

The carina is a good landmark for the upper border of the cavoatrial junction. Length of carina to cavoatrial junction was associated with age” Ahn and Chung (2015).

Reference:

Ahn, S. and Chung, J.H. (2015) Proper tip position of central venous catheter in pediatric patients. The Journal of Vascular Access. April 27th. .

Proper tip position of central venous catheter in pediatric patients [@ivteam #ivteam](http://ctt.ec/F03z4+)

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Abstract:

BACKGROUND: In this study, we analyzed the thin-section pulmonary computed tomographic (CT) angiogram scans of pediatric patients to determine the normative length of superior vena cava (SVC) and the distance between carina and cephalad of SVC or cavoatrial junction.

METHODS: Consecutive child patients, under 13 years of age in whom the central catheters were inserted under ultrasound guidance from December 2004 to April 2005 were evaluated retrospectively.

RESULTS: In the 14 cases, the mean age was 7.2 ± 4.21 years. The mean length and diameter of the SVC in the pediatric patients were 45.6 ± 23.03 and 13.7 ± 3.62 mm, respectively. The distance from the carina to the cavoatrial junction was 22.0 ± 9.98 mm. The mean distance from the superior margin of the SVC to the carina was 23.7 ± 16.70 mm. The mean distance from the carina to the catheter tip was 38.9 ± 18.60 mm. In no case was the cavoatrial junction cephalad with respect to the carina. Carina to cavoatrial junction was significantly associated with age, height, and weight, respectively ($r = 0.750$; $p = 0.005$, $r = 0.763$; $p = 0.004$; $r = 0.777$; $p = 0.003$).

CONCLUSIONS: The carina is a good landmark for the upper border of the cavoatrial junction. Length of carina to cavoatrial junction was associated with age. The rates of malposition and re-intervention and the patient’s exposure to radiation can be reduced by using ultrasound during the catheter insertion.

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