

## Methicillin Resistant *Staphylococcus aureus* contamination of phlebotomy tourniquets and faucets

Abeywickrama T<sup>1</sup>, Amarasinghe K<sup>1</sup>, Wijerathne S<sup>1</sup>, Dharmaratne C<sup>1</sup>, Fernando D<sup>1</sup>, **Gunasekera KM<sup>1</sup>**, Senaratna BCV<sup>1</sup>

<sup>1</sup>Faculty of Medical Sciences, University of Sri Jayewardenapura

Introduction and objectives: Methicillin resistant *Staphylococcus aureus* (MRSA) is transmitted through direct contact or fomites. Carriage on hospital personnel is the most important means of nosocomial spread. However, fomites are being increasingly recognized as sources of nosocomial infection. Our aim was to describe the MRSA contamination rate of phlebotomy tourniquets and faucets in a tertiary care hospital and to compare the contamination of plastic tube tourniquets with that of fabric tourniquets.

Method: A cross-sectional study was carried out in the general wards of a tertiary care hospital in Colombo District. Two hundred tourniquets were collected and 100 faucets were swabbed and cultured on CHROMagar™ MRSA medium (CHROMagar Microbiology). Fifty plastic tubes and 50 fabric tourniquets were compared for contamination as an experimental study.

Results: MRSA grew in 26% of tourniquets. Majority were plastic tubes. MRSA contamination of tourniquets did not significantly differ by ward ( $p > 0.4$ ). MRSA was found on 26% of faucets, where contamination rate was highest in the common wards for dermatology, dental, rheumatology, and neurology (55.6%), followed by gynaecology (45.2%), cardiology (33.3%), surgery (18.8%), psychiatry (11.1%), and medicine (5.6%). There was a significant difference between the different types of wards ( $p < 0.01$ ). There was no significant difference in the colony count per

surface area of the two types of tourniquets after a single use.

Conclusion:

MRSA contamination rates of tourniquets and faucets are high. Single use of plastic tube tourniquets and daily cleaning of faucets with detergents is recommended.