Abstract:

INTRODUCTION: Meticillin-resistant Staphylococcus aureus (MRSA) hospital-acquired infection is associated with increased patient mortality. National guidelines state that shared patient equipment must be cleaned after use. The authors sought to identify MRSA contamination in a sample of non-disposable venepuncture tourniquets and audit cleaning habits between patient contacts.

MATERIALS AND METHODS: Fifty tourniquets were collected from junior doctors, nursing staff and wards from two district general hospitals in Essex, UK in 2007. A questionnaire was completed at the time of collection for each tourniquet. The tourniquets were cultured using standard microbiology techniques.

FINDINGS: 18/50 (36%) tourniquets were positive for S. aureus and of these 6/50 (12%) were MRSA positive. 33/43 (77%) healthcare professionals using non-disposable tourniquets for venepuncture made no attempts at cleaning their tourniquets. 10/43 (23%) staff admitted to cleaning their tourniquets. The tourniquets were used for an average of 14 weeks on approximately three different patients per day. 30/50 (60%) tourniquets were visibly soiled and of these 13 were blood stained and 20/50 (40%) appeared ‘clean’. Worn tourniquets when compared with the ‘clean’ tourniquets were more likely to be contaminated with S. aureus, 15/30 (50%) vs 3/20 (15%), and MRSA 5/30 (17%) vs 1/20 (5%).

CONCLUSION: Non-disposable venepuncture tourniquets are contaminated with MRSA and pose a risk to patients. The majority of clinical staff do not clean them between patient contacts as recommended by guidelines. The use of non-disposable venepuncture tourniquets should be abandoned. The introduction of disposable tourniquets to clinical practice should be an adjunct to current measures for MRSA prevention.
Study identifies MRSA contaminated tourniquets in clinical intravenous practice