospital-based population to identify any high-risk population who are likely to benefit from vaccination against hepatitis A.

Patients attending the medical outpatient department of Lok Nayak Hospital, New Delhi from May 1995 to May 1996, who did not have any evidence of hepatobiliary disease, were included in the study. They were evaluated on the basis of a questionnaire, clinical examination, liver function tests and ELISA for AHA (*Hepavase*; General Biological, Taiwan).

Of 395 subjects, 240 were from the low socioeconomic (LS) group and 155 from the high socioeconomic (HS) group. The male-female ratio was 1.4:1. The overall prevalence of 36.7% (Table) of AHA-negative subjects compares well with a recent study from Mumbai<sup>3</sup> which found a prevalence rate of 22% (35% among those aged less than 10 years), but not with a study from Pune<sup>4</sup> where the prevalence rate was almost nil in those aged above 10 years. This increased prevalence rate may indicate an epidemiological shift of hepatitis A in India, as has occurred in the developed world and in some developing countries.<sup>5</sup> Our results show no significant difference in prevalence rates between LS and HS groups while the difference was significant between men and women. Both these are contrary to the observations in the Mumbai study.<sup>3</sup>

Such a shift may raise the age of HAV infection and increase severity of hepatitis A infection.<sup>5</sup> We agree with the editorial<sup>6</sup> that since a safe, immunogenic hepatitis A vaccine is available, there is an urgent need to balance

**Table: Age-specific prevalence of anti-HAV antibody-negative subjects**

Age groups	Sex		Socioeconomic status		Total
	Men	Women	Low	High	
11-20	12/48 (25%)	25/45 (55.6%)	16/52 (30.8%)	21/41 (51.2%)	37/93 (39.8%)
21-30	33/85 (38.8%)	28/56 (50%)	39/99 (39.4%)	22/42 (52.4%)	61/141 (43.3%)
31-40	17/50 (34.3%)	12/33 (36.3%)	25/57 (43.9%)	4/26 (15.4%)	29/83 (34.9%)
>40	10/48 (20.8%)	8/30 (26.7%)	13/32 (40.6%)	5/46 (10.9%)	18/78 (23.1%)
Total	72/231 (31.2%)	73/164* (44.5%)	93/240 (38.8%)	52/155 (33.5%)	145/395 (36.7%)

\*p<0.01 as compared to men

between the economic and social costs due to the disease burden and the cost of intervention. A system to generate such data needs to be devised.

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### References

1. Malik YA, Bharin R. *Changing pattern of hepatitis A in Malaysia*. Presented at 4th Western Pacific Congress in Chemotherapy and Infectious Diseases, Manila, 1994.
2. Frosner GG, Papevangelou G, Butter R, Iwarsoon S, Lindholm A, Courco-Pauty A, et al. Antibody against hepatitis A in seven European countries. I. Comparison of prevalence in different age groups. *Am J Epidemiol* 1979; 110: 63-9.
3. Dhawan PS, Shah SS, Alvares JF, Kher A, Shankaran K, Kandoth PW, et al. Seroprevalence of hepatitis A virus in Mumbai and immunogenicity and safety of hepatitis A vaccine. *Indian J Gastroenterol* 1998; 17: 16-8.
4. Arankalle VA, Tsarev SA, Chadha MS, Alling DW, Emerson SU, Banerjee K, et al. Age specific prevalence of antibodies to hepatitis A and E viruses in Pune, India, 1982-1992. *J Infect Dis* 1995; 171: 447-50.
5. Hadler SC. *Global impact of hepatitis A infection: changing patterns*. In: Hollinger FB, Lemon SM, Margolis HS, Eds. *Viral Hepatitis and Liver Disease*. Baltimore: Williams & Wilkins, 1991; pp 14-20.
6. John TJ, Chandy GM. What priority for prevention of hepatitis A in India? (Editorial). *Indian J Gastroenterol* 1998; 17: 2-3.

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