

ENDOSCOPIC DIAGNOSIS OF DUODENAL ULCER FREQUENCY IN CHRONIC LIVER DISEASE, A TERTIARY CARE ASSESMENT.

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Abstract:

Introduction: The duodenal ulcers are commonly seen in subjects of liver cirrhosis. Portal hypertension, splenomegaly, EV (esophageal varices) and duodenal ulcer are caused by cirrhosis. A grave complication of duodenal ulcer associated with noteworthy morbidity and mortality is bleeding. It is therefore suggested for the subjects suffering from liver cirrhosis must be observed routinely for the existence of duodenal ulcers initially at the time of diagnosis and then intermittently during life. Duodenal ulcers may result in severe bleeding in subjects suffering from liver cirrhosis, stressing that duodenal ulcer should be monitored as the source of hemorrhage reasonably than varices (esophageal). Current research is aimed to demonstrate the relationship between duodenal ulcers in subjects with cirrhosis as presented in Medical Department. The implementation of its consequences might assist in the timely treatment of dangerous bleeding from upper gastro-intestinal tract. **Objective:** This study was aimed to observe the occurrence of duodenal ulcer in cirrhotic subjects. **Study design:** This study was cross-sectional. **Place and Duration:** In the Medicine Units of PMC Hospital Nawabshah and Lakyari endoscopic suit Hyder Medical Centre Nawabshah for one year duration from January 2019 to December 2019. **Methods:** One hundred and forty five subjects having liver ecotoxicity on the abdominal ultra sound examination and meeting the inclusion criteria were recruited in current study and the. After taking the informed consent upper gastro-intestinal tract endoscopy was performed in all subjects and the existence and count of duodenal ulcers were recorded. The location of the ulcer, its size and bleeding from the ulcer was also noted. **Results:** The incidence of ulcers (duodenal) was 17.24 %, i.e. 25 out of 145 patients, and 120 (82.75%) were negative for ulcers during endoscopy. Out of 145, 15 (10.34%) patients with bleeding duodenal ulcer and 10 (6.89%) were without evidence of duodenal bleed. **Conclusion:** The study showed that 17.24% of patients with cirrhosis had duodenal ulcers. Its use will help to identify the cause of bleeding in patients with cirrhosis and help in treatment during endoscopy of the upper gastrointestinal tract.

Key words: liver cirrhosis, Duodenal Ulcer, Upper Gastro-Intestinal Endoscopy.

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INTRODUCTION:

Cirrhosis a well-known global issue and may be observed in all communities, race groups, and all ages and in both genders. Alcoholism and viral hepatitis are the commonest causes of cirrhosis. Cirrhosis is an increasing burden of morbidity and mortality in Great Britain and it is estimated that 30,000 cases of cirrhosis are there and at least 7,000 new cases are diagnosed each year¹⁻². In the United Kingdom, there was a 45% increase in the incidence of liver cirrhosis and in the decade 1992-2001 a 68% rise in the occurrence was noted. In the US mortality related with cirrhosis was responsible for 1.2% of total deaths³. Rendering to the United States

CDC (Center for Disease Control), Even though the reason of deaths due to liver cirrhosis and CLD (chronic liver disease) fell from 7 to 12 in 2000. The mortality of individuals from this disease was 26,219 in the United States⁴⁻⁵. Cirrhosis is caused by hepatic cell necrosis resulting in fibrosis and lump development. The construction of the liver is usually altered, which prevents blood flow and liver function⁶⁻⁷. The clinical characters of portal hypertension and compromised liver cell functions are the consequences of this disorder. The main complications are portal hypertension, acid, liver failure, encephalopathy, hepatocellular carcinoma and coagulopathy. In patients with

cirrhosis, gastro-intestinal bleeding is usually related to esophageal varices. Though, it is analysed that in subjects with cirrhosis 05-15% bleed from duodenal ulcers in place of varicose veins. In subjects suffering from liver cirrhosis 30% had signs and symptoms dyspepsia due to ulcer peptic disease. In the United States the frequency of peptic ulcers is 10.00%. In the same way duodenal ulcers are four times more common than peptic ulcers. In Pakistan, the proportion is 05: 01, and the rate of gastric and duodenal ulceration is very high in some Indian regions. In patients with liver cirrhosis the frequency of duodenal ulcers is 09.5%. A solid association remains among peptic ulcer disease and *Helicobacter pylori* (*H. pylori*). Duodenal ulcers are more common than gastric ulcers, and their prevalence rises is related with age. In Pakistani population gastric and duodenal ulcers are more common and are mostly NSAID-related. Infection with *Helicobacter pylori* is commonly seen in NSAID related peptic ulcer⁸. In patients with liver cirrhosis gastric and duodenal ulcers have been reported to be particularly more common. In these patients with cirrhosis, the existence of gastric and duodenal ulcers is considerably related with hypertensive gastro-pathy, and is not associated with infection of *H. pylori*. Consumption of alcohol supports the appearance of corrosions in the stomach and duodenum. It is observed that *H. pylori* abolition does not reduce percentage of the ulcers remaining in patients with cirrhosis, suggesting that the infection by *H. pylori* may not be an important threat agent for PU disease in subjects with cirrhosis. Therefore, routinely eradication of *H. pylori* could not be guaranteed in subjects suffering from liver cirrhosis and PUD. *H. pylori* infection is directly related to ulcer (duodenal) in the common populace. Conversely, duodenal ulcers appear as an independent of infection by *H. pylori* in cirrhotic subjects. The healing processes in duodenal ulcers are slow in subjects with liver cirrhosis and chances of recurrences are usually more in comparison to subjects without cirrhosis. In patients with cirrhosis 79.00% of recurrences are without symptoms⁹⁻¹⁰. Decreased counts of platelet, prolonged prothrombin time, and a decrease in coagulation factors are the causes which may lead to bleeding. Duodenal ulcers are common in subjects suffering from cirrhosis in comparison to the common people. Previously most of the cases of bleeding in subjects suffering from liver cirrhosis had been related with esophageal varices¹¹. The upper gastrointestinal tract endoscopy had revealed that erosions, gastritis or peptic ulcers, particularly duodenal ulcers,

are accountable for bleeding. There is no statistics in our community concerning the incidence of duodenal ulcers in subjects with cirrhosis, which is why the diagnosis of duodenal ulcer can be overlooked in patients, and therefore a duodenal ulcer can be treated accordingly might be late, particularly in subjects presenting with haematemesis¹¹. The current research was aimed to observe the incidence of duodenal ulcers in subjects suffering from liver cirrhosis. Current research had been intended to assist and treat subjects suffering from liver cirrhosis associated with duodenal ulcers by learning about their frequency and reducing disease burden and death.

MATERIALS AND METHODS:

This research was focused at the *Medicine Units of PMC Hospital Nawabshah for one year duration from January 2019 to December 2019*. The planned sample bulk was 145 cases with a 5% margin of error and a 95% confidence level. The incidence of duodenal ulcers was 09.5%, in patients with cirrhosis. An improbable purposeful sampling technique was used. According to the operational definition, male and female patients aged 18 to 60 years with cirrhosis. Patients suffering from cerebrovascular disease, COPD (chronic obstructive pulmonary disease), myocardial infarction, corrosive uptake, encephalopathy, and CRF (chronic renal failure) were omitted.

RESULTS:

A sum of 145 subjects with ascites and enlarged spleen on the physical analysis, augmented echogenicity of liver and general abdominal parenchymal equation in abdominal ultrasound were selected. Figure I showed that 59.31% of 145 patients are male and 40.69% are female. The overall percentage of men is higher than the percentage of women. Cirrhosis was more common in the 41-60 middle age group, the mean age was 51.30, and standard deviation was 10.182.

The frequency of duodenal ulcers was 17.24 %, i.e. 25 out of 145 patients had 25 had DU, and 120 (82.75%) negative ulcers during endoscopy. Out of 145, 15 (10.34%) patients with duodenal ulcer bleeding and 10 (6.89%) were without evidence of duodenal bleed. In the case of duodenal ulcer, it occurs in the first part of the duodenum in 12 patients (8.27%), and in the second part of the duodenum 08 (5.51%) in 05 (3.44%) patients. In terms of gender with duodenal ulcer, 5.51% (08 out of 59) women and 11.72% men (17 out of 86 men) had duodenal ulcers (Figure II).

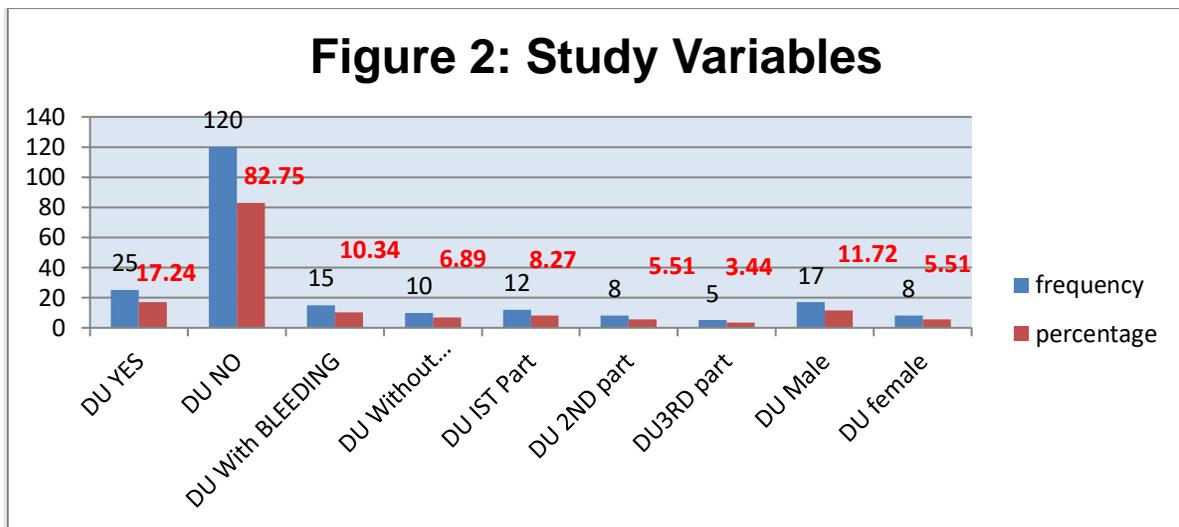
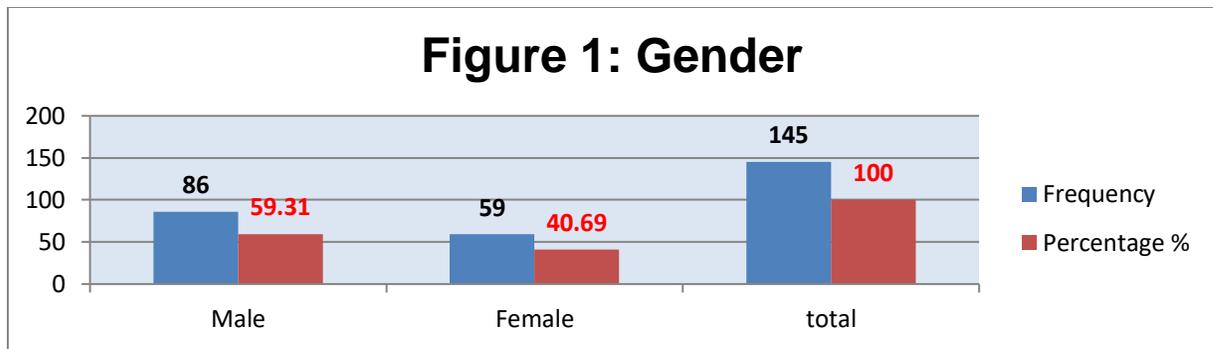


Table 1: Male and female with and without DU in relation to duration of CLD.

	MALE	FEMALE	TOTAL	p-value
DU YES	17(11.72)	8(5.51)	25(17.24)	0.005
<03 years	2(1.37)	1(0.68)	3(2.06)	
3-5 years	5(3.44)	2(1.37)	7(4.82)	
>5 years	10(6.89)	5(3.44)	15(10.34)	
DU NO	69(47.58)	51(35.17)	120(82.75)	
<03 years	9(0.06)	5(0.03)	14(9.65)	
3-5 years	20(13.79)	12(8.27)	32(22.06)	
>5 years	40(27.58)	34(23.44)	74(51.03)	

Table 2: Male and female in relation to duration of CLD.

CLD duration	MALE	FEMALE	total	p-value
<03 years	11(7.58)	5(3.44)	16(11.03)	0.005
3-5 years	25(17.24)	15(10.34)	40(27.58)	
>5 years	50(34.48)	39(26.89)	89(61.37)	
total	86(59.31)	59(40.69)	145(100.0)	

The duration of liver disease a total of 25(17 male and 08 females) were positive for DU on endoscopy, while 120 (69 males and 51 females) were negative for duodenal ulcerations. The details of disease duration

and presence of duodenal ulcer is described in above table. As the duration of CLD increases the frequency of duodenal ulcer also increased.as shown in table

16 subjects were with ailment duration known for 03 years (11.03%), 40 subjects for 03-05 years (27.58%), 89 for >5 years (61.37%). Regarding the consequence of disease length on

DISCUSSION:

This study was aimed to observe the incidence of duodenal ulcers in subjects suffering from liver cirrhosis. Most of the patients who took part in our study were 35-55 years old. A similar average age was noted in many of the previous researches in patients with liver cirrhosis⁹. This might be due to the reasons that cirrhosis mostly consequence of chronic hepatitis. Cirrhosis commonly results after one to twenty years following chronic liver disease. GIT bleeding is often attributed to esophageal varices in patients with cirrhosis. But; duodenal ulcer can cause upper gastrointestinal bleeding instead of varicose veins¹⁰. Similarly, in patients with cirrhosis, indigestion may be due to a gastric and duodenal ulcer of approximately 30%, rather than cirrhosis alone. A study from UK analysed the rates of peptic ulcer disease from 1972– 2000, as well as a significant decrease in admissions and mortality associated with peptic ulcer disease¹¹⁻¹². The frequency of all causes of upper gastrointestinal bleed has decreased as analysed in some fresh studies. However, the frequency of bleeding from peptic ulcers remained stable. The most common cause of upper gastrointestinal bleeding is due to peptic ulcer disease and it is analysed in about 50% of totally cases. Esophagitis remains as the second and gastric erosion are at third sources, of bleeding correspondingly. In subjects with liver cirrhosis the esophageal varices are responsible as a cause of bleeding 50-60%. The duration of the disease was changing. Duodenal ulcers were more common in longer patients with cirrhosis. Patients with disease lasting 6 years had a larger duodenal ulcer (29%), while patients with disease lasting 5 years had 17% DU¹³⁻¹⁴. the frequency of DU was 0.02% in patients with a 4-year history and 0% in patients with a 3-year history. In subjects with liver cirrhosis the incidence of duodenal ulcers is more or less similar as it was defined in earlier periods. Duodenal ulcers could be the source of upper gastrointestinal bleeding in subjects suffering from cirrhosis. The existence or nonexistence of duodenal ulcers is related with duration of cirrhosis¹⁵. Endoscopic scrutiny for duodenal ulcers is valuable for diagnosing and treating subjects with liver cirrhosis.

CONCLUSION:

The incidence of duodenal ulcers was 17.24 % in subjects of liver cirrhosis. The influence of disease duration on the appearance of duodenal ulcer is obvious, but more research is needed.

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duodenal ulcers, as the duration of illness had increased the ratio of duodenal ulcer also increased. As shown in table 2

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