ORIGINAL ARTICLE

PREVALENCE OF HEPATITIS B AND C IN UROLOGICAL PATIENTS

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ABSTRACT

Background: To determine the frequency of hepatitis B and C virus infection in urological patients and assess the risk factors. **Methods:** This observational study was conducted at department of urology Liaquat University of Medical and Health Sciences Jamshoro, from January 2010 to December 2011.Patients admitted at urology department during the study period were screened for HBV & HCV, and detailed history was taken to find out risk factors causing hepatitis B & C in urological patients. **Results:** A total 1472 patients were screened including 1152(78.26%) male and 320(21.73%) female patients. Out of 1472 patients 252(17.11%) were found positive for HBV & HCV. Visit to general practitioner and frequent use of Intravenous and Intramuscular drugs was risk factor found in 225(89%) patients. A visit to barber for shaving and hair cut was found in 139(72.3%) patients. Previous history of surgical procedures was found in 91(36.1%) patients. Blood transfusion was found in 49(19.4%) patients in past. Visit to dentist for procedures was found in 37(14.68%) patients. Road traffic accident in the past was seen in 14(5.5%) patients. **Conclusion:** The high prevalence i.e. 17.11% of hepatitis B & C in urological patient suggests that pre-operative screening of all patients for hepatitis B & C should be made mandatory. Public awareness regarding hazards and common modes of disease transmission should be transmitted through print and electronic media and public awareness programs.

KEY WORDS: Hepatitis B, Hepatitis C, Urological patients, Prevalence.

INTRODUCTION

Hepatitis B and C are worldwide health concern and quickly coming up as major health problem in developing countries like Pakistan. These are the main causes of chronic liver disease (CLD) resulting in morbidity and mortality in Pakistan.[1,2]

Hepatitis B virus has infected more than 2000 million people globally and 350 million people are chronically infected carriers of the HBV,[3] and 50 million new cases of Hepatitis B are diagnosed annually.[4] Over one million people die yearly with Hepatitis B associated chronic liver disease.[5] World Health Organization (WHO) estimates that 180 million people i.e. 3% of the world population is infected with hepatitis C virus (HCV); 130 million of whom are chronic HCV carriers and are at threat of developing liver cirrhosis, portal hypertension, ascites, bleeding esophageal varices and liver cancer.[6]

Hepatitis B & C viruses are blood borne & largely transmitted by transfusion, use of infected needles, surgical and dental instruments, and barber shaving equipments.[7] Doctors particularly surgeons and paramedical staff have high occupational risk of developing infection through needle injury or direct transfer of the virus through cut skin.[8]

In developing countries like Pakistan, preoperative screening of hepatitis B & C is not done in everyday practice, and blood transfusion continues to be most important cause of spread of the hepatitis. During 2001-2002 more than six million blood units were not screened for blood borne infections together with hepatitis B & C.[9] In dialysis patients, reasons that were regularly reported as being associated with an increased prevalence of hepatitis B & C infection were the duration on dialysis and amount of blood transfusions.[10] World Health Organization calculated approximately that 6.7 billion injections (39.3% of all injected) are given via reused equipments mostly because of financial limits.[11] Our study aimed to see the prevalence of the disease in patients who present for urological disorders.

The objective of this study was to know the prevalence of hepatitis B & C virus infection in urological patients and to know the risk factors.

MATERIAL AND METHODS

This observational study was conducted at department of urology Liaquat University of Medi-

cal & Health Sciences Jamshoro from January 2010 to December 2011. All those patients who were admitted and underwent surgical procedure in urology ward were included in the study. Those who were previously known to have hepatitis B or C were excluded from the study. This study consisted of 1472 patients were admitted at urological ward during the study period. All patients were screened for HbsAg and Anti HCV to see the carrier status of the patients before surgery. A detailed questionnaire was designed for all positive patients which included age, sex, history of previous surgical procedure, trauma, blood transfusion, visit to dentists, general practitioner and barber, user of frequent I.V and I.M medication.

All HBV and HCV positive patients were further advised liver function tests including prothrombin time.

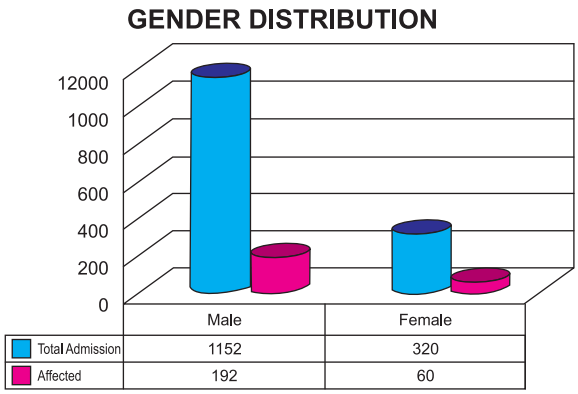

Fig. 1: Gender distribution of patients.

RESULTS

A total 1472 patients were screened during the study period including 1152 (78.26%) male and 320 (21.73%) female patients, male to female ratio 3.6:1. (Figure 1)

Out of 1472 patients, 252 (17.11%) were found positive for HBV and HCV. Among positive patients Hepatitis C was found in 236 (16.03%) and 16 (1.08%) patients suffered from hepatitis B. Mean age of the studied population was 43.9±11.2 years. Most common age group affected from HBV and HCV were aged 42-65 years (77.7%). Among affected patients 192 (76.2%) were male and 60 (23.8%) were female.

Visit to general practitioner and frequent use of Intravenous and Intramuscular drugs was risk factor found in 225 (89%) patients. A visit to barber for shaving and hair cut was found in 139 (72.3%) patients. Previous history of surgical procedures was found in 91 (36.1%) patients. Blood transfusion was found in 49 (19.4%) patients in past. Visit to dentist for procedures was found 37 (14.68%) patients. Road traffic accident in the past was seen in 14 (5.5%) patients. (Figure 2)

Disturbed coagulation profile was found in 28 (10.31%) patients, among them 22 (8.73%) needed vitamin K injection and 4 (1.5%) patients needed fresh frozen plasma.

DISCUSSION

Hepatitis prevalence varies according to geographical variation.[12] Hepatitis B & C are quickly

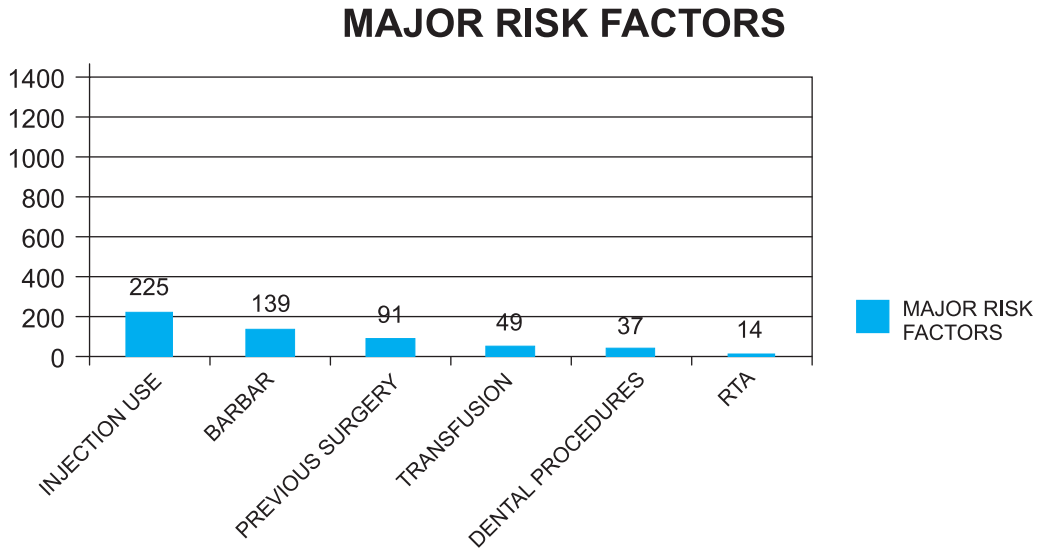

Fig. 2: Presence of risk factors in patients positive for hepatitis B & C.

spreading in the majority of the world. Pakistan is highly endemic for hepatitis B & C, many studies were carried out in Pakistan throughout last decade thus treatment and prevention strategies were devised. On the whole incidence in Pakistani population ranges between 4-25%.[13,14] The dilemma of viral hepatitis in hospitalized patients is not effectively controlled even though the asymptomatic patients pose huge risk of spreading the infection to the other patients and medical workers.[15,16] In our study the higher incidence of hepatitis B & C were in the age group of 42-65 years which is equivalent to the study of talpur et al[17] and Zahid et al.[18]

Among 252 affected patients 192 (76.2%) were male and 60 (23.8%) were female. The results are also comparable with other studies showing higher prevalence among the male than female.[19-21]

World Health Organization regards hepatitis C an epidemic because a patient living with hepatitis C can remain infected for decades before being discovered. Hepatitis C virus infection is endemic in certain parts of the world from 0.4% in general population of Fukuoka Japan to 2.4% in Turkey[22] and 14.4% Southern Italy.[23]

Hepatitis B was found in 1.08% patients in our study. In Japan prevalence is 0.8%,[24] in Saudi Arabia 1.5%,[25] Vietnam 3.1%,[26] China 4.6%, Indonesia 5%, Korea 7.3%, Thailand >8%, Philppines 5-16% and Taiwan >10%.[24]

In our study the hepatitis B & C present in 17.1% cases with patients having HCV as 16.03% and HBV in 1.08% cases.

The results of our study are comparable to studies done in different cities of Pakistan Karachi HBV 6.5% and HCV 11.3%,[27] Rawalpindi HBV 2.8%, and HCV 7.5%,[28] Jacoabad HBV 9.33% and HCV 14%,[29] Rahimyar Khan 16.78% HCV patients.[30] These results are comparable to our study especially results of smaller cities.

Nearly 90% patients gave history of frequent use of I.V and I.M medication at G.P clinics, same were observed in the studies of Faridullah[31] and Aslam.[32] They have noted history of parenteral therapy in 96% patients positive for HBV and 95.4% patients positive for HCV.

In our study the predisposing factor of hepatitis B & C were previous history of surgery in 91 (36.1%) patients, blood transfusion in 49 (19.4%) patients, 14 (5.5%) patients had a history of road traffic accidents. A visit to barber for shaving and hair cut was found in 139 (72.3%) patients. Ashraf et al reported 91.67% patients with history of injections, blood transfusion in 47.38% patients, history of previous surgery in 37.08% patients, history of dental procedure in 44.29% and shaving by barber in 84% patients.[33] Though frequent use of injectables remained the major factor in Ashraf et al study which is similar to our study but percentage of patients is higher in each risk group than our study population.

CONCLUSION

The high prevalence i.e. 17.11% of hepatitis B and C in urological patient suggests that preoperative screening of all patients for hepatitis B & C should be made mandatory. This is also alarming for health care providers who are at high risk of transmission of this disease. Public awareness regarding hazards and common modes of disease transmission should be transmitted through print and electronic media and public awareness programs.

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