

ANTI-HCV POSITIVE PATIENTS AND PROBLEMS IN THEIR MANAGEMENT

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ABSTRACT

Background: Hepatitis C is an important cause of morbidity and mortality worldwide. Screening for it is by detection of anti-HCV antibodies. The purpose of this study was to know the presentation of anti-HCV positive patients, risk factors for it and problems in the management of these patients.

Material & Methods: This study was conducted in Medical Unit of District Headquarter Teaching Hospital Dera Ismail Khan from January 2006 to October 2008. Three hundred anti-HCV positive patients were studied. Detailed history was taken from each patient to know about the risk factors and symptoms of HCV infection. Examination was performed to look for relevant signs and the previous record of the patients checked to know about the treatment they had received.

Results: Majority of anti-HCV positive patients 186(62%) were asymptomatic. Main identifiable risk factor in 90(30%) patients was the use of un-sterilized injections. In 102(34%) cases there was no identifiable risk factor. Out of 279 patients having received no antiviral therapy in the past, 81(29.03%) were not ready to carry out further investigations and treatment mainly because of economic problems. Out of 192 patients, already knowing about their anti-HCV positivity, 12(6.25%) were treated inappropriately in the past because of wrong interpretation of their investigations.

Conclusion: Majority of patients with hepatitis C are asymptomatic. The main identifiable risk factor is the use of un-sterilized injections. About one third of patients with hepatitis C are not managed properly. More knowledge and awareness regarding Hepatitis C is required.

Key words: Chronic Hepatitis C, Anti-HCV, Risk factors.

INTRODUCTION

Hepatitis C virus (HCV) infection is a global health problem causing significant morbidity and mortality from complications of end stage liver disease. HCV infected patients are screened by testing their serum for antibodies to HCV (anti-HCV). Confirmation of infection is by detection of HCV ribonucleic acid (RNA) by polymerase chain reaction (PCR). A negative RNA test in a person with HCV-antibodies most likely indicates that the HCV infection has resolved. Other possibilities are that the anti-HCV immunoassay is falsely positive, the HCV RNA is falsely negative or rarely that a person has intermittent or low level viraemia. A positive test in an infant born to HCV infected mother does not necessarily mean infection. It may be simply the result of passive transfer of maternal antibodies across the placenta and therefore a repeat test at 18 months or later is recommended¹. A false negative HCV RNA test is very unlikely because the RNA tests, using the PCR technique, are extremely sensitive and almost all patients with chronic HCV infection will test positive². Spontaneous recovery occurs in 20 to 40% cases of acute

hepatitis with slightly higher clearance rates of 53% in genotype 2 in Africa³. Factors associated with spontaneous clearance of HCV infection appear to include younger age, female gender and certain major histocompatibility genes. Lack of vigorous T lymphocyte response despite vigorous HCV replication appears to promote a higher rate of chronic infection⁴. Chronic infections are diagnosed by the persistence of HCV RNA in the blood for six months or more². Anti-HCV antibodies do not provide protection against HCV infection because HCV has a high rate of mutation making it difficult for the immune system to fight it off, as by the time the immune system figures out the virus, it has changed to look different. For the same reason it is difficult to develop a vaccine⁴. Recovery from hepatitis C does not protect against re-infection with the same or different strains of HCV⁵. With the passage of time anti-HCV titres decline and might disappear completely 10 to 20 years after recovery⁶. Anti-HCV antibodies may be absent in immunocompromised patients and in acute HCV infection. In acute HCV infection HCV RNA can be detected in 1-2 weeks while anti-HCV antibodies are detectable about 8 weeks later⁷.

Patients with chronic HCV infection are often asymptomatic⁸ but may present with chronic fatigue⁹ and rarely present with jaundice¹⁰. In developed countries, now-a-days, the main risk factor for HCV transmission is the use of shared, unsterilized or poorly sterilized needles and syringes by those injecting illicit drugs¹¹, and blood and blood products are rarely responsible for HCV transmission since the introduction of screening of donors in 1992. The purpose of this study was to know about the presenting features of anti-HCV positive patients in our population, about the risk factors for HCV transmission and problems in management of anti-HCV positive patients.

MATERIAL AND METHODS

The study was conducted over a period of two years and ten months i.e. from January 2006 to October 2008 involving 300 patients attending medical unit of District Headquarter Teaching Hospital Dera Ismail Khan or private clinics of physicians working in this hospital. Patients with decompensated cirrhosis were excluded from the study because such patients remain no more candidates for antiviral therapy. Patients included in the study were either cases referred to us, already knowing about their anti-HCV positivity, or were found to be anti-HCV positive at the time of investigation in our unit. The record of the referred cases was checked in detail so as to avoid unnecessary investigations and treatment. Information was obtained from all the patients about their symptoms and risk factors for HCV transmission. Any blood transfusion in the past was considered as risk for HCV as it has been shown that most countries in the developing world do not have adequate screening procedures and only about 40% of the donated blood is tested for the virus⁸. Examination was done in each and every patient and routine and relevant investigations including ALT levels and abdominal ultrasound were performed. Liver biopsy was done when needed. HCV RNA by PCR was done for confirmation of diagnosis. Those found positive for HCV RNA and having received no antiviral therapy in the past were considered for treatment with interferon and ribavirin given in combination. Explanation was given to those needing no such treatment.

RESULTS

Age range of the 300 patients, comprising 201 (67%) male and 99 (33%) females, was 19-61 (Mean 36.5) years. One hundred and ninety two out of 300 (64%) were referred cases, already knowing about their anti-HCV positivity either because of screening in 156 (52%) cases or because of

being investigated for their symptoms in 36(12%) cases. One hundred and eight (36%) patients were diagnosed as anti-HCV positive in our Unit, either because of screening in 30 (10%) cases or because of symptoms in 78 (26%) cases. The various reasons for screening were, before donation of blood for transfusion, before joining special jobs and services, at the time of entry into other countries, because of sexual relations or before being subjected to surgery or other invasive procedures. The various symptoms leading to diagnosis of anti-HCV positivity were fatigue and long standing aches and pains in 90 (30%) patients and jaundice in 24 (8%) patients. Risk factors found responsible for anti-HCV positivity were use of glass syringes and shared needles in the past in 90 (30%) cases, previous history of blood transfusion in 48 (16%) cases, surgery in 36 (12%) cases, anti-HCV positive spouse in 24 (8%) cases, multiple sex partners in 6 (2%) cases and unsterilized procedures performed by Quacks such as injections for haemorrhoids, and cuts given to various parts of the body either for relief of pain or for removal of so called dirty blood in 18 (6%) cases. In 102 (34%) patients there was no obvious risk factor. Twenty four (8%) patients were having more than one risk factor for anti-HCV positivity.

Out of the 192 (64%) patients, already knowing about their anti-HCV positivity, 21 (10.93%) were treated previously with antiviral combination therapy. Out of these 21 (10.93%) patients 12 (6.25%) patients were treated inappropriately in the past. In 4 (2.08%) patients treatment was given despite the fact that they were having sustained virological response (SVR) and therefore were not in need of any more antiviral therapy. Two (1.04%) other patients were cases of relapsers and non-responders, one each, and were unnecessarily retreated with the same regimen. In 6 (3.12%) other patients treatment was given simply on the basis of anti-HCV positivity without confirmation of infection. In the remaining 279 patients 81 (29.03%) patients refused to carry out further investigations and treatment due to various reasons. The cost of necessary investigations and treatment was responsible for 52 (18.63%) such cases. Sixteen (5.73%) were having concern about the safety and efficacy of the regimens used for treatment of HCV infection. Out of these 10 (3.33%) were interested in treatment by quacks. The remaining 13 (4.65%) patients were convinced that as their ALT levels are normal so they do not need any treatment. Out of the remaining 198 patients HCV RNA was not detectable in 27 patients representing either resolved infection or false positive RNA and the remaining 171 patients were considered for antiviral combination therapy.(Figures 1,2 & Table)

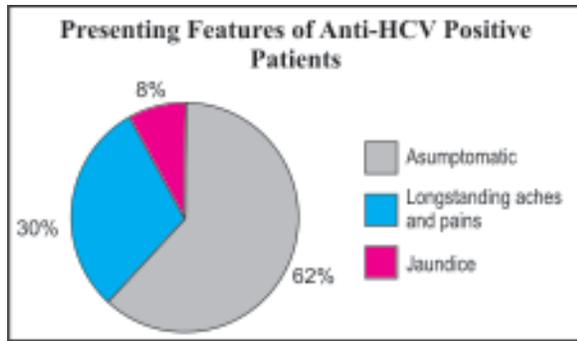


Fig. 1

Table: Risk factors for anti-HCV positivity.

S. No.	Risk factors	Role in causation of HCV infection
1.	Use of un-sterilized syringes and needles in the past	30%
2.	Previous history of blood transfusion	16%
3.	Previous history of surgery	12%
4.	Anti-HCV positive spouse	8%
5.	Multiple sex partners	2%
6.	Quacks induced cases	6%
7.	No obvious risk factor	34%
8.	More than one risk factors	8%

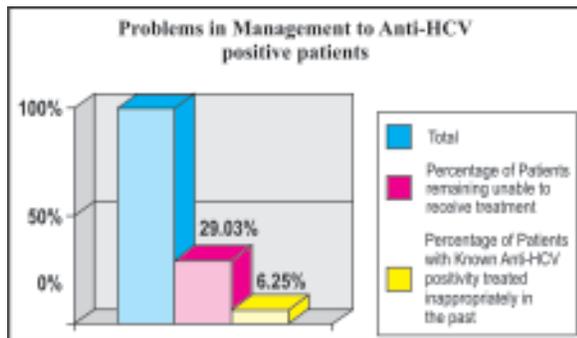


Fig. 2

DISCUSSION

The age range of chronic HCV infected patients in this study was 19-61 years, mean being 36.5 years. Other studies have also shown peak prevalence of HCV infection in the age group 45-54 years.¹² Sixty-two percent patients in this study

were asymptomatic and diagnosed during screening and only 8% presented with jaundice. This is in accordance with other studies showing jaundice to be a rare feature in HCV infected patients.¹⁰ About two third patients were male in this study. This may be simply a reflection of the fact that males are subjected to screening procedures more commonly than females and therefore diagnosed more frequently. Another possibility is that males are exposed to the risk factors more commonly than females. In this study the main identifiable risk factor for HCV was the use of un-sterilized syringes and needles. Even in developed world currently the main risk factor for HCV transmission is the use of shared, un-sterilized needles and syringes.¹¹ However in developed world this practice is common in those involved in drug abuse, whereas in this study out of 90 patients having history of injection with shared needles and syringes only six patients were having drug abuse. This shows that such unhygienic and unacceptable injection techniques are still common in our community. The small number of individuals involved in drug abuse i.e. 2% cases of anti-HCV positive patients may be because of concealment due to stigma associated with such practices or because they have limited access to information and health care services. The factor of concealment may also be responsible for the small number 2% cases of HCV due to multiple sex partners as compared to large number i.e. 8% cases of HCV due to anti-HCV positive spouse. Twenty-eight percent patients were having previous history of blood transfusion or surgery. The significant contribution of blood transfusion, even in the modern world, in causation of HCV infection is reported by other studies as well.⁸ Sixteen percent cases of anti-HCV positivity were the result of un-sterilized procedures performed by quacks. This reflects the ignorance of our common man about the risk of transmission of various diseases including HCV from these procedures. However an additional factor encouraging such approach may be the cost of various diagnostic and therapeutic procedures especially surgery and the fear of risk associated with anesthesia and surgery tempting the patients to resort to quacks, being motivated by their publicity and claim of providing immediate relief without surgery and with minimal charges.

About one third of patients in our study were having no obvious cause for anti-HCV positivity. These cases may have resulted from practices which are very common and generally ignored as a risk for HCV infection such as body piercing, tattooing and commercial barbering.¹

Out of 192 referred cases 6.25% were inappropriately treated by their doctors in the past. This may be because the previous record of these

patients was not checked properly by those doctors or because the investigations were interpreted wrongly. The wrong interpretation of investigations may be due to confusion of hepatitis C with B as anti-HCV antibodies and Hepatitis B surface antigen (HBsAg) are used as screening tests for diagnoses of hepatitis C and B respectively. In case of hepatitis B, eradication of infection is indicated by disappearance of HBsAg. However in case of hepatitis C anti-HCV antibodies persist for years⁶ after the infection resolves spontaneously or with treatment.

A third of patients refused further investigations because of various reasons including cost of investigations and treatment, concern about efficacy and safety of antiviral regimens, or because they thought that they need no treatment as their ALT levels were normal. This reflects the problems faced by a common man in having an easy access to diagnostic and therapeutic facilities for HCV infection, lack of accurate information about the efficacy and toxicity of the drugs used for treatment of HCV infection and the false impression that not only the patients but also many doctors get from normal ALT levels. In fact more than 80% of patients infected with genotype 2 or 3 can be expected to eradicate the virus after 6 months of therapy,⁸ and although side effects of the therapy are common, serious side effects occur infrequently and most of these can be handled easily. Generally patients with normal ALT levels have mild disease but 14-24% of patients may develop progressive liver disease despite normal ALT levels.^{13,14}

The finding that 10 (3.33%) patients refusing treatment in this study were interested in treatment by quacks is still another problem we are facing. Factors involved in continuation of such practices are lack of awareness about the disease especially the fact that detrimental effects of this infection appear years or even decades later by which time these quacks have already done their job and are not considered responsible for their deterioration by the patients affected.

CONCLUSION

Majority of the patients with hepatitis C are asymptomatic. The main identifiable risk factor is the use of un-sterilized injections. About one third of patients with hepatitis C are not managed properly. More knowledge and awareness regarding Hepatitis C is required.

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