Original Article

Prevalence of Hepatitis B and C in the Patients Undergoing Cataract Surgery at Eye Camps

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Purpose: To assess the prevalence of hepatitis B and hepatitis C viral infection in the patients undergoing elective eye surgery.

Material and Method: All patients who were selected for cataract surgery were included in the study. After history, examination and Investigations patients were screened for Hepatitis B and C virus antibody with chromatography (Kit) method. All the details were recorded on preformed proforma and data was compiled and analyzed for age and sex mean values. Pearson's correlation coefficients were calculated to assess the prevalence of Hepatitis B and C in general population undergoing cataract surgery.

Results: Four hundred and thirty seven patients were operated on for cataract surgery at eye camps. Mean age of patients was 60 years, 191 (43.70%) were male and 246 (56.29%) female. Out of them 108 patients were found to be positive for Hepatitis B and C (24.7%,) antibody. Hepatitis B accounted for 19 cases (4.34%) and Hepatitis C for 89 cases (20.36%).

Conclusion: The prevalence rate of Hepatitis B and C antibody in our population is alarming, not only for the general population but also for the general health care personals. Steps need to be taken to abort this preventable disease.

Viral hepatitis is a major health problem effecting approximately two billion people worldwide.

The hepatitis B virus (HBV) has infected more than two billion people and 350 million people are carrier of the virus, each year approximately one million people die from hepatitis B, makes it one of the major causes of morbidity and mortality[1].

Hepatitis C virus (HCV) infection is increasing even more rapidly and has occurred in endemic situation in most parts of the world, with a prevalence of about 3% world wide[2]. Hepatitis C virus infection progresses slowly and carries high risk of chronic liver disease (70-80%) and later liver malignancy[3].

The prevalence of Hepatitis B and C is also increasing in our country[4].

Doctors, especially surgeons, and the paramedical staff have a high occupational risk of acquiring HBV and HCV infection from the infected patients. Approximately 500,000 percutaneous blood exposures occur among hospital based health care workers in the United States each year. Surgeons and operation room personnel have the high risk of occupational exposure[5]. With such a high figure, rate of transmission in the highly developed country like USA little is known about the rate of risk in our part of the world. Due to this concern, this study was carried out to evaluate the presence of hepatitis B and C infection in patients admitted for surgery at eye camps.

MATERIALS AND METHODS

The observational study was carried out at the eye camps of Baloo-Ja-Kuba and Kumb Nawabshah in the

district Shaheed Benazeerabad and Khairpur organized by the Department of Ophthalmology PMC Nawabshah from December 2008 to Feb 2010. During this period 437 patients undergoing eye surgery were evaluated for hepatitis B and C antibody. After history, examination and investigations patients were screened for HBV and HCV with chromatography (kit) method. The details were recorded on proforma and data was compiled and analyzed for age and sex mean values. Special emphasis was put on age, sex, occupation. All patients of either sex who were operated as elective cases were included in the study.

RESULTS

In this study 437 patients who underwent eye surgery at eye camps were screened for HBV and HCV. There `were 191 (43.70%) male and 246 (56.29%) female patients. Mean age of these patients was 60 years. The range of age was 40 to 80 years (Table 1). All the patients belonged to rural areas. Total 108 patients were found positive for hepatitis B and C. Amongst them 19 were positive for hepatitis B (4.34%) and 89 for hepatitis C (20.36%) (Table 2). Hepatitis B was found in 11 (57.89%) male and 08 (42.10%) female patients. Hepatitis C was predominant in females 57 (64.04%) while it was found in 32 (35.94%) male patients. Both hepatitis B and C were found in 108 (24.7.%) patients. Amongst them 43 (39.81%) were male and 65 (60.18%) were females (Table 2).

DISCUSSION

The incidence of hepatitis B and C has achieved endemic situation in many countries of the world, especially in underdeveloped countries. Pakistan is no exception as the disease has been recorded to an alarming level in most parts of the country especially in the rural areas, as can be seen from Tables 1 and 2. In Pakistan a large proportion of the population is already infected with hepatitis B and C with the prevalence of 10% for hepatitis B and 4-7% for hepatitis C. In certain parts especially in the rural areas the percentage of infected individuals is significantly higher than the above quoted figures[6,7]. The transmission of virus is through the blood and secretions. Most common source of spread of these infections is through the use of unsterilized syringes or instruments especially dental instruments or unchecked blood transfusion. Other factors involved in the spread of infection are persons who have their armpits or face shaved by street barber or those involved in sexual abuse[8,9,10].

In this study 4.34% patients had hepatitis B and 20.36% patients had hepatitis C. According to Cloud Hay and his colleagues[11] the prevalence of hepatitis C was 11.26% which is lower to our study. Ali and his associates[12] reported 5.1% patients suffering from hepatitis C in their study at Gadap area. The carrier state of HBs Ag is around 10% in different segments of Pakistani people[7] which is higher than our study. In a study by Sheikh and his colleagues[13] carrier state of HBs Ag was found to be 2.8 %. Weis and his co-workers[14] reported 35% cases of HCV and 4% cases of HBV in their study of patients operated at John Hopkins.

Table 1: Patients data

Number of Patients	437
Age Group	40- 80 years
Mean Age	60 years.
Male	191 (43.70%)
Female	246 (56.29%)

Table 2: HBV and HCV Positive

Total Patients Screened	437
Patients positive for both Hepatitis B and C.	108(24.7)
HBV Positive	19 (4.34%)
HCV Positive	89 (20.36%)
Male	43 (39.81%)
Female	65 (60.19%)

CONCLUSION

With such a rate of HBV and HCV as reported in our study suggests screening of all the patients who are selected for surgery. At the same time the print and electronic media is required to making the public aware about the methods of the spread of disease to prevent further transmission. It is the prime duty of doctors and paramedical staff to counsel the patients and use ethical practice.

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REFERENCE

1. **Kane M.** Global program for control of hepatitis B infection, vaccine. 1995; 47-9.
2. **Dubois F, Desenclos JC, Merriote N.** Gondean A, and the collaboration study group. Hepatitis C in a French population – based surgery, 1994. Sero prevalence surgery of viremia, genotype distribution and prognostic risk factors. Hepatol. 1997; 25; 1490-6.
3. **Supsa VE, Hadjipashali E, Hatzakis A.** Prevalence of risk factors and evaluation of a screening strategy for hepatitis B and C viral infections in healthy company employees. Euro J Epidemiol. 2001; 17: 721.
4. **Khokhar N, Gill ML, Malik GL.** General seroprevance of hepatitis B and C infection in the population. J College of Physicians and Surgeons Pak. 2004; 14: 534.
5. **Bell DM.** Occupational risk of HBV, HCV and HIV infection in health care workers. An overview. J Med. 1997; 102: 9-15.
6. **Malik IA, Kaleem SA, Tarique WUZ.** Hepatitis C infection in prospective, where do we stand? J College of Physicians and Surgeons Pak. 1999; 9: 234-7.
7. **Yousaf A, Mohammad A, Ishaque M, et al.** Can we afford to operate on patients without HBs Ag screening? J College of Physicians and Surgeons Pak. 1996; 9: 98-100.
8. **Luby S.** The relationship between therapeutic injections and high prevalence of hepatitis C infection in Hafizabad. Pakistan. Epidemiol Infection. 1997; 119: 349-56.
9. **Khuwaja AK, Qureshi R, Fatimi Z.** Knowledge and attitude about hepatitis B and C among patients attending family medicine clinics in Karachi. Eastern Mediterranean Health J. 2002; 8: 1-6.
10. **Thornburn D, Roy K, Camerson SO.** Risk of hepatitis C virus transmission from patient to surgeons. Gut 2003; 52; 1333-8.
11. **Chaudhary IA, Khan SA, Samiullah.** Should we do the hepatitis B and C screening on each patient before surgery. Pak J Med Sci. 2005; 21; 278-80.
12. **Ali SA, Sheikh FA, Ahmed K.** Prevalence of hepatitis B and C virus in surgical patients. Pak J Surgery. 2007; 23: 109-12.
13. **Shaikh MH, Shams K.** Prevalence of HBV in health care personnel and methods of control. J College of Physicians and Surgeons Pak. 1995; 5: 19-21.
14. **Makary ESW, Weis MA.** Prevalence of blood borne pathogens in an urban university based general surgical practice. Ann Surg. 2005; 24: 803-9.