

# Frequency of Hepatitis C in General Surgical Patients at Teaching Hospital Khairpur Sindh

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## ABSTRACT

**Background:** Viral hepatitis is a global issue. Hepatitis C virus is worldwide public health problem. This is related to the continued occurrence of new infections and the presence of a large reservoir of chronically infected population.

**Objective:** To observe the frequency of Hepatitis C virus (HCV) infection and find out the risk factors in general surgical patients.

**Study Design:** Prospective Observational type.

**Place and Duration of Study:** This study was carried out in the Surgical Department of Ghulam Muhammad Mahar Medical College Teaching Hospital Khairpur Sindh during one year period from May 2012 to April 2013.

**Materials and Method:** All patients admitted in surgical department either for emergency or elective surgery was included in the study. All patients were screened for HbSAg and Anti-HCV by using immuno chromatography (ICT) method. The data of sero-positive patients for hepatitis C were taken for further study. The data was collected through pre-designed Proforma and analyzed through SPSS version 15.

**Results:** Total 1030 patients were admitted in surgical department for emergency or elective surgery. During screening Anti-HCV +ve was found in 165 (16.0%) patients. Out of these, 95 (9.2%) were male and 70 (6.7%) were female. Mean age of these patients was 40.7 years. Among positive patients, most belongs to rural area with poor socioeconomic status. Multiple injections by quacks, shaving by barbers, history of blood transfusion, previous surgery were found to be risk factors in male, while in female history of Gynae and obstetrics procedure, partner +ve for HCV, blood transfusion were found main risk factor. No any risk factor was found in 20 (12.1%) male and 35 (21.2%) females.

**Conclusion:** In the absence of any vaccine for Hepatitis C virus, emphasis should be made on health education and about the risk factors for virus transmission. Health care providers must be committed in the formulation of policies and strict adherence to the safe practices.

**Key Words:** Hepatitis C, risk factor, surgical procedure, prevention.

## INTRODUCTION

Viral hepatitis is a major health problem affecting approximately two billion populations worldwide. Current data shows that about 160 million people worldwide are infected with hepatitis C virus.<sup>1</sup> with the prevalence rate of 4-6% in Pakistan.<sup>2</sup>

Hepatitis C virus (HCV) infection is increasing even more rapidly and has occurred in endemic situation in most parts of the world, with a prevalence rate of about 3% worldwide.<sup>3</sup>

Hepatitis C virus infection progresses slowly and carries a high risk of chronic liver disease (70-80%) and latter Hepatocellular carcinoma.<sup>4</sup>

In Pakistan the prevalence of hepatitis C according to provinces is different and was found to be high in Punjab and Sindh (5-6%).<sup>5</sup>

Hepatitis is transmitted by contaminated blood transfusion, un-sterilized syringes, surgical instruments, dental surgery, sexual contact, drug abuse and shaving by barbers. Health care providers especially surgeons and operation theater staff has significantly high risk of infectivity along with further transmission of the disease if pre-operatively screening and standard

precautions are not followed strictly. 60-70 percents of patients with chronic liver disease (CLD) are positive for anti-HCV<sup>6</sup> and can be associated with coagulopathy causing bleeding problems during surgery. Routine screening before any surgical intervention reduces the potential risk for its transmission, which is a part of standard care.<sup>7</sup>

The objective of this study was to identify patients with anti-HCV positive presenting to surgical department for emergency or elective procedures.

## MATERIALS AND METHODS

This observational study was carried out in surgical department of Ghulam Muhammad Mahar Medical College Teaching Hospital Khairpur Sindh, during one year period from May 2012 to April 2013. Total 1030 patients were admitted in department for emergency or elective surgical procedures. Routine screening test were performed in all patients and in 165 patients become HCV positive, anti-HCV positive patients were included in study after taking informed consent. Further detailed history with regards to various risk factors such as in males past history of any surgery, blood transfusion, shaving by barbers, drug abuse,

partner positive for HCV and past history of jaundice, same as in positive female patients detailed history of jaundice, mode of delivery, place of delivery, any gynaecological procedure, blood transfusion, partner positive for HCV status were obtained in all study population. In all positive cases specific investigations like LFT, PT, APTT and ultrasound especially upper abdomen were performed.

All information was recorded through a pre-designed Performa. Data was analyzed by using SPSS version 15.

## RESULTS

Teen hundred and thirty (1030) patients were admitted in surgical ward during a one year of study period for emergency or elective surgical procedures. All patients were screened for anti-HCV status. Out of 1030 screened patients 165 (16.0%) become anti-HCV positive.

The age range of patients between 11-70 years and more. In 165 positive patients 95(9.2%) were male and 70(6.7%) were females. Majority of positive patient were belongs to rural areas, uneducated and have had poor socioeconomic status and none of them had knowledge about disease and its importance (table: 1).

**Table No. 1: Demographic characteristics of study population N=165**

parameters	number	percentage
-Total patients for surgery	1030	-
-Anti-HCV +ve patients	165	16.0%
-Male	95	9.2%
-Female	70	6.7% %
-Emergency cases	35	21.2%
-Elective cases	130	78.7%
-Belongs to Rural areas	135	81.8%
-Belongs to Urban areas	30	18.1%

**Table No. 2: Age distribution of anti-HCV reactive patients N=165**

Age in years	HCV+ve	Percentage
11-20 years	08	4.8%
21-30 years	12	7.2%
31-40 years	50	30%
41-50 years	68	41.2%
51-60 years	18	10.9%
61-70+ years	09	5.4%

More positive cases were seen in age between 30-50 years. Age distribution of the patients is shown in table: 2.

Among 95 anti HCV positive males, 42(44.2%) had history of shaving by barbers, in 35(36.8%) history of multiple injections, while among 70 anti-HCV positive females, 30(42.8%) had history of blood transfusion, history of injections positive in 25(35.7%). In 20 males

and 35 females no any related risk factors found for hepatitis C transmission shown in table: 3.

**Table No. 3: Risk factors identified in Hepatitis C positive Males & Females**

Risk (males) 95	No: %	Risk (females) 70	No: %
-Shave by barbers	42 (44.2%) iiiij	-Previous surgery = D&C =LSCS	25 (35.7%) 10 (14.2%)
-Parenteral injections	35 (36.8%)	-h/o blood transfusion	30 (42.8%)
-Past h/o surgery	18 (18.9%)	-Multiple injections	25 (35.7%)
-h/o blood transfusion	15 (15.7%)	-h/o jaundice	20 (28.5%)
-Partner +ve for HCV	08 (8.4%)	-Partner +ve for HCV	15 (21.4%)
-No risk factor	20 (21.0%)	-No risk factor	35 (50%)

## DISCUSSION

In Pakistan the frequency of Hepatitis C is significantly higher than in the neighboring countries.<sup>8</sup>

According to Pakistan Medical Research Council (PMRC) Survey 2008, Province Sindh had 5.0-6.0% frequency in its Obstetrics.<sup>9</sup>

In our study frequency of anti-HCV is 16.0% and the mean age of hepatitis C seropositivity 45.5 years; this may be due to fact that frequency of HCV increases with age.<sup>10</sup>

The results of our study are comparable with two international studies conducted in Japan, one shows seropositivity of HCV was 16.9%, while other shows HCV frequency was 7.1%.<sup>11, 12</sup> But our study results are slightly higher to studies done in different cities of Pakistan, HCV seropositivity in Karachi 11.3%<sup>13</sup>, Rawalpindi 7.5%<sup>14</sup>, Nawabshah 11.6%<sup>15</sup> and in Jacobabad HCV positivity 14%<sup>16</sup>.

Weis and his co-workers reported the prevalence rate of HCV 35% in their patients operated at John Hopkins.<sup>17</sup> another study conducted at Egypt out of 5909 patients evaluated, showed anti HCV frequency seen in 29.8% patients.<sup>18</sup>

The risk factors recognized in this study are same seen in the study by Zubia et al. they have noted history of multiple injection therapy in 95.4% I anti-HCV positive patients.<sup>13</sup> Poor health and low educational standard in Pakistan also contribute for disease transmission,<sup>2</sup> as seen in our study, most of our study populations were illiterates and belong to poor socioeconomic class.

Regarding risk factors in female patients in our study, previous history of gynecological (D&C) and Obstetrical (LSCS) was a major risk factor for transmission of anti-HCV seen in 35(50%) and the same was reported by Jaffary<sup>19</sup> and Batool as 42.2%.<sup>20</sup>.

## CONCLUSION

In the absence of any vaccine for Hepatitis C virus, emphasis should be made on health education and about

the risk factors for virus transmission. Health care providers must be committed in the formulation of policies and strict adherence to the safe practices.

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