Images in clinical medicine

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Pneumoperitoneum following cardiopulmonary resuscitation in a COVID-19 patient

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Case presentation

An 86-year-old Hispanic lady was brought to the emergency department in acute respiratory distress. She had tested COVID-19 positive a week prior to her presentation. She had a past medical history of chronic hypertension, gastric ulcer, abdominal hernia, anxiety, and arthritis. On arrival blood pressure was 130/72 mmHg, heart rate 85/min, respiratory rate 33/min, temperature 98.8 ºF, with oxygen saturation of 82% while breathing room air. Further testing revealed ground glass opacities and interstitial infiltrates in both lungs on computed tomography. Over the next few hours, the patient deteriorated with her oxygen saturation dropping 40% followed by asystole. Cardiopulmonary resuscitation (CPR) was immediately started. She was intubated on first attempt. CPR continued for 15 minutes and multiple doses of epinephrine were given. Return of spontaneous circulation was obtained with sinus rhythm that required vasopressors to maintain reasonable mean arterial pressures. A post resuscitation chest radiograph depicted sub diaphragmatic free air suggesting spontaneous pneumoperitoneum (**Figure 1**). All prior imaging tests failed to reveal this new finding. Her abdomen was mildly distended but no signs of tension pneumoperitoneum or inferior vena cava compression were found on physical or ultrasonographical exam. A surgical consultation was obtained. In view of her dismal prognosis, after discussing with her family, limitation of care followed.

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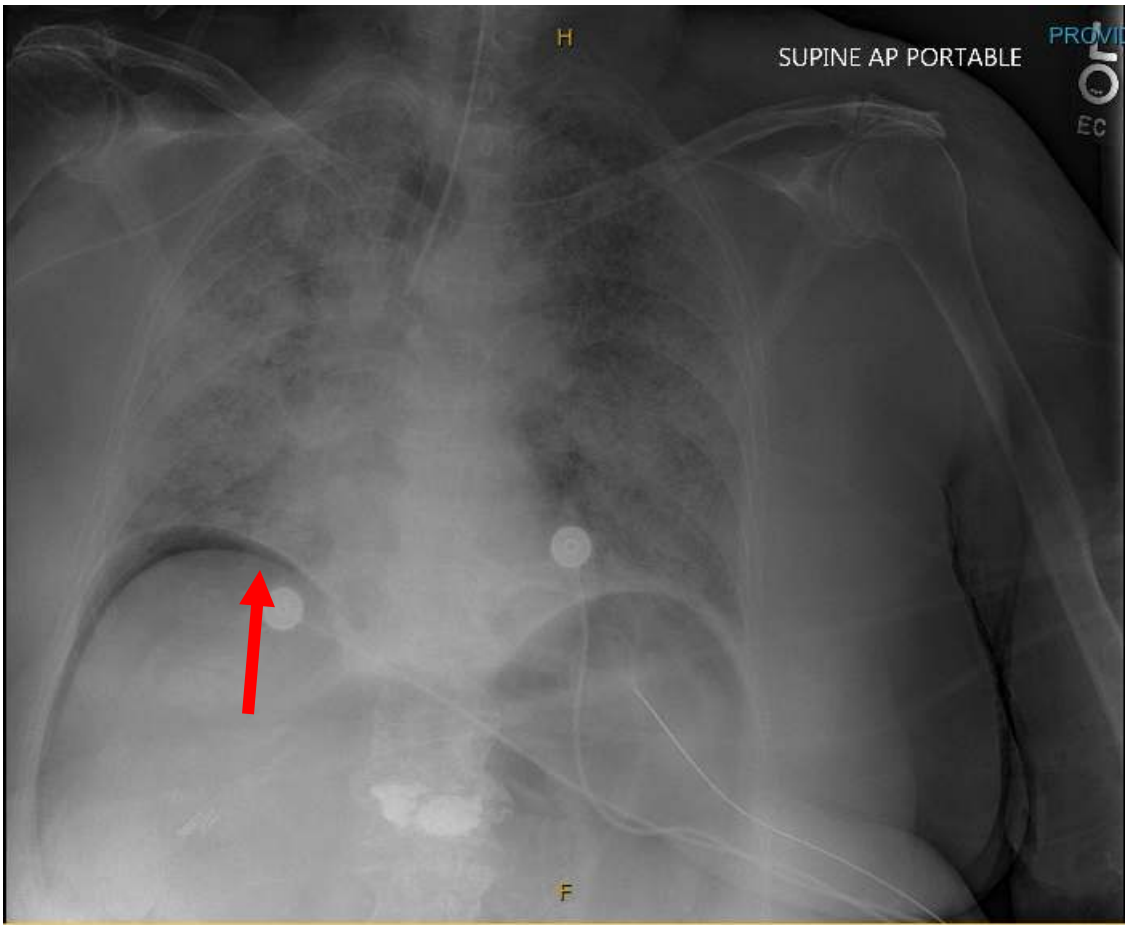
Figure 1. Portable chest radiograph following chest compressions showing diffuse hazy bilateral lung opacities



Legend: There was evidence of free air below the right hemidiaphragm (arrow).