Original Article

Hepatitis A

Frequency of Hepatitis A in Patients with Acute Hepatitis in Abbottabad

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ABSTRACT

Objective: To investigate the frequency of hepatitis "A" in patients with acute hepatitis.

Study Design: Retrospective study

Place and Duration of Study: This study was carried out at Shahina Jamil Teaching Hospital Abbottabad from March 2006 to February 2008.

Materials and Methods: The study included all acute hepatitis patients who visited the ShahinaJamil Hospital Abbottabad. Various viral markers were used to establish the diagnosis of acute hepatitis that included anti HAV IgM, HBsAg, anti HCV and anti HEV IgM. Liver function tests were also done.

Results: A total of 125 patients with acute hepatitis visited the out patient department of S.J. Hospital Abbottabad during the study period. The specific etiologic diagnosis could be made in 88(70.4%) patients. Hepatitis "A" was found in 33(26.4%), HBV in 19(15.2%), HCV in 6(4.8%), and HEV in 30(24.0% patients. The mean age of the patients with HAV infection was significantly younger than patients with HBV,HCV and HEV.

Conclusion: The present study showed that hepatitis A is one of the common type of viral hepatitis and can be controlled easily with improving sanitation and water distribution and personal hygiene.

Key Words: Hepatitis A, Acute Hepatitis, Patients

INTRODUCTION

Viral Hepatitis is an inflammation of the liver due to viral infection[1]. Major causes include specific hepatitis viruses, (HAV, HBV, HCV, HDV, HEV), alcohol and drugs while less common causes include other viral infections (eg, infectious mononucleosis, yellow fever, cytomegalovirus infections) and leptospirosis. Hepatitis "A" virus is primarily transmitted via the fecal oral route and is most commonly acquired via ingestion of contaminated food or during sexual activity[2]. The incubation phase lasts from 2 to 7 weeks (mean 28 to 30 days)[3].

Prodromal symptoms are non specific and often include anorexia, fever, nausea and malaise. Jaundice typically appears within 1 week after symptoms onset and occurs in 70-80 % of the adult population, but in less then 10 % of children younger than 6 years of age. Bilirubinuria may precede jaundice by a few days and dark urine is a common presenting complaint. Jaundice and hepatomegaly are the most commonly observed physical examination abnormalities[4].

Hepatitis A virus infection is self limited disease which results in fulminant hepatitis and death in only a small proportion of patients. However, it is a significant cause of morbidity and socio-economic losses in many parts of the world[5,6]. Because a good deal of HAV infections maybe asymptomic or may go unreported, the CDC estimated that the actual number of new HAV infections in 2007 was about 25,000[7].

Hepatitis "A" virus is responsible for majority of sporadic and epidemic cases of acute viral hepatitis in developing countries like Pakistan. Therefore we decided to study the frequency of HAV infection among patients with acute hepatitis in Abbottabad.

MATERIALS AND METHODS

The study was conducted from March 2006 to February 2008 on patients with acute hepatitis who visited the outpatient Department of ShahinaJamil Hospital Abbottabad. ShahinaJamil Hospital is the teaching hospital of Frontier Medical College Abbottabad. Information from patients included age,gender,past history of jaundice, operations, blood transfusions, medications, intravenous drug abuse, alcohol ingestion and recent travel abroad. Patients with history of chronic hepatitis B and C were excluded from the study. Blood sample was taken from all patients for screening of hepatitis A,B,C, and E virus. Various viral markers including anti HAV IgM, HBsAg, anti HCV and anti HEV IgM were used HCV RNA was done for the positive patients. Liver function test and blood CP were also done. The patients were treated according to current guide lines for the management of acute hepatitis.

RESULTS

A total of 125 patients fulfilled the inclusion criteria. The mean age of patients was 22.4 +7.2 years for HAV

patients,33.7+10 years for HBV patients, 40+8 years for HCV patients and 28+6.4 years for HEV patients. Most patients were from low socioeconomic class. Most of patients presented with the symptoms of nausea, vomiting, loss of appetite, abdominal pain, yellowish discoloration of eyes, fever, dark urine, myalgia, arthralgia and general malaise. Out of 125 patients, 33(26.4%) had acute hepatitis "A", 19(15.2%) had acute hepatitis "B", 6(4.8%) HCV and 30(24.0%) had acute hepatitis E infection. All markers of HAV, HBV, HCV, and HEV were negative in 37(29.6%) patients. Liver function test (LFT) showed no significant difference in serum bilirubin, and ALT level among acute hepatitis, A, B, C, and E groups.

DISCUSSION

Worldwide, HAV is responsible for an estimated 1.4 million infections annually[8] with variable course of illness[9].

Several studies have reported that hepatitis A is responsible for major outbreaks as well as sporadic cases of acute hepatitis in Pakistan and other developing countries. In the present study 26.4% of cases of HAV infection were present out of all the patients with acute hepatitis but according to the literature, approximately 40% of all acute viral hepatitis is caused by HAV[10].

Table No.1: Frequency of acute viral hepatitis in patients of Abbottabad.

Type of virus	HAV	HBV	HCV	HEV	Non ABCE	Total
No. of patients	33	19	06	30	37	125

Table No.2; Age and biochemical data of patients of acute hepatitis.

Type of virus	Age (years)	Serum bilirubin (mg/dl)	ALT (u/dl)
HAV	22.4 ±7.2	09.4 ±05.2	198 ±16
HBV	33.7 ±10.0	10.1 ±04.8	186 ±11
HCV	40.0 ±08.0	08.1 ±07.0	115 ±10
HEV	28.0 ±06.4	10.2 ±05.3	174 ±12

HAV spreads primarily by fecal-oral route and therefore is more common in areas of poor hygiene[11].Sporadic cases are also common, usually as a result of person to person contact. Fecal shedding of the virus occurs before the symptoms develop and usually ceases a few days after symptoms begin. In the present study we have also seen that HAV infection is more common among young adults, a finding similar to earlier studies.

Since the availability of effective vaccine to prevent hepatitis A virus infection, feasibility of elimination of indigenous transmission of hepatitis A virus is increasing. Vaccination against hepatitis A has been proven effective in controlling the disease worldwide[12]. Vaccination is recommended for persons at increased risk for the disease including international travelers, non-injection and injection drug users and children living in communities with high rates of disease[13,14,15].

CONCLUSION

Because treatment have limited efficacy, prevention of viral hepatitis A is very important. Good personal hygiene helps to prevent transmission, particularly faeco-oral transmission. The present study shows that HAV is a common case of acute viral hepatitis and preventive measures therefore are more important in developing areas.

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