

Boerhaave's Syndrome: A Differential Diagnosis of Acute Chest Pain Following a Vomiting Illness

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ABSTRACT

Spontaneous oesophageal rupture (Boerhaave's syndrome) is extremely rare in children. Presentation is usually in middle aged men as a result of vomiting following heavy food or alcohol consumption. We describe an unusual case of a 12-year old boy without significant past medical history presenting with acute chest pain following gastroenteritis.

Keywords: Boerhaave's Syndrome, chest pain, vomiting

Síndrome de Boerhaave: Un Diagnóstico Diferencial de Dolor Torácico, Agudo Tras Enfermedad Acompañada de Vómitos

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RESUMEN

La ruptura esofágica espontánea (síndrome de Boerhaave) es extremadamente rara en niños. Por lo general se presenta en hombres de mediana edad como resultado vómitos tras la ingestión de alcohol o alimentos pesados. Describimos un caso inusual de un niño de 12 años de edad sin antecedentes clínicos significativos, que acudió con dolor torácico agudo tras una gastroenteritis.

Palabras clave: Síndrome de Boerhaave, dolor torácico, vómito

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CASE REPORT

A 12-year old boy presented with a five-day history of vomiting and diarrhoeal illness. He also had shortness of breath, sore throat, jaw pain and chest pain for 48 hours. He had two minor episodes of haematemesis in this 48-hour period. He was unable to open his mouth to communicate or take food due to severe discomfort. There was no significant past medical history. On initial assessment, he was very tachycardic, tachypnoeic and dehydrated needing fluid resuscitation. An urgent chest radiograph performed showed pneumopericardium and pneumomediastinum (Fig. 1). There was also surgical emphysema in the cervical pre-vertebral soft tissues which extended superiorly from the pneumomediastinum (Fig. 2).

Boerhaave's syndrome was diagnosed based on the

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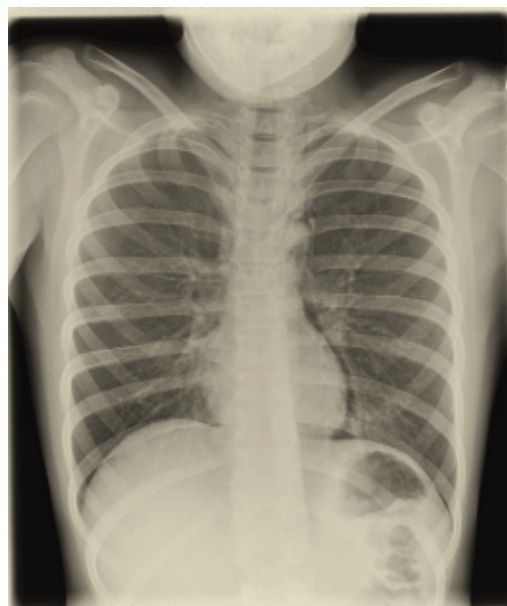


Fig. 1: Chest radiograph showing pneumopericardium and pneumomediastinum.

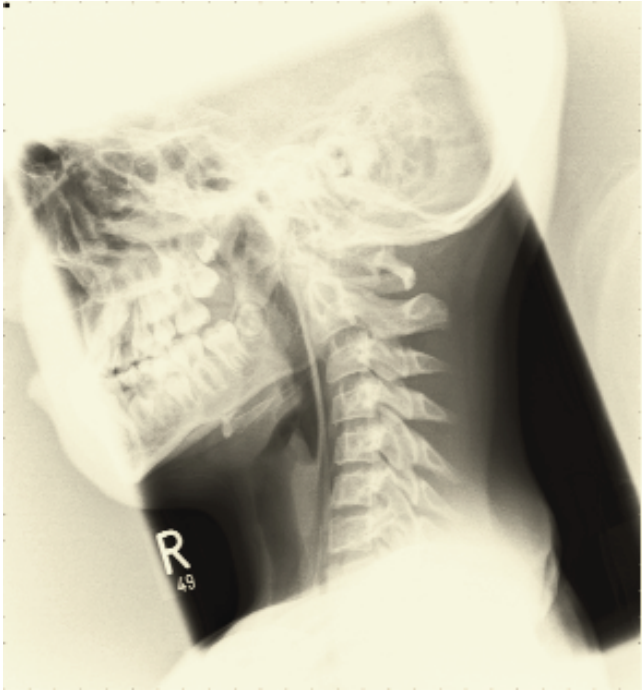


Fig. 2: Surgical emphysema was also found in the cervical prevertebral soft tissues.

clinical history and radiographic findings. He was managed conservatively with prophylactic intravenous antibiotics, nasogastric tube for ‘drip and suck’ and was kept nil by mouth. The patient made a full recovery and was discharged a week later with no complications. He had an oral gastrointestinal (GI) contrast study before discharge from the ward and three weeks later which showed no leak of the contrast into the mediastinum. However, this will not exclude the diagnosis given his clinical history at presentation and chest radiographic appearance.

DISCUSSION

Boerhaave’s syndrome is a non-iatrogenic transmural rupture of the oesophagus that is commonly preceded by forceful vomiting. Boerhaave’s syndrome presents with a characteristic clinical triad of vomiting followed by sudden-onset of thoracic pain, associated with subcutaneous emphysema. Forceful ejection of gastric contents in an unrelaxed oesophagus against a closed glottis is the mechanism described (1). The most common site of rupture is in the distal oesophagus along the left posterior-lateral wall [anatomical point of weakness] (2). This condition is more common in adult male patients and is rarely reported in children. The condition carries a 20–40% mortality rate if not identified and treated early (3). Diagnostic modalities used are plain chest radiograph, upper GI contrast study and computed tomography (CT) scan with oral contrast (3).

Multiple treatment modalities have been described in adult case series which include exclusive conservative measures, endoscopic treatment (using self-expandable metal stents ± additional surgical intervention) or extensive surgery (3). The choice of treatment depends on timing of presentation, associated complications and clinical state of the patient (1, 3). Boerhaave’s syndrome should be included in the broad differential diagnosis in patients presenting with acute chest or epigastric pain, dyspnoea, subcutaneous emphysema or haematemesis following a vomiting illness (4, 5).

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