

“The purpose of this meta-analysis was to examine the effectiveness of silver-impregnated central venous catheters (CVCs) in preventing catheter bacterial colonization and catheter-related blood stream infections (CRBSIs)” Chen et al (2014)

Reference:

Chen, Y.M., Dai, A.P., Shi, Y., Liu, Z.J., Gong, M.F. and Yin, X.B. (2014) Effectiveness of silver-impregnated central venous catheters for preventing catheter-related blood stream infections: a meta-analysis. *International Journal of Infectious Diseases*. 29, p.279-286.

Meta-analysis examines effectiveness of silver-impregnated central venous catheters
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Abstract:

OBJECTIVES: The purpose of this meta-analysis was to examine the effectiveness of silver-impregnated central venous catheters (CVCs) in preventing catheter bacterial colonization and catheter-related blood stream infections (CRBSIs).

METHODS: PubMed, Cochrane, and Embase databases were searched up to April 30, 2014. Studies in which other antiseptic reagents were used (e.g., chlorhexidine, octenidine dihydrochloride, urokinase rinses, benzalkonium chloride, rifampin-minocycline) were excluded. Pooled odds ratios (ORs) and 95% confidence intervals (CIs) were calculated. Tests of heterogeneity and publication bias were performed.

RESULTS: Twelve studies were included in the meta-analysis. The studies enrolled a total of 2854 patients; 1440 received a standard CVC and 1414 received a silver-impregnated CVC. No significant difference in catheter bacterial colonization rates was found between silver-impregnated and standard CVCs (OR 0.907, 95% CI 0.758-1.087, p=0.290). No significant difference in CRBSI rates was found between silver-impregnated and standard CVCs (pooled OR 0.721, 95% CI 0.476-1.094, p=0.124). No significant heterogeneity or publication bias was noted.

CONCLUSIONS: Silver-impregnated CVCs are not associated with reduced rates of bacterial colonization or CRBSI.

Full Text



Meta-analysis examines effectiveness of silver-impregnated central venous catheters | 2

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