Original Research Article

Demographic and Clinical Profile Analysis of Acute Viral Hepatitis -A Patients in Bangladesh: A Single-Center Study

ABSTRACT

Background: *Hepatitis A is an infectious disease of the liver caused by Hepatovirus A (HAV); it is a type of viral hepatitis. Especially in the young, many cases have few or no symptoms. The symptoms may include nausea, vomiting, diarrhea, jaundice, fever, and abdominal pain typically last usually 8 weeks or less. Around 10-15% of people experience a recurrence of symptoms during the 6 months after the initial infection. Acute liver failure may rarely occur, with this being more common in the elderly. An increase in acute hepatitis A (AHA) cases has been notified in Bangladesh frequently.* ***Objective:*** *In this study, our main goal is to evaluate the demographic & clinical profile of acute viral hepatitis A patient in Bangladesh. Method: This prospective study included 23 patients ranging from 5->40 years of AVH, admitted to tertiary care hospitals. Patients with recent onset of jaundice, conjugated hyperbilirubinemia, or mixed hyperbilirubinemia, and positive serum report of immunoglobulin M were included in the study.* ***Results:*** *During the study, the majority belonged to the 5-10 year's age group, 52.2%, and the majority were male, 75.0%. The male female ratio was 3:1. Mean serum bilirubin was 25.20±95.08, S.GPT ALT was 922.61±955.46, serum alkaline Phosphatase was 560.88±397.21, and C Reactive Protein was positive in all cases. Moreover, the electrolytic imbalance was observed where S. Sodium was 142.00±0.00, Serum Creatinine 23.55±31.75 and Serum Albumin 36.00±0.00* ***Conclusion:*** *In our study, AVH A is seen as an infection in childhood, this infection was also seen in adolescents and adults, which causes liver damage. Improvement in hygiene and socioeconomic conditions, and routine immunization needs to take to decrease the severity of the AVHA.*

Keywords:

Acute hepatitis A (AHA), Liver disease, Conjugated hyperbilirubinemia, Mixed hyperbilirubinemia, Immunoglobulin M

INTRODUCTION

"Although Acute Viral Hepatitis (AVH) is prevalent worldwide, it is a serious health problem in underdeveloped countries in terms of morbidity and death. Viruses such as A, B, C, D, E, and G cause AVH. However, the most common viral causes of AVH with a significant health burden are hepatitis A and hepatitis E". [1-3] In underdeveloped nations like Bangladesh, hepatitis A is an infectious disease of the liver caused by Hepatovirus A (HAV); it is a type of viral hepatitis. Especially in the young, many cases have few or no symptoms. When symptoms occur, they and Symptom may include nausea, vomiting, diarrhea, jaundice, fever, and abdominal pain it typically last 8 weeks or less. Around 10-15% of people experience a recurrence of symptoms during the 6 months after the initial infection. Acute liver failure may rarely occur, with this being more common in the elderly. The Hepatitis E virus (HEV) produces sporadic infections as well as the severe pandemic of viral hepatitis and fulminant hepatic failure. Hepatitis A and E (HEV) are mostly transmitted orally, whereas hepatitis B (HBV), C(HCV), and D(HDV) are transmitted parenterally. HAV infection is clinically indistinguishable from other types of acute viral hepatitis, and the illness is usually mild and self-limited when healthy persons are infected [16-18]. Previous anti-HAV seroprevalence investigations in Bangladesh have revealed a significant seroprevalence. Moreover, Hepatitis A seroprevalence varies by area, depending on urbanization and environmental cleanliness. Hepatitis A was prevalent in Korea, and the majority of people were infected asymptomatically as children, providing them with lifetime immunity. [4-5] "However, the seroprevalence of hepatitis A has been declining over the previous thirty years as socioeconomic position and overall public health have improved. The decline in hepatitis A virus (HAV) infection in young adults has resulted in a fall in the number of people who have been naturally immunized, resulting in an increase in the adult population at risk of contracting the illness". [6-7] In this study, our main goal is to evaluate the demographic &clinical Profile of Acute Viral Hepatitis A Patients in Bangladesh.

OBJECTIVE

The objective of the study was to evaluate the demographic & clinical profile of acute viral hepatitis A patients in Bangladesh.

METHODOLOGY

The present prospective study included 22 patients ranging from 5->40 years of AVH, admitted to tertiary care hospitals. Patients with recent onset of jaundice, conjugated hyperbilirubinemia or mixed hyperbilirubinemia, and positive serum report of immunoglobulin M were included in the study. However, patients with underlying chronic liver disease, negative serological tests, and USG suggestive of cirrhosis of the liver were excluded from the study. All relevant clinical information and complete medical history were obtained for each patient. History was taken with special reference to contact with a jaundiced patient. Data were entered on the excel spreadsheet and analyses were performed with IBM SPSS statistics version 22.0. Results were expressed in tables and bar charts.

RESULTS

Table 1: Gender and age-wise hepatitis infections among participants (N=22)

Variables	Hepatitis A n (%)
Gender	
Male	18(75%)
Female	4(25%)
Male Female Ratio	3:1
Age group	
5-10 yrs.	11(50.0%)
11-15 yrs.	11(45.5%)
16-20 yrs.	1(4.5%)
Mean ±SD	10.50±3.25

Table 1 showed the age distribution of the patients where the majority were belonging to the 5-10 year's age group, 50.0%. Where the mean age was 10.61±3.26 years. And the male female ratio was 3:1.

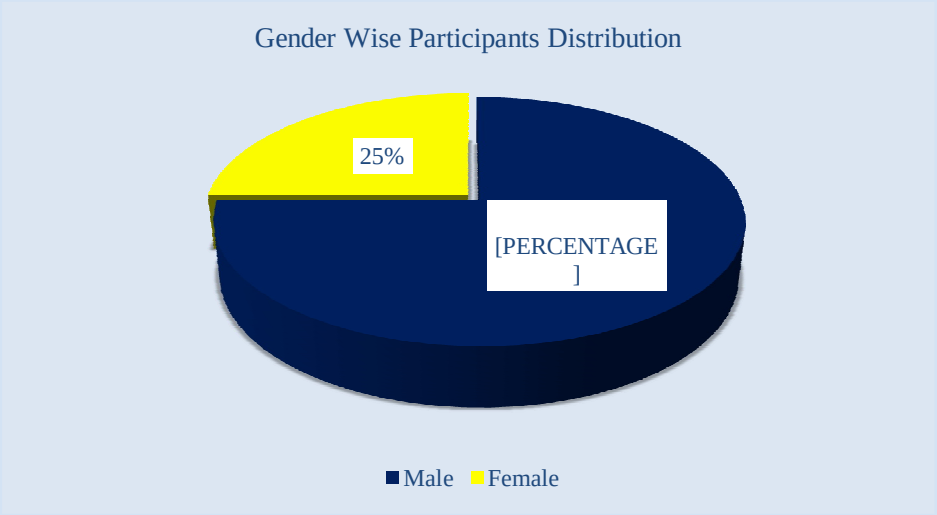

Figure-I: *Gender Participants distribution (N-22)*

Figure-I showed the gender distribution of the patients where the majority were male, 75.0%.

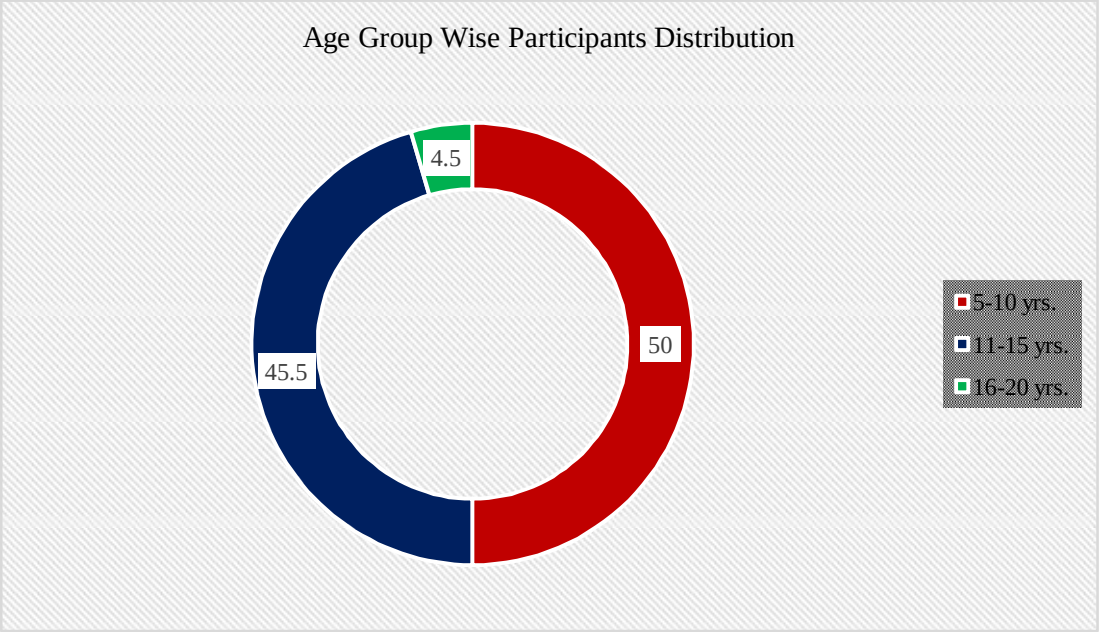

Figure-II: *Age group wise Participants distribution (N-22)*

Table 2: Hematological status of participants (N=22)

Parameters	Hepatitis A n (%)
Serum Bilirubin Total	25.20±95.08
SGPT ALT	922.61±955.46
SGOT AST	648.00±347.90
Serum Alkaline Phosphatase	560.88±397.21
S. Sodium	142.00±0.00
Serum Creatinine	23.55±31.75
Serum Albumin	36.00±0.00

Table-2 showed hematological status of the participants. Out of total 22 participants, the mean Serum bilirubin total was 25.20±95.08, SGPT ALT was 922.61±955.46, SGOT AST was 648.00±347.90, Serum Alkaline Phosphatase, APTT Patient was 30.20±0.00, Serum Creatinine was 23.55±31.75 and Serum Albumin was 36.00±0.00 respectively.

Table 3: Dual virus distribution of patients (N=3)

Characteristics	Hepatitis A n (%)
Hepatitis B	3(100.0%)
Hepatitis C	0(0.0%)

Table 3 showed dual virus among 3 patients hepatitis B with hepatitis A.

Table 4: Complaints distribution of patients (N=22)

Complaints	Hepatitis A

	n (%)
Vomiting	17(85.0%
Jaundice	8(40.0%)
Fever	7(35.0%)
Itching	4(20.0%)
Loose stool	3(15.0%)
Upper Abdominal Pain	2(10.0%
Cough	1(5.0%)
High color urine	1(5.0%)

Table 4 showed the complaints of patients. According to the complaints, highest was vomiting 17(85.0%), followed by jaundice 8(40.0%), fever 7(35.0%), itching 4(20.0%), loose stool 3(15.0%), upper abdominal pain 2(10.0%), cough & high color urine 1(5.0%) each.

Figure-III showed the complaints of patients. Vomiting was highest 85.0%, followed by jaundice 40.0% & Fever 35.0%.

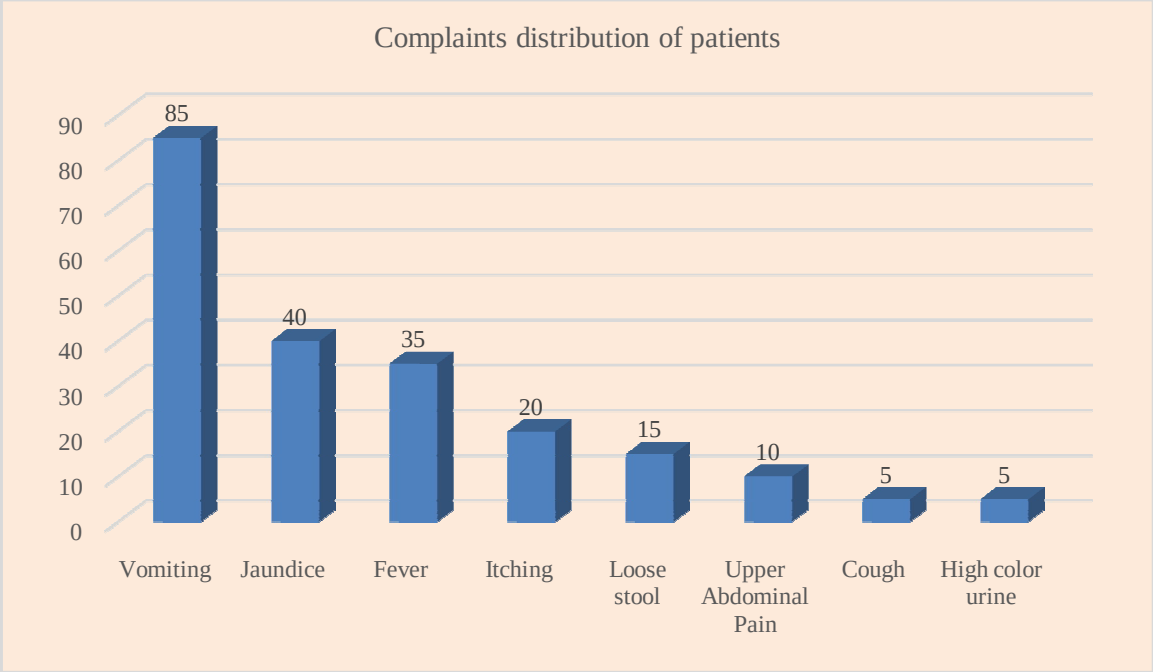

Figure-III: *Complications of the Patients (N-22)*

Table 5: Duration of illness of patients (N=22)

Duration of illness	Hepatitis A n (%)
2-3 weeks	14(63.6)
4-6 weeks	8(36.4)
>6 weeks	0(0.0)
Mean ±SD	22.27±8.07

Table 5 showed the duration of illness. According to the duration 2-3 weeks was highest 14(63.6%), followed by 4-6 weeks was 8(36.4%). More than 6 weeks was nil.

DISCUSSION

"In most cases hepatitis A is a self-limited acute disease. Most children are asymptomatic or develop a mild self-limiting illness younger than 6 years of age. However, HAV infection can develop more severe symptoms in adults, which can lead to serious complications. Therefore, the increasing incidence of HAV infection due to changing neuro epidemiology in adults might have an impact on morbidity and mortality". [8-11] Here, the majority belonged to the 5-10 year's age group, 50.0%. Where the mean age was 10.61±3.25 years. Which was supported by other studies where the majority were belong 6-11 year's age group, 50%. [12] "Laboratory data also showed severe hepatitis in terms of abnormal liver function test, the mean levels of S. GPTALT (975.43±1213.06). The High levels of SGPT (or ALT) in the blood may indicate liver problems and damage. This means patients have undergone the following conditions. Which was similar to other studies where the mean level of S.GPT ALT was 955.43±1113.03". [13] Besides this, total bilirubin was 1.86±1.41. As we know, the normal ranges of bilirubin range from about 0.2-1.2 mg/dL. So higher levels usually include jaundice and itching. Here, in our results, high direct Bilirubin level with normal or slightly elevated indirect bilirubin, has been which again signifies reasons for obstructive jaundice due to intrahepatic cholestasis, not due to stones. This is also supported by other studies. [14] Apart from higher SGPT or bilirubin, Alkaline phosphatase levels can change and increase as a consequence of different liver diseases, which is also commonly seen in Hepatitis A cases. [15] Which is quite similar to our study where alkaline phosphate was seen high as >500 IU/dl (560.88±397.21). None of the participants of this series developed fulminant hepatic failure.

CONCLUSION

In our study, AVH A is seen as an infection in childhood, this infection is also seen in adolescents and adults, which causes liver damage. Improvement in hygiene and socioeconomic conditions, routine immunization needs to take for decreased severity of the AVH A.

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Conflict of interest: *None declared*

Consent

As per international standard or university standard, patient(s) written consent has been collected and preserved by the author(s).

Ethical approval:

The study was approved by the Institutional Ethics Committee.

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