ORIGINAL ARTICLE

Prevalence of Hepatitis B & C in Patients Visiting a Free Eye Camp for Cataract Surgery at Jarranwala District Faisalabad

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ABSTRACT

Objective: To find out the prevalence of Hepatitis B & C in patients visiting a free eye camp for cataract surgery as an occupational hazard to healthcare providers.
Study design: Cross sectional descriptive study
Place and duration: This study was conducted in a free eye camp at Hameeda Yousuf Welfare Hospital Jarranwala; district Faisalabad from 8th to 10thMarch 2013
Methodology: All patients selected for cataract surgery were included in the study. These patients were screened for Hepatitis B surface antigen and antibody of Hepatitis C by Kit Method. All the details were recorded on a structured proforma. Data was analyzed for mean age, gender distribution and frequencies of Hepatitis B & C.
Results: Three hundred and seventy nine patients selected for cataract surgery were screened for Hepatitis B & C. Mean age of patients was 58 years, 185(48.81 %) were found positive for Hepatitis B & C. Hepatitis B accounted for 6(1.59%) cases where as Hepatitis C for 179(47.60%) cases.
Keywords: Hepatitis B, Hepatitis C, Cataract Surgery

INTRODUCTION

Viral Hepatitis is a global public health problem. It is estimated that more than two billion people are affected with HBV worldwide. In the Middle East and Indian subcontinent, an estimated 2–5% of the general population is suffering from HBV[1]. HCV is another viral infection of liver associated with greater mortality and morbidity. According to the recent estimates of World Health Organization (WHO) every year, 3–4 million people are infected with the hepatitis C virus. About 150 million people are chronically infected and more than 350 000 people die from hepatitis C-related liver diseases every year. Countries with high rates of chronic infection are Egypt (15%), Pakistan (4.8%) and China (3.2%)[2,3]. Although ten million people are infected with HCV in Pakistan, a large population is unaware about the epidemiology, risk factors and mode of transmission of the disease[4]. The prevalence of HBV and HCV is increasing day by day in our country[5]. As majority of the patients infected with HBV and HCV are not symptomatic, they pose a serious threat to the health care professionals and other patients sharing the same instruments[6,7].

Free eye camps for the general population are a regular activity in Pakistan. Different organizations are managing these camps in different areas where thousands of patients are operated for cataract extraction with IOL implantations. Obviously these services are not like the established hospitals resulting in a high occupational risk of acquiring HBV & HCV infection from the patients[8]. In the United States around 500,00 percutaneous blood exposures occur among hospital based health care workers annually[5]. Due to this important reason the study was conducted to find out the prevalence of HBV and HCV in patients selected for cataract surgery in a free eye camp.

MATERIAL & METHODS

This descriptive cross sectional study was conducted in a free eye camp at Hameeda Yousuf Welfare Hospital Jarranwala. All the 379 patients selected for Cataract surgery were screened for HBV antigen and HCV antibodies. Screening kits (ICT:ACON®, ACON Laboratories Inc., San Diego,CA92121,USA) were used. Three drops of separated serum were taken by the dropper provided in the kit and placed on the kit device. The sample showing two bands against C (control sample) and T (test sample) were considered positive for the hepatitis B surface antigen. For HCV screening a drop of serum was placed in the sample space in the kit device and three drops of buffer, provided with the kit, were added to it. The samples showing two bands against both C and T were considered positive for anti-HCV antibody. The data was recorded on a proforma and later on analyzed by statistical tools.

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RESULTS

In this study 379 patients operated for cataract with Intra ocular lens implantation were screened for Anti HCV and HBs Ag. Out of these 379 patients 179 (47.22%) were male whereas 200 (52.77%) were females. Mean age of these patients was 58 years and the age ranges between 16 to 100 years. 185 patients were found positive either for HBV or HCV. Among these 185 positive patients 6 were positive for HBV ((1.59%)) and 179 positive for HCV(47.60%). 3 out of 6 HBV positive patients were in younger age group that is 16-55 while 44 patients out of 179 positive HCV patients were in this age group detailed sex distribution of hepatitis positive patients are described in table II and III.

Table I: Age and sex distribution of study subjects

Age groups (Yrs)	Male	Female	Total
16-35	2(0.53%)	3(0.79%)	5(1.32%)
36-55	39(10.37%)	36(9.57%)	75(19.94%)
56-75	112(29.78%)	114(30.31%)	221(58.77%)
76-100	35(9.30%)	43(11.43%)	78(20.74%)

Table II: Age and sex distribution of hepatitis b positive patients

HBV status (n=378)	16-55 Years	56- 75 Years	76-100 Years	Total
Positive (M)	1(0.26%)	2(0.53%)	0	3(0.79%)
Negative(M)	41(10.90%)	107(28.45%)	28(7.44%)	176(46.80%)
Positive (F)	2(0.53%)	1(0.26%)	0	3(0.79%)
Negative(F)	39(10.37%)	120(31.91%)	37(9.84%)	196(52.12%)

Table III: Age and sex distribution of hepatitis c positive patients

HBV status (n=378)	16-55 Years	56- 75 Years	76-100 Years	Total
Positive (M)	24(6.38%)	50(13.29%)	14(3.72%)	88(23.40%)
Negative(M)	19(5.05%)	59(15.69%)	13(4.45%)	91(24.20%)
Positive (F)	20(5.31%)	56(14.89%)	15(3.98%)	91(24.20%)
Negative(F)	24(6.38%	58(15.42%)	24(6.38%)	106(28.19%)

DISCUSSIONS

Our target population revolves around older age groups as cataract is a geriatric phenomenon. But the prevalence of Hepatitis B and C in these older age groups is significant in terms that the epidemic in our society is much older than what we proposed it to be. The high prevalence of HBs Ag and anti- HCV in patients presenting for surgery make the doctors in surgical practice at high risk of acquiring blood borne diseases from the patients on whom they operate[18,19].

The eye camps arranged in different communities do not have standard operative procedures. So such a high prevalence of Hepatitis C poses an occupational hazard for the health care professionals. The HBV positivity rate is different from other studies[9,10,11,12,13]. The quoted studies reflect a high positivity rate for HBV showing results of Hepatitis B vaccination program in different age groups including EPI.

In a similar study conducted in Dera Ismaeel Khan, both hepatitis B and C are highly prevalent in the age group between 55–64years comparable to our study[5]. The results are showing that the rate of HCV infection is higher than HBV in this study, which are contradictory to other studies carried out at local[14,15] and International level[16,17].

CONCLUSIONS

Hepatitis B & C are very serious public health problems. The High Prevalence especially of HCV as reported in this study suggests to adopt preventive measures on a larger scale. Although free eye camps are an excellent activity providing the restoration of sight to the needy communities but at the same time proper guide lines for the control of infection must be adopted. The government should also develop and implement legal protocols for these camps. This is not an issue for the general community but it is also a potential threat for the health care professionals.

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