

PEPTIC ULCER DISEASE AMONG PATIENTS WITH LIVER CIRRHOSIS IN JUTH

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INTRODUCTION

Peptic ulcer is a break in the lining of the stomach or the duodenum, with a diameter of at least 0.5 cm penetrating through the muscularis mucosa.¹ Peptic ulcer disease remains an important cause of morbidity and increased health care costs.² The prevalence rate of peptic ulcer disease in the general population in different regions of the world as reported in previous studies include; 1.5 – 3.0% in the USA, 2.7% in Italy, 18.3% in Nairobi, Kenya, 24.6% in Accra, Ghana, 11.6% in Ibadan, Nigeria and 9.5% in northern Nigeria.³

Previous studies have shown high prevalence of peptic ulcer disease in patients with cirrhosis and such patients also have a significantly higher risk of peptic ulcer bleeding compared with the general population.⁴ However, the commonest cause of upper GI bleeding in patients with liver cirrhosis remain oesophageal varices which account for 60-65% of UGI bleeding in cirrhotic patients.⁵

Several literatures have reported the prevalence rates of PUD in cirrhotic patients to range between 5-32%.⁶ The presence of peptic ulcer in cirrhotic patients may be associated with some ulcerogenic factors that are specific to patients with liver cirrhosis. Among the proposed factors are hypergastrinemia, decreased gastric

prostaglandin E2 levels, and the observed portosystemic shunting in liver cirrhosis, which may prevent ulcerogenic factors from being cleared by the liver.⁷

This study reviewed the prevalence of peptic ulcers among patients with liver cirrhosis who have had UGI bleeding and those who have never had upper GI bleeding but were referred to have upper GI endoscopy for variceal surveillance.

METHODOLOGY

This was a retrospective study of 112 adult patients aged 18 and above with liver cirrhosis, irrespective of etiology, who were referred for upper GI endoscopy on account of upper gastrointestinal bleeding (UGIB) and for variceal surveillance to the endoscopy unit of Jos University Teaching Hospital (JUTH) between October 2018 and December 2019.

RESULTS

One hundred and twelve (112) patients were reviewed, 90 (80.36%) were males and 22 (19.64%) females. The mean age of study population is 46.04 (+/- 17.70) years. 37 (33.01%) of the liver cirrhosis patients had peptic ulcer disease, 101 (90.18%) had oesophageal varices and 59 (52.68%) Portal hypertensive gastropathy (PG).

Sixty four (57.10%) were referred on account of upper gastrointestinal bleeding (UGIB) and 48 (42.90%) for variceal surveillance (VS).

Peptic ulcer disease (PUD) was found in 10 (20.83%) of the 48 referred for variceal surveillance and 27 (42.19%) of the 64 referred on account of UGIB.

Table 1: Characteristics of study population

	Frequency	Percentage (%)
Gender		
Male	90	80.36
Female	22	19.64
Total	112	100.00
Age (years)		
20-29	10	8.93
30-39	23	20.54
40-49	41	36.61
50-59	22	19.64
60-69	12	10.71
70-79	4	3.57
Total	112	100.00
<i>Mean (±SD) age 46.04 (± 11.70)</i>		
Peptic ulcer disease	37	33.01
Oesophageal varices	101	90.18
Portal gastropathy	59	52.68
Indications for endoscopy		
Variceal surveillance	48	42.90
UGIB*	64	57.10
Total	112	100

*Upper gastrointestinal bleeding

Table 2: Upper GIT endoscopic findings based on indication

Indication	DU	GU	PUD	Varices	PG	PUD+Varices	PUD+PG	PG+Varices	PUD+PG + Varices
VS	3	8	10	42	22	9	5	16	4
UGIB	7	25	27	59	37	23	13	32	9
Total	10	33	37	101	59	32	18	48	13

UGIB- upper gastro-intestinal bleeding; VS - Variceal bleeding; PUD – peptic ulcer disease; DU- duodenal ulcer; PG – portal hypertensive gastropathy; GU - Gastric ulcer.

DISCUSSION

The prevalence rate of peptic ulcer in cirrhotic patients in this study was 33.01%. This figure is higher than the prevalence rates in the general population.³

It is also higher than the combined prevalence rate of gastric and duodenal ulcers (4.9% and 17.3% respectively) observed in a previous study of dyspeptic patients referred for upper GI endoscopy at Jos University Teaching Hospital.⁹ This high prevalence was due to some ulcerogenic factors that are specific to liver cirrhotic patients as earlier mentioned.

It is however lower than peptic ulcer rates in a similar study in Callao-Peru where 52% of patients with cirrhosis had PUD.⁶ The reason for the higher rate of peptic ulcer in that study may be due to the smaller sample size in that study population and the fact that the study participants were hospitalized sick patients.

Peptic ulcer has been identified as the most common cause of Non-Variceal UGI bleeding in patients with liver cirrhosis accounting for up to 50% of cases.¹⁰ While it was difficult to state from our study the exact number of patients who bled solely from gastric/duodenal ulcers, PUD was detected in 42.19% of patients who had UGI bleeding. This is over twice the number of patients with PUD who had UGI endoscopy for surveillance (without prior history of upper gastrointestinal bleeding).

Liver cirrhosis doesn't only predispose to development of PUD but also increase likelihood of bleeding from these ulcers.

This increased risk of bleeding in cirrhotic patients is multifactorial which include coagulation dysfunction and thrombocytopenia that is frequently seen in these patients.¹¹

CONCLUSION

Peptic ulcer disease is an important cause of UGI bleeding in patients with liver cirrhosis. Although the prevalence of variceal bleeding in cirrhotic patients is high, peptic ulcer disease remain an important cause of upper gastrointestinal bleeding in this group of patients. It is important for the physician to promote avoidance of PUD risk factors and for early diagnosis and prompt treatment where present. There is need for further research in the assessment of efficacy of standard of care of PUD in patients with liver cirrhosis.

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