



“The purpose of this study was to evaluate the role of post-procedural chest X-ray in detecting complications of CVC insertion.” Zadeh and Shirvani (2014).

Reference:

Zadeh, M.K. and Shirvani, A. (2014) The role of routine chest radiography for detecting complications after central venous catheter insertion. Saudi Journal of Kidney Diseases and Transplantation. 25(5), p.1011-1016.

Evaluating post-procedural chest X-ray in detecting complications of CVC insertion  
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Abstract:

Chest radiographs are obtained routinely after central venous catheter (CVC) insertion in many institutions, although it consumes time and money. The purpose of this study was to evaluate the role of post-procedural chest X-ray in detecting complications of CVC insertion; we performed CVC insertion without using ultrasonography guidance. A total of 454 patients who required an emergency vascular access for hemodialysis between February 2008 and March 2010 were included in this study. In cases where three to five unsuccessful attempts were encountered to place the CVC or pierce the artery, we used another site for CVC placement or we placed the CVC under ultrasonographic guidance. Both the internal jugular

and the subclavian veins were used as routes for catheter insertion. All the catheters were dual lumen and were inserted by the same vascular access surgeon. All the catheters were inserted using the same protocol. This protocol consists of five stages including position, percutaneous anesthesia, puncture, pull out and placement. Chest radiography was obtained after the procedure and patients were interviewed for the presence of any unusual symptoms. The X-rays were reviewed by a radiologist who was unaware of the patients' symptoms. Complications occurred in two patients who had unusual symptoms after the placement of the catheter. Although immediate postprocedural chest radiography is recommended for tip position confirmation, it should not be considered a reliable procedure for detecting complications in the absence of clinical symptoms. It is recommended to monitor patients after catheter insertion and perform delayed chest X-ray in the presence of any unusual symptoms.

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