Original Article

Viral Hepatitis

Prevalence of Viral Hepatitis in Patients attending Medical Camp

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ABSTRACT

Objective: Objective of this study was to check prevalence of Viral Hepatitis in Patients attending Medical Camp

Study Design: Cross sectional study

Place and Duration of Study: This study was conducted in free Medical Camp of Shaheed Mohtarma Benazir Bhutto Medical University Larkana from 01.07.2011 to 31.12.2011.

Materials and Methods: An advertisement was given one week prior via media for awareness of people. The camp was organized by the faculty of Medical unit III on 1st July 2011. This camp, apart from necessary medicines, equipped with diagnostic facilities to diagnose hepatitis B & C viruses. Patients willing to participate in this study were enrolled; patients with known hepatitis B & C were excluded. ELISA technique was used to diagnose. This study was approved by Ethical committee of Shaheed Mohtrama Benazir Bhutto Medical University. SPSS version 19 was used for data analysis.

Results: Total of 400 peoples were seen at the camp, 96 of them were already known cases of hepatitis B and C and were excluded from analysis. Of 304 patients 246 were males and 154 were females. From 304 patients 32 (10.5%) patients had hepatitis C and 16 (5.3%) had hepatitis B and rest were seronegative. The frequency of HCV and HBV was common in patients with age between 20 to 40 years.

Conclusions: This was a small effort to increase awareness in local population regarding the course of viral hepatitis. We also collected data regarding present prevalence of chronic viral hepatitis in rural areas of interior Sindh. Much more is to be done to control this misery of our community.

Key Words: Viral Hepatitis, Patients, Medical Camp

INTRODUCTION

Hepatitis B virus (HBV) and hepatitis C virus (HCV) are among the principal causes of severe liver disease, including hepatocellular carcinoma and cirrhosis-related end-stage liver disease.

The World Health Organization (WHO) estimates that there are 350 million people with chronic HBV infection and 170 million people with chronic HCV infection worldwide.[1,2]Hepatitis B is estimated to result in 563 000 deaths and hepatitis C in 366 000 deaths annually.[3] Given its large population (165 million) and intermediate to high rates of infection,[1,2]

Pakistan is among the worst afflicted nations. Pakistan has one of the world's highest fertility rates, exceeding four children per woman.[4] It is approximately 800 000 sq km area slightly less than twice the size of the state of California in the USA and Pakistan is larger than either Turkey or Chile.[4-5] Pakistan is divided into five provinces, Punjab, Sindh, Northwest Frontier Province (NWFP), Balochistan, and gilgit baltistan as well as federally administered areas including the capital (Islamabad), Federally Administered Tribal Areas (FATAs), and the western third of Jammu and Kashmir.[6-7] Considering Pakistan's size and large, growing population, there is a surprising dearth of information about hepatitis prevalence, although more is known about its risk factors. We prospectively conducted this study to know the prevalence of hepatitis.

MATERIALS AND METHODS

This cross sectional study was conducted in free medical camp of Shaheed Mohtarma Benazir Bhutto Medical University Larkana. Chandka Medical College was gifted by Praiseworthy Ex-Prime Minister of Pakistan Shaheed Zulfiqar Ali Bhutto. His dream was not only to make this institute the premier institute of Pakistan but to ultimately expand it to the level of a University, which was fulfilled in 2008.

An advertisement was given one week prior via media for awareness of people. The camp was organized by the faculty of Medical unit III on 1st July 2011. This camp, apart from necessary medicines, equipped with diagnostic facilities to diagnosis hepatitis B & C viruses.

Patients willing to participate in this study were enrolled; patients with known hepatitis B & C were excluded. Two ml blood was collected for detection of HBV and HCV. ELISA technique was used to diagnosis.

Ethics: This cross sectional study was approved from ethical committee of Shaheed Mohtarma Benazir Bhutto medical university Larkana,

Statistics: SPSS version 19 was used for data analysis. Frequency and percentages were reported for

categorical variables and mean and SD was reported for continuous variables.

RESULTS

Total of 400 peoples were seen at the camp, 96 of them were already known cases of hepatitis B and C and were excluded from analysis. Of 304 patients 87 (28.6%) were <20 years of age, 76 (25%) were 20-40 years of age, 117 (38.5%) were 40-60 years of age and 24 (8%) were >60 years of age (Figure 1).Overall 246 (61%) were male and 154 (39%) were female (Figure 2).

Out of 304, 32 (10.5%) patients had hepatitis C and 16 (5.3%) had hepatitis B and rest were seronegative (Figure 3).The frequency of HCV and HBV was common in patients with age between 20 to 40 years of age. Of 32 HCV cases patients, 20 (62.5%) were male and 12 (37.5%) were female, and of 16HBV cases 11 (68.7%) were male and 5 (31.2%) were female.

Table No.1: Stratification of Hepatitis based on age:

Hepatitis	< 20 years n=84	20-40 years n=76	40-60 years n=117	>60 years n=24
Yes	11 (13.09)	16 (21.05)	18 (15.38)	3 (12.5)
No	73 (86.90)	60 (78.94)	99 (84.61)	21 (77.5)

Table No.2: Baseline characteristics on participant

Characteristics	Hepatitis positive (n=48)	Hepatitis negative (n=256)	P-value
Mean Age	36±12	38±10	0.12
Male	31 (64.5)	215 (83.9)	0.004
Female	17 (35.4)	41 (16.0)	

Table No.3: Comparison of baseline characteristics of patients with HBV and HCV

Characteristics	HBV positive (n=16)	HCV positive (n=32)	P-value
Mean Age	34±13	36±13	0.24
Male	11 (68.7)	20 (62.5)	0.46
Female	5 (31.2)	12 (37.5)	

DISCUSSION

We observed highly variable seroprevalence estimates for both HBV and HCV. Unlike highly contagious diseases like measles that have a more predictable seroprevalence, blood-borne illnesses like hepatitis are transmitted sporadically or in micro-epidemics. These micro-epidemicsmay account for the wide variations in prevalence seen within a nation, a province, or even acommunity. Identification of the causes of these micro-epidemics provides an opportunity to limit the transmission of these diseases.[8-9] However, methodological differences in sampling strategies may also contribute to differences in seroprevalence within similar regions or populations. For example, one study of the general population did a staged cluster random sampling of the entire city's study population,[10] while another study of putative 'random samples' in a different city recruited persons with the aid of newspaper advertisements[11] that may have distorted the risk profile of respondents compared to the former study.`

The published literature regarding risk factors for HBV and HCV transmission in Pakistan is informative. WHO estimates that in Southeast Asia, an average person receives four injections per year, most of which are unnecessary and up to 75% are unsafe or reused.[12] Unnecessary injections are given commonly in Pakistan out of the prevalent view in the population that injected medicines are more effective than oral medications.[13-14] Intramuscular injections are frequently used for fever, fatigue, and general ailments, while intravenous drips are used for the treatment of weakness, fever, and 'severe' diseases.[15-16] Some people use IV drips to cool down during the summer (HQ, personal observation). These injections are given by physicians at clinics, by informal, untrained providers, by health workers who do home visits, and by pharmacists both trained and informal.[17-18] The healthcare providers mayeven encourage the injection-seeking behavior because patients are more willing to pay an additional physician's fee for injections but will not pay this added fee for oral medications.[18] Syringes are reused and sterility of injections is often not maintained due to financial limitations and lack of risk awareness among the healthcare providers and the population ingeneral.[17]These injections appear to be the single most significant factor in the spread ofHBV and HCV in the general population of Pakistan.

There are about 1.5 million units of blood products transfused each year in Pakistan.[19] Data on the safety of this transfusion process are scanty – perhaps due to the lack of a system of reporting infectious or non-infectious adverse events.[20] The transfusion network is poor lyorganized and likely contributes significantly in the transmission of serious infectious diseases. In fact, the leading hepatologist and public health scientist of Pakistan and editor of the country's premier medical journal for 30 years died in 2004 of cerebral malaria that she acquired through a blood transfusion given during bilateral knee replacement surgery. Her case dramatized the need for regulation and control of the transfusion practices in Pakistan. Under the umbrella of National Blood Policy, comprehensive measures are needed in both public andprivate sectors of all four provinces. These measures should include a situational analysis and a realistic assessment of the blood requirement in the area, followed by recruitment and maintenance of voluntary, non-remunerated blood donors and standardization and regulation of appropriate blood screening procedures. IDUs are numerous in Pakistani society and though they have a disproportionately high burden of health problems, they

have been inadequately studied. Limited data suggest the likely hood that the prevalence of hepatitis is very high in this community. Urgent efforts need to be made to better study this population and to apply globally effective programs like needle exchange and condom distribution together with appropriate counseling and therapy for their drug addiction. Unless serious infections are controlled in IDUs, they will continue to be the source of HBV, HCV, and now HIV to the general population in Pakistan.

CONCLUSION

This was a small effort to increase awareness in local population regarding the course of viral hepatitis. We also collected data regarding present prevalence of chronic viral hepatitis in rural areas of interior Sindh. Much more is to be done to control this misery of our community, but the main hurdle in achieving this goal is lack of financial and institutional supports.

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