



The purpose of this study was to assess the feasibility and safety of placement of tunneled cuffed catheters through direct percutaneous puncture of the superior vena cava (SVC) in patients with occluded right and left innominate veins” Zhai et al (2017).

Abstract:

OBJECTIVE: The purpose of this study was to assess the feasibility and safety of placement of tunneled cuffed catheters through direct percutaneous puncture of the superior vena cava (SVC) in patients with occluded right and left innominate veins.

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METHODS: This was a retrospective review of all patients with right and left innominate vein occlusions who underwent tunneled catheter placement with direct SVC puncture between January 2012 and December 2014. Under fluoroscopic guidance with the patient in a supine position, a 5F catheter was placed at the distal end of the SVC through the femoral vein, iliac vein, or hepatic vein. This catheter was used as a fluoroscopic target for the puncture. Following the guidance of fluoroscopy, the puncture needle and sheath were placed through a transcutaneous route with the insertion site 0.5 to 1.0 cm lateral-inferior to the clavicle head of the sternocleidomastoid, with the pathway inferior (caudal) to the clavicle, which

allowed access of the guidewire and placement of a tunneled central venous catheter.

RESULTS: The procedure succeeded in all 16 patients. During follow-up (mean, 12 months; range, 3-36 months), access failure due to thrombosis was observed in one patient. The remaining continued to function well until the end of the follow-up period or until the death of the patient (n = 3). No pneumothorax occurred. The most common complication was mediastinal hematoma after puncture failure in five patients. The diameter of the maximum hematoma was 2.2 cm, and all resolved spontaneously.

CONCLUSIONS: In patients with central vein occlusion and exhaustion of conventional insertion sites, a tunneled central venous catheter can be safely placed through SVC puncture by the transcutaneous route.

Reference:

Zhai, S., Zhao, Q., Feng, Y., Yu, Y., Zhou, L., Cui, T. and Fu, P. (2017) Placement of tunneled cuffed vascular catheter through superior vena cava puncture. *Journal of Vascular Surgery. Venous and Lymphatic Disorders*. 5(4), p.547-552.

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