

Should a drain be inserted?

M J Mpe, Cert Pulm (SA)

Sefako-Makgatho Health Sciences University, Pretoria, South Africa

Corresponding author: M J Mpe (john.mpe@smu.ac.za)

Figure 1 is a chest radiograph of a 52-year-old ex-smoker with known moderate chronic obstructive pulmonary disease who presented to the emergency department with 2 days of worsening dyspnea and non-specific right chest pain. He was hemodynamically stable and tachypneic with low oxygen saturations (87%). There were reduced breath sounds and increased resonance over the right hemithorax. The clinical signs and radiology were thought consistent with the right pneumothorax, and an intercostal drain was inserted. A persistent air leak developed, which prompted a chest computed tomography (CT) to be performed (Fig. 2).

Giant bullae can mimic tension pneumothoraxes both clinically and radiologically.^[1] Differentiation can be difficult with conventional chest radiography. Treatment is different, and misdiagnosis can be catastrophic. While CT remains the gold standard for distinguishing the two, it may be logistically difficult for unstable patients. Point-of-

care chest ultrasound can help with the differentiation.^[2] It is fast, safe and inexpensive, with a reported sensitivity and specificity of 100% for large pneumothoraxes.^[3] The presence of lung sliding or a lung pulse at the pleural interface excludes a pneumothorax.

1. Aramini B, Ruggiero C, Stefani A, Morandi U. Giant bulla or pneumothorax: How to distinguish. *Int J Surg Case Rep* 2019;62:21-23. <https://doi.org/10.1016/j.ijscr.2019.08.003>.
2. Karacabey S, Sanri E, Metin B, et al. Use of ultrasonography for differentiation between bullae and pneumothorax. *Emerg Radiol* 2019; 26(1):15-19. <https://doi.org/10.1007/s10140-018-1640-9>.
3. Hosseini-Nik H, Bayanati H, Souza CA, et al. Limited chest ultrasound to replace CXR in diagnosis of pneumothorax Post image-guided transthoracic interventions. *Can Assoc Radiol J* 2022;73(2):403-409. <https://doi.org/10.1177/08465371211034016>.

Submitted 31 January 2023. Accepted 10 September 2023. Published 27 November 2023.

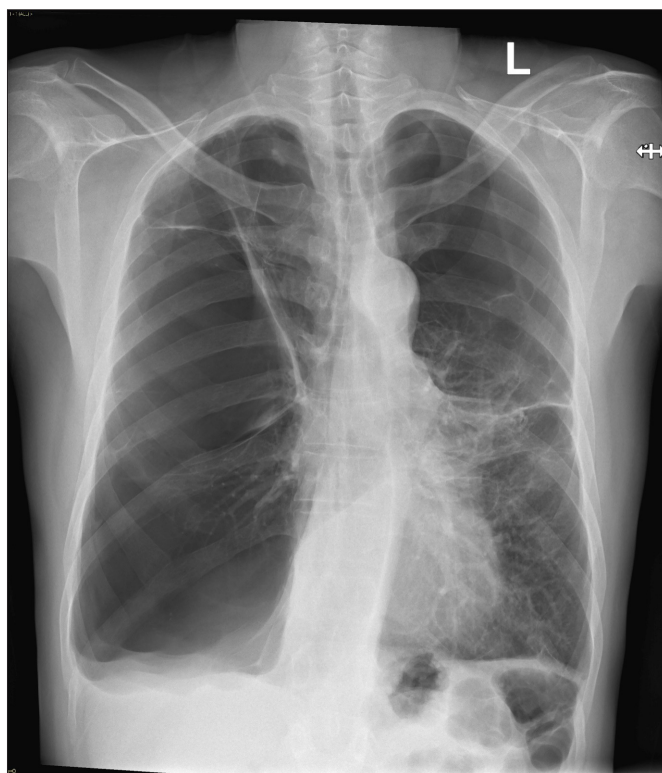


Fig. 1. Chest radiograph



Fig. 2. Computed tomography with intercostal drain.