Efficiency of chlorhexidine–silver sulfadiazine-impregnated venous catheters at subclavian sites

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Reference:


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Background: Cost-effectiveness analyses show that chlorhexidine–silver sulfadiazine (CHSS)-impregnated catheters reduce catheter-related bloodstream infection (CRBSI) and central venous catheter (CVC)-related costs. However, no studies have reported the efficiency of CHSS-impregnated catheters for venous access when the risk of CRBSI is low; for example, at the subclavian site. This study determined the cost of a CVC, diagnosis of CRBSI, and antimicrobial agents to treat CRBSI; we did not consider the cost of increased hospital stay.

Methods: This retrospective study included patients admitted to the intensive care unit at Hospital Universitario de Canarias (Tenerife, Spain) who had a subclavian venous catheter.
Results: Patients with CHSS catheters (n = 353) had a lower incidence density of CRBSI (2.12 vs 0 out of 1,000 catheter-days; P = .02) and lower CVC-related cost per catheter-day (3.35 ± 3.75 vs 3.94 ± 9.95; P = .002) than those with standard catheters (n = 518). CHSS-impregnated catheters were associated with a lower risk of CRBSI (exact logistic regression) (odds ratio, 0.10; 95% confidence interval, −∞ to 0.667; P = .008) than standard catheters when controlling for catheter duration. CHSS-impregnated catheters were also associated with a lower CVC-related cost per catheter day than standard catheters (Poisson regression) (odds ratio, 0.85; 95% confidence interval, 0.001-0.873; P < .001).

Conclusions: CHSS-impregnated catheters may be efficient in preventing CRBSI in patients with subclavian venous access.

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