

Wiping out infection: The use of chlorhexidine wipes vs. regular soap in preventing hospital-acquired infections

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Introduction

Hospital-acquired infections “prolong lengths of stay and increase costs of care and patient morbidity and mortality” [3]. Consequently, hospitals are aiming to decrease rates of hospital-acquired infections (HAIs) among patients. Chlorhexidine (CHG) is a topical antiseptic solution safely used worldwide since 1954 [4]. CHG reduces skin colonization of pathogens such as methocillin-resistant *Staphylococcus aureus* (MRSA) and vancomycin-resistant *Enterococcus* (VRE) in order to help prevent cross infections from healthcare providers to patients and vice versa [3]. Scholarly research studies were utilized for this poster to determine the effectiveness of CHG bathing verses regular soap baths in preventing transmission of HAIs.

Methods

A literature search was conducted which included the following databases:

- Ovid
- CINAHL
- PubMed

The following search terms were used alone and in combination:

- Chlorhexidine
- Bath*
- Basin
- Infection Control

Literature Review Results

The articles utilized indicated that use of CHG formulated wipes decreased the acquisition of HAIs.

1. A total of 7727 patients were bathed with either CHG or non-antimicrobial washcloths. They found:
 - 5.10 cases of MDRO per 1000 patient-days with CHG use
 - 6.6 cases of MDRO per 1000 patient-days with regular washcloths. [1]
2. MRSA and VRE transmission rates were analyzed before CHG bathing was implemented and after.
 - MRSA transmission rate was 1.2 per 1000 patient days without CHG and 0.6 per 1000 patient days with CHG use
 - VRE transmission rate was 7.5 per 1000 patient days without CHG use and 3.6 per 1000 patient days with CHG use. [2]
3. For 6 months patients were bathed with routine soap in 6 ICUs. These results were compared with a 6 month period of bathing with CHG solution.
 - Acquisition of MRSA decreased 32% following the use of CHG bathes
 - Acquisition of VRE decreased 50% following the use of CHG baths. [3]

Teaching Points to Share with Patients and Implement into Standard of Practice

- Decreases risk of HAIs [1,2,3,4,5]
- Causes bacterial suppression of normal skin bacteria, gram negative and drug resistant bacteria maintained for up to 6 hours [4]
- Avoids exposing patients to potentially contaminated bath basins [5]
- Increases time efficiency [2,5]
- CHG is safe to use on skin; it does not absorb well into skin [4]
- Increases cost effectiveness – preventing HAIs results in a shorter hospital stay, outweighing increased cost of CHG wipes [2]



Conclusion

The studies utilized concluded that CHG, especially in the form of wipes, was more effective in decreasing rates of HAIs compared to basin baths. Wide-spread use of CHG products may pose a risk for potential resistance to CHG, however continued research will provide more evidence for the emergence of organism resistance to CHG [3,4]. Based on the literature results, steps should be taken to educate nurses on the importance of teaching patients about the benefits of CHG wipes in order to increase compliance. Education for patients may also be provided in the form of pamphlets and posters.

References

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