

Rare Atypical Presentation of Acute Hepatitis A in Children: Single Center Experience

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Retrospective study from the beginning for two years at National Liver Institute, Menoufyia University, out of 20 patients with HAV were admitted, eleven of them were HAV infection associated with ascites. Inclusion criteria were: HAV-IgM +ve, no hepatic or any other chronic illness before, normal growth and nutritional status, no history of HAV vaccination. Exclusion criteria were: combined HAV infection, nephrotic syndrome, protein-losing enteropathy, malnutrition, history of filariasis and pre-existing liver cirrhosis (e.g. due to schistosomiasis). Laboratory profile of HAV (IgG, IgM), HEV, HCV-Ab, HBsAg and HBcAb (IgG, IgM) were tested by ELISA (enzyme-linked immuno-sorbent assay) via COBAS INTEGRA 400 - Roche- Diagnostics, to confirm that the child is free from other viral hepatitis.

Patients aged from 3-13 years with predominance of male sex [2 females: 9 males]. All patients presented with hepatosplenomegaly and ascites, five of them (about 46.5%) had right sided pleural effusion, one patient had bilateral pleural effusion. All patients also presented with conjugated hyperbilirubinemia, prolonged prothrombin time. All patients had albumin 2.3gm and more (2.3-3.7gm). Seven patients (63.6%) had albumin less than 3gm, the remaining four patients had albumin more than 3gm. Two patients (18.1%) were in fulminant hepatitis (FH), with no previous liver disease before (FH presented by coagulopathy and coma grade III, IV). Some changes of serum Na⁺ level occurred and corrected without any medications and it was not correlated with the presence or the severity of ascites. Ascites was associated with high level of ammonia in 36.3%, positive CRP in 81.8%, and prolonged prothrombin time. Ascites was present in all cases of conjugated hyperbilirubinemia; recovery was the fate of all children.

Many authors concluded that, ascites and pleural effusion may exceptionally accompany hepatitis A infection in children, and presumably the same may occur in adults. The occurrence of ascites in such cases may be explained by a transient increase in portal venous or lymphatic pressure due to the compression of hepatic sinusoids. The transport of ascitic fluid through the diaphragmatic lymphatics or direct passage through a diaphragmatic defect may cause pleural effusion [1-4]. In our cases no diaphragmatic hernia was found, so pleural effusion might be mostly due to ascitic fluid transported through the diaphragmatic lymphatics. Our conclusion: pleural effusion and ascites may associate acute hepatitis A infection in children, fortunately its appearance, however, does not indicate an unfavorable outcome, and this observation to be studied on large cohort in Egyptian children.

Table 1: Demographic data and clinical parameters of patients.

Parameter	No of patients=11	%
Age range/yr	3-13yrs	-
Sex		
-M	9	-
-F	2	
Hepatomegaly	11	100%
Splenomegaly	11	100%
Hepatosplenomegaly	11	100
Ascites	11	100%
Fulminant hepatitis	2	18.1
Pleural effusion	6	54.5%
Prolonged PT.	11	100
Direct Hyperbilirubinemia	11	100
Hyperammonemia	4	36.3
Others:		
-FH	2	18.1%
-CRP	9	81.8%

M= male, F= female, FH= fulminant hepatitis, CRP= C-reactive protein, AFP= alfa feto-protein, PT = prothrombin time, CRP =C reactive protein

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