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Clinical Image

Recurrent Boerhaave Syndrome a Rare Cause of Pneumomediastinum

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Clinical Image

A 48 year old female with history of choledocholithiasis for which she has been admitted several times to the hospital for biliary colics complicated with cholangitis 1 month prior where an Endoscopic retrograde cholangiopancreatography (ERCP) was performed.

She presented to the emergency department for ongoing epigastric pain radiating to the back with multiple episodes of vomiting the past week. She also reported chest tightness but no shortness of breath.

Initial blood work up showed elevated lipase levels at 1524U/L, white blood cell count at 15x10^3/mm3 and elevated C reactive protein at 237mg/L .

The diagnosis of acute pancreatitis was made and CT of the abdomen was performed for severity grading of the pancreatitis along with a chest CT to assess for any cause of chest pain.

Abdomen computed tomography showed areas of non-enhancing low attenuation in the pancreatic body and head consistent with necrosis along with multiple peri pancreatic collection, concluding to a necrotizing pancreatitis.

Chest images on the other hand, revealed extensive pneumomediastinum with neck emphysema, but no pleural effusion, pneumothorax or collection.

Further investigation showed no evidence of tracheal tear or esophageal perforation.

The patient then received intra venous fluids, and worsening of signs of sepsis with elevated fever justified the use of antibiotics and showed a satisfactory evolution with regression of symptoms and decrease in inflammation markers. A follow up chest radiograph

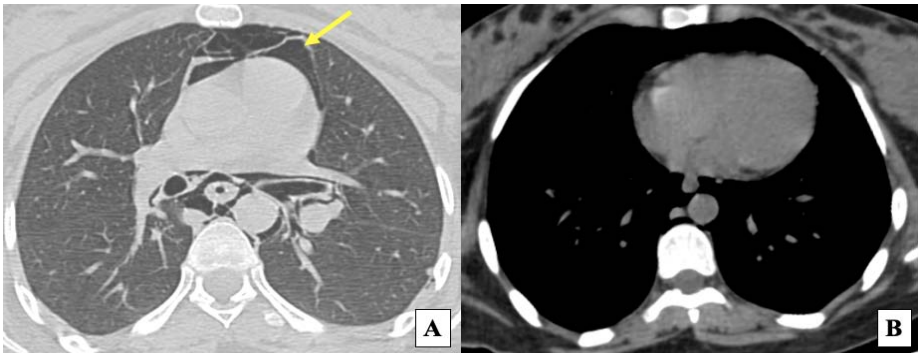

Figure 1: Axial Chest CT images in lung window (A) and mediastinal window (B) showing diffuse pneumomediastinum (arrow) with no pleural effusion or parenchymal abnormality.

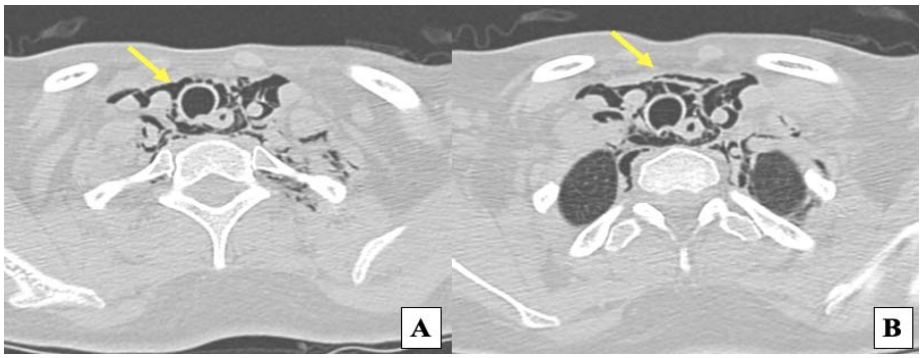

Figure 2: Axial Chest CT images in lung window at the level of the lower neck (A) and pulmonary apices (B) showing extensive emphysema (arrows).

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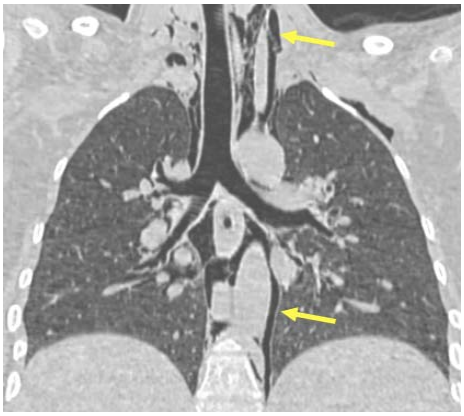

Figure 3: Coronal Chest CT in lung window image demonstrating diffuse pneumomediastinum and neck emphysema (arrows) with no evidence of pneumothorax.

3 weeks after discharge showed complete resolution of the pneumomediastinum.

Spontaneous pneumomediastinum usually results secondary to alveolar rupture induced by repeated coughing or vomiting [1]. This type of barotrauma can in some rare cases suggest a Gastro Intestinal (GI) leak also known as the Boerhaave syndrome [2]. It is a life threatening condition with very poor prognosis in absence of surgical treatment as it evolves to mediastinitis and severe septic shock. Imaging usually demonstrates pneumomediastinum, pleural effusion and pneumothorax, fluoroscopy or ideally CT with oral contrast show direct leakage [3].

We suggest that in our case onset of signs of mediastinitis, might be caused by microscopic perforation with no evidence of a substantial GI tear, due to the repeated episodes of vomiting like suggested in several reported cases in the literature as a recurrent Boehraave syndrome [4]. Resolution of symptoms and favorable prognosis when the primary cause of repeated vomiting (in our case the choledocholithiasis causing pancreatitis) is treated is considered as a hallmark and clinched the diagnosis.

Keywords: Pneumomediastinum; Boerhaave Syndrome; CT; Chest.

References

1. Al-Mufarrej F, Badar J, Gharagozloo F, Tempesta B, Strother E, Margolis M. Spontaneous pneumomediastinum: diagnostic and therapeutic interventions. J Cardiothorac Surg. 2008; 3: 59.
2. Sharma H, Tiwari A, Khan M S, Saha B. Vomiting Induced Spontaneous Pneumomediastinum Should Be Differentiated From Boerhaave's Syndrome: A Case Report. In B44 PLEURAL DISEASE: CASE REPORTS I. American Thoracic Society. 2017; 195: A3527.
3. Kyriakides J, Stackhouse A. Vomiting-induced pneumomediastinum as a result of recurrent Boerhaave's syndrome. J Surg Case Rep. 2020; 2020: rjaa102.
4. Forshaw MJ, Khan AZ, Strauss DC, Botha AJ, Mason RC. Vomiting-induced pneumomediastinum and subcutaneous emphysema does not always indicate Boerhaave's syndrome: report of six cases. Surg Today. 2007; 37: 888-92.