Research Article

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The Evaluation of a Hundred Eleven Adult Patients with Acute Hepatitis

Akut Hepatitli Yüz On Bir Yetişkin Hastanın Değerlendirilmesi

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ABSTRACT

Objectives: We aimed to evaluate the etiological, epidemiological and laboratory characteristics of adult patients admitted to our hospital with acute hepatitis.

Materials and Methods: The patients with alanine aminotransferase (ALT) levels exceeding 10-fold and appropriately examined for etiology were included in the study. The markers for hepatothropic viruses and the others, autoimmune markers and hepatobiliary ultrasound were evaluated.

Results: In this study, 111 patients were included, 46 (41%) were female and 41.4% of the patients had AH-A, 17.1% had AH-B, 2.7% had AH-C and 6.3% were not found any cause. The mean age was 22.11±6.05 years in AH-A. The majority of AH-A cases were male with 65%. The mean age was 33.5±14.78 in AH-B. There was a statistically significant difference between ages of patients with AH-A and AH-B (p=0.004).

Conclusion: Since no specific treatment is available for acute viral hepatitis, preventive measures are more significant. The prevalence of AH-A and AH-B have declined in the recent years. It is clear that extensive vaccine policies and improved sanitation help eliminate these diseases. In order to ensure complete elimination of viral hepatitis, it is essential to give due importance to the vaccination in childhood as well as in adults.

Keywords: Acute hepatitis, virus, transaminase

ÖZ

Amaç: Hastanemize akut hepatit ile başvuran erişkin hastaların etiyolojik, epidemiyolojik ve laboratuvar özelliklerini değerlendirmeyi amaçladık.

Gereç ve Yöntemler: Çalışmaya alanin aminotransferaz (ALT) düzeyleri 10 katın üzerinde olan ve etiyolojisi uygun olarak incelenen hastalar dahil edildi. Hepatothropik virüsler ve diğerleri için belirteçler, otoimmün belirteçler ve hepatobiliyer ultrason değerlendirildi.

Bulgular: Çalışmaya 111 hasta dahil edildi, 46 (%41) kadın ve hastaların %41,4'ü AH-A, %17,1'i AH-B, %2,7'si AH-C ve %6,3'ü herhangi bir neden bulunmadı. AH-A'da ortalama yaş 22,11±6,05 yıldı. AH-A olgularının çoğu %65 ile erkekti. AH-B'de ortalama yaş 33,5±14,78 idi. AH-A ve AH-B'li hastaların yaşları arasında istatistiksel olarak anlamlı fark vardı (p=0,004).

Sonuç: Akut viral hepatit için spesifik bir tedavi mevcut olmadığından, önleyici tedbirler daha önemlidir. AH-A ve AH-B prevalansı son yıllarda azalmıştır. Kapsamlı aşı politikalarının ve iyileştirilmiş sanitasyonun bu hastalıkları ortadan kaldırmaya yardımcı olduğu açıktır. Viral hepatitin tamamen ortadan kaldırılmasını sağlamak için, aşılamaya yetişkinler kadar çocuklukta da gereken önemi vermek gerekir.

Anahtar Kelimeler: Akut hepatit, virüs, transaminaz

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Introduction

Acute hepatitis (AH) refers to necro-inflammation of liver which have many causes including viruses, drugs, alcohol, ischemia, autoimmune disorders and other causes. The most common causes of AH are hepatotropic viruses which have diverse types of transmission and epidemiologies. Hepatitis A virus (HAV), HBV, HCV, HDV and HEV are among most frequently observed in clinical practice (1) 852 patients with acute viral hepatitis from 17 centers were included in this study. Their sociodemographic characteristics, clinical courses, treatments, and laboratory findings were retrospectively analyzed. Results: The most commonly found microorganisms were the hepatitis B virus (55.2%. These are important health problem commonly seen both in our country and in the world. With increasing the administration of the vaccines worldwide, of the etiologies of AH, the prevalence of HAV and HBV has declined in the recent years (2) acute viral hepatitis most frequently is caused by infection with any of three distinct viruses: hepatitis A virus (HAV. Therefore, the epidemiology of AH has been changed. In this study, we aimed to evaluate the etiological, epidemiological and laboratory characteristics of adult patients admitted to our hospital with AH.

Materials and Methods

The patients who were followed up in the clinic of the Department of Infectious Diseases and Clinical Microbiology of Cerrahpaşa Medical Faculty between 2001 and 2019 were examined. Patients with alanine aminotransferase (ALT) levels exceeding 10-fold and appropriately examined for etiology were included in the study. The patients were retrospectively analyzed in terms of demographic data, etiology, age, gender, physical examination, laboratory findings, imaging methods and prognosis. Patients with missing diagnostic data were excluded from the study. The markers for hepatothropic viruses [anti-HAV immunoglobulin M (IgM), hepatitis B surface antigen, anti-HBc IgM, anti-HCV, anti-HDV, HCV-RNA] and the others [Epstein-Barr virus (EBV), Varicella zoster virus (VZV), Cytomegalovirus, etc], autoimmune markers and hepatobiliary ultrasound were evaluated.

Statistical Analysis

Data analysis was performed by using the SPSS 20.0 program. The laboratory values of patients were compared with univariate analysis. Subsequently, chi-square test and Mann-Whitney U test were used for categorical variables and continuous variables, respectively. A $p \leq 0.05$ was considered as statistically significant.

Results

In the study, 111 patients were included, 46 (41%) were female and 65 (59%) were male. Forty-six (41.4%) had AH-A, 19 (17.1%) had AH-B, 3 (2.7%) had AH-C and 7 (6.3%) were not found any cause. The mean age was 34.5±19.03 (minimum: 16, maximum: 89). In the first admissions to hospital, the mean aspartate aminotransferase (AST) was 1313.54±1158.46 U/L, the mean ALT was 1672.79±1132.42 U/L and the mean serum direct bilirubin was 4.70±3.76 mg/dL.

The ages ranged from 16 to 39 and the mean age was 22.11±6.05 years in AH-A. The majority of AH-A were male with 65%. The mean AST and ALT levels were 1586.70±1434.84 and 2096.04±1165.04 in AH-A respectively.

The ages ranged from 18 to 75 and the mean age was 33.5±14.78 in AH-B. The mean AST and ALT levels were 1474.42±796.27 and 2133.95±1103.90 in AH-B respectively. HDV coinfection did not occur in any case. All AH-B patients developed immunity except 2 patients. Seroconversion occurred in only one of the patients with acute flares of chronic hepatitis B. In acute flares of chronic hepatitis, only one patient developed immunity.

Five patients died from fulminant hepatitis including AH-B (1 patient), acute flares of chronic hepatitis B (1 patient) and unknown causes (3 patients). Toxic hepatitis was caused by ornidazole (1 case), cefazolin (1 case) and polypharmacy (1 case). Hepatic transaminases of all patients returned to normal limits after withdrawal of the drugs.

Hepatic tuberculosis was seen in a patient and the transaminases returned to normal ranges under anti-tuberculosis treatment.

The other etiologies of our patients were autoimmune hepatitis, leptospirosis, ischemic hepatitis, VZV, EBV, tuberculosis, reactive hepatitis and acute cholecystitis (Table 1).

Discussion

Acute viral hepatitis (AVH) is the most common liver disease in the world. Its prevalence varies according to socioeconomic and geographical characteristics of the countries. AH-A is frequently seen in childhood in developing countries (1) 852 patients with acute viral hepatitis from 17 centers were included in this study. Their sociodemographic characteristics, clinical courses, treatments, and laboratory findings were retrospectively analyzed. Results: The most commonly found microorganisms were the hepatitis B virus (55.2%. HBV and HAV are the first two common viruses in many adult AVH case studies. While some studies have reported type A predominance in AH (3,4), many studies have shown that

Table 1. The etiological distribution in patients presenting with acute hepatitis

Etiology of patients	No. of patients	Percent
Acute hepatitis A	46	41.4
Acute hepatitis B	19	17.1
Acute flares of chronic hepatitis	13	11.7
Acute cholecystitis	10	9.0
Unknown	7	6.3
Toxic hepatitis	3	2.7
Acute hepatitis C	3	2.7
Autoimmune hepatitis	2	1.8
Leptospirosis	2	1.8
Ischemic hepatitis	2	1.8
Varicella-zoster virus	1	0.9
Epstein barr virus	1	0.9
Tuberculosis	1	0.9
Reactive hepatitis	1	0.9
Total	111	-

type B hepatitis is more common (1,5,6) 852 patients with acute viral hepatitis from 17 centers were included in this study. Their sociodemographic characteristics, clinical courses, treatments, and laboratory findings were retrospectively analyzed. Results: The most commonly found microorganisms were the hepatitis B virus (55.2%. For example, in a study, HBV and HAV rates were seen 60.4% and 27.5% in AVH adult patients respectively (6). In our study, 41.4% of the patients were type A, followed by type B with 17.1%. On the other hand, it was observed that the AVH cases have markedly declined in the last ten years (Figure 1).

In a study, Eker et al. (7) found that the mean age for AH-A and AH-B was 21.5 and 33, respectively. In other studies, the mean age was found to be lower in patients with AH-A (8,9). In our study, the mean age for AH-A and AH-B cases are 22.1 and 33.5 respectively. There was a statistically significant difference between ages of patients with type A and with type B (p=0.004).

When the studies in our country examined in terms of gender, Çolpan et al. (9); 42.4% female, 57.5% male, Koruk et al. (8); 50% female and 50% male, Özkurt et al. (5); 42.7% female, 57.2% male were reported. In our study, 46 (41%) were female and 65 (59%) were male. While the incidence of AH-B did not differ between genders, the majority of AH-A cases were male.

In this study, AH-A and AH-B cases were mostly seen during autumn and winter months (Figure 2) and similar results were

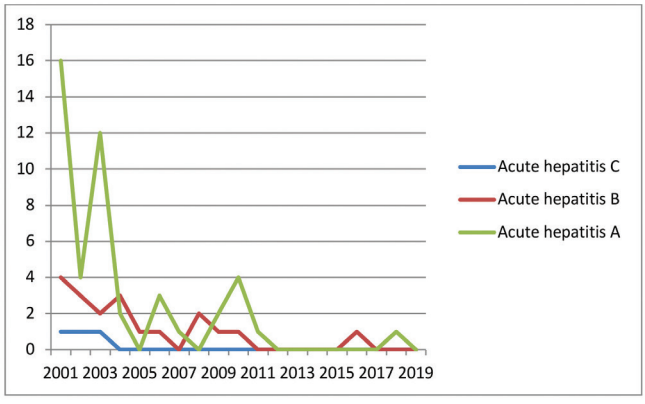

Figure 1. The change of the acute viral hepatitis by years

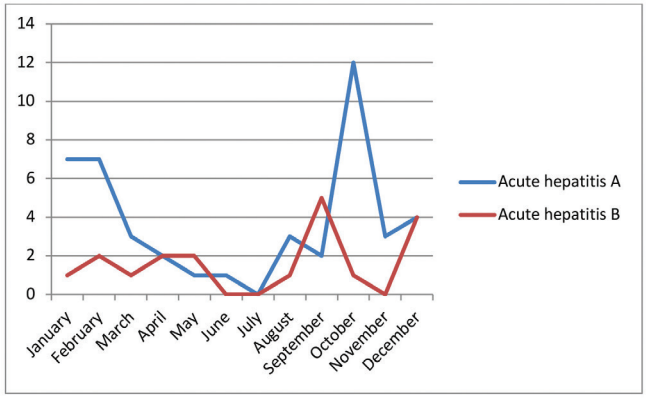

Figure 2. The number of cases of acute viral hepatitis by months

found in the previous studies (1,5) 852 patients with acute viral hepatitis from 17 centers were included in this study. Their sociodemographic characteristics, clinical courses, treatments, and laboratory findings were retrospectively analyzed. Results: The most commonly found microorganisms were the hepatitis B virus (55.2%).

In Turkey, the rate of positive hepatitis C antibody results is 1.12% among all groups (10). AH-C has generally subclinic and anicteric presentation and it is often difficult to differentiate acute infection from chronic infection with available tests. In our study, three (2.7%) AH-C cases were diagnosed with the presence of hepatitis symptoms, more than 10-fold increase in transaminases with anti-HCV and HCV-RNA positivity. Risk factors were not determined in any cases. The prevalence of AH-C was found to be high (2.7%), compared to other studies conducted in our country (1,5) 852 patients with acute viral hepatitis from 17 centers were included in this study. Their sociodemographic characteristics, clinical courses, treatments, and laboratory findings were retrospectively analyzed. Results: The most commonly found microorganisms were the hepatitis B virus (55.2%).

In the etiology of fulminant hepatitis, the most commonly found infectious agents are HAV in children and HBV in adults (11) gender, etiology, treatment modality, and outcomes. RESULTS A total of 308 patients were analyzed. Hepatitis A (20.9%). Fulminant hepatitis caused by HBV ranges from 0.1% to 0.4% (12). However; the rate was 4.5% (5/111) among all cases. Contrary to previous studies, in our patients, fulminant hepatitis more frequently developed due to unknown etiologies, not in HBV and HAV.

In another study conducted in our clinic between 1989-1991, majority of the patients (55.3%) were male and the rate of AH-A, AH-B and AH-C were 31.2%, 63.8% and 5% respectively (13). Three patients (2.8%) developed fulminant hepatitis and all of them died (13). Compared with our study, it was observed that the rate of AH-B and AH-C decreased over the years

Study Limitations

This study had some limitations including retrospective design, low number of cases and the lack of clinical symptom and signs. Prospective studies are required to better demonstrate these findings.

Conclusion

Since no specific treatment is available for AVH, preventive measures are more important to fight these diseases. In our study, though most of AVH were caused by HAV, followed HBV, the prevalence of AH-A and AH-B have declined in the recent years. It is clear that extensive vaccine policies and improved sanitation help eliminate these diseases. In order to ensure complete elimination of viral hepatitis, it is essential to give due importance to the vaccination in childhood as well as in adults.

Ethics

Ethics Committee Approval: Retrospective study.

Informed Consent: Since our study was retrospective, informed consent was not used.

Peer-review: Externally peer-reviewed.

Authorship Contributions

Surgical and Medical Practices: A.K., S.Y.K., Concept: Ö.F.T., Design: B.M., İ.İ.B., Data Collection or Processing: A.K., S.Y.K., Analysis or Interpretation: N.S., Ö.F.T., Literature Search: A.K., Writing: A.K., S.Y.K.

Conflict of Interest: The authors declare that they have no conflict of interest.

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