Journal of Advanced Medical and Dental Sciences Research

@Society of Scientific Research and Studies

Journal home page: www.jamdsr.com doi: 10.21276/jamdsr Index Copernicus value = 82.06

(e) ISSN Online: 2321-9599; (p) ISSN Print: 2348-6805

Original Research

Assessment of Clinical profile of patents with portal hypertension

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ABSTRACT:

Background: Portal hypertension (PH) is an increase in pressure in the portal vein and its tributaries. The importance of PH is defined by the frequency and severity of its complications including variceal bleeding, spontaneous bacterial peritonitis, and hepatorenal syndrome, which represent the leading causes of death and of liver transplantation in patients with cirrhosis. Hence; the present study was undertaken for assessing the clinical profile of patients with portal hypertension. **Materials & methods:** A total of 25 patients with portal hypertension were enrolled. Complete demographic details of all the patients were obtained. Only those patients were enrolled which were diagnosed clinically, biochemically, radiologically and endoscopically with portal hypertension. Complete medical and clinical history of all the patients was obtained. Grading of the esophageal varices was done as Grade 0, grade 1, grade 2 and Grade 3. All the results were recorded in Microsoft excel sheet and were analysed by SPSS software. **Results:** Constitutional symptoms were found to be present in 100 percent of the patients, while abdominal distension was found to be present in 88 percent of the patients. Pallor was found to be present in 80 percent of the patients while icterus was found to be present in 72 percent of the patients. Splenomegaly was found to be present in 72 percent of the patients while anaemia was found to be present in 60 percent of the patients. In 32 percent of the patients, esophageal varices were of grade 3 while in 28 percent of the patients, esophageal varices were of grade 2. **Conclusion:** Constitutional symptoms and abdominal distension are the most common components of clinical profile among portal hypertension patients.

Key words: Clinical profile, Portal hypertension

Received: 20 October, 2019 Revised: 12 December, 2019 Accepted: 13 December, 2019

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This article may be cited as: Kishore R. Assessment of Clinical profile of patents with portal hypertension. J Adv Med Dent Scie Res 2020;8(1):229-232.

INTRODUCTION

Portal hypertension is an increase in pressure in the portal vein and its tributaries. It is defined as a portal pressure gradient (the difference in pressure between the portal vein and the hepatic veins) greater than 5 mm Hg. Although this gradient defines portal hypertension, clinical significant portal hypertension is defined by a gradient of 10 mm Hg or greater, because this pressure gradient predicts the development of varices, decompensating of cirrhosis, and hepatocellular carcinoma. The most direct consequence of portal hypertension is the development of gastroesophageal varices that may rupture and lead to the development of variceal hemorrhage.[1-3]

The importance of PH is defined by the frequency and severity of its complications including variceal bleeding, spontaneous bacterial peritonitis, and hepatorenal syndrome, which represent the leading causes of death and of liver transplantation in patients with cirrhosis. Proper diagnosis and management of these complications are vital to improving quality of life and patients' survival.[4-6] Hence; the present study was undertaken for assessing the clinical profile of patients with portal hypertension.

MATERIALS & METHODS

The present study was conducted with the aim of assessing the clinical profile of patients with portal hypertension. Ethical approval was obtained from institutional ethical committee and written consent was obtained from all the patients after explaining in detail the entire research protocol. A total of 25 patients with portal hypertension were enrolled. Complete demographic details of all the patients were obtained. Only those patients were enrolled which

were diagnosed clinically, biochemically, radiologically and endoscopically with portal hypertension.

Exclusion criteria for the present study included:

- Patients with any other systemic illness,
- Patients with any other hepato-biliary disorder
- Patients with presence of any malignant neoplasm
- Patients who didn't gave the informed consent

Complete medical and clinical history of all the patients was obtained. Grading of the esophageal varices was done as follows:

- Grade 0: No varices
- Grade 1: Varices small and straight
- Grade 2: Varices obliterating less than one-third of esophageal lumen
- Grade 3: Varices obliterating more than one-third of esophageal lumen[7]

All the results were recorded in Microsoft excel sheet and were analysed by SPSS software. Chi-square test was used for assessment of level of significance.

RESULTS

In the present study, a total of 25 patients with portal hypertension were enrolled, Mean age of the patients of the present study was 53.3 years, 52 percent of the patients belonged to the age group of more than 50 years while 32 percent of the patients belonged to the age group of 30 to 50 years. 64 percent of the patients were males while the remaining were females. In the present study, constitutional symptoms were found to be present in 100 percent of the patients, while abdominal distension was found to be present in 88 percent of the patients. Pallor was found to be present in 80 percent of the patients while icterus was found to be present in 72 percent of the patients. Splenomegaly was found to be present in 72 percent of the patients while anaemia was found to be present in 60 percent of the patients. In the present study, in 32 percent of the patients, esophageal varices were of grade 3 while in 28 percent of the patients, esophageal varices were of grade 2.

Table 1: Age and gender-wise distribution

Parameter		Number of patients	Percentage of patients
Age group (years)	Less than 30	4	16
	30 to 50	8	32
	More than 50	13	52
Gender	Males	16	64
	Females	9	36

Table 2: Clinical symptoms

Clinical symptoms	Number of patients	Percentage of patients
Constitutional symptoms	25	100
Abdominal distension	22	88
Pallor	20	80
Icterus	18	72
Ascites	19	76
Splenomegaly	18	72
Anaemia	15	60

Graph 1: Bar graph representing various clinical symptoms

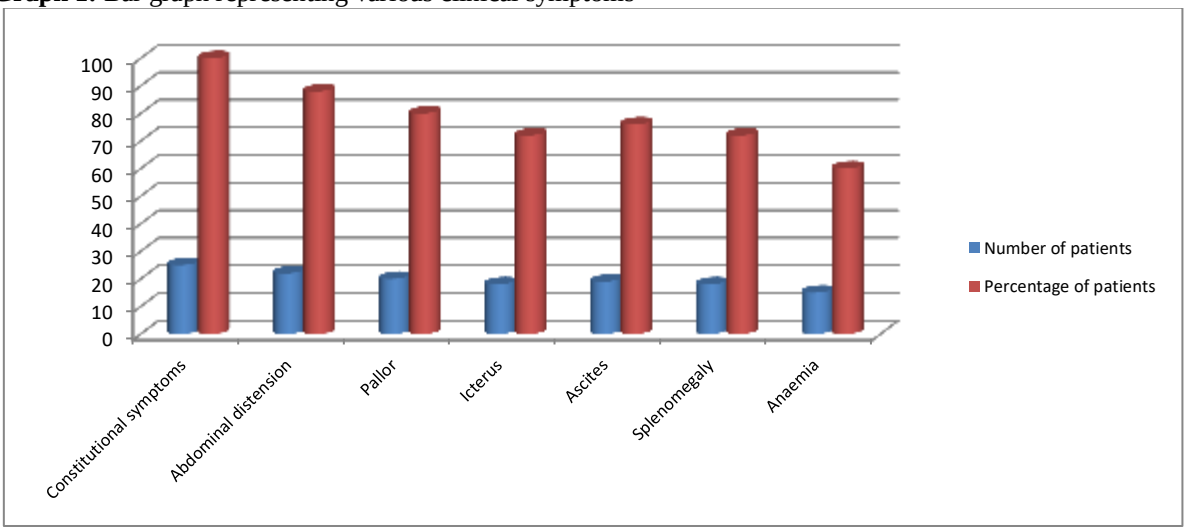

Table 3: Grading of the esophageal varices

Grading	Number of patients	Percentage of patients
Grade 0	4	16
Grade 1	6	24
Grade 2	7	28
Grade 3	8	32

DISCUSSION

Portal hypertension is increased pressure within the portal venous system. It is determined by the increased portal pressure gradient (the difference in pressures between the portal venous pressure and the pressure within the inferior vena cava or the hepatic vein. This pressure gradient is normally less than or equal to 5 mmHg. A pressure gradient of 6 mmHg or more between the portal and hepatic veins (or inferior vena cava) suggests the presence of portal hypertension in most cases. When the pressure gradient is greater than 10 mmHg, portal hypertension becomes clinically significant. A pressure gradient between 5 to 9 mmHg usually reflects subclinical disease. This gradient is measured by determination of the hepatic venous pressure gradient (HVPG).[8- 10] Hence; the present study was undertaken for assessing the clinical profile of patients with portal hypertension.

In the present study, a total of 25 patients with portal hypertension were enrolled, Mean age of the patients of the present study was 53.3 years, 52 percent of the patients belonged to the age group of more than 50 years while 32 percent of the patients belonged to the age group of 30 to 50 years. 64 percent of the patients were males while the remaining were females. In the present study, constitutional symptoms were found to be present in 100 percent of the patients, while abdominal distension was found to be present in 88 percent of the patients. Pallor was found to be present in 80 percent of the patients while icterus was found to be present in 72 percent of the patients. Anand AC et al studied patients with portal hypertension and esophageal varices seen at a tertiary care hospital. The hepatopulmonary syndrome (HPS) is defined as a triad of liver dysfunction, intrapulmonary vascular dilatations (IPVD) and arterial hypoxemia. There is paucity of Indian studies regarding the prevalence of IPVD and arterial hypoxemia particularly amongst patients with non-cirrhotic portal fibrosis (NCPF) and extrahepatic portal vein obstruction (EHPVO), where liver dysfunction is not a feature. Ultrasonography of abdomen, contrast-enhanced echocardiography (CEE), arterial blood gas analysis and assessment of alveolar-arterial oxygen gradient were done. Of 138 patients with portal hypertension seen, 88 fulfilled the inclusion and exclusion criteria. These included 63 with cirrhosis, 15 with NCPF and 10 with EHPVO. CEE showed IPVD in 17 (27%) patients with cirrhosis, of which 11 (17.5%) fulfilled the criteria for HPS. IPVD were also noted in 4 (26.6%) cases of NCPF and 3 (30%) of EHPVO, though only 2 (13.3%) and 1 (10%) respectively had elevated alveolar-arterial gradient and liver dysfunction in addition. Age and sex distribution and duration of symptoms were not different in patients with HPS. Patients with HPS had higher incidence of dyspnea, platypnea, clubbing and spider nevi.

Hepatopulmonary syndrome is present in 17.5% of cirrhotics, 13.3% of patients with NCPF and 10% with EHPVO. Patients with HPS had significantly higher incidence of dyspnea, platypnea, clubbing and spider nevi.[11]

In the present study, Splenomegaly was found to be present in 72 percent of the patients while anaemia was found to be present in 60 percent of the patients. In 32 percent of the patients, esophageal varices were of grade 3 while in 28 percent of the patients, esophageal varices were of grade 2. Arora NK et al performed a study at the tertiary care centre in northern India. Children below the age of 14 years with suspected portal hypertension were prospectively assembled into a cohort to determine the etiology and clinical profile of portal hypertension. Of the 115 patients with portal hypertension, 76.5% had extrahepatic portal hypertension (EHPH). Remaining 23.5% of the cases had intrahepatic and post-hepatic causes of portal hypertension. Children with EHPH had a significantly earlier onset of symptoms as compared to those with intrahepatic portal hypertension ($p = 0.002$) and bled significantly more frequently ($p = 0.00$). Forty per cent of patients with chronic liver disease (CLD) never had jaundice. History suggestive of potential etiological factors could be elicited in only 7% of EHPH patients. The commonest site of block in splenoportal axis was at the formation of the portal vein. An inverse relation of bleeding rates with duration of illness was seen in EHPH. Of the 10 CLD patients in whom liver biopsy could be done, cirrhosis was present in 6 patients. Understanding the natural history of EHPH and portal hypertension due to other etiologies may have significant implications in choosing the appropriate intervention and predicting the outcome.[12]

CONCLUSION

From the above results, the authors conclude that constitutional symptoms and abdominal distension are the most common components of clinical profile among portal hypertension patients. However; further studies are recommended.

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