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COMPARISON OF A WATERLESS ALCOHOL BASED HAND SANITATION PRODUCT WITH A TRADITIONAL CHLORHEXIDINE HAND SCRUB TECHNIQUE FOR HAND HYGIENE PREPARATION IN AN EQUINE HOSPITAL SETTING

Surgical hand antisepsis techniques aim to eliminate or reduce transient and resident micro-organisms from the hands; they are a key in prevention of surgical site infections (SSI)⁽¹⁻³⁾. Recently alcohol based hand rubs have been recommended for pre-surgical preparation in human medical practice rather than traditional chlorhexidine scrubs^(4,5). Alcohol based hand rubs have been reported to have better efficacy in reducing colony counts on hands pre-surgery, to cause less skin irritation, to conserve water, and to lower overall costs^(4,6,7). Despite the recognised advantages in human medicine, the uptake of alcohol based hand preparation systems in large animal veterinary practice has been limited⁽⁸⁾. This study aims to test effectiveness of an alcohol based product in comparison to a chlorhexidine scrub, under both clean and contaminated conditions in order to emulate some aspects of large animal practice⁽⁹⁾.

Numbers of colony forming units of bacteria in glove juice⁽¹⁰⁾ from participants' hands were determined, pre-scrub, immediately post-scrub and after two hours⁽¹¹⁾ inside a sterile glove. Participants completed two trials for comparison of each of the two hand preparation protocols: hands that were clean but contaminated, and; hands that were heavily contaminated with equine faeces⁽⁹⁾. All samples were cultured in serial dilutions on blood agar and on MacConkey agar plates (for the growth of enteric bacteria).

Both hand preparation protocols successfully reduced the number of colony forming units from participants' hands, and did not significantly differ in effectiveness. The abilities of the two hand preparation protocols to eliminate bacteria following faecal contamination of hands did not differ significantly, but the removal and inhibition of bacterial growth was less consistent, with residual counts found in most participants. The results indicate equivalent efficacy of the alcohol based rub tested with a traditional pre-surgical protocol, although it is of interest that neither performed comprehensively under contaminated conditions.

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