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Research Article

### A RESEARCH STUDY TO EXAMINE THE RANGE AND ASPECTS OF HEPATOCELLULAR CARCINOMA (HCC) AMONG PATIENTS AT TERTIARY HEALTHCARE FACILITY

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**Abstract:**

**Background:** All around the globe, the third most contributing factor to death from cancer is hepatocellular carcinoma.

**Objective:** To examine activated aspects among patients of hepatocellular carcinoma (HCC) at a tertiary care centre in the previous two years was the purpose of this research.

**Material and Methods:** We carried out this research at Mayo Hospital, Lahore from January 2017 to August 2018. The patients selected for this study were having HCC identified by histopathology or tumour marker. These patients were examined. Level of alpha-fetoprotein, the presence of cirrhosis, distribution of liver lesions, positivity for hepatitis serology and size of tumour were observed and demographic aspects were noticed.

**Results:** Histopathology and tumour marker proved HCC was observed in 192 patients. The number of males and females were 149 (77.6%) and 43 (22.4%) respectively. 27 (14%) cases were found positive for hepatitis B surface antigen. 138 (72%) patients were positive for HCV. Multicentric distribution was observed in 117 (61%) patients. 134 (70%) patients were noted with cirrhosis and increased level of alpha-fetoprotein was observed in 154 (84%). 16 (8%) patients were found with dual hepatitis (HBV + HCV). The people without any reason were 11 (6%).

**Conclusion:** the results concluded that in most patients, hepatitis C virus infection is associated with hepatocellular carcinoma. The males were more vulnerable to this disorder and it was observed in the fifth and sixth decade of life. Cirrhosis, multicentric and advanced disorder at presentation were observed in the majority of the patients.

**Keywords:** Multicentric, Advanced, Hepatocellular, Hepatitis, HCV, HBV, Carcinoma and Cirrhotic.

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**INTRODUCTION:**

All around the globe, the third most contributing factor to death from cancer is hepatocellular carcinoma. It is also the fifth most frequently found malignancy [1]. Worldwide, there is a high incidence of HCC and chronic hepatitis C virus (HCV). The chronic liver disorder is caused by HCV [1]. The incidence of all primary liver malignancies due to HCC is between 60% and 90% in developing countries. In these countries, death is mostly caused by HCC [2]. Based on the report of the World Health Organization, HCV infects about 160 million people all over the world. Most of these people belong to the developing nations. For cirrhosis and hepatocellular carcinoma, the factor that is significantly responsible for HCV. It is due to the fact that the incidence of HCV related liver is high even in developed nations [3]. The reasons reported in various studies of HCC conducted in the previous ten years in Pakistan have been aflatoxins and viral hepatitis [4]. In patients of hepatocellular carcinoma, HBsAg was positive in about 60% based on the results of previous studies [5]. On the other hand, the incidence of positivity of hepatitis C virus infection was reported as 80% according to the results of current studies [6]. In various nations, there exists a difference in the clinical aspects, survival of hepatocellular carcinoma and causes [7]. To examine activated aspects among patients of hepatocellular carcinoma

(HCC) at a tertiary care centre in the previous two years was the purpose of this study.

**PATIENTS AND METHODS:**

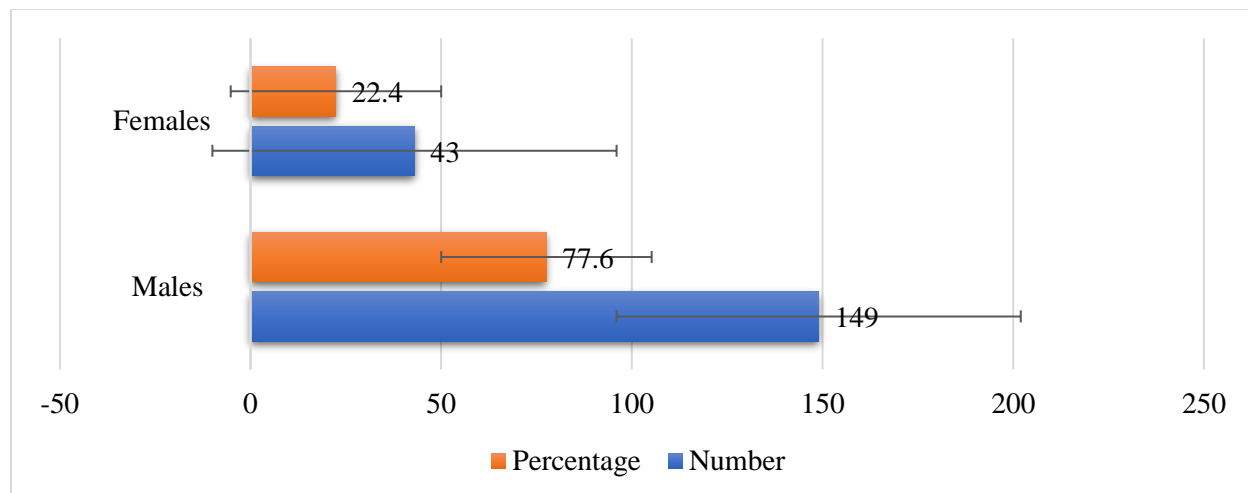
We carried out this research at Mayo Hospital, Lahore from January 2017 to August 2018. The patients selected for this study were having HCC identified by histopathology or tumour marker. These patients were examined. Level of alpha-fetoprotein, the presence of cirrhosis, distribution of liver lesions, positivity for hepatitis serology and size of the tumor were observed and demographic aspects were noticed. Features such as the presence of hepatitis B surface antigen, anti HCV antigen and demographic aspects were also observed.

**RESULTS:**

Histopathology and tumour marker proved HCC was observed in 192 patients. The number of males and females were 149 (77.6%) and 43 (22.4%) respectively. 27 (14%) cases were found positive for hepatitis B surface antigen. 138 (72%) patients were positive for HCV. Multicentric distribution was observed in 117 (61%) patients. 134 (70%) patients were noted with cirrhosis and increased level of alpha-fetoprotein was observed in 154 (84%). 16 (8%) patients were found with dual hepatitis (HBV + HCV). The people without any reason were 11 (6%). Detailed outcomes analysis is given in Table – I & II:

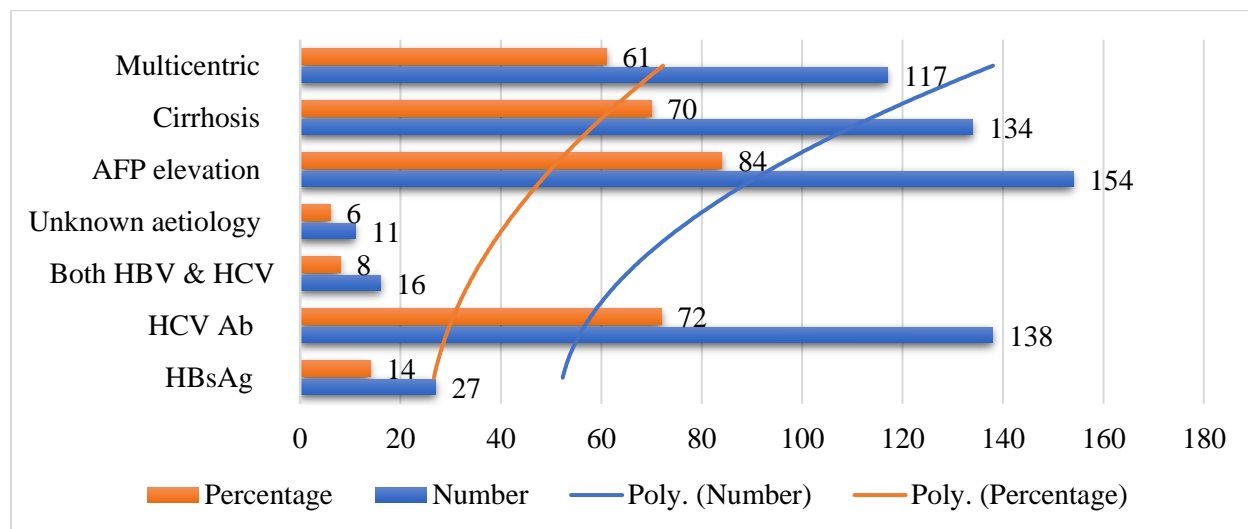
**Table – I: Gender Distribution**

Gender	Number	Percentage
Males	149	77.6
Females	43	22.4



**Table – II:** Clinicopathological Features

Features	Number	Percentage
HBsAg	27	14
HCV Ab	138	72
Both HBV & HCV	16	8
Unknown aetiology	11	6
AFP elevation	154	84
Cirrhosis	134	70
Multicentric	117	61

**DISCUSSION:**

Various studies are conducted in different regions of Pakistan. These studies indicated the range of age between 17 – 84 years. The number of males in our study was 89%. In the studies held previously, 87% of patients were found with anti HCV and 69% of patients were positive for Hepatitis B surface antigen [8]. In Pakistan and various other developed nations of Asia and Africa, aflatoxin contamination has also been observed along with hepatitis B and hepatitis C virus infection [4]. In 84% of cases, there observed an increased level of fetoprotein. In one study, the cases found with cirrhosis were 86% [9]. Cirrhosis and chronic hepatitis result from hepatitis C virus infection and as a result, it leads to HCC.

The time duration between the establishment of HCV infection and hepatocellular carcinoma is long [10]. Hepatic carcinogenesis is significantly caused by hepatitis B. The incidence is increased many times by

the presence of HBsAg [11]. Diabetes mellitus and synergism of alcohol with viral hepatitis are other causes of hepatocarcinogenesis [12]. As compare to identical study in Germany, there are a deficiency of correlation between alpha-fetoprotein and size of the tumor in various studies conducted in Pakistan [13]. According to the results of the current study, alpha-fetoprotein was increased in 84% of cases. Elevated tumour marker, FNAC, radiological results and liver biopsy were the basis of identification in our study. Seventy percent of our cases were presented with multicentric tumours. This has been due to a valuable number of patients with chronic hepatitis C. In Germany, it is 90% and 76% in India [13, 14]. The establishment cirrhosis is associated with alcoholism along with hepatitis B and C. As a result, it contributes to HCC [15]. In rural areas of Southern Punjab, testing for HCV is less common. The main reason of HCV transmission in this area is still the blood transfusions.

**CONCLUSION:**

It is concluded that the most common malignancy is hepatocellular carcinoma. The major reason is HCV as it presents with advanced stage. The males were vulnerable to this disorder and it was observed in the fifth and sixth decade of life. In most of the patients, Anti HCV has been found, 6% of cases had multilocular presentation. Cirrhosis was present in seventy percent patients. Alpha-fetoprotein was elevated in above 80% of cases.

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