

Isolation of methicillin-resistant *Staphylococcus aureus* (MRSA) from rented DVDs

To the Editor:

The infection potential within the home is closely related to that in the community, and transfer of infectious agents between the home and other related community settings undoubtedly occurs as a result from the movement of people and domestic animals in and out of the home as well as by way of food, air, and other inanimate objects.¹ Through contact with a contaminated inanimate object (such as a toy), microbes acquired on hands can be transferred to another host by touch.

Using standard bacteriological procedures,² we examined samples from 60 rented DVDs obtained from 5 different local DVD rental shops in Tripoli city for gram-positive and gram-negative bacteria. Susceptibility of isolated bacteria to various antibiotic agents was determined by the disc diffusion method.³ Methicillin resistance was determined using 1- μ g oxacillin discs and Muller-Hinton agar plates with added sodium chloride. Methicillin resistance was reported if the zone of inhibition was \leq 11 mm.

Of the 60 DVDs evaluated in this study, *Staphylococcus aureus* was detected on 35 (58.3%), *S epidermidis* on 20 (33.3%), *Pseudomonas aeruginosa* on 3 (5%), gram-negative rods on 7 (11.7%), gram-negative cocci on 1 (1.7%), and *Bacillus* species on 23 (38.3%). No *Enterobacteriaceae*, *Streptococcus*, or *Aeromonas* species were detected. Of the *S aureus* isolates detected on the rented DVDs, 4 (11.4%) were found to be resistant to oxacillin—that is, methicillin-resistant *S aureus* (MRSA). Resistance to other antibiotic agents is summarized in Table 1.

Exposing new, unused DVDs artificially contaminated with *S aureus* ATCC 25923, *Escherichia coli* ATCC 25922, and a MRSA strain to 70% isopropyl alcohol or 2% distilled vinegar for 1 minute or longer rendered them free of bacteria regardless of the test organism used (results not shown). The use of isopropyl alcohol in commercially available prep pads or swabs also can be effective in disinfecting rental DVDs (K. S. Ghenghesh, unpublished observation).

Our findings show that, at least in our region, rental DVDs carry multiple antimicrobial-resistant bacteria,

including MRSA, and may play a role in the transmission of these organisms in the community. In an era

Table 1. Antibiotic resistance of *S aureus* (n = 35) isolated from rented DVDs

Antibiotic	Number (%) resistant
Ampicillin	20 (57.1)
Oxacillin	4 (11.4)
Erythromycin	17 (48.6)
Tetracycline	5 (14.3)
Fusidic acid	24 (68.6)
Ciprofloxacin	1 (2.9)
Gentamicin	0 (0.0)
Vancomycin	0 (0.0)

when infections are becoming more difficult to deal with by the antibiotic route, primary prevention is increasingly critical.¹ The decontamination of rental DVDs with alcohol or distilled vinegar may decrease the risk of transmitting pathogenic bacteria of these objects in the community as a whole and in the home in particular, especially in the presence of immunocompromised inhabitants. Educating the public on the importance of personal hygiene, especially handwashing, when handling rented DVDs also may enhance transmission prevention.

Khalifa Sifaw Ghenghesh, PhD, DipBact

Department of Microbiology and Immunology,
Faculty of Medicine

Halima Nashnoush, MSc

Department of Botany, Faculty of Sciences

Amal Shaker, BSc

Department of Botany, Faculty of Sciences

Hussam Enaami, MBBS

Department of Microbiology and Immunology,
Faculty of Medicine

Abdualaziz Zorgani, PhD

Department of Microbiology and Immunology,
Faculty of Medicine, Al-Fateh University, Tripoli, Libya

References

1. Scott E. The potential benefits of infection control measures in the home. *Am J Infect Control* 2001;29:247-9.
2. Duguid JP. *Staphylococcus*: cluster-forming gram-positive cocci. In: Collee JG, Duguid JP, Fraser AG, Marmion BP, editors. *Practical medical microbiology*. Edinburgh: Churchill Livingstone; 1989. p. 303-16.
3. Jorgensen JH, Turnidge JD. Susceptibility test methods: dilution and disk diffusion methods. In: Murray PR, Baron EJ, Jorgensen JH, Pfaller MA, Tenover FC, White

doi:10.1016/j.ajic.2008.06.010

0196-6553/\$36.00

Copyright © 2009 by the Association for Professionals in Infection Control and Epidemiology, Inc.