

Prevalence of Hepatitis B and C among Cataract Surgery Patients in Avicenna Hospital Lahore

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ABSTRACT

Aim: To determine the prevalence of Hepatitis B and C viral infection in the admitted individuals undergoing cataract extraction in Avicenna Hospital Lahore.

Study Design: Cross sectional study.

Duration: This study was carried out over one year duration from June 2017 to June 2018.

Method: After informed consent the admitted patients were screened for HBsAg and Anti HCV. Those found positive on screening test were confirmed by Enzyme Linked Immunosorbant Assay (ELISA). The information of the patients was entered in a proforma for analysis and the results were recorded.

Results: A total of 200 patients were screened in the one year study period. Mean age of the patients was 61 years. Percentage of male and female patients was 56% and 44% respectively. Out of 200 patients 27(13.5%) were positive for HBsAg, 38(19%) were positive for Anti HCV and 8(4%) were simultaneously positive for both. Thus, 61 out of 200 (30.5%) patients were positive for either disease.

Conclusion: It is of utmost importance to screen the preoperative patients undergoing cataract extraction for blood borne viral infections in order to minimize the risk of transmission to the health care personnel.

Keywords: Hepatitis B, Hepatitis C, Cataract Surgery.

INTRODUCTION

Hepatitis is a serious health issue in Pakistan. Pakistan has the world's second highest prevalence of hepatitis C, second only to Egypt.¹ A survey done on 2007 found that close to 7% of people in the province of Punjab had hepatitis C, while around 5% of people were infected in the entire country¹. The incidence of hepatitis B is very high all over the world. Almost 3 billion people are carriers, 2 billion people are affected at some stage of their lives and one million have died due to the progression towards end stage liver disease and hepatocellular carcinoma². Asia has the highest rate of newly diagnosed cases followed by Africa and Middle East³. Documented prevalence of Hepatitis C by WHO is around 3% of the global population which is almost 170 million in numbers⁴.

The hepatitis B virus (HBV) is transmitted between people through contact with the blood or other body fluids, including semen and vaginal fluid of an infected person. The hepatitis C virus (HCV) is spread through direct contact with infected blood. At times individuals contract hepatitis with limited or no symptoms but often it leads to jaundice, anorexia and diarrhea. The swelling and inflammation if allowed to progress may lead to end stage liver disease and cancer.

Avicenna Hospital is located in the outskirts of Lahore receiving major patient turnover from nearby villages including Hair, Lidher, Karbath, Lehna singh wala Bedian and Dera chahal. Patients being admitted for cataract extraction undergo strict screening for Hepatitis B and C. Those found positive are referred to free hepatitis clinic

within the hospital and keeping in view of the high prevalence of hepatitis in this area government of Pakistan has established Pakistan Kidney and Liver Institute and research center(PKLI) for the evaluation and treatment of such patients very close to Avicenna hospital. Current research aims to discover the prevalence of Hepatitis B and C in patients being operated for cataract in order to minimize the risk of transmission and proper referral for further management.

MATERIALS AND METHODS

This cross sectional study was carried out in eye department of Avicenna Medical College and Hospital Lahore from June 2017 to June 2018. A total of 200 patients undergoing eye surgery, who were unaware of hepatitis infection undergoing cataract extraction were included in the study. An ethical approval was taken by the institutional review board and informed consent from the patients. Screening for Hepatitis B and C was initially carried out by rapid chromatography immunoassay for qualitative detection. Positive results were confirmed by ELISA and entered into a special proforma which were later analyzed by statistical methods. Patients were then referred to the Hepatitis clinic for complete evaluation, treatment and follow up. Later the patients were also referred to PKLI as needed.

RESULTS

A total of 200 patients were screened. Mean age of the patients was 61 years. Out of 200 patients, 112(56%) were male and 88(44%) were female. Out of 200 patients 27(13.5%) were positive for HBsAg, 38(19%) were positive

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for Anti HCV and 8(4%) were simultaneously positive for both. Thus, 61 out of 200 (30.5%) patients were positive for either disease. Following gender distribution of HBsAg and anti-HCV was observed during analysis.

The incidence of hepatitis B (15.1%) and C (21.4%) was evidently high in males as compared to females 11.3% and 15.9% respectively. Also a high percentage of males(5.35%) were seen to be simultaneously positive for both hepatitis B and C as compared to females (2.27%).

Table: Gender distribution of Hepatitis B and C

	Male	Female
Total	112	88
HBsAg +	17(15.1%)	10(11.3%)
Anti-HCV+	24(21.4%)	14(15.9%)
Both B & C	6(5.35%)	2(2.27%)

DISCUSSION

The incidence of Hepatitis B and C infection is increasing in Pakistan at an alarming rate. Leading cause in this regard is lack of awareness in general population further aggravated by unsafe medical practice in rural health care centers⁵. We have done a cross gender comparison in our study in order to determine the divergence in the prevalence of hepatitis B and C. Our study shows a high prevalence among males for both hepatitis B(15.1%) and C(21.4%). Similar trend was observed in another study by Riaz et al⁵. However our results regarding hepatitis C are much higher 21.4% and 15.9% in males and females respectively as compared to 12.6% and 11.2% Riaz et al⁵. Overall 61 out of 200 (30.5%) were infected with either disease. This result is almost two times more than the previously documented results^{6,7,8}.

In another study done by Iftikhar et al the total prevalence of Hepatitis B and C in males was higher than females among preoperative cataract patients of D I Khan⁹. However, some studies have shown higher prevalence of Hepatitis B and C in females (60.18%) than in males (39.81%)¹⁰.

CONCLUSION

Our study shows that there is a high prevalence of Hepatitis B and C in patients undergoing cataract extraction. A vast reduction in the spread of these diseases can be made by extricating surgical instruments and formulating strict protocols of screening. We recommend proper awareness programs to be conducted for the

education of general public in order to decrease the risk of transmission of such infections. Also it is mandatory to refer all infected individuals to the relevant clinics in order to improve their quality of life.

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