

An Elderly Female with Dyspnea and Abdominal Pain

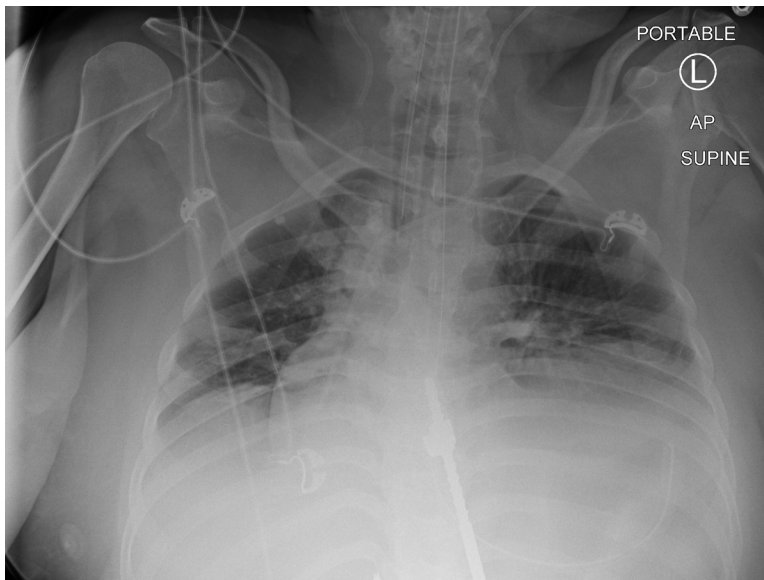
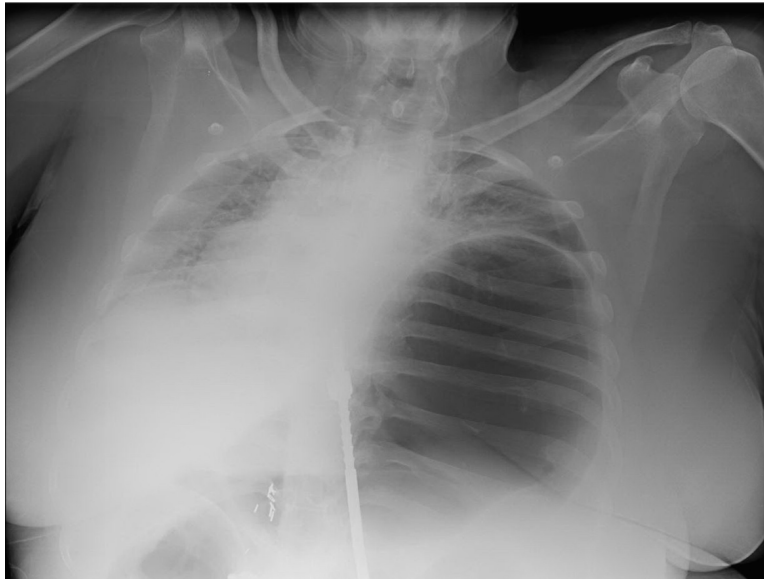
Jon Van Heukelom, MD*

*University of Iowa Carver College of Medicine, Iowa City, IA

Correspondence should be addressed to Jon Van Heukelom, MD at jon-vanheukelom@uiowa.edu

Submitted: October 19, 2016; Accepted: November 4, 2016; Electronically Published: January 28, 2017; <https://doi.org/10.21980/J83S3K>

Copyright: © 2017 Heukelom. This is an open access article distributed in accordance with the terms of the Creative Commons Attribution (CC BY 4.0) License. See: <http://creativecommons.org/licenses/by/4.0/>



History of present illness: A 55-year-old female presented via transfer from a referring hospital with 48 hours of abdominal pain, vomiting and dyspnea. She was found to be in severe distress. Her temperature was 37.5°C, heart rate 130/minute, respiratory rate 47/minute, blood pressure 80/48 mmHg, and oxygen saturation of 95% on a non-rebreather mask. She had distended neck veins, diminished breath sounds on the left hemi-thorax, and a distended abdomen. A chest X-ray that had been obtained at the referring hospital was immediately reviewed. The decision was made to intubate the patient. Following intubation, a nasogastric tube was placed with marked improvement in her hemodynamics. An abdomen-pelvis computed tomography (CT) was obtained which showed a para-esophageal hernia with the majority of the stomach located in the left hemi-thorax and evidence of a bowel obstruction.

Significant findings: Radiography shows a dilated, gas-filled structure that fills nearly the entire left hemi-thorax. Lung markings are visible in the uppermost portion of the left hemi-thorax. There is mediastinal shift to the right. In the visualized portion of the abdomen, dilated loops of bowel are also visualized. This constellation of findings is consistent with a tension gastrothorax.

Discussion: Tension gastrothorax is a rare complication of blunt trauma, diaphragmatic hernias, and certain surgical procedures.^{1,2} Clinically, a tension gastrothorax may mimic that of a tension pneumothorax, making it difficult to diagnose.^{3,4} Stabilizing treatment includes decompressing the stomach by means of a nasogastric (NG) tube.² Placement may be difficult due the intra-thoracic position of the stomach leading to kinking of the tube. The attempt to place an NG tube can lead to hyperventilation and air swallowing, which can aggravate gastric distention.⁴ Failure to decompress the stomach, however, may lead to patient decompensation and cardiac arrest.⁵ Definitive treatment is surgical repair.²

Topics: Tension gastrothorax, GI, gastroenterology, cardiothoracic, radiograph, CXR, abdominal, dyspnea, shortness of breath.

References:

1. Elangovan A, Chacko J, Gadiyaram S, Moorthy R, Ranjan P. Traumatic tension gastrothorax and pneumothorax. *J Emerg Med.* 2013;44(2):e279-80. doi: 10.1016/j.emermed.2012.07.043
2. Koa Y, Lee WJ, Lin HJ. Tension gastrothorax: a life-threatening cause of acute abdominal pain. *CMAJ.* 2009;180(9):983. doi: 10.1503/cmaj.081094
3. Lee WJ, Lee YS. Traumatic diaphragmatic rupture: a diagnostic challenge in the emergency department. *Emerg Med J.* 2007;24(8):601. doi: 10.1136/emj.2006.040451
4. Nishijima D, Zehbtachi S, Austin RB. Acute posttraumatic tension gastrothorax mimicking acute tension pneumothorax. *Am J Emerg Med.* 2007;25(6):734:e5-6. doi: 10.1097/01.mej.0000103465.32882.a0
5. Ahn S, Kim W, Sohn CH, et al. Tension viscerothorax after blunt abdominal trauma: a case report and review of the literature. *J Emerg Med.* 2012;43(6):e451-3.