

Letters

Adhesive tape in the health care setting: another high-risk fomite?

TO THE EDITOR: We read with interest the article by Pinto and colleagues regarding colonisation of reusable tourniquets by multiresistant organisms (MROs).¹

We highlight that surgical adhesive tape also has the potential to act as a significant fomite in health care settings.

We collected partially used surgical tape rolls from several clinical areas of three hospitals in the Hunter New England Area Health Service. Using hands disinfected with alcohol gel, tape rolls from different locations in each area were placed into 21 clean collection bags (up to three tapes per bag).

Tapes from each batch were placed in 21 sterile containers with 15 mL of brain-heart infusion broth and incubated overnight at 35°C in carbon dioxide. The broths were subcultured onto Columbia horse-blood agar (Oxoid Australia, Adelaide, SA), MacConkey agar (Oxoid) and differential selective media to detect vancomycin-resistant enterococci (VRE) (chromID VRE; bioMérieux, Marcy L'Étoile, France), methicillin-resistant *Staphylococcus aureus* (MRSA) (Brilliance MRSA; Oxoid) and multiresistant gram-negative bacteria (chromID ESBL; bioMérieux). A multiplex tandem polymerase chain reaction assay (MRSA4; AusDiagnostics, Sydney, NSW) to detect MRSA and methicillin-susceptible *S. aureus* (MSSA) was also performed on all broth cultures. Routine species level identification was performed (VITEK MS; bioMérieux). Susceptibility was determined in accordance with Clinical and Laboratory Standards Institute criteria.²

In 11 of the 21 tape batches, MRSA and/or VRE were identified. Of these, four were positive for MRSA and 10 for VRE, with three positive for both. MSSA was



Surgical adhesive tape – a significant fomite

identified in two, both in association with VRE. All batches showed evidence of contamination with other bacteria such as *Bacillus cereus*, coagulase-negative staphylococci, non-multiresistant Enterobacteriaceae, *Pseudomonas* spp, *Acinetobacter* spp and other enterococci.

Our results indicate that surgical adhesive tapes are frequently contaminated with MROs.

Interpretation of these results is limited by the small number of tapes and clinical areas sampled, and the difficulty of proving a relationship to clinical infection. However, items such as intravenous cannulae, surgical drains and wound dressings are frequently fixed using surgical adhesive tape. This may lead to colonisation and subsequent infection. Furthermore, tape rolls are often left lying on contaminated surfaces, are handled by multiple individuals and cannot be disinfected.

Surgical adhesive tape is a potential reservoir of pathogenic bacteria³ and fungi⁴ and was implicated in a prolonged *S. aureus* outbreak in a neonatal unit.⁵ The role of surgical tape as a potential fomite was reported in 1974⁶ but has not been widely acknowledged since.

Removing the outer layer of the tape roll is unlikely to reduce contamination, given visible contamination of the side of many rolls (Figure).³ Short rolls of surgical adhesive tape should be supplied in

sealed packets and used for individual patients, only after hand disinfection, and discarded after use.

Patrick N A Harris Infectious Diseases and Microbiology Advanced Trainee

Chris Ashhurst-Smith Senior Scientist, Microbiology

Sandy J Berenger Infection Prevention and Control Clinical Nurse Consultant

Allison Shoobert Infection Prevention and Control Clinical Nurse Consultant

John K Ferguson Infectious Diseases Physician and Microbiologist

Hunter Area Pathology Service, John Hunter Hospital, Newcastle, NSW.

patrick.harris@hnehealth.nsw.gov.au

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- 2 Clinical and Laboratory Standards Institute. Performance standards for antimicrobial susceptibility testing; twentieth informational supplement. CLSI document M100-S20. Wayne, Pa: CLSI, 2010.
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- 6 Berkowitz DM, Lee WS, Pazin GJ, et al. Adhesive tape: potential source of nosocomial bacteria. *Appl Microbiol* 1974; 28: 651-654. □

“ Surgical adhesive tape is a potential reservoir of pathogenic bacteria

” Harris et al

Early experience with antimicrobial stewardship ward rounds at a tertiary referral hospital

TO THE EDITOR: Antimicrobial resistance has been identified as a major concern in Australia, particularly as few new antimicrobial agents are being developed.¹ Studies suggest that up to half of antimicrobial agents prescribed in hospitals are inappropriate.²⁻⁴ Antimicrobial stewardship interventions, including dissemination of clinical guidelines and restrictions on antimicrobial formularies, may not be fully able to account for the complex indications