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Radiographic Findings of a Symptomatic Pneumothorax During Intercostal Nerve Infiltration

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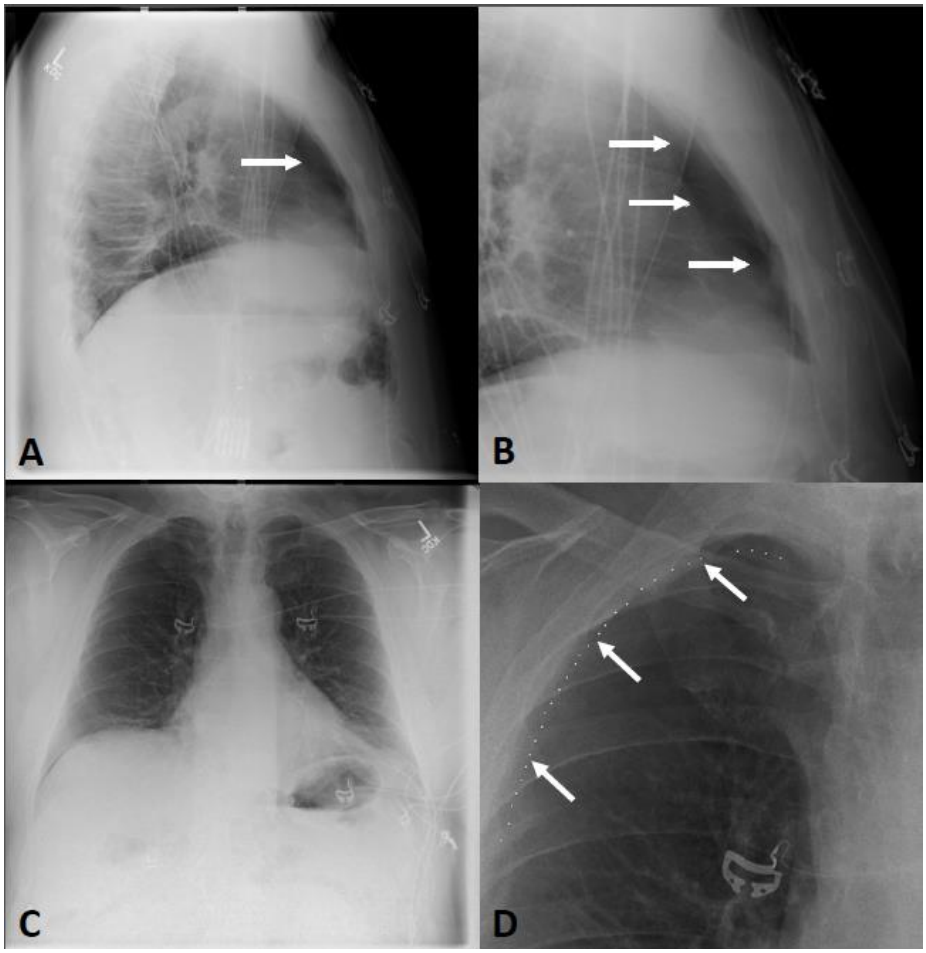

Fig. 1. (A) lateral, (B) magnified lateral, (C) anteroposterior, and (D) magnified anteroposterior radiographs demonstrating a 10% to 15% right pneumothorax. Important radiographic findings include a visible pleural edge and absent lung markings peripheral to this demarcation.

Intercostal nerve blocks are a relatively simple procedure that may be performed for the treatment of chronic pain conditions, such as postherpetic neuralgia and postsurgical incision pain. Although widely regarded as safe, intercostal nerve blocks among other thoracic procedures may lead to inadvertent pneumothorax. The incidence of pneumothorax during intercostal nerve block can vary widely; historically, rates of 0.073% to 19% have been reported (1-3). More recently, in a study of 1,020 individual intercostal nerve blocks, pneumothorax occurred in 1.4% of procedures performed (4). Current standard for universal use of ultrasound guid-

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ance when performing an intercostal nerve block may further reduce the incidence of pneumothorax. Pneumothorax may have a delayed presentation, although often presents either during or immediately after the inciting procedure.

Chest radiography is the first diagnostic modality performed to assess pneumothorax as it is quick and inexpensive; of note, computed tomography offers greater sensitivity in assessing for a small pneumothorax. These radiographs (Fig. 1) demonstrate a 10% to 15% right-sided pneumothorax in a 55-year-old man who underwent a right-sided ultrasound-guided intercostal nerve block at the T8 vertebral level. Immediately after the injection he reported shortness of breath and a change in oxygen saturation from 100% to 98%. As in the instance of this patient, observation alone is the treatment of choice for small pneumothorax with mild breathlessness (5). Markedly symptomatic patients should be admitted for further assessment and management. Despite this, providers should be ready to urgently diagnose and decompress a pneumothorax in the acutely presenting patient.

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