

The carina is located in the mid-zone of the superior vena cava (SVC) and is considered a reliable landmark for CVC placement in chest radiographs” Kwon et al (2018).

Abstract:

Subclavian central venous catheterization is a common procedure for which misplacement of the central venous catheter (CVC) is a frequent complication that can potentially be fatal. The carina is located in the mid-zone of the superior vena cava (SVC) and is considered a reliable landmark for CVC placement in chest radiographs. The C-length, defined as the distance from the edge of the right transverse process of the first thoracic spine to the carina, can be measured in posteroanterior chest radiographs using a picture archiving and communication system. To evaluate the placement of the tip of the CVC in subclavian central venous catheterizations using the C-length, we reviewed the medical records and chest radiographs of 122 adult patients in whom CVC catheterization was performed (from January 2012 to December 2014) via the right subclavian vein using the C-length. The tips of all subclavian CVCs were placed in the SVC using the C-length. No subclavian CVC entered the right atrium. Tip placement was not affected by demographic characteristics such as age, sex, height, weight, and body mass index. The evidence indicates that the C-length on chest radiographs can be used to determine the available insertion length and place the right subclavian CVC tip into the SVC.

Reference:

Kwon, H.J., Jeong, Y., Jun, I.G., Moon, Y.J. and Lee, Y.M. (2018) Evaluation of a central venous catheter tip placement for superior vena cava-subclavian central venous catheterization using a premeasured length: A retrospective study. *Medicine*. 97(2), p.e9600.

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