

Pneumomediastinum and pulmonary interstitial emphysema after tracheal taser injury

A male jail inmate in his 30s presented to the emergency department with shortness of breath after sustaining multiple shocks from a conducted electrical weapon (CEW). His exam revealed normal vitals, crepitus of the upper chest and neck and barb wounds on the abdomen, chest and anterior neck, 2 cm above the sternal notch. CT of the neck and chest (figures 1–3) demonstrated pneumomediastinum, pulmonary interstitial emphysema

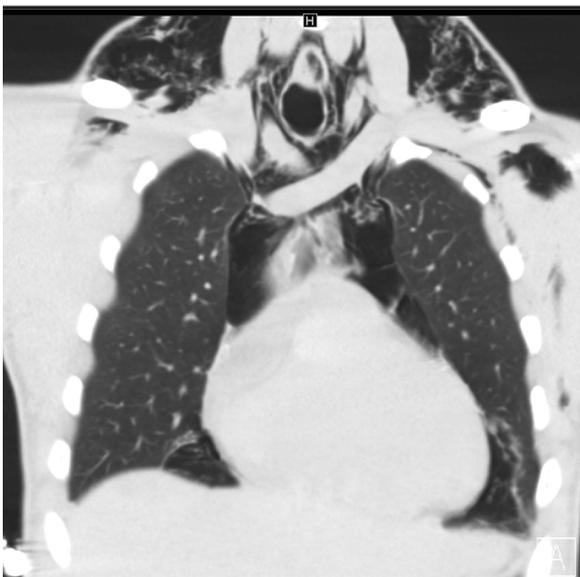


Figure 1 Coronal chest CT image showing pneumomediastinum.

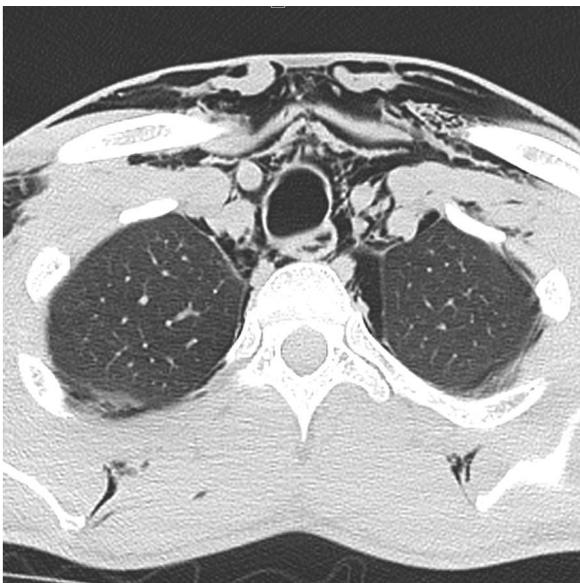


Figure 2 Transverse chest CT image showing subcutaneous emphysema at the root of the neck.



Figure 3 Transverse chest CT image showing pulmonary interstitial emphysema of the right lower lobe.

and subcutaneous emphysema from the bilateral chest to the masticator space. As neck swelling increased, intubation was performed fiberoptically.

Pharyngoscopy, bronchoscopy and an esophagram revealed no blood or persistent mucosal defect. Tracheal puncture with subsequent spontaneous closure was the suspected cause. It was thought less likely but also possible that the CEW elicited powerful forced expiration against a closed glottis causing a small tracheal tear.

CEWs, although known to be generally safe in limited exposures, have been associated with rare but frequently controversial reported complications.¹ Such complications are often traumatic, and have included pneumothorax and subcutaneous air from pharyngeal perforation. Mild superficial injuries from the barbs used by these weapons are the most common injury. All patients exposed to CEWs should be fully examined to rule out serious traumatic injury.

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