

Chlorhexidine-impregnated dressing is beneficial to prevent CVC-related complications. Future studies are warranted to assess the role and cost-effectiveness of Chlorhexidine-impregnated dressings”  
Wei et al (2019).

Abstract:

**BACKGROUND:** Several randomized controlled trials (RCTs) evaluated the role of Chlorhexidine-impregnated dressing for prophylaxis of central venous catheter (CVC) related complications, but the results remained inconsistent, updated meta-analyses on this issue are warranted.

**METHODS:** A meta-analysis on the RCTs comparing Chlorhexidine-impregnated dressing versus other dressing or no dressing for prophylaxis of central venous catheter-related complications was performed. A comprehensive search of major databases was undertaken up to 30 Dec 2018 to identify related studies. Pooled odd ratio (OR) and mean differences (MDs) with 95% confidence intervals (CI) were calculated using either a fixed-effects or random-effects model. Subgroup analysis was performed to identify the source of heterogeneity, and funnel plot and Egger test was used to identify the publication bias.

**RESULTS:** A total of 12 RCTs with 6028 patients were included. The Chlorhexidine-impregnated dressings provided significant benefits in reducing the risk of catheter colonization (OR = 0.46, 95% CI: 0.36 to 0.58), decreasing the incidence of catheter-related bloodstream infection (CRBSI) (OR = 0.60, 95% CI: 0.42 to 0.85). Subgroup analysis indicated that the Chlorhexidine-impregnated dressings were conducive to reduce the risk of catheter colonization and CRBSI within the included RCTs with sample size more than 200, but the differences weren't observed for those with sample less than 200. No publication bias was observed in the Egger test for the risk of CRBSI.

**CONCLUSIONS:** Chlorhexidine-impregnated dressing is beneficial to prevent CVC-related complications. Future studies are warranted to assess the role and cost-effectiveness of Chlorhexidine-impregnated dressings.

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### Reference:

Wei, L., Li, Y., Li, X., Bian, L., Wen, Z. and Li, M. (2019) Chlorhexidine-impregnated dressing for the prophylaxis of central venous catheter-related complications: a systematic review and meta-analysis. *BMC Infectious Diseases*. 19(1), p.429. doi: 10.1186/s12879-019-4029-9.