



HEPATITIS B & C; FREQUENCY OF VIRAL INFECTION IN SURGICAL PATIENTS

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INTRODUCTION

In 1963 first was identified hepatitis B and hepatitis C was in 1988. Both the viruses are main agents to develop the chronic liver diseases (CLD), cirrhotic condition and hepatocellular carcinoma (HCC).¹ It has been reported that approximately 350 million people are infected with HBV and 170 million with HCV worldwide.²

Hepatitis B and C is a major cause of illness, death and serious public health throughout the world and in Pakistan.³ Hepatitis viral is a serious health problem that affects nearly two billion people around the world. Throughout the world the hepatitis B infected are around two thousand; including 350 million have chronic liver disease. Infection with hepatitis C virus appears to be local in many places in the world, with a 3% worldwide.⁴ More than a third of the population in the region of Southeast Asia have been

ABSTRACT... Objectives: To determine the frequency of hepatitis b & c viral infection in surgical patients. **Study Design:** Descriptive case series. **Place and Duration of Study:** This study was conducted at surgical department of multiple hospitals and compares the results, JPMC Karachi, Civil Hospital Naushahro Feroze and Jamshoro, Pakistan from August 2014 to December 2015. **Methodology:** All 2645 patients were admitted for emergency and elective surgery. All patients taken detail history regarding demographic parameter and risk factors like previous surgery, blood transfusion, barbar, Road Traffic accident, haemodialysis, Tattoos/body piercing, injecting drug user, family history of hepatitis, previous history of jaundice and Hospitalization. Hospital laboratory was used for screened HBsAg and Anti HCV using immunochromatography (ICT method). Patients excluded who were those did not need the surgery or known case of HBsAg and Anti HCV. Data collected was entered into and analyzed by using statistical package for the social science – 20. **Results:** Out of 2645 patients, male to female ratio were 1.9:1. The mean age was 40.2+6.12years (20 to 60 years). Out of 2645 patients, Anti HCV was positive in 288(10.88%) cases followed by HBsAg was in 152(5.74%) cases. While both positive in 36 (1.36%) cases. We observed Previous surgery was main risk factor in the reactive 156(32.77%) cases followed by Barbar, Blood transfusion were 74(15.54%) and 47(9.87%) respectively. **Conclusion:** We conclude that preoperatively screening of hepatitis B and C should be performed.

Key Words: HBsAg, Anti HCV, Risk factors, Prevalence, Screening

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infected with HBV and 80 million companies and approximately 0.2 million deaths a year.⁵ Pakistan faces a huge burden of these diseases. World dominate HBV and HCV community in Pakistan and 10% and 4-10% respectively. No practice to do serological detection system before surgery, which is one of the causes responsible for the increased transmission of diseases.⁶ Hepatitis is transmitted through contaminated blood, unsterilized injections and surgical instruments, drug abuse, dental surgery, shaving razors, sexual assault, toothbrushes and shaving by barbers.⁷ The number of patients with hepatitis B and C, received elective and emergency services has increased dramatically.

The aim of this study was to estimate the prevalence of Hepatitis B surface antigen (HBsAg) and anti-HCV antibodies among patients undergoing

different surgical procedures to various hospitals.

MATERIALS AND METHODS

This descriptive case series was conducted at surgical department of multiple hospitals and compares the results Civil Hospital Naushahro Feroze, Liaquat University Hospital Jamshoro and JPMC Karachi, August 2014 to December 2015. All 2645 patients were admitted for emergency and elective surgery. All patients taken detail history regarding demographic parameter and risk factors like previous surgery, blood transfusion, barbar, Road Traffic accident, haemodialysis, Tattoos/body piercing, injecting drug user, family history of hepatitis, previous history of jaundice and Hospitalization. Hospital laboratory was used for screened HBsAg and Anti HCV using immunochromatography (ICT method). Patients excluded who were those did not need the surgery or known case of HBsAg and Anti HCV.

RESULTS

Out of 2645 patients, 1733(65.51%) were male

and 912(34.48%) female, male to female ratio were 1.9:1. The mean age was 40.2+6.12years (20 to 60 years). Out of 2645 patients, Anti HCV was positive in 288(10.88%) cases followed by HBsAg was in 152(5.74%) cases. While both positive in 36 (1.36%) cases (Table-I). We observed Previous surgery was main risk factor in the reactive 156(32.77%)cases followed by Barbar , Blood transfusion were 74(15.54%) and 47(9.87%) respectively (Table-II).

Variable	No. Patients	Percentage
Gender		
Male	1733	65.51%
Female	912	34.48%
Age		
20-35 years	623	23.55%
36-50 years	1123	42.45%
51-60 years	899	33.98%
HBsAg and Anti HCV 476		
HbsAg	152	5.74%
Anti HCV	288	10.88%
HbsAg + Anti HCV	36	1.36%

Table-I. Demographic Variable N=2645

RISK FACTORS	No. Patients	HBsAg	Anti HCV	HBsAg + Anti HCV
Previous surgery	156(32.77%)	39	103	14
Blood transfusion	47(9.87%)	9	31	7
Barbar	74(15.54%)	17	55	2
Road Traffic accident	32(6.72%)	14	13	5
Haemodialysis	11(2.31%)	5	6	0
Tattoos/body piercing	12(2.52%)	11	1	0
Injecting drug user	21(4.41%)	6	15	0
Family history of hepatitis	37(7.77%)	16	18	3
Previous history of jaundice	32(6.72%)	15	17	0
Hospitalization	54(11.34%)	20	29	5
Total	476	152	288	36

Table-II. Risk factors for HBsAg / anti HCV in positive patients n=476

DISCUSSION

Viral hepatitis is common health problem around the world most third world countries including Pakistan today.⁸ Hepatitis B and C is spreading rapidly in much of the world. Pakistan local hepatitis B and C, many studies were conducted in Pakistan over the past decade, and therefore the treatment and prevention strategies have been developed. Incidence in Pakistan now days approximately ranges from 4-25%.⁹ Incidence of Hepatitis B & C were found many folds higher

in males as compared to females because male more involve outdoor activity lead to road traffic accident etc. In our study observed (65.51%) were male and 912(34.48%) female, male to female ratio were 1.9:1. However in the study of Emad-Aldin Ibrahim Osman reported almost same results 1939 (61.1%) were males and 1233 (38.9%) were females.¹⁰ In our study observed higher incidence of viral hepatitis were in 4th and 5thdecade with mean age was 40.2+6.12years (20 to 60 years). While study of Abdul Majid is

reported almost same result.²

According to WHO estimates, some 130 to 170 million are infected with HCV and more than 0.3 million died of liver disease due to hepatitis C each year. WHO estimated that about two million people are infected with HBV and more than 350 million have chronic hepatitis infection. HBV and HCV have a major infectious diseases in the world.^{11,12} The lack of information and health education and safe practices appear to be major risk of passing HBV and HCV in community. This is why health care units awareness mass must be made for both health care providers and the community to reduce the threat.^{11,12}

Viral hepatitis are highly endemic in Pakistan as compared to low prevalence in Europe.² In this study the prevalence rate 17.99%, showing that HCV10.88% is more prevalent than HBV5.74% and combine 1.36%, which is also reported in the study of Muhammad Rafique Memon which is 33 (3.61%) patients were found HBsAg positive and 117 (12.8%) were Anti-HCV positive, while 9 (0.98%) were positive for both during preoperative workup.¹³ A review of literature showed that most of the infected patients had positive risk factors i.e. history of injection drug abuse, blood transfusion and chronic hepatitis.^{7,9,11}

In our predisposing factors were observed previous surgery in 156(32.77%) cases followed by Barbar, Blood transfusion were 74(15.54%) and 47(9.87%) respectively. However, a study of Ashraf et al reported 91.67% of patients with a history of injections, blood transfusions in 47.38% of patients, surgery in the previous 37.08% of patients, dental history and procedure of 44.29% and shaving Barber in 84% of patients.¹⁴

CONCLUSION

We conclude that preoperatively screening of hepatitis B and C should be performed. HCV more prevalent than HBV are common infections in our setup. Public awareness of the dangers and the most common ways of transmitting the disease to be transmitted through the print and electronic media and public awareness programs.

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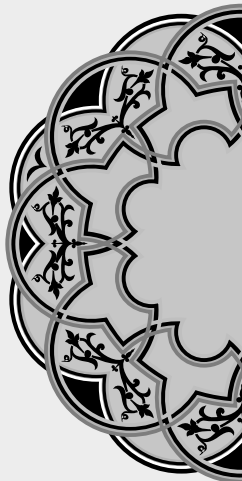
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PREVIOUS RELATED STUDY

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*“We know what we are,
but know not what we may be.”*

William Shakespeare

AUTHORSHIP AND CONTRIBUTION DECLARATION

Sr. #	Author-s Full Name	Contribution to the paper	Author=s Signature
1	Dr. M. Paryal Tagar	Conception and design, Statistical expertise, Critical revision of the article for important intellectual content	
2	Dr. Mujeeb Rehman Abbasi	Data Collection Drafting of the article	
3	Dr. M. Rafique Pathan	Statistical expertise	
4	Dr. Hafeezullah Shaikh		