



IMAGES IN INTENSIVE MEDICINE

Rapid atrial swirl sign and central venous catheterization

Signo de la turbulencia auricular rápida y cateterización venosa central

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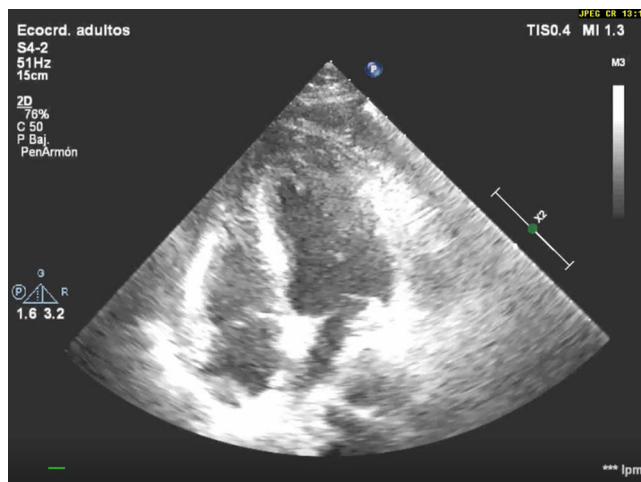


Figure 1

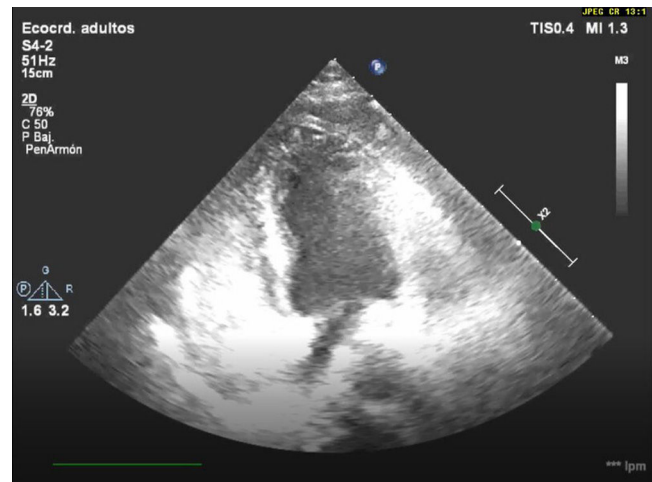


Figure 2

Radiography is the principal method used to confirm central venous catheter placement and to discard complications. Ultrasound is an alternative in the intensive care setting, obviating radiation exposure and reducing time to confirmation and costs. Correct placement in the superior vena cava is evidenced by visualizing the guide or catheter, or the rapid atrial swirl sign, in a sub-xiphoid or apical plane (Fig. 1). The rapid atrial swirl sign reflects turbulent flow in the right atrium following the rapid injection of saline solution swirled by the distal port (Fig. 2, Video 1). A time of over two seconds suggests

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malpositioning. In contrast, if the sign is evidenced in under two seconds, the tip is well positioned and the catheter can be used immediately. However, in order to discard complications such as pneumothorax, radiography or thoracic ultrasound is needed.

Conflicts of interest

The authors declare that they have no conflicts of interest.

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Appendix A. Supplementary data

Supplementary material related to this article can be found, in the online version, at doi:<https://doi.org/10.1016/j.medine.2022.10.019>.