

Analytical Assessment of Operative Complications in Hepatitis B and C Patients in E.N.T Practice

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Background: The aim of this study is to get an overview of patients presenting for surgery who are HBV or HCV positive on investigations without previous history of any symptoms.

Type of study: A cross-sectional observational study.

Patients and Methods: 100 consecutive patients admitted in ENT Department Unit 1, Mayo Hospital, Lahore from November 2008 to February 2009 were screened for Hepatitis B and C and were followed up for assessment of complications.

Results: 9 patients (9%) were screened HCV positive and (3%) were HBsAg positive. Out of these 5 patients (42%) showed complications, one with reactionary hemorrhage and four were declared unfit for general anesthesia. There was a high incidence of complications in patients with Hepatitis C but the results were not statistically significant ($p = 0.159$).

Conclusion: The results of this study show that complication rate of surgery is very high in Hepatitis C patients and all patients presenting in ENT should be screened for Hepatitis.

Key words: Anti HCV antibody, HbsAg, Surgical risks.

Introduction

Viral hepatitis is inflammation of the liver by specific viruses; commonly type A, B and C. Liver performs a vital function which includes converting harmful substances into harmless materials, production of albumin, fat and vitamins. When the liver is diseased these functions are disturbed, resulting in clinical manifestations of diseases.

The incidence of Hepatitis C and B in Pakistan has been shown to be (5.31%) and (2.56%) respectively in general population applying for jobs in foreign countries.² 6-10% cases of HBV and 50-70% of HCV infection can transform into chronic stage.³

The liver enzymes (AST, ALT), viral proteins (HCV-anti body) (HBsAg antigen) are tested to evaluate the patients with hepatitis. The degree of dysfunctions in a patient with HBV and HCV are difficult because the clinical features and laboratory tests only determine the severity of liver dysfunctions.⁴ Liver biopsy can determine the severity of liver disease, but it is not used a routine preoperative investigation for these patients because the risks cannot be performed in asymptomatic patients.⁶⁻⁹

Patients with HBV and HCV infection are frequently admitted for surgery so it is important to know if these patients are at high risk for operative complications. Because patients with HBV and HCV infection typically proceed to surgery without histological confirmation, there is a risk that a subset of these patients will be undiagnosed. Patients with chronic HBV and HCV infection even without cirrhosis may be at high risk of complications.¹⁰⁻¹⁴

The aim of this study is to get an overview of patients presenting for surgery who are HBV or HCV positive on investigations without previous history of any symptoms.

Material and Methods

This study is performed in the department of Otorhinolaryngology and Head and Neck Surgery Unit-I KEMU/ Mayo Hospital, Lahore. All patients who had surgical procedures performed at the E.N.T Department Unit-I, during period of four months (November 2008 – February 2009) with known HBV and HCV status detected on investigations without prior history of liver disease were included in the study.

All surgeries were performed in the Operation Theater of E.N.T. The HBV and HCV status was determined by the facility provided by CENUM Laboratory, located within the hospital premises, using a second or third generation Enzyme Linked Immunosorbent Assay (ELISA). Table 1 gives the categorical factors included in the analysis.

All complications were noted during surgery and after surgery during the in-patient stay, follow up post-operative complications were also noted that occurred within 30 days after surgery. Post-operative complications were identified, reviewed and entered into the data base. SPSS software was utilized for statistical analysis of results. Any complication or death was considered a post-operative complication in the current study. Operative complications were grouped into two major categories:

1. Systemic infection.
2. Postoperative bleeding requiring transfusion.

Table 1: Operative complications.

		Hepatitis			Total
		+		-	
		C	B		
Complications	+	5	0	0	5
	-	4	3	88	95
Total		9	3	88	100
		12			

P-value = 0.159

Results

During the 4-month study period, a total of 100 patients with complete information on age, sex, HBV and HCV status, type of anesthesia, and type of surgery were included in the study. In this cohort, 9 patients (9%) were screened HCV positive and (3%) were HBV positive (Table 1 and Chart 1). Out of these, 5 patients (42%) showed complications, one with reactionary hemorrhage and four were declared unfit for general anesthesia (Chart 2). Patients with HCV positive were shown to be at high risk of complications but was not statistically significant (p = 0.159).

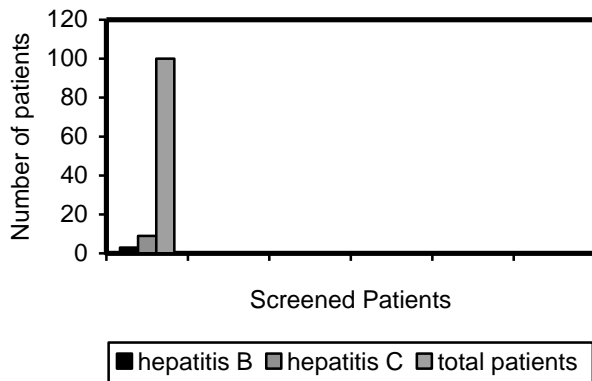


Chart 1: Graphical presentation of screening results.

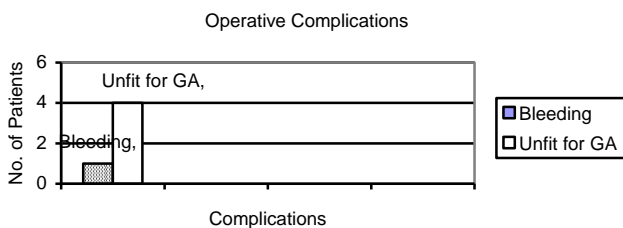


Chart 2: Graphical presentation of complications.

Discussion

It is seen that elective surgery is safe in asymptomatic patients. In sub-clinical cirrhosis, surgery is associated with

increased mortality. The complications in patients with liver disease are associated with the presence and severity of cirrhosis. Our study showed that all complications are in HCV positive patients and those detected positive for anti-HbsAg have no complications. Although we did not find anti-HCV status to be an independent risk factor for post-operative complications statistically (P = 0.159), special attention should be paid to patients with chronic liver disease. Similar results were shown by Cheung et al.⁴ As age and their liver disease progresses in the group of patients who are HCV positive, the long term effects of chronic liver disease could have a more profound effect on post operative complications.

Conclusion

We conclude that in our study, 12% patients turn out to be Hepatitis positive though they had no visible symptoms. Out of these 12 patients screened positive, 5 patients developed complications, which bring percentage to 42% in our study. This is a very high risk factor for operative surgery and thus emphasizes screening of masses at large for HBV and HCV.

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