



The primary aim of this study was to investigate the CRI/CRBSI incidence and the association between potential risk factors, including the introduction of a simple hygiene insertion bundle and CRIs at a large university hospital in Sweden” Thorarinsdottir et al (2019).

Abstract:

BACKGROUND: Catheter-related infections (CRIs) and catheter-related bloodstream infections (CRBSIs) are among the most frequent hospital acquired infections. CRI/CRBSI studies in Scandinavian cohorts are scarce. The primary aim of this study was to investigate the CRI/CRBSI incidence and the association between potential risk factors, including the introduction of a simple hygiene insertion bundle and CRIs at a large university hospital in Sweden.

METHODS: We retrospectively included all patients aged 12 and above who received a central venous catheter (CVC) or a central dialysis catheter during a two-year period, one year before and one year after the implementation of a simple hygiene insertion bundle. Microbiological data, including catheter tip cultures and blood cultures, were merged with CVC insertion data.

RESULTS: A total of 1,722 catheter insertions in 1,428 patients were included. CRI and CRBSI

incidence were 1.86/1,000 and 0.62/1,000 catheter days, respectively. In a multivariable regression model, the implementation of a simple hygiene insertion bundle was the independent factor most strongly associated with significantly lower CRI-incidence (95% Confidence Interval (CI) of Odds Ratio (OR) 0.23 - 0.92, $p = 0.029$). Choosing multiple lumen catheters was associated with increasing CRI-incidence (95% CI of OR 1.11-2.39, $p = 0.013$).

CONCLUSION: The incidence of catheter-related infections and catheter-related bloodstream infections in this Scandinavian cohort was low. The implementation of a simple hygiene insertion bundle seems to be an effective intervention for reducing catheter-related infections. The use of multiple-lumen catheters is associated with increased risk of catheter-related infections.

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Reference:

Thorarinsdottir, H., Rockholt, M., Klarin, B., Broman, M., Fraenkel, C.J. and Kander, T. (2019) Catheter-related infections: A Scandinavian observational study on the impact of a simple hygiene insertion bundle. *Acta Anaesthesiologica Scandinavica*. September 15th. doi: 10.1111/aas.13477. .

