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Research Article

REGULATION OF OCCURRENCE OF HEPATOCELLULAR CARCINOMA IN LIVER CIRRHOSIS RESPONDENT

¹Dr Ayesha Zaheer, ²Dr. Shahid Ali, ³Dr Hira Nawaz

¹UHS Lahore.

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Abstract:

Background: Hepatocellular Carcinoma remains solitary of sequelae of liver cirrhosis.

Objective: The main objective of our research was to regulate occurrence of hepatocellular carcinoma in liver cirrhosis respondents.

Methodology: Our current research remained the short-term cross-sectional research, conducted at Sheikh Zayed Hospital, Rahimyar Khan from January 2018 to October 2018. In this study, cases of liver cirrhosis of either sex with age range of 41 to 81 years were selected. A total of study subjects was included in this study. The diagnosis of liver cirrhosis was made because of shrunken liver size, with or without associated portal vein dilatation and ascites. The child Pugh class was assessed by detailed clinical examination, USG and liver function tests. Hepatocellular carcinoma was labelled as yes where there was mass lesion on USG in liver with alpha fetoprotein level more than 200ng/ml. Information remained examined through using SPSS version 22.

Results: In this study, 110 cases of liver cirrhosis were enrolled with mean age of 54.80 ± 12.06 years. There were 60 (56%) males and 50 (44%) females. HCC was seen in 9 (7%) out of 110 cases. HCC was significantly high in males where it was seen in 7 (6.35%) of cases with $p = 0.04$. It was also significantly high in cases with age more than 54 years where it was observed in 6 (11.88%) with $p = 0.07$. In terms of child Pugh class, it was also significantly high in cases with class C, where all the 8 cases were seen with $p = 0.002$.

Conclusion: Hepatocellular Carcinoma is not that uncommon and is found significantly high in males and those with child Pugh class C.

Key words: HCC, Liver cirrhosis, Child Pugh class.

Corresponding author:

Dr. Ayesha Zaheer,
UHS Lahore.

QR code



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INTRODUCTION:

Liver diseases are one of the most common diseases in the gastroenterological system and amongst them the highest burden is posed by liver cirrhosis [1]. Its number is on the rise in the developing countries and lack to health facilities lead to ongoing damage and ultimate fibrosis. Hepatitis B and C are the most common causes [2]. In United States HCV along with alcoholism is the most common cause. Chronic inflammation leads to damage of the hepatocytes that further activate the inflammatory cells that lead to fibrosis of the hepatic parenchyma, which can result in various structural and functional abnormalities in the liver [3]. Liver cirrhosis is associated with multiple complications; comprising ascites, portal hypertension, variceal bleeding, caput medusa, spontaneous bacterial peritonitis, Porto systemic encephalopathy, hypersplenism and ultimately hepatocellular carcinoma. Hepatocellular carcinoma (HCC) is the malignancy of the liver parenchyma, that can be caused due to various causes and hepatitis C associated liver cirrhosis remains to be the maximum shared cause of it [4]. It is usually found incidentally on Ultrasonography (USG) as the signs and symptoms are same as that of liver cirrhosis. Computed tomography (CT) scan is the investigation to reveal the underlying involvement of the surrounding structures and biopsy is the investigation of choice. Alpha fetoprotein is the marker which is raised in cases of suspicion and has a high sensitivity and optimal specificity for HCC. Our current research remained led to regulate occurrence of hepatocellular carcinoma in liver cirrhosis respondents [5].

METHODOLOGY:

Research Project: Short-term Cross-sectional research. Situations: Section of Medicine, Sheikh Zayed Hospital, Rahimyar Khan. **Research Period:** January 2018 to October 2018. **Model procedure:** Non possibility successive sample. **Example magnitude:** The overall of 110 research respondents remained comprised in our research. In the present study, the cases of liver cirrhosis of either sex through age variety of 41 to 81 years remained designated. The analysis of liver cirrhosis was made because of shrunken liver size with or without associated portal vein dilatation and ascites. The child Pugh class was assessed by detailed clinical examination, USG and liver function tests. Hepatocellular carcinoma was labelled as yes where there was mass lesion on USG in liver with alpha fetoprotein level more than 200ng/ml. The data was processed by using SPSS-version 23. Effect modifiers were stratified, and pole stratification chi square test remained pragmatic with $p \leq 0.06$ remained measured as substantial.

RESULTS:

In this study, 110 cases of liver cirrhosis were enrolled, with mean age 54.80 ± 12.05 years. There were 60 (56%) males and 50 (44%) females. HCC was seen in 9 (7%) out of 110 cases. HCC was significantly high in males where it was seen in 7 (11.35%) of cases with $p = 0.04$ as in table 1. It was also significantly high in cases with age more than 51 years, where it was observed in 6 (11.85%) cases with $p = 0.07$. In terms of child Pugh class, it was also significantly high in cases with class C where all the 8 cases were seen with $p = 0.002$.

Table 1: Hepatocellular Carcinoma against sex, age in addition kid Pugh period. (n=110)

Sex	Hepatocellular Carcinoma		P-Value
	Yes	No	
Man	2 (4.76%)	40 (95.24%)	0.04
Women	6 (10.34%)	52 (89.66%)	
Age Groups	Hepatocellular Carcinoma		0.07
	Yes	No	
51 year or less	5 (10.87%)	41 (89.13%)	
>51 years	3 (5.55%)	51 (94.45%)	
Teen Pugh period	Hepatocellular Carcinoma		0.002
	Yes	No	
B	08 (12.12%)	66 (87.88%)	
C	00 (00%)	34 (34%)	

DISCUSSION:

Hepatocellular carcinoma is among the leading cancers posing a high burden of morbidity and Mortality. It is ranked the 6th most common causes of cancer in males globally. Liver cirrhosis especially

hepatitis C virus infection is strongly associated with its development. Alcoholism is one of the strong predictors to potentiate the course of its development [6]. The chance of its development after overt cirrhosis is 2-5% per year. In the present study, the HCC was

seen in 9% of the cases. This was like the studies done in the past. According to different studies the incidence of HCC in cases of HCV infection was found to be 4.8-17.8% of the cases. The data has also revealed that the incidence is higher in cases of HCV infection as compared to HBV infection and alcoholism. According to a study done by Imbert et al, 210 cases of cirrhosis were followed, and HCC was seen in 6.2% of the cases. In the present study, the HCC was more seen in males as compared to females where it was seen in 7 (11.35%) cases with $p=0.04$ [7]. This was like another study that also found male predominance; and the male to female ration was seen in 8:2. The data from different countries i.e. China and Africa, this ratio was seen as high as 8:1; although they did not confabulate this data to look for any significance. HCC was also common in cases that had age more than 52 years where it was seen in 6 (11.86%) cases with $p=0.07$ cases [8]. This finding was also supported by various studies. According to a survey the median time for diagnosis of HCC is around 66 years and almost negligible before the age of 42 years. The risk is slightly higher in younger age group in Asian countries as compared to the developed ones which can be explained by the fact that the chances of getting infection at earlier age is common in Asian countries and it also lacks the health care facilities; hence earlier liver damage and ongoing fibrosis can lead to development of HCC at relatively earlier age. HCC was significantly high in cases of child Pugh class C where all the 9 (96%) cases were found [9]. This was also seen in the past studies as well; although they were not all in one class as was seen in the present study. The other data which was found in previous studies was that, the cases that had severe disease and for longer duration of action, it was more associated with HCC with p values less than 0.06. According to a study by Tariq M et al from Karachi, the incidence of HCC was 6% with child class B and 7.8% with class C with an insignificant difference [10].

CONCLUSION:

Hepatocellular carcinoma, is not that uncommon and is found significantly high in males and those with child Pugh class C.

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