

# SHOULD WE DO HEPATITIS B AND C SCREENING ON EACH PATIENT BEFORE SURGERY: Analysis of 142 cases

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## ABSTRACT

**Objective:** To see the prevalence of hepatitis B and C in surgical cases undergoing elective surgery.

**Design:** A Prospective observational study.

**Place and duration:** Surgical Unit-I Fauji Foundation Hospital, Rawalpindi from January 2003 to June 2003.

**Patient and methods:** A total of 142 patients above the age of 20 years undergoing elective surgery were screened for hepatitis B and C.

**Results:** Majority of them were females (63.74%) and among them 11.26% were found Hepatitis C and 2.11% Hepatitis B positive.

**Conclusions:** It is concluded that every case under going surgery should be screened for Hepatitis B and C. Awareness regarding Hepatitis B and C should be created among doctors and paramedical staff.

**KEY WORDS:** Hepatitis B, Hepatitis C, Screening, Surgery

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## INTRODUCTION

Screening for hepatitis B and C is routinely not done in majority of hospitals in Pakistan. It is usually done in patients with past history of jaundice or for some liver diseases. Precautions against Hepatitis B and C are taken only when a known positive case is being treated or operated. Unfortunately majority of the patients (more than 60%) do not present with jaundice and the carrier usually do not display

the symptoms.<sup>1</sup> Surgical procedures in the ward or in the theater are the important mode of transmission of Hepatitis B and C virus. Contaminated needles, surgical equipment, surgical disposables, blood transfusion and self pricks during procedures can be the cause of transmission of virus from patient to patient and even to the doctors and para-medical staff and nurses. A large number of population in Pakistan consist of a symptomatic carriers. Keeping in view the dreadful complications of hepatitis and its high infectivity we in Pakistan cannot afford to operate on patients without hepatitis screening. This study was carried out to discover the incidence of hepatitis C in our surgical patients to get an idea about the number of the patients we are operating on them without knowing that whether they are hepatitis B or C positive.

## PATIENTS AND METHODS

This prospective observational study was carried out at Surgical unit-I of Fauji Foundation Hospital Rawalpindi from January 2003 to June 2003. Fauji foundation hospital

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Rawalpindi is a tertiary care 660 bedded teaching hospital. All ex-service man and their families are entitled for free indoor and outdoor treatment. All admitted patients above the age of 20 years under going elective surgery were included in the study. Hepatitis BsAg and HCV screening were carried out in all patients to see the carrier status of the patients before surgery. All findings were recorded and analyzed at the end of the study.

## RESULTS

A total number of 142 cases were operated during the study period. Majority of them were females (63.74%) as compared to male (36.26%). Lager numbers of patients were in 4<sup>th</sup>, 5<sup>th</sup> and 6<sup>th</sup> decade of life in both sexes. After screening 11.26% patients were found to be HCV positive and majority of them were females (62.50%) with male to female ratio of 1:1.6. Majority of them belongs to 5<sup>th</sup> and 6<sup>th</sup> decade of life in both sexes (Table-I). Only three cases of Hepatitis B (2.11%) were found during this study period. One is male and remaining two are females.

## DISCUSSION

Hepatitis C Virus (HCV) infection appears to be endemic in most parts of the world with prevalence of 3%,<sup>1</sup> which ranges from 0.4% in the adult general population of Fukuoka, Japan to 14.4% in the healthy individuals from

southern Italy.<sup>2</sup> Figures have even widely varied within the same country. Hepatitis B and C is highly endemic in Pakistan and its incidence is increasing within last decade<sup>3,4</sup>. A large number of a symptomatic carriers is present in our country. The carrier rate of Hepatitis HBsAg is quoted to be around 10%<sup>4,5</sup> and seroprevalence of Anti HCV antibodies varies from 4% to 7% in different segments of Pakistani population<sup>6,7</sup>. The prevalence of anti HCV antibodies in chronic liver disease has been reported to be between 20 to 75% in different studies<sup>8</sup>. The prevalence of anti-HCV antibodies in blood donors has been reported from 0.5% to 14% in different studies<sup>9</sup>. In different studies carried out at different centers by Sheikh et al<sup>3</sup>, Malik et al<sup>5</sup>, Kazam and colleagues<sup>9</sup> and Khattak and his colleagues<sup>10</sup> showed the carrier rate of HBsAg is ranging from 2.8% to 10%.

The commonest mode of HBV and HCV transmission is by the contaminated blood and its products, use of unsterile syringes, sharp surgical instruments and needles. Doctors and health care professionals are at high risk of acquiring the hepatitis B and C infection. Health professionals are exposed to this danger while handling the patients, during treatment and investigations procedures in ward, during surgery, renal dialysis and so on. In operation theater accidental cuts and pricks over the surgeons or their assistants and spillage of blood drops in the eyes are the commonest modes of transmission to them. In United

Table-I: Incidence of HCV Infection in different age groups

	Cases Operated		Total	HCV +		Total
	Male	Female		Male	Female	
21-30 Years	2	20	22(15.49%)	-	1	1(6.25%)
31-40 Years	6	21	27(19.01%)	-	2	2(12.50%)
41-50 Years	20	26	46(32.39%)	2	3	5(31.25%)
51-60 Years	14	18	32(22.53%)	2	3	5(31.25%)
61-70 Years	6	6	12(8.45%)	2	1	3(18.75%)
>70 Years	3	-	3(2.11%)	-	-	-
<b>TOTAL</b>	<b>51(36.0%)</b>	<b>91(64.0%)</b>	<b>142</b>	<b>6(37.5%)</b>	<b>10(62.5%)</b>	<b>16(11.26%)</b>

States out of 5.6 million health care workers about 600,000 to 800,000 suffer needle stick injuries that's one out of every seven worker is accidentally stuck by a contaminated needle every year<sup>9</sup>. A study carried out by Abdul Mujeeb and his colleagues showed the prevalence of HBsAg in 7% of doctors, 17% among dentists and 20% in sweepers working in the hospitals<sup>11</sup>. On the other end there is a very little understanding of Hepatitis B and C infection and how to adopt the safety measures against it among the health care professionals and doctors<sup>12</sup>.

In our study the incidence of HCV infection among patients operated is 11.26% as compared to Hepatitis B (2.11%), which is quite high and alarming. Its incidence is high in the females (62.50%) and more common in 5<sup>th</sup> and 6<sup>th</sup> decade of life in both sexes in our study. In Pakistan like many other third world countries, more than 80% of deliveries are conducted by traditional birth attendants in unhygienic condition and without proper sterilization, which makes females more vulnerable to HCV and Hepatitis B virus infection. Other common causes of these infections among the patients are use of contaminated syringes, transfusion of contaminated blood and their products and surgery without proper sterilization. Surgeons and other health care professionals are more prone to get these infections while handling them in out patients department, casualty, wards and in Operation Theater. So certain guideline must be followed when dealing with the patients. (a) In elective cases Hepatitis B and C screening should be done. (b) In Hepatitis B and C cases surgeons and health care professional should protect themselves before handling these patients like protective mask, eye protection spectacles and use of double gloves etc. (c) During emergency surgery all

protective measures should be adopted and carrier status should be checked as soon as possible.

In addition to that awareness regarding Hepatitis B and C infection should be done among the peoples through electronic media, newspapers, workshops and awareness programmes on major scale. Government sectors and private sector should join hand to hand against this programme.

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