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ORIGINAL ARTICLE

Factors decreasing compliance with treatment of HCV- Logistical, financial or lack of awareness of the disease.

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ABSTRACT… Objective: To identify the fears and concerns regarding HCV amongst people presenting to a free screening camp and to identify the barriers preventing patients from linkage to care (seeking medical care for HCV). **Study Design:** Cross Sectional study. **Setting:** Gajrakh District, Gujranwala. **Period:** 15th February to 14th March 2019. **Material & Methods:** Questionnaire was filled by all the participants attending free screening and treatment camp. Questionnaire explored socio-demographic features, financial status, knowledge regarding awareness of disease e.g. risk factors for transmission of disease, possible complications of disease, fears regarding diagnosis & treatment of HCV and possible concerns of female population. **Results:** This study included 100 participants, 58% were females and 42% were males with a mean age of 46.23±12.36. Fifty seven percent of the participants were laborer, 15 were salary based, 6 were shopkeepers and 7 were housewives. Majority of participants have a sound knowledge about transmission of HCV i.e 95% said yes to the question about spread via ear/nose piercing by unsterilized needles, however, 49% and 61% think that hugging the patient and eating and drinking with patient also caused viral spread respectively. Most important factors contributing to inability to start treatment were inability to bear cost, missing of daily wages, lack of transport, fear of side effects and fear of being outcast in 75, 66, 41, 26 and 25% respectively. **Conclusion:** Socioeconomic factors like costly treatment, missing of daily wages, lack of transport, fear of side effects and being outcast are real hindrance in getting HCV treatment.

Key words: Hepatitis C, HCV Elimination, Pakistan.

INTRODUCTION

Over the last decade, hepatitis C virus (HCV) infections have been on the rise world wide.[1] Pakistan ranks second in the number of HCV cases as nearly 6.8% of the population is infected with HCV, the most common genotype is 3a.[2,3] Around 5 to 20 % of the chronically infected patients with HCV develop cirrhosis over a period of twenty to thirty years.[4] Large majority of patients with HCV are asymptomatic and not aware that they have the disease.[5] According to a survey, nine out of ten men, women and children are unaware that they have viral hepatitis.[6]

Without finding these millions of people and linking those to care all other efforts to eliminate hepatitis C will meet with partial success only.[7]

It has been observed that lack of knowledge and concerns regarding confidentiality and stigma experienced if tested positive are well known barriers among people that limit their attendance in screening camps.[8] People often have concerns and fears regarding treatment. Identification of these barriers and addressing them expeditiously is essential to reach the WHO elimination target of HCV which requires at least a 30% diagnosis rate by 2020.[9,10]

Objectives of this study were to identify the fears and concerns regarding HCV amongst people presenting to a free screening camp and to identify the barriers preventing patients from linkage to care (seeking medical care for HCV).

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MATERIAL & METHODS

It is a cross sectional study carried out in a remote town of Gujranwala from 15th February to 14th March 2019. This study took place for a total duration of one month. With the help of local influential people announcements were made through mosques, banners were displayed and pamphlets were distributed within the community highlighting arrangements for free medical camps providing screening and free treatment. The 100 attendees of a free screening camp were surveyed with a formal questionnaire in native language, after an informed consent from participants. Non-probability consecutive sampling technique was used. Help was offered to fill the questionnaire by attending doctor. Following was the inclusion criteria; No restriction was placed on basis of age and gender, to encourage maximum participation. Exclusion criteria include 1. HBV-HCV coinfection. 2. Patients only infected with HBV 3. Advance Cirrhosis. Questionnaire explored socio-demographic features, financial status, knowledge regarding awareness of disease e.g. risk factors for transmission of disease, possible complications of disease, fears regarding diagnosis & treatment of HCV and possible concerns of female population. The study was approved by Institutional review board of FMH College of Medicine and Dentistry (IRB approval letter No FMH 01-2019-IRB-558-M). Data was collected and analyzed using standard statistical software. The percentages and frequencies were calculated for different parameters.

RESULTS

This study included 100 participants, 58% were females and 42% were males.

Fifty seven percent of the participants were laborer by profession. Demographic data on literacy level and source of income of participants is shown in Table-I.

There were ten questions regarding knowledge about the mode of transmission of hepatitis C. The result of these questions is shown as percentages in the Figure-1.

Five questions were asked regarding the factors which cause barrier to linkage to care for HCV. Percentages of these factors are illustrated in men and women diagrammatically in Figure-2.

Characteristics	N & %*. Total n=100
Mean Age (years)	46.23±12.36
Gender	
Male	(42%)
Female	(58%)
Education	
Illiterate	(43%)
Primary	(10%)
Middle	(15%)
Matric	(10%)
Graduation	(22%)
Source of income	
Laborer	(57%)
Salary based	(15%)
Shopkeeper	(6%)
House wives	(7%)
Others	(15%)

Table-I. Demographic data of participants.
*Number and percentages are same as there are 100 participants.

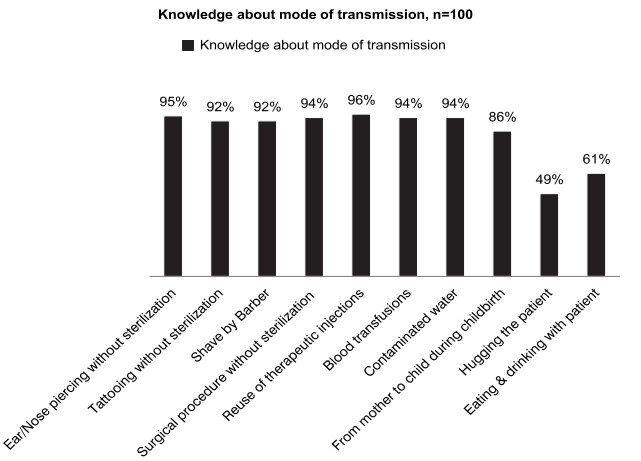

Figure-1. Knowledge about the mode of transmission

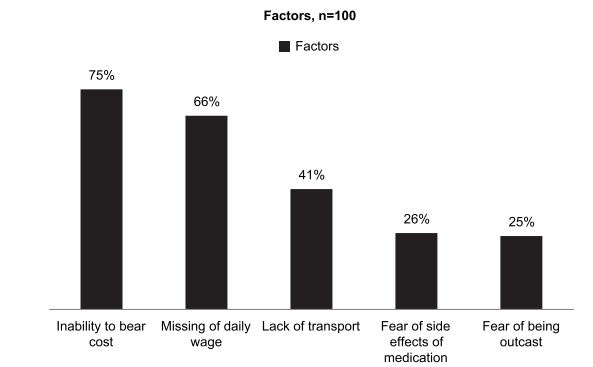

Figure-2. Factors preventing men from seeking care for HCV

Women were asked two more questions, they responded as follows; 36 percent told that they are occupied in household chores so they cannot seek treatment for HCV while 21 percent responded that no male person available to accompany them to the medical facility.

DISCUSSION

This study aims at exploring factors and fears which act as barriers towards people seeking screening for HCV infection. Adherence to treatment plan is backbone of successful eradication of HCV.[11,12] In the world every year Hepatitis C virus infection contributes to around 350,000 deaths.[13]

This study found multiple factors which contribute against the successful HCV treatment. Low socioeconomic status brings lack of education and awareness plus poor finances to travel to the point of care as was shown in our study that 75% of people were not able to bear the cost of travel and treatment whereas 66% people were reluctant to reach the screening camp because of fear of missing daily wages. Similarly, Ajit S et al found that poor socioeconomic status is a major hurdle in initiation of treatment in India.[14] Likewise Charthia et al reported that lack of resources like insurance denial for antiviral treatment among 50% of patients was a major hurdle in initiation of therapy.[15]

Our study found that the majority of people have good knowledge about transmission of the disease; however, there are few misconceptions like spread of the disease by hugging and eating together. Two national studies found comparatively low levels of knowledge about mode of transmission, this could possibly because the participants of a medical camp are usually the people with already known hepatitis C disease who have a much more knowledge about the disease by visiting different doctors than the general population.[16,17] Knick et al found the low level of disease knowledge in high prevalent area in united states.[18]

We found that around one third of the people had a fear of disease and fear of being outcast after diagnosed with HCV infection. This is one of the barriers for initiation of treatment as people hide their disease. Soltan et al and Ullah et al found the similar results in hepatitis C affected individuals in Egypt and Pakistan respectively.[19,20]

Although all oral, highly effective and safe treatment has been available for HCV around one fourth of people are afraid of treatment and adverse effects, similar to Buggisch et al who found the similar results in Germany.[21] Among the females the household chores and non availability of the male person for transportation was the main barriers in getting the HCV treatment, Massah et al reported the similar findings in Iran.[22]

CONCLUSION

According to our study, financial logistical and social reasons along with a lack of awareness of the nature of HCV and its potential complications leads to poor compliance with screening and subsequent treatment. Need to address these issues to eradicate hepatitis C.

REFERENCES

1. Blach S, Zeuzem S, Manns M, Altraif I, Duberg A-S, Muljono DH, et al. **Global prevalence and genotype distribution of hepatitis C virus infection in 2015: A modelling study.** Lancet Gastroenterol Hepatol [Internet]. 2017; 2(3):161–76. Available from: http://dx.doi.org/10.1016/s2468-1253 (16)30181-9.

2. Bhatti S, Manzoor S. **Molecular epidemiology and clinical features of Hepatitis C Virus (HCV) in epidemic areas of Interior Sindh, Pakistan.** Pak J Med Sci. 2016; 32(5):1279-1282. doi: 10.12669/pjms.325.10429

3. Umar M, Saeed Akhtar T. **New direct acting antiviral agents for the treatment of Hepatitis C: 2016 and Beyond.** JCPSP. 2016; 26(10):843-850.

4. Kamani L, Ahmad BS, Kalwar HA. **Hepatitis-C infection: Are we really committed to eliminate?** Could it become the second Polio for Pakistan? Pak J Med Sci. 2020; 36(7):1742-1744. doi: 10.12669/ pjms.36.7.2804

5. Kileng H, Gutteberg T, Goll R, Paulssen EJ. **Screening for hepatitis C in a general adult population in a low-prevalence area: The Tromsø study.** BMC Infect Dis 19, 189 (2019). https://doi.org/10.1186/s12879-019-3832-7

6. Liu L, Xu H, Hu Y, Shang J, Jiang J, Yu L, et al. **Hepatitis C screening in hospitals: Find the missing patients.** Virol J 16, 47 (2019). https://doi.org/10.1186/s12985-019-1157-1

7. Terrault NA. **Hepatitis C elimination: Challenges with under-diagnosis and under-treatment.** F1000Res. 2019; 8:54. http://dx.doi.org/10.12688/f1000research.15892.1

8. Crowley D, Van Hout MC, Lambert JS, Kelly E, Murphy C, Cullen W. **Barriers and facilitators to hepatitis C (HCV) screening and treatment-a description of prisoners' perspective.** Harm Reduct J [Internet]. 2018; 15(1):62. Available from: http://dx.doi.org/10.1186/s12954-018-0269-z

9. World Health Organization (WHO). **Combating hepatitis B and C to reach elimination by 2030: Advocacy brief.** 2016. (http://apps.who.int/iris/handle/10665/206453)

10. World Health Organization (WHO). **Global health sector strategy on viral hepatitis 2016–2021.** 2016. (http://www.who.int/hepatitis/strategy2016-2021/ghss-hep/en/)

11. Cramer JA, Roy A, Burrell A, Fairchild CJ, Fuldeore MJ, Ollendorf DA, Wong PK: **Medication compliance and persistence: Terminology and definitions.** Value Health 2008, 11:44–47. DOI: 10.1111/j.1524-4733.2007.00213.x

12. Lo Re V 3rd, Teal V, Localio AR, Amorosa VK, Kaplan DE, Gross R: **Relationship between adherence to hepatitis C virus therapy and virologic outcomes: A cohort study.** Ann Intern Med 2011, 155:353–36. DOI: 10.7326/0003-4819-155-6-201109200-00003

13. A Hatzakis, S Wait, J Bruix, M Buti, M Carballo, M Cavaleri et al. **The state of hepatitis B and C in Europe: Report from the hepatitis B and C summit conference.** J Viral Hepat, 2011; 18(1): 1–16. doi: 10.1111/j.1365-2893.2011.01499.x.

14. Sood A, Midha V, Halli S, Narang V, Mahajan R, Mehta V et al. **Impact of "Sambhav" Program (Financial Assistance and Counselor Services) on Hepatitis C Pegylated Interferon Alpha Treatment Initiation in India.** IJHPM. 2018; 7(12):1138-1144. doi: 10.15171/ijhpm.2018.84

15. Gowda C, Lott S, Grigorian M, Carbonari DM, Saine ME, Trooskin S et al. **Absolute insurer denial of direct-acting antiviral therapy for Hepatitis C: A national specialty pharmacy cohort study.** Open Forum Infect Dis. 2018 Jun 7; 5(6):ofy076. doi: 10.1093/ofid/ofy076.

16. Dis Knol Mustafa RE, Mushtaq S, Akhtar N, Yameen MA. **Assessment of knowledge, attitude and practice towards hepatitis among patients visiting the hepatitis clinic in tertiary care hospital, Rawalpindi, Pakistan.** J Pak Med Assoc. 2019 Aug; 69(8):1136-1141.

17. Pirani, S., Allana, S., Ali, T. S., Ismail, F. **Association of awareness about hepatitis C infection with patterns of health seeking behavior among hepatitis C patients in Karachi.** Pak J of Pub Health in Developing Countries 2017 3(2), 395-404.

18. Knick T, Sherbuk JE, Dillingham R. **Knowledge of Hepatitis C risk factors is lower in high incidence regions.** J Community Health. 2019 Feb; 44(1):12-15. doi: 10.1007/s10900-018-0545-6.

19. Soltan, E.M., Salama, H.M. & Aboelmagd, M.A. **Assessment of stigma among patients infected with hepatitis C virus in Suez City, Egypt.** J Public Health 2018; 26(3), 279–288. https://doi.org/10.1007/s10389-017-0872-6

20. Ullah Q, Ullah A, Khan Y, Khan FA, Ali S. **The extent of prevailing stigma among hepatitis C patients in Peshawar Khyber Pukhtunkhwa Pakistan.** HSSR. 2021; 9(3):1595-601 (2021). https://doi.org/10.18510/hssr.2021.93160

21. Buggisch P, Heiken H, Mauss S, Weber B, Jung M, Görne H et al. **Barriers to initiation of hepatitis C virus therapy in Germany: A retrospective, case-controlled study.** PLOS ONE. 2021; 16(5):e0250833. https://doi.org/10.1371/journal.pone.0250833

22. Massah O, Effatpanah M, Moradi A, Salehi M, Farhoudian A, Karami Z. **Barriers to Hepatitis C treatment among women in methadone treatment: A study from Iran, the Most Populous Persian Gulf Country.** Addict Health. 2017 Fall; 9(4):229-236. PMID: 30574286; PMCID: PMC6294482.

AUTHORSHIP AND CONTRIBUTION DECLARATION

No.	Author(s) Full Name	Contribution to the paper	Author(s) Signature
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2	Raja Ikram Ul Haq	Data collection, Manuscript writing.	
3	Asad Choudhry	Data collection, Editing manuscript.	
4	Abdul Farooq Rauf	Data collection.	
5	Muhammad Sohaib	Data collection.	
6	Arif Amir Nawaz	Final review and Approval of manuscript.