Profile of Viral Hepatitis A in Chennai

This retrospective study compares the clinical features, laboratory profile and complications of anti HAV IgM positive acute viral hepatitis A in 138 children between 1-15 year (1-5 year: *n*=31; 5-10 year: *n*=85; and 10-15year: *n*=22). We found that older children presented with HAV (hepatitis A virus) infection with more atypical manifestations (ascites and splenomegaly) and complications.

Key words: *Children, Hepatitis A, India.*

We conducted this study to analyze the clinical profile of type A virus infection in a tertiary referral centre in Chennai catering to children from middle and high socioeconomic group. A total of 138 consecutive hospitalized/outpatient children (age 1m-15 y), from the Kachi Kamakoti CHILDS trust Hospital with the clinical and biochemical manifestations of acute hepatitis, and positive for antiHAV IgM were included in the study over a period of three years (December 2002-December 2005). The age distribution, presenting complaints, laboratory investigations, and ultrasonographic findings are summarized in ***Table* I**. All children improved with conservative management.

We noted an increased incidence of HAV (21%) in the older children as compared to previous studies(1-4). The increase could be attributed to either more older children being infected or lesser number of younger children being infected due to the introduction of HAV immunization. Several workers have documented the shift in epidemiology of HAV infection with peak age of seroprevalance shifting from first decade to third decade of life(2). In a study from Chennai, the mean prevalance rate in children

TABLE I CLINICAL, BIOCHEMICAL, AND ULTRASONOGRAPHIC FINDINGS IN CHILDREN WITH HEPATITIS A VIRUS INFECTION (*N*=138)

	1-5 years (*n*=31)	5-10 years (*n*=85)	10-15 years (*n*=22)	*P* value
No. of children	28 (22.5%)	85 (61.6%)	22 (15.9%)	
Fever	28 (90.3%)	66 (77.6%)	20 (90.9%)	0.15
Jaundice	28 (90.3%)	83 (97.6%)	21 (95.5%)	0.14
Vomiting	27 (87.1%)	64 (75.3%)	19 (86.4%)	0.26
Pain abdomen	11 (35.5%)	35 (41.2%)	13 (59.1%)	0.21
Ascites	0	8 (9.4%)	4 (18.2%)	0.07
Pale stools	11 (35.5%)	15 (17.6%)	7 (31.8%)	0.09
Splenomegaly	16 (57.1%)	9 (10.5%)	19 (86.3%)	0.18
Complications	0	0	8 (5.8%)*	–
Free fluid on USG (*n*=30)	8(25.8%)	12 (15.3%)	10 (34.4%)	0.564
Age (years)	3.36 (3.0-3.6)	7.24 (6.9-7.5)	12.39 (11.6-13.1)	<0.0001
Total bilirubin (mg/dL)	4.83 (4.1-5.4)	5.56 (4.9-6.2)	5.72 (4.6-6.7)	0.36
Direct bilirubin (mg/dL)	3.82 (3.3-4.2)	4.19 (3.6-4.6)	4.36 (3.4-5.3)	0.61
SGOT (IU/dL)	1497.6 (994.6-2000.6)	1468.0 (1133.3-1802.7)	1417.0 (776.7-2057.2)	0.98
SGPT (IU/dL)	1665.6 (1211.9-2119.3)	1633.0 (1372.6-1893.4)	1600.8 (1137.2-2064.4)	0.98
Prothrombin time (s)	7.39 (4.01-10.7)	14.54 (13.1-15.9)	12.92 (12.0-13.7)	<0.0001
Albumin (g/dL)	1.9 (1.23-2.6)	3.5 (3.4-3.6)	3.6 (3.4-3.8)	<0.0001

**Complications include major gastrointestinal bleed, intracerebral bleed, and hypoglycemia in 1 child each, grade I encephalopathy in 2 children, and acute liver cell failure in 4. Three children had prolonged cholestasis (>12 wk); USG: ultrasonography.*

for HAV was 83.2% with the infection achieving seroprevalance of 96.9% by the age of 12 years(3). The increase in number of children in the age group of 10-15 years compared to study by Malathi, *et al*.(1) could be possibly due to above cited reasons and possibly the occurrence of this epidemiological shift in Chennai(1). At this point, the reasons only be postulated as the present study was not done at the community level. Another notable point is the increased incidence of complications in older children. Probably our HAV vaccination policy needs a review.

Shrishu R Kamath, Malathi Sathiyasekaran, T Eswara Raja and Sudha,
From Mehta Children Hospital, Chennai and Department of Pediatrics, Kanchi Kamakoti CHILDS Trust Hospital, Chennai, India.

REFERENCES

1. Malathi S, Mohanavalli B, Menon T, Srilatha P, Sankaranarayanan VS, Bhaskar Raju B, *et al*. Clinical and viral markers pattern of acute sporadic hepatitis in children at Madras, South India. J Trop Pediatr 1998; 44: 275-278.
2. Mall ML, Rai RR, Philip M, Naik G, Parekh P, Bhawnani SC, *et al.* Seroepidemiology of hepatitis A in India: changing pattern. Indian J Gastroenterol 2001; 20: 132-135.
3. Mohanavalli B, Dhevahi E, Menon T, Malathi S, Thyagarajan SP. Prevalence of antibodies to hepatitis A and hepatitis E virus in urban school children in Chennai. Indian Pediatr 2003; 40: 328-331.
4. Poddar U, Thapa BR, Prasad A, Singh K. Changing spectrum of sporadic acute viral hepatitis in Indian children. J Trop Pediatr 2002; 48: 210-213.