

RESEARCH NOTE

LOW PREVALENCE OF ANTI-HAV AMONG CHILDREN IN SOUTHERN THAILAND

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Hepatitis A virus (HAV) infection constitutes a major public health problem particularly in areas where, as a consequence of socio-economic development hygiene and sanitation are in the process of modernization as has been the case in Southeast Asia. Due to these altered conditions, hepatitis A infection which formerly almost exclusively occurred as an asymptomatic childhood infection leaving the child with lifetime immunity has been postponed towards adolescence and early adulthood with the symptoms evoked by the virus increasing in severity in proportion to the age of the respective patient. Although the mortality rate is below 1/1000, fatalities do occur as has been reported during an outbreak of hepatitis A in Shanghai in 1988 (Yao, 1990). As a consequence of this altered pattern of endemicity and the resulting lack of antibodies to HAV among the general population the risk of sudden major outbreaks has been multiplied (Sinraparatsamee *et al*, 1995).

Since the data on the seroprevalence of anti-HAV in the south of Thailand are limited, we examined a group of children residing either in Hat Yai proper or in the other districts of Songkhla, a province bordering on the Gulf of Siam in the east and on Malaysia in the south. Economically, the majority of Songkhla's inhabitants largely depend upon the income garnered from either rubber plantations or fishery. Hence, their socio-economic background can be regarded as rather limited.

The population studied comprised 190 randomly selected children between 2 months and 15 years of age who attended the pediatric department at Hat Yai Hospital, Songkhla Province, for treatment of

acute illness not obviously affecting the liver or the immune system. Exclusion criteria were acute or chronic liver disease, medication with immunosuppressive drugs, or an otherwise compromised immune response. After having obtained their parents' consent as to the purpose of the study, venous blood was taken, the sera separated and kept at -20°C until further tested.

The test for the presence of anti-HAV was performed using a commercially available ELISA kit (Abbott Laboratories, North Chicago, Ill.). The results were expressed as either positive or negative according to the cut-off value specified by the manufacturer's instructions.

As shown in Table 1, the overall prevalence of anti-HAV detected in 190 randomly selected children under 15 years amounted to 9.4%, which bears witness to the low level of immunity acquired against hepatitis A virus among children and young adolescents in the south of Thailand. These data are comparable to those garnered from among primary school children aged between 6 to 12 years who without exception originated from low to middle socio-economic backgrounds in Bangkok (Poovorawan *et al*, 1997).

Table 1

Prevalence of anti-HAV among different age groups.

Age group (years)	No.	anti-HAV +ve	
		No.	%
0-2	37	3	8.1
3-5	43	3	6.9
6-10	67	4	6.0
11-15	43	8	18.6
Total	190	18	9.4

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To conclude, we detected an alarming low prevalence of acquired immunity against hepatitis A virus among children and young adolescents residing in the south of Thailand, as we had previously determined for Bangkok. Hence, due to the resulting imminent risk of a major outbreak, the population ought to receive profound health education geared at applying preventive measures such as improved hygiene and sanitation. In addition, administration of immune prophylaxis might be considered, although at present, due to the high cost of the hepatitis A vaccine, this is not feasible for the majority of the Thai population. In any event, the cost/benefit ratio of vaccination should be taken into account and in case of the price being acceptable hepatitis A vaccination might be delivered on a routine basis in particular targeting adolescents and young adults nation-wide. If costs fall to acceptable levels in future, to guarantee complete eradication of hepatitis A virus infection in the future, vaccination of pre-school children ought to be considered.

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