

Cutaneous Manifestations in Hepatitis C virus infection

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ABSTRACT

Objective: To determine the nature and frequency of cutaneous manifestations in patients of Hepatitis C virus (HCV) infection.

Methodology: One hundred HCV positive patients presenting at Dermatology department of Civil Hospital Karachi from January 2008 to December 2008 were enrolled and evaluated for cutaneous manifestations. Relevant data regarding history, physical examination including skin & its appendages and investigations (complete blood counts, liver function tests, Serum Anti HCV antibodies, ultrasound abdomen) were recorded and analyzed.

Results: Out of 100 patients (43% males, 57% females) mean age 41 years (Range 12-70 years), pruritus was the most common dermatological feature seen in 35% patients followed by Lichen planus 12% and idiopathic thrombocytopenic purpura in 8% patients. Less common features were urticaria, alopecia areata, porphyria cutanea tarda & cryoglobulinemia.

Conclusion: Pruritus, lichen planus and idiopathic thrombocytopenic purpura are common Cutaneous manifestations in patients suffering from HCV infections. These are important and sometimes the only presenting feature of HCV infection, therefore health care providers should be vigilant while examining these patients for underlying HCV disease.

KEY WORDS: Hepatitis C, Cutaneous manifestations, extrahepatic manifestations.

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INTRODUCTION

Hepatitis C virus (HCV) infection is a major public health challenge globally. It affects 170 million people worldwide¹ while in Pakistan the estimated prevalence ranges from 6-20%.^{2,3} HCV is a major cause of both acute and chronic hepatitis and hepatocellular carcinoma worldwide. Most

patients with HCV are asymptomatic and may remain undiagnosed for long periods.³ However chronic HCV infection & chronic active hepatitis may be slowly progressive which result in severe morbidity & mortality if untreated.

HCV infection is associated with various extrahepatic manifestations involving kidneys, bones, muscles, nerves, gastrointestinal tract & skin.⁴ Cryoglobulinemia, Lichen planus, pruritus and porphyria cutanea tarda are the most frequently associated skin manifestation of HCV while less common features include polyarteritis nodosa, urticaria, vitiligo, thrombocytopenic purpura, sjorgens syndrome, erythema multiforme and necrolytic erythema.⁴⁻⁷

For many patients cutaneous manifestations may be the only or the earliest sign of underlying HCV infection. Awareness of these conditions by healthcare providers will facilitate better evaluation and management of these patients to

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prevent life threatening complications as well as to prevent further transmission of disease. Local data regarding cutaneous manifestations associated with HCV infection is scarce in Pakistan, hence this study was planned to determine the nature & frequency of various dermatological features in patients of HCV.

METHODOLOGY

This study was conducted in the Dermatology department of Civil Hospital Karachi from January 2008 to December 2008. Hepatitis C positive patients of all ages and both sexes were included in the study. Hepatitis C was diagnosed on the presence of Anti HCV antibodies in blood. Patients having concomitant infection with Hepatitis B were excluded from the study. Similarly patients having systemic diseases like diabetes mellitus, chronic renal failure, rheumatoid arthritis or other autoimmune diseases were also excluded from the study.

Detailed history was taken from all patients who were enrolled in the study and a thorough physical examination including skin & its appendages were performed and relevant investigations (complete blood count, liver function tests, anti HCV antibodies and ultrasound) were recorded. Frequency of various cutaneous manifestations associated with HCV infection was noted & analyzed. All the relevant data was entered into SPSS version 11 and analyzed. Frequencies are given in the form of percentages.

RESULTS

A total of 100 Hepatitis C positive patients 43 males and 57 females were included in the study. The age ranged from 12-70 years. The mean age of the patients was 41 years. Majority of the patients were in the age group between 40-60 years.

The spectrum of HCV infection in our study showed that 83% patients had chronic liver disease (CLD), 11% patients presented with jaundice plus deranged liver function tests, 4% had active hepatitis while 2% patients were diagnosed as a case of hepatocellular carcinoma secondary to HCV. These cases presented with one or more dermatological features. The frequency of various cutaneous manifestations is shown in Table-I.

Pruritus was the most common cutaneous presentation and was seen in 35% patients. Lesions were seen predominantly on extremities with excoriation marks in 18 patients & pruritus with dryness of skin in 17 patients. Lichen planus (LP) was seen in 12 patients, out of which 3 patients had

generalized LP, 2 had oral lesions only, 5 had lesions only on extensor surfaces with sparing of trunk and mucosal surfaces & the remaining 2 patients had involvement of lower limbs only.

Jaundice was present in 12% of patients. Idiopathic thrombocytopenic purpura was seen in 8 patients. Six patients had purpuric lesions only on the lower limbs & 2 had petechiae & purpura on chest and abdomen. Urticaria was seen in 6 patients, 4 patients had lesions only on upper limbs, one had involvement of back alone & the other two had lesions on chest and abdomen.

Other cutaneous features which were less frequent findings included palmar erythema, clubbing, leuconychia, spider naevi, alopecia areata, prurigo nodularis, porphyria cutanea tarda, erythema nodosum, sjorgens syndrome, vitiligo and cryoglobulinemia. Urticarial vasculitis, erythema multiforme and granuloma annulare were rare findings in our patients.

Table-I: Cutaneous manifestations in HCV positive patients.

<i>Cutaneous Manifestation</i>	<i>Percentage</i>	<i>Male</i>	<i>Female</i>
Pruritus	35	19	16
Lichen Planus:	12	3	9
Oral	2		
Cutaneous	10		
Jaundice	12		
Idiopathic Thrombocytopenic Purpura	8	5	3
Urticaria	6	3	3
Alopecia Areata	5	4	1
Vitiligo	3	3	-
Urticarial Vasculitis	2	1	1
Cryoglobulinemia	3	3	-
Porphyria Cutanea Tarda	4	3	1
Systemic Sclerosis	1	-	1
Erythema Multiforme	1	1	-
Erythema Nodosum	3	2	1
Sjorgens Syndrome	3	1	2
Prurigo Nodularis	8	5	3
Psoriasis	5	3	2
Granuloma Annulare	1	1	-
Palmar erythema	10	4	6
Clubbing	6	4	2
Leuconychia	5	1	4
Spider naevi	8	5	3

DISCUSSION

The present study describes the frequency of various cutaneous manifestations of HCV infection in patients presenting at a tertiary care hospital of Karachi, Pakistan. Different studies report different frequencies of various dermatoses. HCV infection is reported to be equally prevalent in both sexes. Studies done by Umer et al⁸ and Azfar et al⁹ observed a similar male to female ratio. However in our study there was a female preponderance. It may be due to the small sample size. Majority of our patients were in the age group between 40-60 years, a finding similar to other studies.^{9,10}

Pruritus was the most common dermatological feature seen in 35% of our patients. Azfar et al reported that generalized pruritus was the most common finding seen in 15.9% patients.⁹ Another study from Egypt observed pruritus in 18.44% cases while Cacoub et al¹⁰ reported pruritus in 15% cases of HCV. A study from Turkey revealed pruritus to be the most common skin manifestation seen in 18.57% of patients.¹¹ The etiology of pruritus is multifactorial in HCV including cholestasis, direct effects of HCV or related to interferon therapy.¹²

Lichen planus (LP), both mucosal and cutaneous have been reported to occur in patients of HCV. The reported prevalence of HCV in patients with LP showed wide variations and frequency varies from 3.8% in France¹³ to 62% in Japan.¹⁴ Local studies have shown association of LP with HCV in 23.5%,¹⁵ while another study showed a frequency of 32.7%.¹⁶ We found a frequency of 12%. However some researchers did not find any difference in prevalence of HCV in patients of LP. The etiology of HCV associated LP is unknown, however it is hypothesized that T cell mediated immunity directed against HCV is responsible for initiating the disease process.⁴

The frequency of porphyria cutanea tarda (PCT) was 4% in our study. Although PCT is associated with liver disease in general recent studies confirm that patients with HCV are at particularly high risk.⁶

Idiopathic thrombocytopenic purpura (ITP) was seen in 8% patients which is comparable with the results of Pouloslisky et al¹⁷ as they reported it to be 10%. Urticaria has been associated with HCV in various studies. In a study by Ahmed et al the association was reported to be 15% between chronic urticaria and HCV antibodies.¹⁸ We found a frequency of 6%. The difference is probably due to smaller sample size in our study. Another

study reported a frequency of 3.84%.⁹ However some researchers did not find any association of HCV with urticaria. Cribier et al¹⁹ in their study concluded that the association was not significant.

Mixed cryoglobulinemia (MC) type II or type III is reported to be present in 50% patients of chronic HCV in western communities. We noted it in 3% patients. It has been reported that the clinical signs of MC in HCV infected individuals are rare in Mediterranean countries despite a high prevalence of HCV. Although it is not clear why some patients infected with HCV develop MC, this finding suggests that there is some other factor besides HCV infection necessary for the development of cryoglobulinemia.²⁰ The treatment for HCV leads to great improvement in the MC therefore it is advised that patients presenting with MC should be screened for the presence of anti-HCV.^{6,21}

Limitation of the study: Limitation of our study includes small sample size, lack of data regarding treatment with antiviral agents which may have side effects involving skin. However, at times it is difficult to differentiate between cutaneous adverse effects of antiviral therapy and skin manifestations of HCV infection. Further large scale studies are needed to assess the nature & frequency of cutaneous manifestations in HCV positive patients.

CONCLUSION

Pruritus was the most common dermatological feature seen in 35% patients followed by Lichen planus 12% and idiopathic thrombocytopenic purpura in 8% patients. Cutaneous manifestations are important and sometimes the only presenting feature of HCV infection, therefore health care providers should be vigilant while examining these patients for underlying HCV disease.

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