

RESEARCH NOTE

HEPATITIS A VIRUS ANTIBODY IN MENTALLY RETARDED CHILDREN

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Hepatitis A virus is an important public health problem especially in areas where hygiene and sanitation are improving such as Southeast Asia because, while the total number of cases of hepatitis A infection are reduced, the number of symptomatic and severe cases increase. The antibody prevalence in Bangkok and in rural areas of Thailand has markedly declined among children and adolescents (Poovorawan *et al*, 1991; 1994). The transition from high to low endemicity poses the danger of outbreaks of symptomatic hepatitis A infection especially among high risk groups such as school children, factory workers, and institutions for the mentally retarded.

In Thailand, there are very few reports on the age specific prevalence among high risk groups. The risk of hepatitis A infection in the mentally handicapped institutions has been reported to be significantly higher than in the general population of the same area (Clemens *et al*, 1992; Lehmann *et al*, 1978). This study aimed to determine the age specific prevalence of anti HAV IgG in institutionalized mentally retarded children. Whole blood was taken from 195 children with mild to moderately low intelligence quotients. The main diagnosis was 21 trisomy syndrome. Children were classified by age into 8 groups, 2-3, 4-5, 6-7, 8-9, 10-11, 12-13, 14-15 and over 16 years. All the sera were kept at -20°C until the time of study. Anti HAV IgG was determined by using the ELISA technique (Abbott Laboratories, North Chicago, USA). In cases of near the cut off point results, the tests were repeated again. The result of age distribution and positive anti HAV is shown in Table 1.

In this study, we showed that the overall antibody prevalence rate in mentally retarded children was 13.85%. The immunity against HAV increased with age (Fig 1).

Table 1

Age specific prevalence of antiHAV in mentally retarded children.

Age (years)	No.	No. positive	%
2-3	19	0	0
4-5	31	0	0
6-7	19	0	0
8-9	16	0	0
10-11	33	4	12.12
12-13	13	2	15.38
14-15	31	8	25.81
≥16	33	13	39.39
Total	195	27	13.85

The epidemiologic study of hepatitis A antibody is useful in planning for disease prevention, especially in high risk populations. The acquisition of HAV infection in different populations depends on living style and environmental sanitation. The

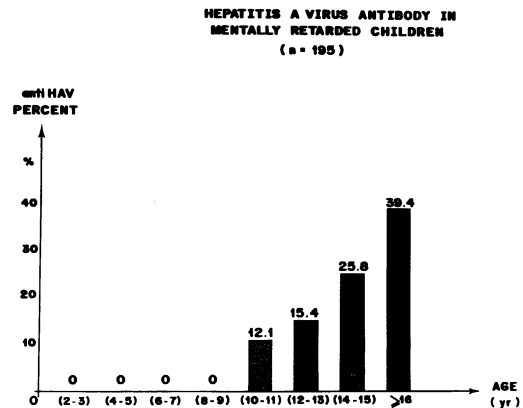


Fig 1—Age-specific prevalence of antiHAV in mentally retarded children.

unexpected of observation in this study was the markedly low anti HAV prevalence among mentally retarded children in Bangkok. These data probably reflect the results of a better living standard, education and hygiene of the parents and healthcare workers of the institution. However, the decrease in anti HAV prevalence may result in more symptomatic hepatitis A in older age groups and possibly outbreaks. Therefore, preventive measures are essential in reducing the infection rate. Other than improvement of hygienic conditions, vaccination with hepatitis A vaccine is another promising preventive measure among mentally retarded children.

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