An alternative is the use of an antiseptic barrier cap, which cleans the catheter hub by continuous passive disinfection” Voor In ‘t Holt et al (2017).

Abstract:

BACKGROUND: Microorganisms can intraluminally access a central venous catheter via the catheter hub. The catheter hub should be appropriately disinfected to prevent central line-associated bloodstream infections (CLABSIs). However, compliance with the time-consuming manual disinfection process is low. An alternative is the use of an antiseptic barrier cap, which cleans the catheter hub by continuous passive disinfection.

OBJECTIVE: To compare the effects of antiseptic barrier cap use and manual disinfection on the incidence of CLABSIs.

DESIGN: Systematic review and meta-analysis.

METHODS: We systematically searched Embase, Medline Ovid, Web-of-science, CINAHL EBSCO, Cochrane Library, PubMed Publisher and Google Scholar until May 10, 2016. The
primary outcome, reduction in CLABSIs per 1000 catheter-days, expressed as an incidence rate ratio (IRR), was analyzed with a random effects meta-analysis. Studies were included if 1) conducted in a hospital setting, 2) used antiseptic barrier caps on hubs of central lines with access to the bloodstream and 3) reported the number of CLABSIs per 1000 catheter-days when using the barrier cap and when using manual disinfection.

RESULTS: A total of 1537 articles were identified as potentially relevant and after exclusion of duplicates, 953 articles were screened based on title and abstract; 18 articles were read full text. Eventually, nine studies were included in the systematic review, and seven of these nine in the random effects meta-analysis. The pooled IRR showed that use of the antiseptic barrier cap was effective in reducing CLABSIs (IRR=0.59, 95% CI=0.45-0.77, P<0.001).

CONCLUSIONS: Use of an antiseptic barrier cap is associated with a lower incidence CLABSIs and is an intervention worth adding to central-line maintenance bundles.

Reference:


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