

An unorthodox way to confirm an uncommon complication of central venous catheter placement

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Received: 28 May 2019; Accepted: 14 June 2019; published: 28 June 2019.

doi: 10.21037/jeccm.2019.06.03

View this article at: <http://dx.doi.org/10.21037/jeccm.2019.06.03>

Malpositioning of central venous catheters (CVC) is a common complication and easily identified on a chest X-ray (CXR). However, positioning of CVC in the pleural space without causing pneumothorax is extremely rare and difficult to identify on a single view CXR. Pleural placement of CVC can be suspected by: either presence of pneumothorax post insertion or being able to flush ports of the CVC but without blood return.

In this case, the CVC did not conform to any particular anatomical landmark on CXR (*Figure 1*). The proceduralist confirmed having blood return from all 3 ports at the time of insertion. However, the radiologist requested to

confirm the CVC location. For which a guide wire was passed through the CVC and found to be likely positioned in the pleural cavity. The CVC was removed without any complications and serial CXRs ruled out development of any subsequent pneumothorax.

Although unorthodox, passing guidewire through a CVC has been used to confirm its position. On retrospective review of this case, the authors propose CT scan of chest as a safer option to confirm the position of a malpositioned CVC. Passing guide wire through a suspected malpositioned CVC exposes the patient to increased risk of complications that is best avoided.

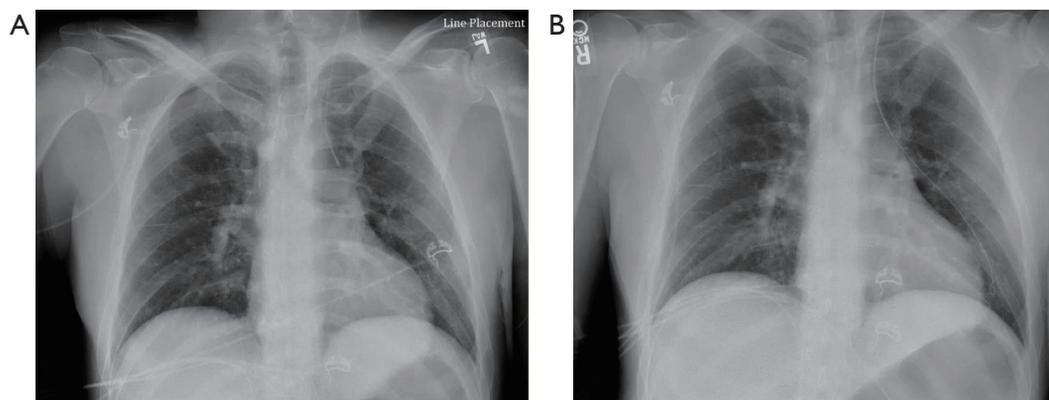


Figure 1 Radiologic imaging. (A) Chest X-ray (CXR) after left internal jugular central venous catheter (CVC) placement, which does not conform to any particular anatomical structure. (B) CXR after passing guidewire through the CVC, proving the tip of the CVC in the pleural space.

Acknowledgments

None.

Footnote

Conflicts of Interest: The authors have no conflicts of interest to declare.

Ethical Statement: The authors are accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved. Written informed consent was obtained from the patient for publication of this manuscript and any accompanying images.

doi: 10.21037/jeccm.2019.06.03

Cite this article as: Kugasia IR, Ijaz M, Khan A. An unorthodox way to confirm an uncommon complication of central venous catheter placement. J Emerg Crit Care Med 2019;3:28.