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Research Article

**PORTAL VEIN THROMBOSIS IN PATIENTS WITH
HEPATOCELLULAR CARCINOMA****¹Dr. Mumtaz Ali Lakho, ¹Dr. Zubair Ahmed Yousfani, ¹Dr. Majid Ali Soomro,
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Hospital Abu Dhabi, United Arab Emirates³Liaquat University Hospital Hyderabad / Jamshoro**Abstract:****OBJECTIVE:** To determine the frequency of portal vein thrombosis in patients with hepatocellular carcinoma.**PATIENTS AND METHODS:** The one year hospital based cross-sectional multidisciplinary and multicenter study (2017-2018) was conducted at tertiary care hospitals and the data was also recruited from few private hospitals. All the patients presented with abdominal pain or tenderness at right upper quadrant, easy bruising or bleeding, enlarged abdomen (ascites), yellow discoloration of eyes (jaundice) and weight loss were explored for portal vein thrombosis while the known cases of hepatocellular carcinoma were also recruited and studied. After taking clinical history, physical examination and routine investigations of the patients having upper abdominal pain, abdominal swelling and fever were explored for portal vein thrombosis by specific investigations as CT or MRI scan and Doppler ultrasonography whereas the frequency / percentages (%) and means \pm SD computed for study variables.**RESULTS:** During six month study period total fifty patients were explored and study. The mean \pm SD for age (yrs) of population was 36.31 ± 7.531 . Regarding gender male 24 (48%) and female 26 (52%), residence as urban 30 (60%) and rural 20 (40%), etiology as chronic viral hepatitis B 15 (30%), chronic viral hepatitis C 25 (50%), both 03 (6.0%), alcohol 04 (8.0%) and NAFLD 03 (6.0%) and PORTAL VEIN THROMBOSIS reported as 18 (36%) respectively. Regarding the clinical status of patients having PVT the survival and mortality was observed in 12 (66.6%) and 06 (33.3%) patients.**CONCLUSION:** PVT is common in patients with HCC and is associated with worsened prognosis.**KEYWORDS:** Portal vein thrombosis, Malignancy, Hepatoma and hepatocellular carcinoma.**Corresponding Author:*****Dr. Samar Raza,**

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INTRODUCTION:

Hepatocellular carcinoma (HCC) is the fifth most common neoplasm and the third most common cause of malignancy related mortality in the world.¹ The burden of HCC in the United States is increasing over the next two decades due to the rising incidence of liver cirrhosis due to hepatitis C infection.² The latency period between hepatitis C infection and occurrence of HCC is 30-35 years.³ The prognosis of HCC has improved since past two decades, especially in developed countries where 30-40% of cases are diagnosed at early stages when curative treatments can be started.⁴ The curative treatment includes surgical resection and liver transplantation with reported 5 year survival around 40-90%.⁵ HCC is also associated with hemostatic disturbance with a reported incidence of portal vein thrombosis (PVT) ranging from 22-67%.⁶ The presence of PVT in patients with HCC is associated with reduced survival while the pulmonary embolism and deep vein thrombosis are clearly a major source of morbidity and mortality in cancer patients.⁷ It is interesting to determine the frequency of PVT in patients with HCC as providing prophylaxis to patients at higher risk for thrombosis may help in reducing malignancy associated morbidity in patients with HCC.

PATIENTS AND METHODS:

The one year hospital based cross-sectional multidisciplinary and multicenter study (2017-2018) was conducted at tertiary care hospitals and

the data was also recruited from few private hospitals. All the patients presented with abdominal pain or tenderness at right upper quadrant, easy bruising or bleeding, enlarged abdomen (ascites), yellow discoloration of eyes (jaundice) and weight loss were explored for portal vein thrombosis while the known cases of hepatocellular carcinoma were also recruited and studied whereas the exclusion criteria were the patients with connective tissue and autoimmune disorders, vitally unstable, hematological malignancies, pregnant women, abdominal tuberculosis, already on anti-inflammatory medication, antibiotics, corticosteroids, anticoagulant / anti-platelet therapy, immunosuppressive drugs and the subjects with liver transplantation. After taking clinical history, physical examination and routine investigations of the patients having upper abdominal pain, abdominal swelling and fever were explored for portal vein thrombosis by specific investigations as CT or MRI scan and Doppler ultrasonography. The data was collected on pre-designed proforma and analyzed in SPSS to manipulate the mean \pm SD, frequencies and percentages.

RESULTS:

During six month study period total fifty patients were explored and study. The mean \pm SD for age (yrs) of population was 36.31 \pm 7.53. The demographical and clinical profile of study population is presented in Table 1.

TABLE 1: THE DEMOGRAPHICAL AND CLINICAL PROFILE OF STUDY POPULATION

Parameter	Frequency (N=50)	Percentage (%)
AGE (yrs)		
20-29	08	16
30-39	12	24
40-49	15	30
50-59	10	20
60+	05	10
GENDER		
Male	24	48
Female	26	52
RESIDENCE		
Urban	30	60
Rural	20	40
ETIOLOGY		
Chronic viral hepatitis B	15	30
Chronic viral hepatitis C	25	50
Both	03	6.0
Alcohol	04	8.0
NAFLD	03	6.0

PORTAL VEIN THROMBOSIS		
Yes	18	36
No	32	64
STATUS OF PATIENTS HAVE PVT		
Mortality	06	33.3
Survival	12	66.6

DISCUSSION:

The present study reported the rate of PVT as 36% in our population and is consistent with the previously study.⁶ HCC poses a unique situation with regards to cancer-associated thrombosis and a significant percentage of patients with cirrhosis, even in the absence of HCC, develop PVT.⁷ Cirrhosis and liver failure often precede the development of HCC, and thrombocytopenia and abnormalities in coagulation assays associated with hepatic failure are commonly perceived to decrease the risk of thrombosis.⁸ However, the incidence of DVT and PE in patients with cirrhosis has been reported to be 0.5%-1%.⁹ Other factors such as platelet dysfunction, endothelial dysfunction, increased levels of von-willebrand factor, and hemodynamic alteration related to portal hypertension involve in the net coagulation status of patients with liver disease.¹⁰ The impact of portal vein thrombosis has been studied extensively in patients with HCC and has clearly shown that PVT is one of the most negative prognostic indicators.

CONCLUSION:

PVT is common in patients with HCC and is associated with worsened prognosis, thus identifying patients at high risk for PVT and initiating prophylaxis may affect outcomes in patient with HCC.

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