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Evaluation of Anti-HCV Positivity in Patients Receiving Inpatient Treatment in a Mental Health Hospital in Turkey

Bir Ruh Sağlığı Hastanesinde Yatarak Tedavi Almakta Olan Hastalarda Anti-HCV Pozitifliğinin Değerlendirilmesi

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Abstract

Objective: Chronic hepatitis is the first cause of cirrhosis and liver carcinoma in developed countries, and it is the second cause of these conditions in Turkey. When the epidemiology of hepatitis is examined, its prevalence is 1.5 to 3.5% globally, and only about 1% in Turkey varies according to different geographical regions. We evaluated the prevalence of chronic hepatitis C infection in the psychiatric patient's group based on sociodemographic data (age, gender, and place of residence).

Methods: We retrospectively analyzed hospitalized patients between January 2016 and January 2018 at the Manisa Psychiatric Hospital, a regional hospital in Turkey. The serological results were analyzed by the ELISA method.

Results: The number of patients included in the study was 10,944. Over the two years, 109 of the hospitalized patients were found to have anti-HCV positivity. The anti-HCV positivity ratio was 0.99%. Of these patients, 87 were men, with anti-HCV positivity of 0.97%. The mean age of anti-HCV-positive patients was 30.17 years (lowest 15, highest 91). And, the highest number of cases was found in 20-to 30-year age group. 58% of patients with anti-HCV positivity resided in the city center and districts. Almost half the patients were in the alcohol and substance addiction treatment.

Conclusion: In psychiatric patients considered a risk group for chronic hepatitis C, routine anti-HCV screening can increase the awareness and diagnostic rates of the disease. Although the prevalence of chronic hepatitis C is similar to that of psychiatric patients and the general population, more comprehensive studies are needed in these patients.

Keywords: Hepatitis C, mental diseases, drug abuse



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Öz

Amaç: Kronik hepatitlerin epidemiyolojisine bakıldığında dünya genelinde prevalansı %1,5 ile %3,5 arasında, Türkiye’de ise farklı coğrafi bölgelere göre değişiklik göstermektedir. Bu çalışma ile psikiyatri hastalarında kronik hepatit C enfeksiyonu prevalansını sosyodemografik verilere (yaş, cinsiyet ve yerleşim yeri) göre değerlendirmesi amaçlanmaktadır.

Yöntem: ELISA yöntemi ile bakılan anti-HCV sonuçları ve epidemiyolojik veriler Statistical Package for the Social Sciences v.6.0 ile analiz edildi.

Bulgular: İki yıl içinde hastanede yatan 10.944 hastanın 109’unda anti-HCV pozitifliği saptanmıştır. Anti-HCV pozitiflik oranı %0,99 olarak saptanmıştır. Bu hastaların 87’si erkek olup ortalama yaş 30.17 bulunmuştur. Anti-HCV pozitifliği saptanan hastaların %58’i il merkezi ve ilçelerde ikamet etmekteydi. Hastaların %50’ye yakını alkol ve madde bağımlılığı tedavisi görmekteydi.

Sonuç: Bu çalışmayla kronik hepatit C için risk grubu olarak kabul edilen psikiyatri hastalarında rutin anti-HCV taraması, hastalık farkındalığını ve tanı oranlarını artırabileceği vurgulanmak istenmiştir. Kronik hepatit C prevalansı, psikiyatri hastaları ve genel popülasyonla benzerlik gösterse de bu hastalarda daha kapsamlı çalışmalara ihtiyaç vardır.

Anahtar Kelimeler: Hepatit C, psikiyatrik hastalıklar, uyuşturucu madde kullanımı

Introduction

Hepatitis caused by the hepatitis C virus (HCV) identified in 1989 was first called ‘non-A non-B hepatitis’. It is an RNA virus with widespread morbidity and mortality around the world. According to the World Health Organization data, 170 million patients are infected with chronic hepatitis C. Although there has been a marked decrease in the prevalence of HCV infections over the past two decades, the mortality rate associated with liver diseases caused by these infections has increased⁽¹⁾. The prevalence of chronic hepatitis C varies even between countries within the same geographical region. Studies have reported the prevalence of chronic hepatitis C as 1.5 to 3.5% globally and about 1% in Turkey. Asia and Africa have the highest prevalence, whereas the UK and Scandinavian countries have the lowest prevalence⁽²⁾.

With the newly developed therapeutic agents resulting in increased recovery rates, it is now estimated that hepatitis C can be eradicated in around 15 years. The main transmission route of the disease are blood and blood products. Risk groups have been defined based on the route of transmission. For example, blood transfusion recipients, hemodialysis patients, and intravenous drug users are the high-risk groups⁽³⁾. Furthermore, communal living and hospital wards with many patients constitute a risk for transmitting the disease. Still the risk of acquiring the virus is even higher among individuals with mental disorders⁽⁴⁾. This study evaluated the prevalence of chronic HCV infection in a regional mental health hospital based on sociodemographic data.

Materials and Methods

This is a retrospective study reviewed the electronic records of 10,944 psychiatric patients who received inpatient

treatment in our hospital between January 2016 and January 2018 was reviewed. In addition to the anti-HCV test results, the patients’ demographic information, including age, sex, inpatient service, and place of residence were recorded.

Statistical Analysis

The epidemiological data and the serological results were analyzed by the ELISA method, and statistical analysis was performed using Statistical Package for the Social Sciences v. 6.0.

Results

The number of patients included in the study was 10.944, of whom 2.056 (19%) were female and 8.888 (81%) were male. Over the two years, 109 of the hospitalized patients (0.99%) were found to have anti-HCV positivity. Of these patients, 22 were women, and 87 were men, with anti-HCV positivity of 1% and 0.97%, respectively. The sociodemographic characteristics of the patients were examined. The mean age of the 10.944 patients was 36.48 years, and the mean age of those who were anti-HCV-positive was 30.17 years (lowest 15, highest 91). The highest number of cases was found in the 20-to 30-year age group (Figure 1). Sixty-three (58%) of the cases with anti-HCV positivity resided in the city center and districts, and 46 (42%) lived in rural areas.

Table 1 presents the inpatient services and the diagnoses of the patients. Almost half the patients (48.6%) received inpatient care in the alcohol and substance addiction treatment centers of the hospital. Also, it shows us that the anti-HCV seropositivity of patients in multiple drug abuse and psychosis groups was statistically higher than in other disorders (Table 1).

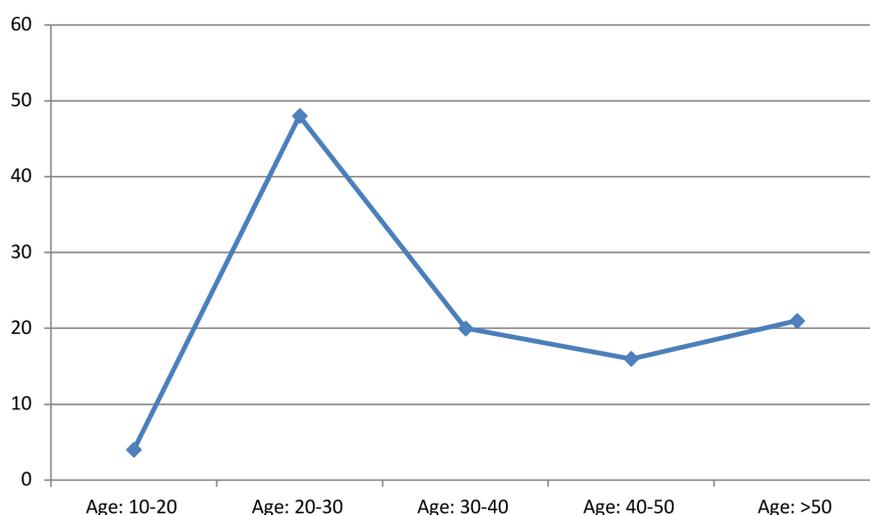


Figure 1. Patients' age distribution

Table 1. The association between anti-HCV positivity and diagnosis according to the clinics

| | Multipl drug abuse n (%) | Alcohol abuse n (%) | Psychosis n (%) | Depression n (%) | Personality disorders n (%) | Other** n (%) | Total n (%) |
|-----------------------|-----------------------------|------------------------|--------------------|---------------------|-----------------------------------|------------------|----------------|
| AMATEM | 50 (45.8%) | 3 (2.7%) | | | | | 53 (48.6%) |
| Closed male ward | 3 (2.7%) | | 13 | 3 (2.7%) | 1 (0.9%) | 2 (1.8%) | 22 (20.1%) |
| Closed female ward | 2 (1.8%) | | 11 (10%) | 5 (4.5%) | | 2 (1.8%) | 19 (17.4%) |
| Forensic ward (male) | 1 (0.9%) | | 3 (2.7%) | | | | 4 (3.6%) |
| Prisoners ward (male) | | | 1 (0.9%) | 1 (0.9%) | 6 (5.5%) | | 9 (8.2%) |
| Pediatric service | | | 1 (0.9%) | | 1 (0.9%) | | 2 (1.8%) |

**Other* group includes Alzheimer's disease, epilepsy and posttraumatic stress disorder.

AMATEM: Alcohol and substance addiction treatment center, HCV: Hepatitis C virus

Discussion

Hepatitis is a cause of preventable morbidity and mortality in developed and developing countries⁽⁵⁾. In the last decade, the rate of cirrhosis due to HCV has increased from 23% to 38.1%⁽⁶⁾. Therefore, the World Health Organization has launched an action plan for the eradication of hepatitis B and HCV by 2030⁽⁷⁾.

Many studies have been conducted with psychiatric patients worldwide, with anti-HCV positivity being reported to vary⁽⁷⁻⁹⁾; however, there seems to be a general decline in prevalence over the years. For example, while a study conducted in 1992 and 1993 showed that anti-HCV positivity was present in 6.7% of 1.180 patients with psychosis, dementia, or mental retardation⁽¹⁰⁾, a 2013 study found a much lower rate (2.53%) among 2.083 psychiatric patients⁽¹¹⁾. In Turkey, Donmezgil et al.⁽¹²⁾ reported anti-HCV positivity in 0.8% of 721 patients. In

this study, we calculated this rate to be 0.99%, similar to the general population.

In the general population, the most prevalent age group for hepatitis C is 25 years and above; however, there has been an increase in the prevalence of this disease in the over-50 age group^(13,14). In this study, anti-HCV positivity was most frequently seen in the 20 to 30-year group, probably because this group included intravenous drug users.

Training programs and preventive measures before blood transfusions have been effective in the reducing the prevalence of chronic hepatitis C recently. Intravenous drug use accompanied by psychiatric diseases and social factors restricts access to treatment^(15,16). Furthermore, staying inwards with many patients, including those with mental retardation, poses a risk of horizontal transmission. Therefore, performing an anti-HCV screening at the first

patient visit is an important step for both diagnosis and prevention. There is a need for more extensive work to be conducted on patients with mental disorders and intravenous drug users.

Study Limitations

There were some limitations to our study. Because of working as a psychiatric district hospital, we couldn't measure HCV-RNA values. And also post-diagnosis follow-up couldn't be performed since we had psychiatric patients.

Ethics

Ethics Committee Approval: The study were approved by the Manisa Celal Bayar University of Local Ethics Committee (protocol number: 20.478.486, date: 25.06.2019).

Informed Consent: Retrospective study

Peer-review: Externally peer-reviewed.

Authorship Contributions

Concept: M.D., Design: C.Ç., Data Collection or Processing: M.O., Analysis or Interpretation: Ş.Ş.A., Literature Search: A.E., Writing: M.D.

Conflict of Interest: No conflict of interest was declared by the authors.

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