



Fluoroscopy-guided subclavian vein catheterization in children is a safe procedure, with a high success rate, resulting in a reduced number of venipunctures, optimal catheter placement, and reduced complications” Pang et al (2018).

Abstract:

Subclavian vein catheterization plays an important role in the treatment of children with hematologic disease. However, catheter placement is a difficult and high-risk procedure in children. Fluoroscopy-guided subclavian vein catheterization was used in 203 children (mean age, 6.99 years  $\pm$  3.722 years; range, 1-16 years) with hematologic disease. The number of vein punctures, catheterization success rate, fluoroscopy time, operation time, and surgical complications were recorded. There was a 100% success rate for fluoroscopy-guided subclavian vein catheterization. A total of 124 cases (61.1%) were successful on the first venipuncture attempt; 171 cases (84.2%) achieved success within 3 attempts. Twenty-five cases had 4 to 6 time venipunctures and the remaining 7 cases underwent  $\geq$ 7 time venipunctures. All catheter tips were successfully placed at the junction of the superior vena cava and the right atrium. Fluoroscopy times ranged from 16 to 607 seconds (mean, 65.46  $\pm$  85.864 seconds). Operation time ranged between 5 and 25 minutes (mean, 10.38  $\pm$  4.036 minutes). Arterial punctured was happened during surgery in 2 cases. There were 2 cases of catheter-related infection, but no other complications. The mean follow-up time was 35 days; range 20 to 50 days. Fluoroscopy-guided subclavian vein catheterization in

children is a safe procedure, with a high success rate, resulting in a reduced number of venipunctures, optimal catheter placement, and reduced complications.

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Landmark-guided subclavian vein catheterization

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Description of subclavian vein central venous access

### Reference:

Pang, H., Chen, Y., He, X., Zeng, Q. and Ye, P. (2018) Fluoroscopy-guided subclavian vein catheterization in 203 children with hematologic disease. *Medicine*. 97(50), p.e13527.

doi: 10.1097/MD.00000000000013527.

