Abstract:

BACKGROUND: The subclavian vein is the preferred site for central venous catheter placement due to infection risk and patient comfort. Ultrasound guidance is useful in cannulation of other veins, but for the subclavian vein, current ultrasound-guided techniques using high-frequency linear array probes are generally limited to axillary vein cannulation.

METHODS: We report a series of patients who underwent clinically indicated subclavian venous catheter placement using a micro-convex pediatric probe for real-time guidance in the vein’s longitudinal axis. We identified rates of successful placement and complications by chart review.

RESULTS: Twenty-four catheters were placed using the micro-convex pediatric probe with confirmation of placement of the needle medial to the lateral border of the first rib. Sixteen of the catheters were placed by trainee physicians. In 23 patients, the catheter was placed without complication (hematoma, pneumothorax, infection). In one patient, the vein could not be safely cannulated without risk of arterial puncture, so an alternative site was selected.

CONCLUSIONS: Infraclavicular subclavian vein cannulation using real-time ultrasound with a
Subclavian venous catheter placement using a micro-convex pediatric probe appears to be a safe and effective method of placing subclavian vascular catheters. This technique merits further study to confirm safety and efficacy.

Other intravenous and vascular access resources that may be of interest (External links – IVTEAM has no responsibility for content).