Original Article

Chronic Hepatitis "C" A Dermatologic Outlook

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ABSTRACT

OBJECTIVE: To determine the cutaneous manifestations of hepatitis "C" virus infection at tertiary care hospital.

METHODOLOGY: This descriptive study was performed in Department of medicine, Khyber Teaching Hospital Peshawar. Study was performed in the outpatient and inpatient medical units of Khyber Teaching Hospital Peshawar from 1st January 2009 to 30 June 2010. 325 patients met the inclusion criteria. Hepatitis C patients of age >15 years and either gender were examined. All hepatitis C patients, diagnosed by third generation ELISA and/or polymerase chain reaction were allowed to participate. Subjected to detailed history, careful clinical examination of skin by dematologist to recognize and diagnose the cutaneous condition. Data was entered in a pre-structured Performa. For data interpretation SPSS 14 was used. Descriptive statistics were used. Mean ± standard deviation was sorted for age. Frequencies and percentages for various variables were calculated.

RESULTS: Of all 325 HCV +ve patients were included in this descriptive study. Male patients were 61% and female 39%. Mean age was 43 (SD±10 years), ranging from 15 to 78 years. About one-fourth of patients (23%) were using anti-viral therapy the rest 77% were with out antiviral therapy. About 41% had one or more cutaneous lesion.

Pruritis was the leading manifestation found in 11%. Lichen planus (oral and cutaneous) was next found in 6.7% patients. Hyperpigmentation was seen in 5.5% patients. Urticaria (acute & chronic) was next counting 5.23%. Jaundice, alopecia and vitiligo were seen in 4.9% each. Dry skin and interferon injection site erythema was observed in 4.6% patients each. Cutaneous vasculitis was noticed in 3.6% each. While Reynaud's Phenomenon photosensitivity and psoriasis were seen in 1.5%1.8% 2.5% patients respectively.

CONCLUSION: Skin lesions are common in patients with anti-HCV patients. Dermatologic lesion may be the initial clue of HCV positivity. Screening studies are needed to find the exact prevalence of skin manifestations of chronic HCV and its treatment.

KEY WORDS: HCV infection, skin manifestations.

INTRODUCTION

The HCV is a single-stranded RNA flavivirus that replicates in hepatocytes and peripheral blood mononuclear cells.[1] Chronic HCV is a huge challenge for modern world. Incidence of HCV fluctuates all over the world. World Health Organization reported 3 percent prevalence of HCV [2] being highest in Egypt 10% to 20% [3] while in Pakistan prevalence ranged from 3% to 13%.[4,5]

Chronic HCV is mostly spread through blood. Sources of spread include blood, needles, contaminated equipments and professional and nosocomial equisition.[6] Spread through sexual route is not very common.[7] frequency of horizontal transmission is low.[8]

HCV is the most leading infection responsible for liver problems worldwide and also causes some extra-hepatic disorders in addition to liver disease. Dermatological findings constitute an important proportion of extrahepatic signs related to HCV infections.[9,10]

Skin lesions appear to be as result of accumulation of antigen antibody complexes in the different cutaneous layers or due to the cutaneous accumulation of different T lymphocytes. In majority skin conditions, the exact cause is not clear.[11]

Dermatologic lesions associated with HCV are divided into 3 classes.[12] (Table I). The skin lesions are not only themselves a reason for morbidity, but these may give clinical clue for underlying HCV infection. Such screening can provide timely diagnosis and management. Early diagnosis of Hepatitis C is important to tackle its dreadful sequelae.[13]

Currently, the most effective therapy for HCV is the combination of Interferon plus Ribavirin.[14]

The increasing use of this combination has brought forward a number of new cutaneous manifestations. The aim of this study is to assess different types of dermatologic conditions in chronic hepatitis C in tertiary care hospital.

METHODOLOGY

The study was performed in Department of medicine, Khyber Teaching Hospital Peshawar in the outpatient and inpatient Department of medicine, K.T.H Peshawar from 1st January 2009 to 30 June 2010. 325 patients met the inclusions criteria mentioned below.

Inclusion Criteria:

Hepatitis "C" patients of age >15 years and either gender were included.

HCV positive patients diagnosed by third generation ELISA screened for skin lesions of HCV. Chronic HCV patients without any clinical or radiological signs of chronic liver disease were selected.

Exclusion Criteria:

Chronic HCV patients who were having co-infection with other infection or systemic illnesses believe to cause dermatosis were excluded from study.

The selected patients were carefully screened by dermatologist especially oral mucosa, hair and nails to recognize the cutaneous condition. Relevant investigations were carried out.

Data analysis:

The data were entered and analyzed in statistical program SPSS version 16.0. Qualitative data (frequencies and percentages) such as cutaneous manifestations in HCV were presented as n(%).No statistical test was applied due to descriptive data

RESULTS

Of all 325 HCV positive patients were included in this descriptive study. Male patients were 199(61%) and female 126(39%). Mean age was 43 (SD±10 years), ranging from 15 to 78 years. About one-fourth patients 76(23%) were using anti-viral therapy the rest 249 (77%) with out antiviral therapy.

About 133(41%) had one or more cutaneous manifestation.

Pruritis was the leading manifestation found in 36 (11%). Lichen planus (oral and cutaneous) was next found in 22(6.7%) patients. Hyperpigmentation was seen in 18(5.5%) patients. Urticaria was next counting 17(5.23%). Jaundice, alopecia and vitiligo were seen in 16(4.9%). Dry skin and interferon injection site erythema was observed in 15(4.6%) patients with Cutaneous vasculitis was noticed in 12(3.6%). While photosensitivity, psoriasis and Reynaud's phenomenon were seen in 6(1.8%), 8(2.5%), 5(1.5%) patients respectively. (Table II)

TABLE I: CLASSIFICATION OF HCV SKIN MANIFESTATIONS

Group	Skin Condition
Often Associated with HCV	Mixed Cryoglobulinemia, Porphyria Cutanea Tarda, Leukocytoclastic Vasculitis, Livedo Reticularis),
Associated with HCV	Lichen Planus, Sjögren's Syndrome, Urticaria, Pruritus, Polyarteritis Nodosa)
Uncommonly Associated with HCV	Erythema Nodosum, Erythema Multiforme, Vitiligo, Psoriasis, Unilateral Nevoid Teleangiectasia, Pyoderma Gangrenosum, Behçet's Syndrome, Mooren Corneal Ulcer, Granuloma Annulare, Disseminated Superficial Actinic Porokeratosis.

TABLE II:
CUTANEOUS MANIFESTATIONS IN HCV (n =133)

Signs	No. of Patients	Percentage
Pruritis	36	11%
Hyperpigmentation	18	5.5%
Lichen Planus	22	6.6%
Urticaria	17	5.23%
Jaundice	16	4.9%
Alopecia	16	4.9%
Vitiligo	16	4.9%
Dry Skin	15	4.6%
Injection Site Erythema	15	4.6%
Vasculitis	12	3.6%
Photosensitivity	8	2.6%
Psoriasis	6	1.8%
Raynaud Phenomenon	6	1.8%

DISCUSSION

Hepatitis "C" is the leading infection responsible for chronic liver disease. The course is usually subclinical and usually present with non hepatic symptoms. At least 40% to 70% HCV patients develop extra hepatic manifestation.[15]

Gender distribution of patients in our study showed a dominance of male gender, which seems to be reflection of HCV distribution in different sets of patients. Similar finding were reported by Devis et al[16] and Ejaz et al[17] while a study from Turkey by Soylu et al[18] found female dominance.

Extra hepatic manifestations of HCV are numerous.[19] Skin conditions associated with HCV infection presents in 20-40% to skin specialists. HCV infection must be screened in suspected lesions to diagnose this infection at early stage.[2O] in our study one or more mucocutaneous manifestations were exhibited in 41% HCV patients, matching studies by Cacoub et al[21] and Raslan et al[22] while Paoletti et al[23] reported cutaneous signs in 80% HCV patients.

Several studies have documented a possible link between pruritus and HCV infection. Prevalence of itching in HCV positive patients differs all over the world.[24] The precise mechanism of itch in liver diseases remains unclear although the presence of bile salts in the skin, histamine and alternative liver metabolites have been proposed as explanations.[25]

Pruritis was the leading finding in our study found in 11% HCV positive patients. This fact has been reproduced in many studies. French study reported in 15% of patients[26], a study from Japan was 39%.[27] while in Pakistan a study from Azfar et al[28] found 25.9%.(Table 2)

The association between HCV infection and LP comes from epidemiological studies that have shown that the seropositivity of anti-HCV is higher in patients with LP than in general population.[29] LP may be the first presentation of HCV infection,[30] especially the oral form of LP seems more common.[31]

Although the etiology of HCV-induced lichen planus is unknown, it is probably related to viral replication in lymphocytes[32]

We found LP (mucosal & cutaneous) in 6.7% patients. Our findings are matching the earlier Pakistani results.[15, 17, 28] while a study from France by Cribier et al showed 3.8% and 4% by Raslan et al[22] in Egypt. (Table II)

The prevalence of chronic urticaria varies from 1% to 5% in the general population.[33] Doutre et al[34] described acute and chronic urticaria in various skin diseases with HCV infection. However Cribier et al[35] showed low prevalence in Europe, HCV positivity in patients of chronic urticaria are consistent with the general population. In patients with HCV, urticaria tends to last longer than the typical few hours, is associated with worse liver status and leaves a brown stain.[36] We found urticaria in 5.23% HCV patients while Azfar et al[28] reported in local study in 2.4% patients. (Table II)

Vasculitis was found in 3.6% of our patients, which is consistent with the finding of Hartmann et al. who reported vasculitis of the skin in 2%[37] and by Devis et al[16] 4.2% of HCV-infected patients. It is due to activation of specific T-Cell group in settings of HCV. Potential antigens of relevance include bacteria, viruses, drugs and other chemicals.[37]

A wide spread hyperpigmentation was observed in 5.5% of patients matching studies by Azfar et al[28] and Raslan et al[22] reported this in 6.2% and 5.3%.(Table 2)

Vitiligo was evident in 4.9% matching 6% from local study by Ejaz et a.l[17] Photosensitivity was noted in 2.5% compare to 7.5% by Azfar et al[28] and Reynaud's phenomenon was 1.8% in our study matching 2% in local study by Azfar et al[28] while in western study by Cacoub et al[21] it was reported high, 6% probably because of cold weather. (Table II)

More over different types of cutaneous conditions are secondarily due to HCV treatment as the erythema around injection present in 4.6% patients in our study while found it in Maticic[19] 7%. Transient alopecia was documented in 4.9% patients while Aamir et al[38] reported in 64% patients the reason for such high figure is because this study was performed on HCV patients on interferon exclusively.

CONCLUSION

Skin lesions are common in patients with anti-HCV patients. Dermatologic lesion may be the initial clue of HCV positivity. Screening studies are needed to find the exact prevalence of skin manifestations of chronic HCV.

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