To enable right-sided CVC placement in patients with TCVO, an inside-out access (IOA) approach was established at 3 vascular access centers in Europe involving use of a novel IOA device advanced from the right femoral vein” Reindl-Schwaighofer et al (2019).

Abstract:

RATIONALE & OBJECTIVE: Left-sided internal jugular and all subclavian central venous catheters (CVCs) cause thoracic central vein occlusions (TCVOs) more often than right-sided internal jugular catheters. To enable right-sided CVC placement in patients with TCVO, an inside-out access (IOA) approach was established at 3 vascular access centers in Europe involving use of a novel IOA device advanced from the right femoral vein. In the current analysis, we assessed the eligibility and success rate of this IOA approach in a cohort of patients with TCVO requiring a tunneled dialysis catheter.

STUDY DESIGN: Retrospective multicenter observational study.

SETTING & PARTICIPANTS: 36 patients with TCVO treated in Vienna, Austria; Oxford, England; or Cologne, Germany, who required hemodialysis access between July 2016 and June 2018.

EXPOSURE: Application of the IOA approach to gain vascular access.

OUTCOME: The primary end point was the success rate of passing the TCVO to gain dialysis access using the IOA approach. Secondary end points were catheter patency at 3 months and procedure-related complications (early infections, bleeding, hematoma, and pericardial effusions).

ANALYTICAL APPROACH: Descriptive statistics to characterize eligibility, success rate, and complications of the IOA approach.

RESULTS: 36 patients with TCVO and history of multiple CVCs and arteriovenous fistulas were referred to the participating centers for vascular access. 32 (89%) patients were eligible for
the IOA approach. 39 treatments were performed, with 7 patients undergoing the IOA procedure a second time more than 3 months after initial CVC placement. Dialysis access was established successfully in 38 of 39 (97%) implementations of the IOA procedure. Median intervention time was 43 minutes. No complications occurred.

LIMITATIONS: No comparison to other methods to place CVCs and the observational study design.

CONCLUSIONS: The IOA approach is a promising method to enable rapid access to the right jugular vein in the setting of pre-existing TCVO. Additional experience is needed to understand the generalizability of these observations.

You may also be interested in...

The challenge of vascular access for hemodialysis
Review of vascular access for hemodialysis
Vascular access outcomes in patients on hemodialysis

Reference: