

## Esophageal Diverticulum by Barium Sallow

E. Abd Elrahim<sup>1,4</sup>, Ala. M. Abd Elgyoum<sup>1,2</sup>, H. Osman<sup>1,3</sup>, A. Elzaki<sup>1,4</sup>, Ali Hassan<sup>1</sup>

<sup>1</sup>Taif University, college of applied medical science, P.O. Box 2425, Post Code-21944, Taif KSA

<sup>2</sup>National Ribat University, Nile Street Burri, Postal Code-11111, Khartoum, Sudan

<sup>3</sup>College of Medical Radiologic Science, Sudan University of Science and Technology, P.O. Box-1908, Khartoum, Sudan

<sup>4</sup>Faculty of Radiology Science and Medical Imaging, Alzaiem Alazhari University, P.O. Box-1432, Khartoum, North, Sudan

### \*Corresponding author

E. Abd Elrahim

Email: [rashidrahim1976@yahoo.com](mailto:rashidrahim1976@yahoo.com)

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**Abstract:** 33 years old male patient came to the hospital C/O dysphagia, burning sensation, weight loss. The pain is severe when eating hard food, but when the patient eats soft food becomes less. The patient requested to do barium swallow x-ray.

**Keywords:** Barium swallow, X-ray

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### INTRODUCTION

An esophageal diverticulum is a pouch that protrudes outward in a weak portion of the esophageal lining. This pocket-like structure can appear anywhere in the esophageal lining between the throat and stomach. Esophageal diverticula can affect people of all ages, although most cases occur in middle-aged and elderly individuals [1].

Overall, esophageal diverticula are rare, showing up in less than 1 percent of upper gastrointestinal X-rays and occurring in less than 5 percent of patients who complain of dysphagia (difficulty in swallowing)[1].

The diagnosis of the esophageal diverticulum is by simple barium swallow normally revealing the diverticulum. It may also be found with upper GI endoscopy or CT with oral contrast [2].

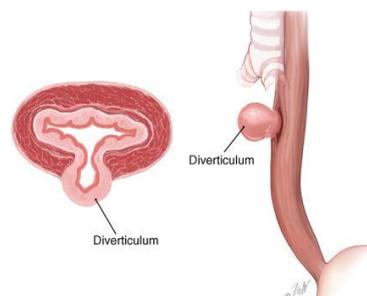
### Barium swallow

Little or no preparations are required for the study of the larynx, pharynx, and esophagus when studied alone[3]. A thick barium mixture is swallowed in supine position and fluoroscopic images of the swallowing process are made. Then several swallows of a thin barium mixture are taken and the passage is recorded by fluoroscopy and standard radiographs. The procedure is repeated several times with the examination table tilted at various angles. A total of 350-450 mL of barium is swallowed during the process[4].

### Esophageal Diverticulum

A diverticulum is a sac or pouch arising from a tubular organ, such as the esophagus Fig 1. This article focuses on diverticula of the esophagus. As is common practice, Zenker diverticulum a type of diverticulum that arises from the posterior hypopharynx[5]. Fig 2.

Esophageal diverticula are classified by location in the esophagus. Upper (pharyngoesophageal, Killian-Jamieson, or Zenker), middle, or lower (epiphrenic). Besides anatomical location, several other ways to classify diverticula of the esophagus and hypopharynx exist. Congenital diverticula are diverticula that are present at birth, while acquired diverticula develop later in life. Diverticula of the esophageal body can sometimes be difficult to classify as congenital or acquired [6].



**Fig. 1: A diagram shows esophageal diverticulum**



**Fig. 2: Barium swallows x-ray show esophageal diverticulum**

### CASE REPORT

33years old male patient came to the hospital C/O dysphagia, burning sensation, weight loss. The pain is severe when eating hard food, but when the patient eats soft food becomes less. The patient requested to do barium swallow x-ray. The barium swallow x-ray was done shows a large swelling in the left wall of the lower part of the esophagus. The final diagnosis is there is large pouch in the lateral part of the esophagus in the lower part, esophageal diverticulum. Fig 3



**Fig 3: Large pouch in the lateral part of the esophagus**

### DISCUSSION

Esophageal diverticula are rare. The true incidence is unknown. The etiology, symptoms and therapeutic requirements suggest a categorization in three forms: pharyngoesophageal (Zenker diverticula), parabronchial and epiphrenic diverticula. Epiphrenic diverticula arise within the distal 10 cm of the thoracic esophagus. The exact prevalence of this condition is not known because asymptomatic cases are usually not discovered. It seems to occur less frequently than Zenker's diverticula with a ratio of 1:5 [7]. The majority of diverticula of the lower third of the esophagus are due to the mechanism of pulsion,

associated with esophageal dysmotility [8]. Most of these are found in middle aged- elderly patients and male gender has a slight predominance. Pathophysiology of the epiphrenic diverticulum is still unclear. The herniation of the mucosa and submucosa through a defect in the muscular layer is probably caused by a longstanding impairment of the esophageal motor activity. However the associated motor disorder is not always recognized and diagnosed.

Using conventional techniques diverticula in the lower portion of the esophagus can be operated with morbidity and mortality rates of 33% and 9% respectively [7].

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