

Correlating Colonic Mucosal Alterations with Severity of Portal Hypertension in Liver Cirrhosis Patients: A Histopathological and Clinical Study

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Conflict of interest: Nil

Abstract:

Background: The aim of the study is to find relationship between Colonic Mucosal changes in patients of Liver Cirrhosis with Portal Hypertension conducted at JNKTMC, Madhepura.

Result: The commonest symptom in patients was abdominal distension 30 (100%), next common was jaundice 20 (66.7%), malena 17 (56.7%), hematemesis 10(33.3%), hematochezia 10(33.3%), and pruritis 2(6.6%) was noted. It is evident from table no.13 that out of 30 patients, serum prothrombin time was prolonged in 30 (100%) patients, serum albumin was decreased in 20 (66.7%) patients, platelet count was decreased in 16 (53.3%), serum bilirubin was raised in 14 (46.7%) patients, SGOT/SGPT was raised in 17 (56.7%) patients.

Conclusion: Our study states that most of the changes which we found on colonoscopic studies were similar to other studies. The only finding which we got in excess in comparison to other studies was colitis like abnormality which was 73.3% which may be probably due to chronic intestinal infections which occur in our country.

Keywords: Colonic Mucosal, Liver Cirrhosis, Portal, Hypertension.

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Introduction

Cirrhosis is a pathologically defined entity that is associated with a spectrum of characteristic clinical manifestations. The cardinal pathological features reflect irreversible chronic injury of the hepatic parenchyma and include extensive fibrosis in association with the formation of regenerative nodules. These features result from hepatocyte necrosis, collapse of the supporting reticulin network with subsequent connective tissue deposition, distortion of the vascular bed, and nodular regeneration of remaining liver parenchyma [1]. Cirrhosis represents the final common histologic pathway for a wide variety of chronic liver diseases. The term cirrhosis was first introduced by Laennec in 1826. It is derived from the Greek term *scirrhus* and is used to describe the orange or tawny surface of the liver seen at autopsy.

Chronic liver disease and cirrhosis result in about 35,000 deaths each year in the United States. Cirrhosis is the ninth leading cause of death in the United States and is responsible for 1.2% of all US deaths. Many patients die from the disease in their fifth or sixth decade of life. Each year, 2000 additional deaths are attributed to fulminant hepatic failure (FHF). FHF may be caused viral hepatitis (e.g., hepatitis A and B), drugs (e.g. acetaminophen), toxins (e.g. *Amanita phalloides*, the yellow death-cap

mushroom), autoimmune hepatitis, Wilson disease, and a variety of less common etiologies. Cryptogenic causes are responsible for one third of fulminant cases. Patients with the syndrome of FHF have a 50-80% mortality rate unless they are salvaged by liver transplantation. [2]

Material and Method

The study was carried out on 30 patients of liver cirrhosis with portal hypertension, both from in-patients admitted in medicine wards and out-patients attending medicine OPD and gastroenterology OPD at JNKTMC, Madhepura. from One year. The selection of patients was done by Simple Sampling method.

Data collected from each patient including age, gender, location, symptoms at the time colonoscopy, alcohol use, cigarette use, aspirin use, NSAID use, aetiology of Cirrhosis, Child Pugh class, history of upper GI bleeding, previous treatment of oesophageal varices, upper GI tract abnormalities in those who underwent upper GI endoscopy.

A detailed clinical assessment was done in all cases including both general physical and systemic examination.

Patients will be further evaluated with various

investigations including CBC, RBS, RFT's, LFT's, PTwith INR, Urine R/M, USG abdomen, Chest X ray, Serum electrolytes, HBsAg test, liver biopsy and UGI endoscopy before undergoing colonoscopy.

Cirrhosis was confirmed by histology or by compatible physical findings, laboratory tests, and radiographic features. Portal hypertension was documented by endoscopic or radiographic evidence of oesophageal, gastric, or intra- abdominal Varices. The severity of cirrhosis was graded using the child Pugh classification.

Inclusion Criteria

1. Patient of liver cirrhosis with portal

hypertension

2. Age group 10-60 yrs
3. No history of any antecedent long standing illness in the form of tuberculosis, IHD etc.,

Exclusion Criteria

1. Presence of any infection at the time of study
2. Co-morbid conditions
3. Liver malignancy
4. Cardiac diseases
5. Massive ascitis
6. Hepatic failure
7. Inadequate bowel preparation
8. Non cirrhotic liver disease

Results

Table 1: Symptom profile of cases

Symptoms	No of Cases (N)	%
Jaundice	20	66.7%
Abdominal Distension	30	100%
Hemetemesis	10	33.3%
Malena	17	56.7%
Hematochezia	10	33.3%
Pruritis	2	6.6%

The commonest symptom in patients was abdominal distension 30 (100%), next common was jaundice 20 (66.7%), malena 17 (56.7%), hemetemesis 10(33.3%), hematochezia 10(33.3%), and pruritis 2(6.6%) was noted.

Table 2: Investigation profile of cases

Investigations	Normal		Abnormal	
	No	%	No	%
Platelet Count	14	46.7%	16	53.3%
S. Bilirubin	16	53.3%	14	46.7%
Sgot/Sgpt	13	43.3%	17	56.7%
Alk Phosphatase	3	10%	27	90%
S. Albumin	10	33.3%	20	66.7%
Prothrombin Time	0	0%	30	100%

It is evident from table no .13 that out of 30 patients, serum prothrombin time was prolonged in 30 (100%) patients, serum albumin was decreased in 20 (66.7%) patients, platelet count was decreased in 16 (53.3%), serum bilirubin was raised in 14 (46.7%) patients, SGOT/SGPT was raised in 17 (56.7%) patients.

Discussion

Several studies have described the colonic findings associated with cirrhosis and portal hypertension [3,4]. The features of portal hypertensive colopathy are not well defined but have included vascular lesions, colitis like abnormalities, rectal varices and haemorrhoids or a combination of these findings [5].

There is confusion regarding the diagnostic criteria and clinical significance of this condition. This might be attributable to imprecise terminology, lack of uniform endoscopic descriptions, interobserver variability, and the absence of distinctive histopathologic features. Various vascular abnormalities have

been observed in the mucosa of upper gastrointestinal tract of cirrhotic patients, including gastro esophageal varices and gastric antral vascular ectasia [6]. These vascular lesions account for most of the upper gastrointestinal bleeding in cirrhotic patients. Similarly, vascular ectasias and varices may occur in the colonic mucosa of cirrhotic patients, and bleeding from these vascular lesions was reported [7].

Conclusion

Our study states that most of the changes which we found on colonoscopic studies were similar to other studies. The only finding which we got in excess in comparison to other studies was colitis like abnormality which was 73.3% which may be probably due to chronic intestinal infections which occur in our country.

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