This supraclavicular, in-plane, real-time, ultrasound-guided cannulation of the brachiocephalic vein seems to be a convenient and effective method to insert central venous catheters in preterm infants” Breschan et al (2017).

Abstract:

BACKGROUND: The aim of this retrospective analysis was to evaluate the clinical effectiveness of the supraclavicular ultrasound-guided cannulation of the brachiocephalic vein in preterm infants.

METHODS: The ultrasound probe was placed in the supraclavicular region so as to obtain the optimum sonographic long-axis view of the brachiocephalic vein. By using a strict in-plane approach the brachiocephalic vein was cannulated by advancing a 22- or 24-gauge iv cannula from lateral to medial under the long axis of the ultrasound probe under real-time ultrasound guidance into the vein.

RESULTS: One hundred and forty-two cannulations in infants weighing between 0.59 and 2.5 kg (median: 2.1; CI: 2.0 to 2.2) were included. Ultimate success rate was 94% (134 of 142).
One cannulation attempt was required in 100 (70%) patients, two attempts in 21 (15%), and three attempts in 13 (9%). The smaller the weight of the infant the more attempts were needed. More attempts also were needed for the right brachiocephalic vein, which was primarily targeted in 75 (53%) neonates. One (1%) inadvertent arterial puncture was noted.

CONCLUSIONS: This supraclavicular, in-plane, real-time, ultrasound-guided cannulation of the brachiocephalic vein seems to be a convenient and effective method to insert central venous catheters in preterm infants.

Reference:

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