Journal of Clinical and Medical Images

Research Article

ISSN: 2640-9615 | Volume 6

Endoscopic Variceal Ligation in Oesophageal Varices

Vanlalhlua C[1*] and Lalramlawmi R[2]

[1]Associate Professor, Department of Surgery, Zoram Medical College, Mizoram

[2]Endoscopist, State Referral Hospital, Falkawn, Zoram Medical College, Mizoram

[*]Corresponding author:

Chawngthu Vanlalhlua,
Associate Professor, Department of General Surgery, Zoram Medical College, Falkawn, Mizoram, N.E, India. Tel: 9862558726,
E-mail: drchlua@gmail.com

Received: 19 Nov 2022
Accepted: 26 Dec 2022
Published: 03 Jan 2023
J Short Name: JCMI

Keywords:

Endoscopy, Erosions/Erythema, Ulcers, Helicobacter pylori, Malignancy, Varices

Citation:

Vanlalhlua C, Endoscopic Variceal Ligation in Oesophageal Varices. J Clin Med Img. 2022; V6(22): 1-4

1. Abstract

1.1. Background: Esophageal Variceal Bleeding (EVB) is a major complication in patients with liver cirrhosis that is treated with Endoscopic Variceal Ligation (EVL). It is perhaps the most devastating portal hypertension-related complication in patients with live cirrhosis, occurring in up to 30% during the course of their illness. The aim of this study was to assess the early feeding after ligation.

1.2. Materials and Methods: This study comprised of 105 patients with esophageal varices in our Endoscopy centre, who had undergone Endoscopic Variceal band ligation during the period of 2 years at Zoram Medical College starting from November 2017 to October 2019. All patients referred for Endoscopy were included. Age ranges from 8 years to 92 years old. UGI Endoscopy was performed by Endoscopist/Surgeons in all patients as a primary diagnostic investigation and interpretation of the findings as observed by a single observer was noted, recorded and reported. Endoscopic biopsy was taken when indicated. H. pylori tests were done in almost all the cases.

1.3. Results: The most common finding was Erosion/Erythema in Gastric Antrum/Fundus (57.87%) followed by erosion/erythema in lower esophagus (17.96%) and Duodenitis in 10.25%. Biopsy was taken from ulcers/growths/polyps/erosions in 402 (6.80%) cases out of which 81 (1.37%) cases were found malignant. Esophageal Varices was seen in 138 patients where Variceal ligation was done in 103 cases. Helicobacter pylori infection was found in 1475 (24.95%) of cases.

1.4. Conclusion: We conclude that UGI Endoscopy plays an important role in patients with abdominal pain. Investigation for H. pylori should be considered for all patients undergoing endoscopy. Biopsy should be taken from any suspicious lesions.

2. Introduction

Esophageal Variceal Bleeding (EVB) is a major complication in patients with liver cirrhosis that is treated with Endoscopic Variceal Ligation (EVL). It is perhaps the most devastating portal hypertension-related complication in patients with live cirrhosis, occurring in up to 30% during the course of their illness. However, rebleeding has been reported to occur in 20% of patients which can lead to high (40%) bleeding-related mortality [1]. There is no consensus on the appropriate time to start oral feeding following EVL. Esophageal varices are present in nearly 30% - 40% of patients with compensated cirrhosis and 60% of those decompensated cirrhosis [2]. Variceal hemorrhages occur only when there is a clinically significant portal hypertension >12mmHg [3]. The one-year rate of a first bleeding episode is 5-15% and its risk is defined by Variceal size, red signs on the varices and severity of liver disease in patients [4]. As many as 70% of the survivors have recurrent bleeding within one year after the index hemorrhage [5]. Patients surviving the first episode of Variceal bleeding are at high risk of recurrent bleeding, with a mortality 33% and thus should have secondary therapy to prevent further Variceal bleeding [6]. The combination therapy of EVL and nonselective beta-blockers for the prevention of recurrent Variceal hemorrhage is now the preferred therapy [7].

Researchers have hypothesized that early feeding may increase the risk of early rebleeding after EVL in patients for various reasons. Oral feeding may cause postprandial hyperemia of mesenteric cir-

culation which in turn may lead to Variceal rupture as a result of an increase of portal pressure [8]. Or oral feeding may dislodge the Variceal bands, thus leading to early rebleeding. Also, dysphagia to solid food has been reported to occur in the initial few days post EVL [9]. Early feeding with a liquid diet after 4 hrs and a regular solid diet 72hrs after EVL does not lead to a higher rebleeding rate compared to delayed feeding as reported by GH Lo1. A recent study by Singh el al observed that early feeding with a liquid diet starting within 1 hr and thereafter increasing to a normal diet within 4hr did not increase the rate of rebleeding as compared with patients with delayed feeding [10]. The aim of study was to compare the effect of early feeding versus delayed feeding on Variceal rebleeding following EVL in patients with cirrhosis.

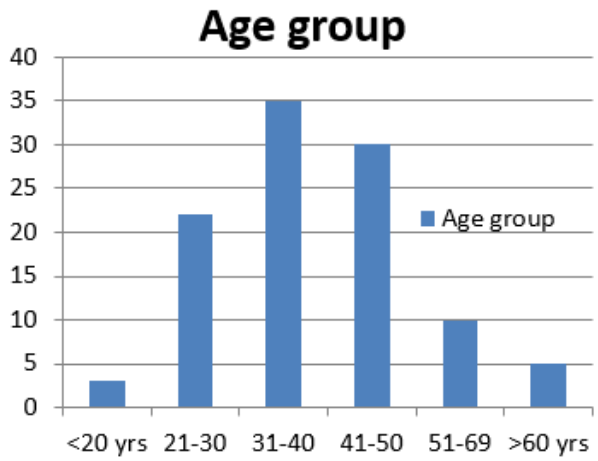
3. Materials and Methods

This prospective randomized controlled study was conducted in the Endoscopy unit of the department of Surgery at Zoram Medical College Falkawn during the period of 2 years from November 2017 to October 2019. A total of 105 haemodynamically stable patients with esophageal varices in patients with liver cirrhosis were included in the study. All patients aged between 20 to 80 yrs., cirrhosis diagnosed by clinical, biochemical or radiological criteria, EVL of bleeding esophageal varices were included. Exclusion criteria were patients with hemodynamically unstable, uncooperative patients, advanced heart, lung and kidney disease, sepsis, advanced HCC, failure to control Variceal bleeding by EVL, Child-Pugh score >13, overt hepatic encephalopathy, esophageal varices grade I and gastric Variceal bleeding. Detailed history taking and clinical examination were carried out in all patients. The severity of liver disease was classified according to Child-Pugh classification [11]. Before taking up the study, approval for carrying out the research work was obtained from the Hospital Ethical Committee. Informed Consent was taken for each case.

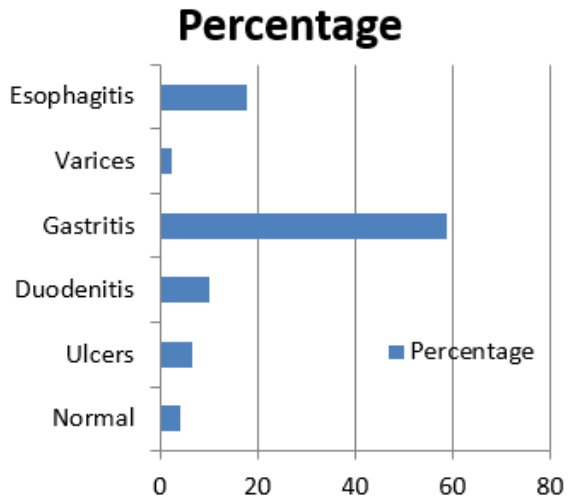
Under local anesthetic (10% Lignocaine) spray and sedation with Midazolam, Endoscopy was performed using Olympus/Sonoscape/Auhoa EsophagoGastroDuodenoscopy and the endoscopic findings were digitally recorded. Before EVL, a diagnostic endoscopy is carried out to evaluate the severity and location of esophageal varices. Varices were classified according to [12]. The varices were banded by using six shooter devices. Typically, six bands are applied during EVL, staring at the GE junction and progressing upward for 5-8cm. two consecutive bands usually placed 2 cm apart on each varix. If the varix is actively bleeding or a varix with a hemocystic spot is found, the first band is usually applied on this spot.

EGD was performed at 1 week, 1 month and 3months post EVL to detect recurrence of varices. Variceal obliteration was defined as complete disappearance of varices or when the sizes of varices were too small to be banded. Rebleeding from varices was defined as the presence of hematemesis and/or malena and the bleeding site was identified to be from esophageal varices by emergency endoscopy. Recurrence of varices was defined as reappearance of varices or enlargement of previous small size varices that became accessible be EVL.

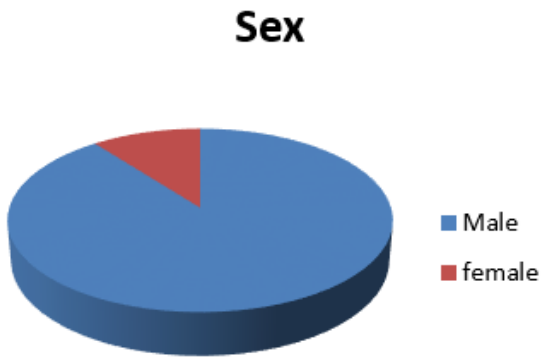
The statistical analysis was done using a 2x2 contingency table and p value was calculated by Fisher's exact test and their statistical significance was noted.



Bar Chart I: Showing Age Distribution



Bar Chart II: Showing Common Findings



Pie Chart I: Showing Sex Distribution

Table 1: Age group distribution

Age group	No. of patients	Percentage
< 20 yrs	3	02.86%
21-30	22	20.95%
31 -40	35	33.34%
41 -50	30	28.57%
51 -60	10	09.52%
>60 yrs	5	04.76%
Total	**105**	**100%**

Table 2: Sex distribution

Sex Distribution	No. of Patients	Percentage
Male	94	89.52%
Female	11	10.48%
Total	**105**	**100%**

Table 3: Endoscopic Findings of common conditions

Sl.no	Endoscopic Findings	No. of patients	Percentage
1	Gastro-Esophageal Reflux Esophagitis (Erosions/erythema)	1062	17.96%
2	Erosive or Erythematous Gastritis (Fundal/Antral/ Body)	3485	58.97%
3	Erosive/Erythematous Duodenitis	605	10.25%
4	Biopsy taken from Ulcers/Growths (Esophagus/Stomach/ Duodenum)	402	6.80%
5	Esophageal Varices of various grades	138	2.33%
6	Normal study	218	3.69%
	Total	**5910**	**100%**

4. Results and Observations

This study includes 105 patients referred to our Endoscopy centre of varying ages ranging from 18 yrs to 65 yrs of age with the maximum number in the age groups of 31-40 yrs of as shown in the table. Esophageal Varices was seen in 138 cases out of which Variceal Ligation was done in 105 cases.

In our study, the most common finding which constituted 58.97% was erosive/erythematous Gastritis of any parts of stomach which may be fundal/body/antral gastritis. It was followed by erosion/ erythema in the lower Esophagus (Esophagitis) which constituted 17.96%. Duodenitis (erosive/erythematous) was found in 10.26% whereas ulcer or growth of any sites were seen in 6.80% where biopsy was taken. Esophageal Varices was seen in 138 cases (2.33%) out of which Variceal Ligation was done in 105 cases. We report normal endoscopic study in 218 cases which constituted 3.69% of the total cases seen in our centre.

5. Discussion

Esophageal Variceal Bleeding (EVB) is a major complication in patients with liver cirrhosis that is treated with Endoscopic Variceal Ligation (EVL). It is perhaps the most devastating portal hypertension-related complication in patients with live cirrhosis, occurring in up to 30% during the course of their illness. Moreover, Variceal bleeding leads to deterioration in liver function and is a common trigger for other complications of cirrhosis like bacterial infections of hepatorenal syndrome.

The age range of the patients in our study was from 18 to 65, the youngest patient was of 18 yrs and the eldest one was of 65 yrs. There are 94 male and 11 female patients in the ratio of 8.54:1. The main cause of cirrhosis in this patient was alcohol induced in 75%, rest of the patients 25% had cirrhosis due to post viral hepatitis. Severity os cirrhosis was decided by Child Pugh classification. 55% patients belonged to Child pugh B, 25% were classified under Child pugh B, and 20% in Child pugh A.

However, rebleeding has been reported to occur in 20% of patients which can lead to high (40%) bleeding-related mortality [1]. There is no consensus on the appropriate time to start oral feeding following EVL. Esophageal varices are present in nearly 30% - 40% of patients with compensated cirrhosis and 60% of those decompensated cirrhosis [2]. Variceal hemorrhages occur only when there is a clinically significant portal hypertension >12mmHg [3]. The one-year rate of a first bleeding episode is 5-15% and its risk is defined by Variceal size, red signs on the varices and severity of liver disease in patients [4]. As many as 70% of the survivors have recurrent bleeding within one year after the index hemorrhage [5]. Patients surviving the first episode of Variceal bleeding are at high risk of recurrent bleeding, with a mortality 33% and thus should have secondary therapy to prevent further Variceal bleeding [6]. The combination therapy of EVL and nonselective beta-blockers for the prevention of recurrent Variceal hemorrhage is now the preferred therapy [7].

6. Conclusion

Esophageal Variceal Bleeding is a major complication in patients with liver cirrhosis that is treated with Endoscopic Variceal Ligation. It is perhaps the most devastating portal hypertension-related complication in patients with live cirrhosis, occurring in up to 30% during the course of their illness. Patients surviving the first episode of Variceal bleeding are at high risk of recurrent bleeding, with a mortality 33% and thus should have secondary therapy to prevent further Variceal bleeding. The combination therapy of EVL and nonselective beta-blockers for the prevention of recurrent Variceal hemorrhage is now the preferred therapy.

References

1. Lo GH, Lin CW, Hsu YC. A controlled trial of early versus delayed feeding following ligation in the control of acute esophageal variceal bleeding. J. Clin. Med. Assoc. 2015; 78: 642-7.
2. Dung HK, Jun YP. Prevention and management of Variceal hemorrhage. International Journal of Hepatology. 2013; 1-6.
3. de Franchis R, Primignani M. Natural history of portal hypertension in patients with cirrhosis. Clinics in Liver Disease. 2001; 5: 645-63.
4. Garcia-Tsao G, Sanyal Aj, Grace ND. Prevention and management

of gastroesophageal varices and Variceal hemorrhage in cirrhosis. Hepatology. 2007; 46: 922-38.

5. Graham DY, Smith JL. The course of patients after variceal hemorrhage. Gastroenterology. 1981; 80: 800-9.
6. D'Amico G, Pagliaro L, Bosch J, Patch D. Pharmacological treatment of portal hypertension: an evidence-based approach. Seminars in Liver Disease. 1999; 19: 475-505.
7. McCormick PA, O'Keefe C. Improving prognosis following a first Variceal hemorrhage over four decades. Gut. 2001; 49: 682-5.
8. Hou Chih M. Is there adequate evidence to encourage early feeding in patients with acute esophageal Variceal bleeding? J. Chin. Med. Assoc. 2015; 78: 631-2.
9. Augustin S, Gonzalel A, Genesca J. Acute esophageal Variceal bleeding: current strategies and new perspectives. World J. Hepatol. 2010; 2: 261-74.
10. Singh SS, Omesh G, Saurabh S, Harsh K, Rajoo SC, Samarth SS. Early feeding after esophageal Variceal band ligation in cirrhotic is safe: Randomized controlled trial. Digestive Endoscopy. 2019; 31: 646-52.
11. Harrison's Principles of Internal Medicine. 18th Edn. 2012; 301: 5056.
12. Tajiri T, Yoshida H, Obara K. General rules for recording endoscopic findings of esophagogatric varices. Dig. Endosc. 2010; 22: 1-9.