

## SCREENING OF 110 CIRRHOTIC PATIENTS FOR HEPATITIS B AND C AT SAIDU TEACHING HOSPITAL SAIDU SHARIF SWAT

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**Background:** Cirrhosis liver is amongst the commonest clinical conditions in Pakistan. Besides other causes, it is mostly related to previous viral infection, in this part of the world. The main objective of this study was to find the frequency of HBsAg and anti HCV in cirrhotic patients of Swat district. **Methods:** This Prospective Study was conducted in the Medical unit of Saidu Teaching Hospital, Saidu Sharif from January 2006 to December 2006. One hundred and ten Cirrhotic Patients, 62 Male and 48 Female aged from 14 to 75 years were included in this study. Sera were tested by 3<sup>rd</sup> generation Elisa method. **Results:** Fifty-nine out of 110 (53.6%) patients were positive for anti HCV antibodies. Twenty-four (21.81%) Patients were positive for HBsAg. Eleven (10%) patients were positive for both HBsAg and anti HCV anti bodies. Sixteen (14.54%) were negative for both sero maker of hepatitis B and C. **Conclusion:** It is evident from this study that Hepatitis C, is a leading cause of cirrhosis in District Swat followed by HBV. Both the viruses account for at least three fourths of the total Cirrhotic.

**Keywords:** Cirrhosis liver, HBsAg, Anti HCV

### INTRODUCTION

Viral hepatitis is the commonest cause of chronic liver disease and affects millions of people worldwide. The disease is more prevalent in developing countries including Pakistan.<sup>1-3</sup>

HBV and HCV are associated with clinically significant chronic infections that may lead to Liver Cirrhosis and Hepato-Cellular carcinoma.<sup>4,5</sup> Liver cirrhosis with its attendant complications result in high morbidity and mortality.<sup>6,7</sup>

The discovery of HBV by Blumberg & HCV by Choo is major break through in the diagnosis, treatment and prevention of viral liver disease.<sup>8</sup> The worldwide estimated chronic carriers of HBV is over 350 millions of which 75% reside in the Asian region.<sup>7,9</sup>

The pattern of infection differ from country to country and is highly endemic in developing countries with a very high carrier rate.<sup>10</sup> HCV infection is prevalent worldwide; nearly 1.5 Million new cases occur yearly in USA.<sup>4</sup> The reported prevalence of HCV in blood donors is 15.6% from Africa, 1.5% from Japan, 0.6% in the USA, 0.34% from Canada, 0.24% in Finland and 0.07% in the UK.<sup>11,12</sup>

The studies conducted in various segments of Pakistan show the prevalence rate in the healthy blood donor for hepatitis HBsAg range between 2–14%, while for HCV anti bodies, 00-20.89%.<sup>13-15</sup> In the health care personals, the prevalence figure reported for HBsAg was 5–9%, and while that for anti HCV was 4%. In the general population the prevalence of HBsAg was estimated at 3.6–18.66% while anti HCV ranged from 4.25–7.13%.<sup>16</sup>

Both HBV and HCV infection is preventable and to some extent curable. The frequency of these

two infections in cirrhosis varies from region to region in Pakistan. This study was designed to look for frequency of hepatitis B and C in cirrhotic Patients of District Swat.

### PATIENT AND METHODS

A prospective study conducted at Medical unit Saidu Teaching Hospital, Saidu Sharif over a period of one year from January 2006 to December 2006. All patients diagnosed as having liver cirrhosis over the age of 14 years were included. The diagnosis was confirmed on the basis of history, examination, laboratory data and finding of abdominal ultrasound.

The sera of all the patients was tested for HBsAg and anti HCV anti bodies by Micro particle Enzyme Immune Assay (MEIA) a 3<sup>rd</sup> generation Enzyme linked Immune sorbent Assay (ELISA) kit.

### RESULTS

In this study, 110 cirrhotic patients were included. There were 62 (56.36%) males and 48 (43.63%) females. Their ages ranged from 14–70 years with mean age of 56 years. The over all age distribution is shown in Table-1. Out of 110 patients 59 (53.6%) were anti HCV positive and 24 (21.81%) were HBsAg positive. Both HBsAg and anti HCV were detected in 11 (10%). Overall virus status is shown in Table-2.

**Table-1: Age distribution of patients (n=110)**

Age Group	Number of cases	%
0–15	2	1.8%
16–30	5	4.54%
31–45	20	18.18%
46–60	62	56.36%
61–75	21	19.09%

**Table-2: Relative frequency of HBV and HCV infections in patients ( n=110)**

Positivity	Number of Cases	%
Anti HCV positive	59	53.6%
HBsAg positive	24	21.81%
Both positive	11	10%
Both Negative	16	14.54%

## DISCUSSION

Cirrhosis liver is a common condition in Pakistan.<sup>1,2</sup> Evaluation of etiological factors & diagnosis of the disease has been the subject of many studies in past. In present study of 110 patients, male to female ratio was 57:43 respectively. The mean age was 56 years, with range of 14–75 years. Reports from other centres in Pakistan also showed similar results.<sup>17,18</sup>

In our study, most of the patients, i.e., 56.3% were relatively young being in the 4<sup>th</sup> and 5<sup>th</sup> decade of life. A similar age range has also been reported from the South East Asia, although, some studies from the West have reported both younger and older age group patients.<sup>19,20</sup> The finding of our study are comparable with the findings of another study from Pakistan as well.<sup>4</sup> In this study viral markers of HBV & HCV were positive in 85.41% patients; this corresponds with the results reported by Shah *et al*, as 85%.<sup>21</sup> Although they have reported higher prevalence of HBV (66%) than HCV (44.71%) but they only checked HCV in their HBV negative patients. This might have led to missing dual infection cases.<sup>22</sup>

HBsAg positivity was observed as 21.81% in our study, which is very close to 22% in the study of Anwaar A *et al*.<sup>6</sup> Others have also shown similar results.<sup>21,22</sup>

Anti HCV was positive in 59 (53.6%) of our patients. In studies of chronic liver diseases conducted in Pakistan, anti HCV was detected in 43% of patients of chronic hepatitis, 18% of cirrhotic, and in 61% cases of liver cell cancer.<sup>23</sup> Eleven (10%) of our patients were positive both for HBsAg and HCV antibodies. The reported prevalence of dual infections with HBV and HCV is approximately 10–15%.<sup>24,25</sup>

We have noted an increased number of HCV cirrhosis patients in our study that may be because of injection habits, use of un-sterilised syringes, un-screened blood transfusion, tattooing, and shaving habits including the use of non-disposable razors by multiple people. Similar data has been presented in one other study from Swat.<sup>13</sup>

## CONCLUSION

We conclude from this study that hepatitis C is a leading cause of Cirrhosis in District Swat, accounting for about 53% of patients, followed by HBV in 24% of patients.

There is a need to adopt aggressive preventive measures, to reduce the incidence of Hepatitis B and C infections and thus reducing the prevalence of Chronic liver disease and Cirrhosis. These conditions have serious economical & social implications for the individual, family and the national exchequer.

Health education, vaccination against HBV, screening of blood donors for HBsAg and anti HCV, strict use of disposable syringes, use of disposable razors and discouraging tattooing will be of great help for prevention of these deadly diseases.

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