ORIGINAL ARTICLE

Skin, Mucosal, Nail and Hair Manifestations in 100 Patients of Chronic Liver Disease (CLD)

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ABSTRACT

Aim: To determine frequency of various skin, mucosal, nail and hair manifestations in our community in patients of chronic liver disease (CLD).
Study Design: A descriptive study.
Place and Duration of Study: Department of Medicine & Dermatology Akhtar Saeed Trust Teaching Hospital Lahore. Total duration of study is 06 months from 1st April 2017 to 30th September 2017.
Methodology: Patients suffering from chronic liver disease (CLD) were included and their detailed history and physical examination was carried out and recorded in specially designed Proforma. The record was analyzed.
Result: A total 100 patients were included and 70 males and 30 were females, whose ages were 20 years and above. In skin manifestations pruritus was most common 25% and least common was dupuytren contracture 3%,regarding mucosal manifestations oral lichen planus (LP) 34% was most common .In nails leuconychia 21% and in hair sparse axillary and pubic hair 50% were most common cause.
Conclusion: Young doctors should give proper importance to physical examination of patients with history of chronic liver disease and look especially for pruritis, oral lichen planus, leuconychia,sparse axillary and pubic hair and other dermatological manifestations as some times these are only the features which point to diagnosis.
Keywords: Chronic liver disease, pruritus, skin manifestations

INTRODUCTION

Hepatitis C virus is a RNA virus, a member of Flaviviridae[1]. Hepatitis C virus infection is a common and major source of slowly progressive liver disease.[1, 2] Chronic liver disease(CLD) is a major health problem in third world countries and is responsible for the major burden of disease presenting to hospitals in Pakistan[3]. Hepatitis C is the more common cause of CLD. There are many other causes for CLD like hepatits B, haemachromatosis, alcoholism, Wilson's disease and drugs like methotrexate etc. Patients with CLD have manifestations on skin, hair, nail and mucosa[4]. There are some manifestations which are due to improper functioning of liver because liver has central role in handling of toxic metabolites in blood and hormones which are produced in the body but there are other skin manifestations which are not explained by these reasons and it is assumed virus replicates within lymphoid cells, potentially resulting in extra hepatic manifestations[5]. Another theory suggests that circulating immune complexes composed of HCV antigens and antibodies deposit in the tissues and cause initiation of an inflammatory cascade[1, 5]. Detection of these dermatological presentations help clinicians to make early diagnosis of disease because sometimes these are only presentation for which patient presents in OPD & emergency department [2].

MATERIAL AND METHODS

This descriptive study was carried out in the Department of Medicine & Dermatology of Akhtar Saeed Trust and Teaching Hospital from 1st April 2017 to 30th September 2017 on one hundred patients. Technique of sampling was convenient. All male and female patients above the age of 20 years with compensated and Decompensated liver disease were included in the study. Patients have no other diseases like renal, cardiac, intestinal and diabetes mellitus were excluded.

Data Collection Procedure: After taking written consent from patients and approval of study from ethical committee, data was collected on already designed Proforma from patients. Patients were included are from outdoor, emergency department and admitted in medical wards after fulfilling inclusion and exclusion criteria. Detailed history and physical examination was done by both physician and dermatologist in proper day light. Diascopy was used to examine spider nevi. Data analysis was computer based and SPSS version 11.0 was used. Frequency tables and percentages were calculated.

RESULTS

One hundred patients were included in the study. Their ages were above 20 years with mean age 43 years. Age distribution is shown in Bar Chart 1. Seventy patients were male and 30 were females. Sex distribution is shown in percentages chart 2. Skin manifestations on body are shown in table1. In both sexes pruritus is more common with total 25% and Dupuytren contracture is present only in 3% of patients. Among the Oral manifestations oral lichen planus is the most common present in 34% of patients in which 16 male and 18 are female, least common manifestation is smooth tongue with 6% which is shown in table 2. Among the nail manifestations leuconychia is present in 21% of patients and clubbing is present in 14 patients which is shown in table 3. Scanty pubic and

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axillary hair are present in 50 patients including 34 males and 16 females which is shown in table 3.

Fig. 1: Age distribution

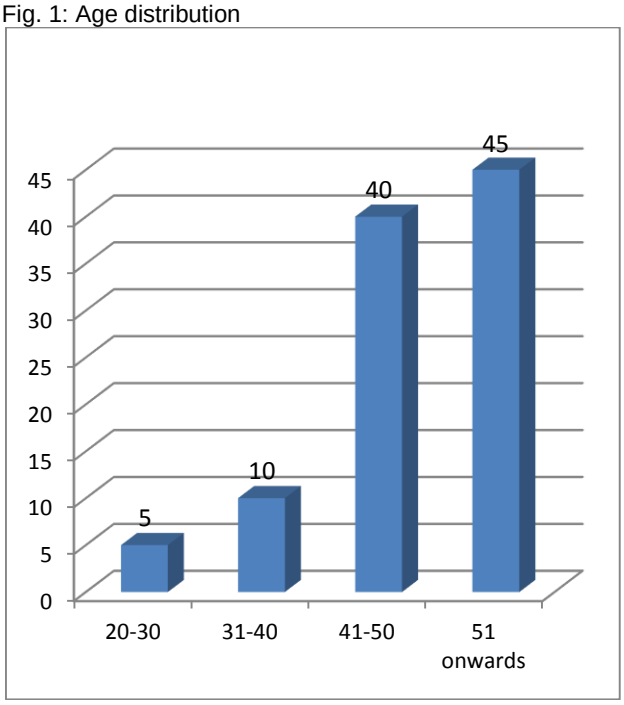

Fig. 2: Gender distribution

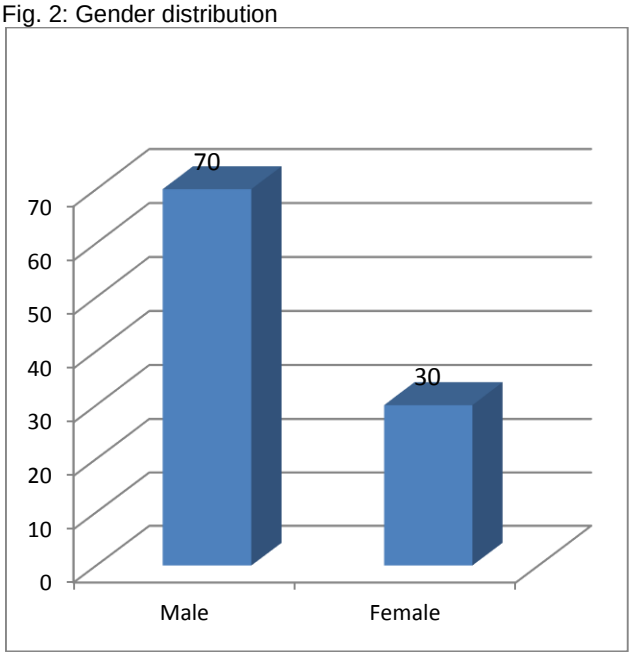

Table 1

Skin Manifestation	Male	Female	n
Pruritis	15	10	25(25%)
Petechial rash	10	2	12(12%)
Hyper Pigmentation	9	8	17(17%)
Bruises	10	5	15(15%)
Palmar Erythema	10	12	22(22%)
Dupuytren Contracture	2	1	3(3%)

Table 2

Mucasal Manifestations	Male	Female	n
Oral Lichen Planus (LP)	16	18	34(34%)
Jaundice	16	16	32(32%)
Cheilitis	5	10	15(15%)
Xerostomia	12	6	18(18%)
Smooth Tongue	3	3	6(6%)
Gingivitis	6	7	13(13%)
Oral Candidiasis	10	14	24(24%)

Table 3

Nail & Hair Manifestations	Male	Female	n
Leuconychia	15	6	21(21%)
Clubbing	8	6	14(14%)
Sparse Pubic & Axillary hair	34	16	50(50%)

DISCUSSION

HCV is probably the most common cause of CLD in the Western world as well as Pakistan[2,6]. Dermatological findings constitute an important proportion of extra hepatic signs related to HCV infection[7,8]. Present study reveals that the infection is more commonly seen in the age group from 21 years onwards similar to other studies[6,7,9,10],suggesting that the risk increase with increasing age possibly due to greater exposure to the risk factors[1,5,6]. The present study showed a greater number of males as compared to females which is again similar to various other studies[9,10] while a study by Adees *et al*. confirmed it by showing a significantly higher prevalence of anti-HCV antibodies in males than females[11]. This can also be attributed to the fact that, in our community, males are at a higher risk due to greater exposure to trauma in daily activities, sexual contact, blood transfusions and intravenous drug abuse[1,6,7].

In our study pruritis is the most common finding with 25% while a study conducted in Egypt, its percentage was 18.4% which is comparable with our result[12]. Chronic hepatitis may be associated with pruritis to the extent that some authorities believe that patients with unexplained pruritis should be investigated for HCV infection[13]. Palmar erythema was noted in 22% of patients while in a study conducted by Azfar *et al*[9] has comparable results with our study. This sign is a severity of decompensated cirrhosis which is different in different studies[1]. Dupuytren contracture which is the least common finding is present only in 3 patients and this percentage is comparable to its prevalence written in different text books of dermatology[14,15,16]. In oral manifestations lichen planus is the most common finding 34% in patients with the chronic liver disease. In an Egyptian study its percentage is 8.5%[12].The relationship between LP and HCV is debatable and several studies have been conducted. A retrospective study by Beaird et al[17] reported 70% frequency of HCV in patients of LP. Epidemiological studies by Mahboob et al[18] on patients of LP have reported an association of 23.5% which is comparable with our study. Hepatitic C virus infection seems to be more frequently seen in patients with generalized LP, and mucosal LP, particularly the chronic

erosive varient[19]. The mechanism of HCV induced lichen planus is unknown and is possibly related to the viral replication in lymphocytes. In nails Leuconychia is present in 21% of the patients in our study while a study conducted in Karachi[16] it's percentage was 21% which is comparable with our results. In another study conducted in Peshawar[20]. It's percentage was 80%. This difference may be due to patients in different stages of decompensation. Non scaring scanty axillary and pubic hair loss is 50% in our study while in a study in Peshawar it's percentage was 64%[20] which is comparable. These findings are nonspecific and are frequently present in chronic liver disease.

CONCLUSION

CLD has many skin, oral, hair and nail manifestations which are in accordance with the stage of the disease. Young Clinicians should do proper general physical examination and look for these common dermatological findings because sometimes these are the only manifestations present in patients with CLD and then accordingly further investigations are planned.

REFERENCES

1. Muzaffar F, Hussain I, Haroon TS. Hepatitis C: the dermatologic profile. J Pak AssocDermatol 2008; 18: 171-81.
2. Chung CM, Nunley JR. Overview of hepatitis C and skin. DermatolNurs 2006; 18 (5): 425-30.
3. Malik IA., Tariq WVZ, Viral hepatitis in Pakistan (Editorial). PJP 1993; 4: 15- 8.
4. Jubert C, Pawlotsky JM, Pouget et al. Lichen planus and hepatitis C virusrelated chronic active hepatitis. Arch Dermatol 1994; 130: 73-6.
5. Dervis E, Serez K. The prevalence of dermatologic ma- nifestations related to chronic hepatitis C virus infection in a study from a single center in Turkey. ActaDermatoven APA 2005; 14: 93-8.
6. Umar M, Bushra HT, Shuaib A, Anwar A, Shah NH. Spectrum of chronic liver disease due to hepatitis "C" virus infection. J Coll Physicians Surg Pak 2000; 10 (10): 380-3.
7. Schwartz RA, Birnkrant AP. Cutaneous manifestations of hepatitis C. [Internet] Online CME from Medscape Jun 2010. Available from: http://emedicine.medscape.com/article/1134161-overview
8. Bonkovsky HL, Mehta S. Hepatitis C: A review and update. J Am AcadDermatol 2001; 44: 159-79.
9. Azfar NA, Zaman T, Rashid T, Jahangir M. Cutaneous manifestations in patients of hepatitis C. J Pak AssocDermatol 2008; 18: 138-43.
10. Ejaz A, Ahmad R, Fazal I, Tahir M. Frequency of vari- ous cutaneous disorders in chronic hepatitis C virus infection. J Pak AssocDermatol 2010; 20: 10-4.
11. Idrees M, Lal A, Naseem M, Khalid M. High prevalence of hepatitis C virus infection in the largest pro- vince of Pakistan. J Dig Dis 2008; 9: 95-103.
12. MamdouhMorsy, MD, Yousef Al-Bayoumi, MD, ElshahatFarag Ahmed, MD Cutaneous manifestations in chronic hepatitis C patients: A prospective study from Egypt The Gulf Journal of Dermatology and Venereology Volume 18, No.2, October 2011, 27-32.
13. Dervis E, Serez K. The prevalence of dermatologic manifestations related to chronic hepatitis C virus infection in a study from a single center in Turkey. ActaDermatovenerol Alp PanonicaAdriat. 2005; 14(3): 93-8.
14. Robin AC, Graham B, Sarkany I. The Hepatobiliary system and the skin. In: Freedberg IM, Eisen AZ, Wolff K et al. Fitzpatrick's Dermatology in General Medicine, 6 thedn. New York: McGrawHill;1998. p 1012-23.
15. Weismann K, Graham RM. Systemic disease and the skin. In: Champion RH, Burton JL, Burns DA, Breathnach SM. Textbook of Dermatology, 6th edn. London: Blackwell Science; 1998. p 2311-73.
16. Nadeem M, Yousaf MA, Zakaria M et al. The value of clinical signs in diagnosis of cirrhosis. Pak J Med Sci 2005; 21: 121-4.
17. Beaird LM, Kabloon N, Franco J, Fairley JA. Screening of HCV in lichen planus patients. J Am AcadDermatol 2001; 44: 311-2.
18. Mahboob A, Haroon TS, Iqbal Z et al. Frequency of anti-HCV antibodies in patients with lichen planus. J Coll Physicians Surg Pak 2003; 13: 248-52.
19. Jackson JM. Hepatitis C and the skin. DermatolClin 2002; 20: 449-58.
20. Miraj Mohammad Khan, SahibzadaMahmood Noor, SherRehman, Arif Syed, Ijaz M. Khan, Khalid Hameed,Cutaneous manifestations of chronic liver disease,Journal of Pakistan Association of Dermatologists 2005; 15: 233-237.