

## **The primary aim of this study was to establish the incidence rate and risk factors for the development of CR-DVT in our critically ill adult patients” Hrdy et al (2017).**

Abstract;

**BACKGROUND:** One of the complications associated with central venous catheter (CVC) placement is catheter related deep vein thrombosis (CR-DVT). However a literature search revealed little evidence of this recognised complication. The primary aim of this study was to establish the incidence rate and risk factors for the development of CR-DVT in our critically ill adult patients.

**METHODS:** All critically ill adult patients admitted to the medical-surgical ICU with CVC inserted were included in this observational prospective study. After catheter removal we performed duplex ultrasound examination to assess the patency of the vein and establish if CR-DVT was present.

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**RESULTS:** A total number of 308 catheters met the inclusion criteria of which 198 were included in the statistical analysis. The CVC was inserted into a subclavian vein (SCV) in 139 (70%) cases and in an internal jugular vein (IJV) in 59 (30%) cases. The 28-day mortality rate was 14.1%. We found CR-DVT during duplex ultrasound examination in 47 (26%) of all cases. 33 (70%) of the CR-DVT were diagnosed in the IJV and 14 (30%) in the SCV. The risk factors for the development of CR-DVT we identified included cannulation of the IJV and the use of treatment dose of LMWH. The effect of CR-DVT on 28-day mortality was not statistically significant.

**CONCLUSION:** The risk factors for CR-DVT we identified were IJV as a site for CVC cannulation and the use of therapeutic anticoagulation prior to cannulation. Our recommendation would be preferential cannulation of a subclavian vein as opposed to an internal jugular vein in order to reduce the risk of CR-DVT.

## Reference:

Hrdy, O., Strazevska, E., Suk, P., Vach, R., Karlik, R., Jarkovsky, J., Sas, I. and Gal, R. (2017) Central venous catheter-related thrombosis in intensive care patients - incidence and risk factors: A prospective observational study. Biomedical papers of the Medical Faculty of the University Palacký, Olomouc, Czechoslovakia. August 24th. .

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