

FREQUENCY OF HEPATITIS B & C IN GYNAECOLOGICAL PATIENTS

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ABSTRACT

Objective: To determine the hospital based prevalence of hepatitis B and C in elective surgical patients of Gynaecology and Obstetrics.

Design: A descriptive study.

Place and Duration: The study was conducted in Military Hospital Rawalpindi from 25 Aug 2004 to 19 Dec 2005.

Patients and Methods: A total of 1502 patients ranging from 20 to 70 years (Mean age 37 SD \pm 12), admitted for elective surgery in Gynaecology department, were screened for hepatitis B and C.

Results: Hepatitis C was positive in 156(10.39%) patients, while hepatitis B was positive in only 20 (1.33%) patients and both hepatitis B & C were positive in 5 (0.33%) patients. Overall hepatitis viruses were positive in 181(12.5%) patients.

Conclusion: Seroprevalence of hepatitis, especially hepatitis C is high in Gynaecology/obstetric patients. All patients undergoing surgical/invasive procedure should be screened for Hepatitis B & C.

Keywords: Screening, elective gynaecology/obstetric surgery, hepatitis B, hepatitis C

INTRODUCTION

Hepatitis B & C are global health issues, and rapidly emerging as major health problems in developing countries like Pakistan. These are the main causes of chronic liver disease (CLD), which is one of major causes of morbidity & mortality in Pakistan [1, 2].

The leading risk factor identified in hepatitis B & C is the use of contaminated syringes by quacks [3]. In Pakistan, the awareness campaign has gained momentum in last few years but still level of awareness is very low. The group of professionals like barbers who may be the major source of spread of hepatitis B & C; have very little knowledge about hepatitis viruses and the risk of their transmission as their practices like reuse of razors may spread these [4].

Anaesthetists, surgeons and paramedics are at high risk to the exposure to hepatitis causing viruses. At present the transmission of hepatitis C by blood transfusion has been reduced to approximately 1.5% [5]. Preventive measures are also required to stop the transmission of hepatitis B & C to healthcare workers and to other patients.

In most of our hospitals, preoperative assessment of patients does not include hepatitis screening as a routine practice. Most of the documented work, on seroprevalence of the disease in Pakistan is on blood donors [6], haemophiliac patients [7] and patients on haemodialysis [8], but very little has been documented on patients coming for elective surgeries. The objective of this study was to determine the prevalence of the hepatitis B & C in hospitalized elective Gynaecological/obstetrical patients, so that special precautions should be taken to check its transmission to the healthcare workers.

PATIENTS AND METHODS

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Received 18 February, 2006: Accepted 19 Aug 2008

This study was carried out at anaesthesia department of Military Hospital Rawalpindi, in patients coming for elective gynaecological /obstetrical surgery. Military Hospital Rawalpindi is a tertiary care teaching hospital providing services not only to families of military personals but also to civil population of the Northern Punjab and most of the areas of NWFP.

All female patients admitted for elective gynaecological / obstetrical surgery from 25th August 2004 to 19th of December 2005 were included. All patients were female ranging from 14 years to 70 years.

During the pre anaesthesia evaluation, informed consent was taken from all patients and they were screened for hepatitis B surface antigen (HBs Ag) and anti hepatitis C virus antibody with third generation Enzyme Linked Immunosorbent Assay (ELISA) technique; all these tests were done at the Armed Forces Institute of Pathology, Army Medical College laboratories and private laboratories of good repute.

RESULTS

A total number of 1502 patients (all female) were operated for elective gynaecological/obstetrical procedures during the study period. Mean age of the patients was 37 years (SD=12). Out of this hepatitis C was positive in 156 (10.39%) patients, while hepatitis B was positive in only 20(1.33%) patients and both hepatitis B&C were positive in 05(0.33%) patients. Overall tests for hepatitis viruses were positive in 181 (12.05%) patients (table-1). Description of know risk factors (table-2).

Table-1: Hepatitis sero-positive patients.

Total No. of Patients	Total No. of Hepatitis sero +ve Cases	Anti HCV +ve Cases	HBs Ag +ve Cases	Anti HCV & HBs Ag +ve Cases
1502	181 (12.05%)	156 (10.39%)	20 (1.33%)	05 (0.33%)

Table-2: Risk factors found in hepatitis B & C sero-positive cases.

Risk Factor	Anti HCV +ve	Hbs Ag +ve	Anti HCV & Hbs Ag +ve	Total No. of Cases
H/O previous surgery	59	09	05	73
H/O blood transfusion	17	02	00	19
Family H/O similar disease	06	00	00	06
Husbands' H/O similar disease	01	00	00	01
Total number of patients with risk factor	83/156 (53.21%)	11/20 (55%)	05/05 (100%)	99/181 54.69%)

DISCUSSION

Hepatitis C is endemic in most parts of the world; its prevalence ranges from 0.4% to 14.4% in different parts of the world [9]. Figures have even widely varied within the same country. Hepatitis B&C are highly endemic in developing countries. In Pakistan its incidence has increased within last decade. In our local literature the antibodies to hepatitis C virus was found to be 20 folds higher than in developed countries 10. In different areas of Pakistan the carrier rate of HBsAg is quoted to be around 10% [11,12] and seroprevalence of Anti HCV antibodies varies from 4% to 7% [13,14]. A study conducted at Karachi by Shirazi and her colleagues shows prevalence of hepatitis B 8.75% and hepatitis C 9.24% with overall prevalence of hepatitis viruses 18% [15], in elective surgical patients. Another study conducted at Karachi by Zubia and her colleagues shows prevalence of hepatitis B 6.5%, hepatitis C 11.3% and both hepatitis B&C 1.5% [16]. A study conducted by Chaudhary and his colleagues at Rawalpindi, shows the prevalence of hepatitis C 11.26% and hepatitis B 2.11% [17], in elective surgical patients.

In our study carried out at Military Hospital Rawalpindi in all elective gynaecological/obstetrical procedures, prevalence of hepatitis C is 10.39%, hepatitis B is 1.33% and of both hepatitis B&C in same patient is 0.33%, which is comparable with above study at Rawalpindi.

An epidemiological study from Japan shows the prevalence of HBV seropositivity 1.8% while HCV seropositivity 7.1% [18].

Another study from same country shows prevalence of HCV 16.9% [19]. A study from Turkey reported the prevalence of HBV 6.6% and HCV 2.4% [20]. In a very large study of United States conducted during 1988 through 1994 reported overall prevalence of HCV 1.8% [21]. The results of international studies are not comparable to our local results especially in case of HCV, reason being more awareness and better preventive measures, in those countries.

Due to awareness and vaccination, prevalence of hepatitis B is decreasing [11, 12, 15-17] and on the other hand the prevalence of hepatitis C is rising in Pakistan. In our study overall known risk factors involved in 53.21% positive cases of HCV and in other 46.79% no known risk factor was found; it clearly shows that there are also other means of transmission of this disease, which are yet to be explored.

The commonest mode of HBV and HCV transmission, as mentioned in literature is by the contaminated blood and its products, use of un-sterile syringes, sharp surgical instruments and needles. Doctors and health care professionals are at high risk of acquiring the disease. In operation theatre accidental cuts and pricks to the surgeons or their assistants and spillage of blood drops in to eyes are commonest modes of transmission to them and at the same time operation theatre may act as the source of spread of the disease to other patients if proper precautions are not taken.

RECOMMENDATIONS

On the basis of above facts we recommend following measures:

- Greater emphasis should be laid on public health education creating awareness about the risk factors of hepatitis B&C, its prevention and control to minimize its transmission.
- All patients should be routinely screened for hepatitis B&C prior to any surgical/invasive procedure.

- All anaesthetists, surgeons, theatre nurses, and all operation theatre staff should get vaccinated and their antibody status should be checked on regular basis.
- Maximum disposables including disposable drapes, disposable anaesthetic circuits etc should be used.
- All staff involved should take standard precautions and use barrier techniques while operating upon infected patients.
- Proper incinerators should be made and used material be destroyed properly.
- Room used for hepatitis positive cases should be sprayed and cleaned with anti viral chemicals after every patient.

CONCLUSION

Seroprevalence of hepatitis viruses, especially hepatitis C virus is high in gynaecological/obstetrical patients scheduled for surgery.

A protocol should be prepared for screening of all patients before any surgical/invasive procedure. No need of protocol, just all the cases under going surgical / invasive procedure should be screened. There is a need to make consolidated efforts for public awareness regarding hepatitis virus infection and its consequences.

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