

An Unusual Case of Chest Pain

P Baburaj^a, Shyam Shankar Varma^a, BL Harikrishnan^a

a. Department of Medicine, Jubilee Mission Medical College & Research Institute, East Fort, Thrissur, Kerala*

ABSTRACT

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A 25 year old female from Palakkad was referred to our hospital with a/c onset of difficulty in swallowing and diffuse chest pain of one day duration. There was radiation of pain to right side of neck and right arm. Prior to this she had fever and cough with persistent vomiting for 3 days. Chest X ray showed subcutaneous emphysema on the right side with evidence of pneumomediastinum. Barium swallow done once the patient became symptomatically better, showed evidence of contrast leak.

Boerhaave's syndrome is a transmural perforation of the oesophagus following a forceful emesis. The Meckler's triad defines the classic presentation of Boerhaave syndrome. It is the triad of vomiting, lower thoracic chest pain and subcutaneous emphysema.

Keywords: Chest pain, Barium Swallow Transmural Perforation.

*See End Note for complete author details

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On examination, she was conscious and oriented and vitals were stable. There was subcutaneous emphysema as the right side of neck and right upper limb up to the wrist. On auscultation of the chest there was a positive Hamman's sign (Also known as Hamman's crunch heard co-incident with each heart beat). Other systems were all within normal limits.

Her blood routine examination was unremarkable. Chest X ray showed subcutaneous emphysema on the right side with evidence of pneumomediastinum.



Figure 1. Barium Swallow: Extra luminal contrast arising from left, postero-lateral tear of esophagus

Barium swallow done once the patient became symptomatically better, showed evidence of contrast leak. An Upper gastrointestinal scopy was deferred for fear of re-perforation.

Patient improved following conservative treatment with antibiotics (prophylactic), intravenous fluids, nil by mouth and supportive measures. She recovered well and at the time of discharge was taking oral feeds.

In brief here was 25 year old female who presented with a/c chest pain and odynophagia following incessant vomiting and an examination had subcutaneous emphysema and a positive Hamman's sign suggestive of pneumomediastinum which were confirmed by a chest X ray. A Barium swallow clinched the diagnosis of a contrast leak secondary to a esophageal tear, which subsequently sealed off spontaneously

This was a case of BOERHAAVE'S syndrome which was first reported by Herman Boerhaave. Boerhaave's syndrome is a transmural perforation of the oesophagus following a forceful emesis.

DISCUSSION

Boerhaave's syndrome was first described by Herman Boerhaave in 1724 for the spontaneous rupture of the oesophagus after a forceful emesis. This is a transmural longitudinal perforation of the oesophagus to be distinguished from Mallory- Weiss syndrome, a non transmural tear also associated with vomiting.

Corresponding Author:

Dr. P Baburaj, MD, Professor of Medicine & Unit Head, Jubilee Mission Medical College & Research Institute, East Fort, Thrissur, Kerala, Pin code – 680005. Tel No: 9895080516. Email: drpbaburaj@yahoo.co.in

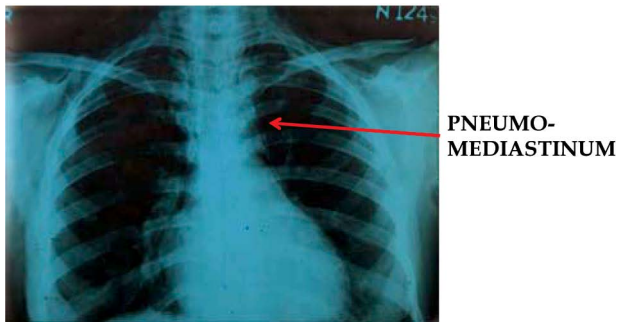


Figure 2. Boerhaave's Syndrome S/C EMPHYSEMA

Pathophysiology

It is postulated to be due to a sudden rise in intraluminal oesophageal pressure produced during vomiting. This is a result of inco-ordination (neuromuscular) causing failure of cricopharygeus muscle to relax. Most common anatomical location of tear is the lower third of oesophagus left postero-lateral wall; 2-3 in proximal to the gastro-oesophageal junction.

Incidence - relatively rare and under reported. An 1986 study reported, 114 ante mortem cases; the rest were diagnosed at autopsy.

Mortality -The mortality rate is high upto 35%, making it the most lethal perforation of the GI tract.

Age - The common age group affected is around 50 – 70 years.

C/F - Sudden chest pain, dysphagia and odynophagia after repeated retching. Typically there is no hematemesis, unlike the more common Mallory- Weiss tear.

The Meckler's triad defines the classic presentation of Boerhaave syndrome. It is the triad of vomiting, lower thoracic chest pain and subcutaneous emphysema. Finding of pleural effusion are common. Tachypnea, tachycardia, fever diaphoresis and hypotension are common, particularly as disease progresses. The unusual findings are peripheral cyanosis, hoarseness of voice, proptosis, cervical vein distention, tracheal and mediastinal shift and features of aspiration pneumonia and sepsis.

Upright chest radiograph is useful. Most common findings are pleural effusion, pneumomediastinum, subcutaneous emphysema etc. A Barium swallow helps confirm the diagnosis. It typically show extravasation of contrast into the diagnosis for fear of re-perforation. Treatment is mainly supportive with intravenous fluids, broad spectrum antibiotics and keeping patient NPO. Prompt surgical intervention is necessary if early

presentation and large perforation with significant symptoms.

The case reported here had all features of spontaneous transmural tear of oesophagus which recovered well without surgical intervention.

END NOTE

Author Information

1. Dr. P Baburaj, MD, Professor and Unit Head, Department of Medicine, Jubilee Mission Medical College & Research Institute, East Fort, Thrissur, Kerala, Pin code – 680005. Phone: 9895080516
2. Dr. Shyam Shankar Varma, Assistant Professor, Department of Medicine, Jubilee Mission Medical College & Research Institute, East Fort, Thrissur, Kerala, Pin code – 680005.
3. Dr. B L Harikrishnan, Assistant Professor, Department of Medicine, Jubilee Mission Medical College & Research Institute, East Fort, Thrissur, Kerala, Pin code – 680005.

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