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Is there really association between lichen planus and hepatitis C ?

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Abstract

Lichen planus (LP) is a T-cell mediated dermatosis with unknown etiology that is affecting the skin, oral mucosa, nail and hair follicle. Although the cause is not known, there are many articles in the literature that show the association between LP and hepatitis C, especially oral LP. However, this association may vary according to geographical regions. We aimed to determine whether such an epidemiological relationship exists in a group of patients with LP who applied to our clinic. The records of 145 patients who were admitted to our polyclinic between March 2014 and 2018 and diagnosed clinically and histopathologically as LP were retrospectively reviewed and none of them had anti-HCV positivity. The prevalence of chronic hepatitis C in oral LP patients has been reported to vary between geographical regions. Based on the literature and books hepatitis C screenings were performed in patients who were followed up with LP clinically and histopathologically in our polyclinic for a long time. We did not find any association between HCV and LP in our study. This could be attributed to a lower prevalence of HCV in our country or other triggering factors contributing in our cases

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Keywords: Lichen planus, HCV, association

Introduction

Lichen planus (LP); It is an itchy, purple, bright, polygonal shaped T-cell mediated inflammatory dermatosis. Although the etiology is not clear, some drugs, contact, emotional stress can play a role [1]. Since 1991, a number of articles have been published in the literature including the association of chronic hepatitis associated with hepatitis C virus (HCV) with LP [2-3]. While the anti-HCV positivity is high in the patients with LP in Japan, there are also articles showing the opposite from some countries [4]. The rates of anti-HCV positivity vary between countries and even between regions of the same country. This ratio is found between 0.5-1% in Turkey [5,6].

In our clinical observations, HCV screenings are often negative in patients who applied to our polyclinic with LP diagnosis. The aim of this study was to show whether there is a relationship or not between LP and HCV infection.

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Materials and Methods

In this study, the files of 396 patients who were admitted to Selçuk University Faculty of Medicine dermatology polyclinic between March 2014-2018 with LP pre-diagnosis and diagnosis were retrospectively evaluated.

A total of 145 patients over 18 years of age with clinical and histopathological diagnosis of LP and anti-HCV test were also included. Those with lichenoid drug eruption were excluded from the study. Age, sex, lesion type (oral LP / cutaneous LP) and anti-HCV test data were gathered. SPSS 21.0 for windows (SPSS Inc. Chicago, IL, USA) software is used for statistical analyses. Data were evaluated by frequency analysis. The study was approved by the Local Ethics Committee of Faculty of Medicine of Selçuk University (approval number: 2018/166).

Results

The data of 396 patients with the pre-diagnosis and diagnosis of LP were analyzed, none of them had anti-HCV positivity. 145 of these patients had histopathological diagnosis as well as clinical findings. Out of the 145 patients included in the study, 75 (51.7%) were female and 70 (48.3%) were male. The mean age of the patients ranged from 20 to 78 years, with a mean of 48.8 ±

15.2 years. The number of patients with oral lichen only was 17 (11.7%) and the number of patients with cutaneous lichen was 128 (88.3%). While 61 of the patients with cutaneous LP planus were male, 67 were female patients. Nine of the patients with oral LP were male and eight were female. None of the patients had anti-HCV positivity.

Discussion

The hepatitis C virus (HCV) is a single-chain RNA virus. Over 120-130 million people worldwide are infected with HCV and 3-4 million new cases are detected annually. HCV infection is one of the major causes of liver disease [7]. The most common dermatological diseases associated with HCV infection are; mixed cryoglobulinemia, porphyria, cutanea tarda, urticaria, pruritus and cutaneous LP and / or oral LP [8,9].

The incidence of LP is between 0.14 and 1.27% of the general population [10]. LP is a chronic inflammatory disease that can hold primarily the skin, besides the mucosa (oral and genital), nail and scalp [11]. Oral LP is a common form of LP and can be seen on its own and as well as with cutaneous LP [12]. In countries like Japan, the association of LP and HCV is high. In addition, the number of publications reporting the relationship between chronic HCV infection and skin and / or mucosal LP has increased in recent years from countries such as Italy and Thailand [13,14]. Statistically significant associations between LP and HCV from different countries and geographic regions have been reported [14,15],but there are also studies from several countries including our country reported without any relationship LP and HCV [7,16-18].

Studies from different regions of our country have been reported to investigate the association of HCV and LP. In the studies conducted in Gaziantep and Diyarbakır, HCV positivity was compared with the control group in patients with LP, and the positivity of HCV antibodies in patients with LP was found respectively 6.84% and 6.25%, significantly higher compared to the control group [19,20]. Denli et al. reported that HCV antibody positivity of LP patients in the Çukurova region was 4 times higher (LP 5%, control group 1.4%) compared to the control group and that they were related to LP and HCV [21]. Although studies showing the association between HCV and LP from Turkey in many studies, this association was not statistically significant. They reported that the relationship between LP and HCV is likely to be coincidental and the recent high prevalence may be of geographic origin [22].

In the two retrospective studies reported from Trabzon and Kırıkkale, which examined the relationship between HCV and LP, anti-HCV positivity in patients with LP was 5.4% and 12.9%, respectively and no statistical difference was found with the control group (5.2%, 3.7% respectively, P = 1,0, P = 0.08) [23,24]. In a retrospective study of İsa et al. from Şanlıurfa, Turkey, anti HCV positivity was not determined in 135 patients [25]. In our study, 396 patients diagnosed or prediagnosed as LP were screened and none of these patients had anti-HCV positivity. According to a study conducted in our region, the authors were performed routine anti-HCV screening test before endoscopy procedure and they found anti-HCV positivity as low as 0.4% [26].

Conclusions

The possible hypothesis of these associations in the papers is thought to be a regional-based association. Viral or host factors may be explain this variability in results [7,18,24]. In our study, we have not detected chronic HCV infection positivity in patients with LP, confirming our clinical observation. Although there are studies showing the association of LP and HCV in our country, we think that this association is not very frequent and regional differences are observed. In order to fully understand these differences, multicenter studies with multiple patients from different regions are required. We believe that our study will contribute to the formation of data on this subject in our country.

Competing interests
The authors declare that they have no competing interests.

Financial Disclosure
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Ethical approval
The study was approved by the Local Ethics Committee of Faculty of Medicine of Selçuk University (approval number: 2018/166).

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