IN THIS ERA OF PANDEMIC EVERY DYSPNEA WITH FEVER IS NOT COVID-19 INFECTION: AN UNUSUAL PRESENTATION OF PERFORATED GASTRIC ULCER AS ARDS

Imran Khokhar, MD[1], Eldia Delia, MD[1], Vishal Chandel, MD[1], Gisha Mohan, MD[1], Joseph Demidovich, DO[1], Mathew Mathew, MD[1]
1. Department of Internal Medicine, Suburban Community Hospital, East Norriton, PA

Suburban Community Hospital
Extraordinary People. Extraordinary Care.

Background

In this era of COVID-19 pandemic, dyspnea and fever are common presentation in the emergency department (ED). Multiple etiologies can cause the similar presentation and delaying the accurate diagnosis can be fatal. We present a case of unusual presentation of perforated gastric ulcer (PGU) manifesting as acute respiratory distress syndrome (ARDS) presented as dyspnea.

Case Presentation

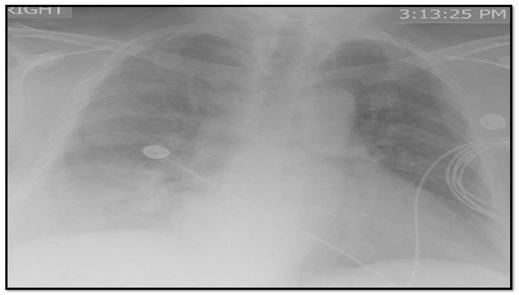
A 50-year-old obese (BMI 45 Kg/m2) female with history of chronic knee pain and NSAID use presented to ED with dyspnea and fever for 3 days. ED vitals: Temperature: 99. 7° F, Pulse: 96/min, Respiratory rate: 27/min, BP: 145/79mmHg, SpO2: 85% on room air that improved to 97% on 4 L nasal cannula oxygen. Physical exam was positive for mild respiratory distress, decreased breath sound at right lung base and obese abdomen with mild discomfort on deep palpation in the epigastric area.

Labs and patient hospital course

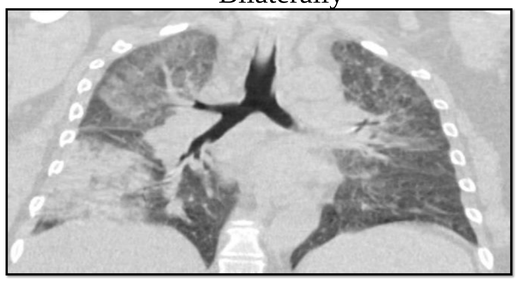
WBC: 12.5K/uL, H/H: 12.6gm/39.8%, BUN: 46mg/dl, Creatinine: 2.0mg/dl, AST: 76U/L, ALT: 46U/L, Ferritin: 321ng/ml, LDH: 476U/L, D-dimer: 6.36 ug/ml and CRP: 170mg/L. ABGs: PH: 7.3, pCO2: 50.1, HCO3:24.1, pO2:89.3, spO2:95.0 with Fio2 44%, mild ARDS category. X-ray chest showed bilateral opacification with right lower lobe consolidation but no gas under diaphragm. CT chest revealed right lower lobe consolidation, severe bilateral ground glass opacity in middle and upper lobe significant for ARDS. Repeat ABGs was PH:7.37, pCO2: 35.30, HCO3:20.10, pO2:66.0, spO2:92.2% with Fio2 40%, moderate ARDS category. The next day, patient complained of abdominal pain and distension. CT scan of abdomen showed pneumoperitoneum and an emergent exploratory laparotomy revealed perforated gastric ulcer. Primary repair and omentum patch was placed. Patient had a complicated postoperative course with acute myocardial ischemia and acute kidney injury that required hemodialysis and tracheostomy.

X-ray / CT scan

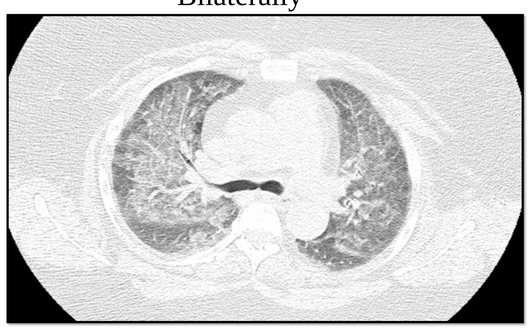
Chest X-RAY Bilateral Infiltrates



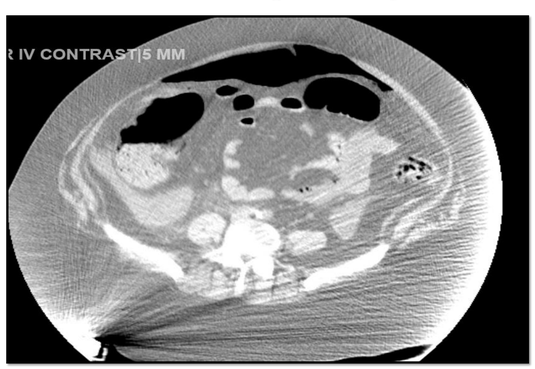
CT Chest Coronal section showing Infiltrates Bilaterally



CT Axial Section Showing Infiltrates Bilaterally



CT Abdomen Showing Pneumoperitoneum



Discussion

Respiratory distress as the initial presentation of a PGU is uncommon especially in the absence of pertinent abdominal symptoms. This case highlights a very critical dilemma that the medical community is facing during this pandemic; that is not to miss other conditions that require prompt management which presents similarly as COVID-19 infection. As in our patient PGU started the inflammatory process in the abdomen that led to the development of ARDS. Early diagnosis, adequately hydration, broad-spectrum antibiotics and immediate surgical repair are basic core of management for PGU. Timely and appropriate management can significantly impact patient's outcomes.

Conclusion

Fever and dyspnea as the initial presentation of a PGU is uncommon presentation. This case highlights a critical situation of missing common diagnoses during this pandemic . We should not miss other conditions that require prompt management which present similarly as COVID-19 infection. Atypical presentation of PGU as ARDS should be considered in clinical setting especially in the background of risk factors like chronic NSAID use.

References

1.Bruner DI, Gustafson C. Respiratory distress and chest pain: a perforated peptic ulcer with an unusual presentation. International Journal of Emergency Medicine. 2011 Jun;4(1):34. DOI: 10.1186/1865-1380-4-34.

2.Raviv B, Israelit SH. Perforated gastrointestinal ulcers presenting as acute respiratory distress. World Journal of Emergency Medicine. 2012 ;3(2):150-153. DOI: 10.5847/wjem.j.issn.1920-8642.2012.02.013. PMID: 25215055;

3.Assar AN, Sinclair CL, Shrestha DB. Chest pain and dyspnea resulting from a perforated duodenal ulcer. Br J Hosp Med (Lond). 2009 Oct;70(10):599. PMID: 20054910.

4.Cuschieri A, Edwardson KF. Perforated duodenal ulcer presenting as acute respiratory failure. British Medical Journal. 1967 Sep;3(5568):779-780. DOI: 10.1136/bmj.3.5568.779. PMID: 6039649; PMCI