The use of a hydrophilic coated wire significantly decreased the number of CVP and the incidence of pneumothorax. TVS is a safe and successful second-line rescue strategy" Polychronidis et al (2017).

Abstract:

Background: Insertion of a Totally Implantable Access Port (TIAP) can be performed either via Central Vein Puncture (CVP) or Brachiocephalic Vein Cut-down (venous section-VS). The primary success rate of TIAP implantation using VS rarely ever achieves 100%. The objective of this study was to describe a modified VS approach using a hydrophilic coated wire (TVS).

Methods: From 01.01.2015 to 31.12.2015, all patients receiving TIAP implantations were screened. During this time, all patients in whom the primary VS procedure was found to be unsuccessful were analysed.

Results: In 2015, 1152 patients had TIAP implantations performed by 24 different surgeons. Of these, 277 patients needed a second line rescue strategy either by CVP (n = 69) or TVS (n = 208). There were no statistically significant differences regarding demographics or indication for TIAP implantation between CVP and TVS. The operation time and the qualification of the operating surgeon between CVP and TVS did not differ significantly. After the introduction of the guidewire with a hydrophilic coated wire, the need for CVP decreased significantly from 12.7% to 8.8% ($p < 0.0001$). In patients receiving CVP as a second line rescue strategy, the incidence of pneumothorax (n = 3 patients (4.3%)) was significantly higher compared to patients with TVS as a second line rescue strategy (n = 1 patient (0.48%), $p = 0.02$).

Conclusion: The use of a hydrophilic coated wire significantly decreased the number of CVP and the incidence of pneumothorax. TVS is a safe and successful second-line rescue strategy.

Full Text

Reference:

Polychronidis†, G., Hennes†, R., Engerer, C., Knebel, P., Schultze, D., Bruckner, T., Müller-Stich, B.P. and Fischer, L. (2017) Use of a hydrophilic coating wire reduces significantly the rate of central vein punctures and the incidence of pneumothorax in totally implantable access port (TIAP) surgery. BMC Surgery. 17:131.

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