ORIGINAL ARTICLE

IDENTIFIABLE RISK FACTORS IN HEPATITIS B AND C

Faiz-Ur-Rehman, Jehangir Khan*, Zahid Fida, Arshad Parvez, Ahmad Rafiq, Shandana Syed*

Department of Medicine, Khyber Teaching Hospital, Peshawar, *Ayub Medical College, Abbottabad, Pakistan

Background: Both hepatitis B and C are common infections affecting masses and are leading causes of Chronic Liver Disease in Pakistan as well as worldwide. In majority of cases both viral diseases spread by factors that are preventable. The present study is conducted to determine the identifiable risk factors in patients admitted with Chronic Hepatitis B and C. **Methods:** An observational study was carried out for a period of 6 months. All age groups and both sexes were included. The patients were interviewed and the identifiable risk factors were looked for. The standard methods for detection of Hepatitis B and C were used. **Results:** One-hundred and ten patients were studied from January to July 2009. Sixty-five patients had Hepatitis C, 35 had Hepatitis B, and 10 had both Hepatitis B and C. Ninety-three patients had a history of injections and transfusions etc., and 38 had surgical scars. Tattoos were present in 42 patients and nose and/or ear piercing marks were present in 28 patients. The number of risk factors increased in co-infection. **Conclusion:** There is a role of unhygienic health delivery practices, lack of awareness and resources for standard screening protocol for spread of Hepatitis B and C.

Keywords: Hepatitis B, Hepatitis C, risk factors, prevention, identifiable, awareness

INTRODUCTION

Hepatitis B and C are endemic in Pakistan and carry a high morbidity and mortality. The prevalence of Hepatitis B and C in Pakistan was around 4% and 6% respectively.[1,2] The reasons for high prevalence are multifactorial like transfusion of unscreened/improperly screened blood or blood products, administering injections through un-sterilised or used syringes by health care workers and quacks, body piercing with un-sterilised needles and shaving by untidy barbers.[3,4] Similarly, sharing syringes by intravenous drug abusers is a significant risk factor for Hepatitis B and C globally.[5,6] Pakistan is a country with the highest number of intramuscular injections per person per year.[7] Recently, Pakistan Medical Research Council has conducted a community-based study showing a reduction in prevalence of Hepatitis B and C to 2.5% and 4.9% respectively.[8] This may be due to an increase in public awareness regarding preventive strategies and inclusion of Hepatitis B vaccine in national immunization program since 2000. However, it still needs a lot of efforts to control Hepatitis B and C. The present study was conducted to determine various identifiable risk factors leading to Hepatitis B and C infections.

MATERIAL AND METHODS

This study was conducted in Medical 'D' Unit, Khyber Teaching Hospital, Peshawar and Medical 'B' Unit, Ayub Teaching Hospital, Abbottabad over a period of 6 months (Jan–Jul 2009). One hundred and ten patients diagnosed having Hepatitis using standard methods were inducted in the study.

The data were recorded on a specially proforma. It included past, personal, socio-economic and family history of hepatitis. Questions were asked about use of injections and transfusions, surgical procedures, dialysis, shaving practices, injuries, tattoos, ear and/or nose piercing, and any dental procedure.

RESULTS

A total of 110 patients were studied, 35 of them had hepatitis B, 65 had hepatitis C, and 10 had co-infection with both B and C. Among them, 77 (70%) were males, 33 (30%) were female, and 60% hailed from rural areas. Majority of them belonged to the farming community or the daily wage earners. All women were housewives.

Promiscuous use of needles, syringes, blades, razors, and instruments was found in 84.54% of the patients. Sixty-seven percent of patients had used intravenous fluid therapy and/or blood transfusion. Thirty-eight patients (34.54%) with Hepatitis C had surgical scars on the skin surface as evidence of surgical procedures. Six of out 10 patients (60%) with co-infection had surgical scars while 12 (34.28%) of Hepatitis B patients had evidence of surgical scars.

Tattooing on the skin was seen in 42 (38%) of patients. Facial tattoo were common in women while men had tattoos on their forearms. Twenty-eight (24.45%) patients had nose and/or ear piercing and majority were women. Sixty-two (56.36%) patients had some dental procedure done. Health care professionals (8, 7.27%) had Hepatitis B infection. Patients with co-infection had the highest number of risk factors on history and examination.

Table-1: Risk factors in patients diagnosed having Hepatitis B and C [n (%)]

	Hep B	Hep C	Hep B & C
Infections/Transfusions	32 (91.4)	54 (83.07)	9 (90)
Surgical Scars	12 (34.28)	20 (51.14)	6 (60)
Injury Scars	17 (48.5)	38 (58.46)	6 (60)
Tattoos	12 (34.28)	26 (40)	4 (40)
Nose/Ear piercing	10 (12.57)	15 (23.07)	3 (30)
Dental procedures	21 (60)	34 (52.3)	7 (70)
Total Patients (110)	**35 (31.8)**	**65 (59.9)**	**10 (9.09)**

DISCUSSION

The global prevalence of HCV is 2.9% with it is the lowest in Europe (1%) and highest (5.3%) in Africa.[9] In Egypt, HCV spread has been contributed by the Anti-schistosomal therapy via injections.[10] Pakistan has an HBV carrier rate of 3–4% while HCV prevalence is 4–5%.[11,13] As the socio-economic and other indicators improve, the prevalence declines.

In our study 70% patients were men while 30% were women and majority had Hepatitis C. The risk factors for the spread of Hepatitis B and C are promiscuous use of syringes, needles, injections, surgical and dental procedures, tattooing, and body piercing. Majority of patients in the study belonged to rural areas where above mentioned risk factors do operate and contribute in the spread of Hepatitis B and C. It is a very common practice to give injections even for minor illnesses in rural areas of developing countries. Poverty, low education, unsafe health practices, and unscreened transfusions have seriously added to the problem.[14–17]

Barbers shave with infected blades which is hazardous.[17] In China the prevalence of HBsAg, Anti-HBsAb, anti-HBcAb was 16.8%, 67.1% and 39.2% respectively, much higher in barbers than other professions.[18] The parenteral use of drugs (narcotics, cocaine etc.) have been found mostly in western societies but no comprehensive data exists for Pakistan.[19,20] Non-white males were more commonly affected in the studies from western countries.[20]

In Australia 80% of Hepatitis B and C individuals are in the population who are parenteral drugs abusers.[21] Drug injection and unsafe sexual practices have added to the spread of Hepatitis B and C in the West.[22] Vertical transmission is higher among children with HCV positive, HIV positive and drug abuse mothers.[23]

CONCLUSION

Lack of awareness in the public about mode, source and spread of Hepatitis B and C is a major issue in spread of Hepatitis B and C and needs urgent redressal on a massive scale.

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Address for Correspondence:

Dr. Faiz-Ur-Rehman, Department of Medicine, Khyber Teaching Hospital, Peshawar, Pakistan.