



CASE REPORT : DIAGNOSIS AND TREATMENT ESOPHAGEAL VARICES

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ABSTRACT

Background: Esophageal varices are dilated submucosal veins that connect the portal and systemic circulations to the esophagus. It occurs because of portal hypertension (most caused by cirrhosis), portal blood flow resistance, and increased portal vein blood flow. Esophageal variceal bleeding has a higher morbidity and mortality rate than other upper gastrointestinal bleeding types. In cases of esophageal variceal bleeding, an endoscopic examination is required to make a diagnosis, assess varicose veins, and plan management based on the underlying disease. This case report reviews the diagnosis and management of the esophageal varices at ENT-KL department. **Case Presentation:** We present a case in which a 54-year-old woman presented to the emergency department of Cut Meutia Hospital with complaints of painful swallowing and a swollen neck. The patient has had this complaint for 5 years, and is getting worse by the day. A barium swallow examination revealed esophageal varices in one-third of the distal esophagus between the seventh and ninth thoracic vertebrae. **Conclusion:** The patient was diagnosed with esophageal varices and was treated several times before being transferred to a gastroenterology department.

Keywords: *dysphagia; esophageal;odynophagia; portal*

INTRODUCTION

The dilated submucosal distal esophagus veins that join the portal and systemic circulations are known as esophageal varices. It occurs in response to increased portal venous blood flow, resistance to portal blood flow, and portal hypertension, most frequently brought on by cirrhosis.¹ The epidemiological data on esophageal varices are scarce. The etiology of the largest esophageal varices is portal hypertension.² Portal hypertension is a persistent increase in portal blood flow pressure of higher than 10 mmHg, whereas the normal pressure range is between 5 – 10 mmHg. Incidence of esophageal varices are more likely to occur in men than in women, with up to 50% of patients experiencing bleeding at some point.³

The portal venous system does not have a vascular resistance valve between the splanchnic vessels and the right side of the heart; hence the increased pressure will cause a backflow of blood and be blocked. Increased portal pressure also causes the release of vascular angiogenic factors and vasodilator, where this factors causes angiogenesis and the formation of the portosystemic collateral system. The collateral is gradually formed and enlarged, thus connecting the systemic circulation to the portal venous system. This causes the submucosal venous plexus to widen in the distal esophagus.⁴⁻⁷ The first signs of a patient with

esophageal varices are the presence of gastrointestinal bleeding, including hematemesis, hematochezia, and/or melena.

Esophageal varices bleeding has a higher morbidity and mortality average than upper gastrointestinal bleeding such as a peptic ulcer. If left untreated, the mortality of esophageal varices is 30–50%, although the treatment reduces the mortality to 20%. The highest mortality occurs in the first few days to the first few weeks of early bleeding; hence an early intervention is essential to sustain survival. The size of varices is one of the risk factors for bleeding.^{8,9}

Endoscopic examination is needed in esophageal varices to make a diagnosis, assess varicose veins, and plan appropriate management based on the underlying disease. Managing bleeding in esophageal varices was pharmacological therapy, endoscopy including sclerotherapy and ligation, balloon tamponade, transjugular intrahepatic portosystemic shunt (TIPS), and surgery. Besides being used as a rescue therapy, TIPS is also a definitive therapy, considering that variceal bleeding can recur.¹⁰ Surgical procedures include shunt surgery, where this action is only performed if other treatment modalities fail.¹¹⁻¹³



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CASE REPORT

A female patient, 54 years old, came to the emergency room at Cut Meutia Hospital with pain when swallowing. The pain experienced by the patient suddenly and gradually gets more severe. The pain when swallowing has been experienced by patients for \pm 5 years before being treated at the hospital. Headache also came along with severe pain, which the patient felt when swallowing. The patient also experienced neck swelling a few months ago. Based on the patient's information, since \pm 5 years ago, the painful swallowing frequently comes and goes. A history of other diseases like hypertension, diabetes mellitus, and liver abnormality was denied by the patient. There was no history of similar diseases in her family.

Physical examination showed the patient was in a compos mentis state, with heart rate (HR) 74 times/minute, respiratory rate (RR) 20 times/minute, blood pressure 120/80 mmHg, SpO₂ 98%, and body temperature 37⁰ C. The abnormal finding in this patient was conjunctiva pallor (+/+), the examination of the soft palate found a lump at the arcus palatopharyngeal, and the other examination was within normal range. Laboratory examination showed hemoglobin, erythrocytes, leukocytes, and MCHC were within normal range, but there was a slight decrease in hematocrit, MCV, and MCH. The barium swallow test was carried out on the second day of treatment and showed esophageal varices in 1/3 of the distal esophagus at the level of the 7th – 9th thoracic vertebrae (Figure 1).

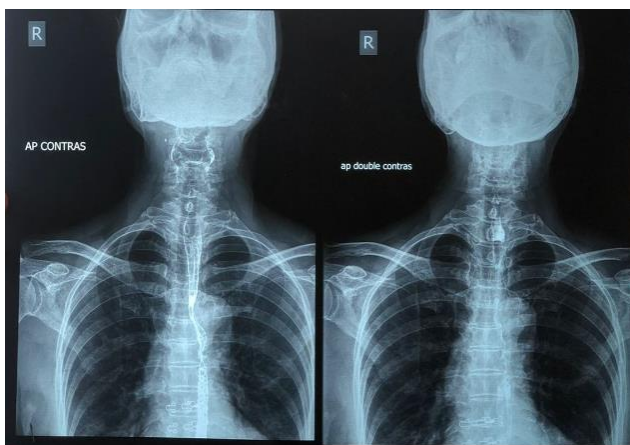


Figure 1. Esophageal varices in case.

Based on the history and examination results, the patient was diagnosed with esophageal varices. During treatment at the ENT-KL department, the patient received several treatments, including cefotaxime, ketorolac, and ranitidine. Furthermore, the patient was consulted by a specialist gastroenterohepatology consultant for further management of this case.

DISCUSSION

A female, 54 years old patient comes with pain when swallowing and neck swelling. Based on the literature, odynophagia and dysphagia are signs of esophageal disorders. Odynophagia is defined as painful swallowing and might occur simultaneously with dysphagia. Odynophagia is caused by esophageal spasm resulting from acute distention, or it might occur secondary due to esophageal inflammation. Dysphagia or difficulty in swallowing might occur due to non-esophageal and esophageal disorders. Esophageal dysphagia can be obstructive or caused by the motor. Obstructive causes are esophageal strictures and extrinsic and intrinsic esophageal tumors, causing the narrowing of the lumen of the esophagus. The causes of motor dysphagia are the decrease, absence, or impaired peristalsis or dysfunction of the upper or lower sphincter of the esophageal.¹⁴

Esophageal varices are dilated submucosal distal esophageal veins that connect the portal and systemic circulations. Increased portal venous blood flow, obstruction to the portal blood flow, and portal hypertension— usually caused by cirrhosis—are the causes of its occurrence.¹ Whereas the normal



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pressure range is between 5 and 10 mmHg. Portal hypertension is a continuous rise in portal blood flow pressure greater than 10 mmHg.^{1,15}

The most common etiology of esophageal varices is portal hypertension. The occurrence of portal hypertension is divided into prehepatic, intrahepatic, and post hepatic (Table 1).¹⁶

Table 1. Etiology of portal hypertension

Pre-hepatic	Intrahepatic	Post hepatic
a. Splenic vein thrombosis	a. Congenital hepatic fibrosis	a. Budd-Chiari syndrome
b. Portal vein thrombosis	b. Idiopathic portal hypertension	b. Inferior vena caval thrombosis
c. External compression on portal vein	c. Tuberculosis	c. Constrictive pericarditis
	d. Schistosomiasis	d. Venocclusive disease
	e. Primary biliary cirrhosis	
	f. Alcoholic cirrhosis	

Laboratory examination shows the parameter within the normal range. The normal laboratory results are consistent with the patient's history of exhibiting the absence of gastrointestinal bleeding, such as hematemesis, hematochezia, and/or melena. Gastrointestinal bleeding is the main symptom that occurs in patients with esophageal varices. The absence of bleeding suggests esophageal varices that is not yet ruptured in the patient. The Barium swallow Test is useful for patients with esophageal varices without bleeding. Multiple filling defects due to venous dilatation on the X-ray will be shown. The results of the barium swallow examination showed esophageal varices in the 1/3 distal esophagus. In patients with portal hypertension, esophageal varices are usually found in the lower 2/3 of the esophagus, at the gastro-esophageal junction, and in the gastric fundus.¹⁷

Based on the literature, 50% of patients with esophageal varices are associated with liver cirrhosis.¹⁸ While the incidence of esophageal varices in non-cirrhotic patients in the literature is not known, this is because data on esophagoscopy is not available.^{19,20} In our case report, the patient had no history of liver disorders. An ENT doctor could not examine the possibility of liver cirrhosis, so the patient consulted to gastroenterohepatology specialist.

The management given to patients includes cefotaxime, ketorolac, and ranitidine. Cefotaxime administration is indicated for patients with esophageal varices with bleeding; as many as two-thirds of patients with variceal bleeding develop an infection, most commonly spontaneous bacterial peritonitis, UTI, or pneumonia. Antibiotics here act as prophylaxis.⁴ Ketorolac is a non-steroid anti-inflammatory drug whose role is to relieve inflammation and treat pain. Giving ketorolac aims to reduce the pain suffered by patients. We follow-up the patient and found she did not return to the gastroenterohepatology specialist. Therefore, we conclude that the etiology and risk factors for esophageal varices in this patient are unknown.

CONCLUSION

Esophageal varices are dilated submucosal veins distal to the esophagus that connect the portal and systemic circulations. It occurs because of portal hypertension (most commonly due to cirrhosis), resistance to portal blood flow, and increased portal vein blood flow. In the following case, a patient came to the emergency room at Cut Meutia Hospital complaining of pain when swallowing and neck swelling. Headaches are also felt to come and go along with pain when swallowing—physical and laboratory examination within normal limits. The patient was then consulted with an ENT-KL specialist for treatment. Furthermore, by the ENT-KL doctor, the patient underwent other supporting examinations, namely barium swallow, and showed esophageal varices. Patients were given the treatment of Cefotaxime, Ketorolac, and Ranitidine. Furthermore, the patient was consulted to Sp.PD-KGEH.

ETHICAL APPROVAL

There is no ethical approval.

CONFLICTS OF INTEREST

The authors declare no conflict of interest

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AUTHOR CONTRIBUTIONS

Investigation, Risa Ayu Nilmarani; data collecting and writing—original draft preparation,



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