

This large series of subclavian vein catheterizations in small infants demonstrates the feasibility of subclavian vein catheterizations even in very small neonates weighing less than 1,500 g.” Lausten-Thomsen et al (2017).

Abstract:

OBJECTIVES: Central venous access in critically ill, small infants remains technically challenging even in experienced hands. Several vascular accesses exist, but the subclavian vein is often preferred for central venous catheter insertion in infants where abdominal malformation and/or closure of the vein preclude the use of umbilical venous catheters, as catheterization of the subclavian vein is easier in very short necks than the internal jugular vein for age-related anatomical reasons. The subclavian vein approach is yet relatively undescribed in low birth weight infants (i.e., < 2,500 g), and this study aims to explore the feasibility of this technique in very small infants.

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DESIGN: Retrospective data collection of prospectively registered data on central venous catheter insertion in infants.

SETTING: Neonatal ICU and PICU at a university hospital.

PATIENTS: One hundred and five newborn children hospitalized in at the ICU.

INTERVENTIONS: An ultrasound-guided supraclavicular approach was applied on all infants who had an subclavian vein catheterization during a 30-month period from January 2013 to July 2015.

MEASUREMENTS AND MAIN RESULTS: One hundred seven supraclavicular subclavian vein catheters were placed in 105 children weighing less than 5,000 g. Among those, 40 patients weighed less than 2,500 g and 10 patients weighed less than 1,500 g. Successful

central venous catheter insertion, defined as the correct placement of a functional double-lumen catheter (3F or 4F), was obtained in 97.3%. All three registered failed attempts were due to hematomas from venous bleeding and occurred in infants weighing greater than 2,500 g. No case of accidental arterial puncture or pleural puncture was registered.

CONCLUSIONS: This large series of subclavian vein catheterizations in small infants demonstrates the feasibility of subclavian vein catheterizations even in very small neonates weighing less than 1,500 g.

Reference:

Lausten-Thomsen, U., Merchaoui, Z., Dubois, C., Eleni Dit Trolli, S., Le Saché, N., Mokhtari, M. and Tissières, P. (2017) Ultrasound-Guided Subclavian Vein Cannulation in Low Birth Weight Neonates. *Pediatric Critical Care Medicine*. 18(2), p.172-175.

doi: 10.1097/PCC.0000000000001028.

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