The objective of this study was to assess the feasibility of a randomised controlled trial to compare the efficacy of chlorhexidine-impregnated dressing with that of polyurethane dressing in the prevention of catheter-related infections in critically ill adult patients with short-term percutaneous CVC” Margatho et al (2018).

Abstract:

BACKGROUND: In patients with short-term percutaneous central venous catheter (CVC), it is recommended that a dressing be applied to the catheter insertion site to prevent catheter-related infections.

OBJECTIVES: The objective of this study was to assess the feasibility of a randomised controlled trial to compare the efficacy of chlorhexidine-impregnated dressing with that of polyurethane dressing in the prevention of catheter-related infections in critically ill adult patients with short-term percutaneous CVC.

METHODS: One hundred fifteen patients with a CVC were randomised to chlorhexidine-impregnated gel dressing (chlorhexidine gel group) or transparent polyurethane dressing (polyurethane group) between April and December 2014. Feasibility outcomes included data on eligibility, recruitment, missing data, and protocol violation. The primary outcome measure of efficacy was the presence of colonisation with the same microorganism in both the skin swab around catheter insertion site and the catheter tip.

RESULTS: Of 526 patients assessed for eligibility, 411 (78%) did not meet inclusion criteria, and 115 (22%) were randomised. Among participants of both groups, there were 14 missing primary outcomes of which 10 were due to failure to collect the catheter tip (a protocol violation). The final sample had 47 and 54 individuals in the chlorhexidine and polyurethane groups, respectively. Skin and catheter tip were colonised by the same microorganism for 13% of the participants in the chlorhexidine group and 8% in the polyurethane group, although the difference was not statistically significant (p = 0.51). There were no differences between the two groups for catheter tip colonisation, skin site colonisation, catheter insertion site infection, catheter-related bloodstream infection, skin irritation, and the number of unplanned dressing changes.
CONCLUSIONS: Our preliminary results found that a large randomised controlled trial would be feasible. This study provides valuable information that can be used to design more robust studies to prevent infection among patients with short-term percutaneous CVC when using either chlorhexidine or polyurethane dressing.

You may also be interested in...

Reference: