Time to Hang the White Coats in the Closet?

BY DOUG BRUNK

SAN DIEGO — It may be time for North Americans to follow the British in their 2007 ban on white lab coats in the health care setting.

Researchers at Virginia Commonwealth University in Richmond used pigskin as an in vitro model to demonstrate that large inoculums of methicillin-resistant *Staphylococcus aureus* (MRSA), vancomycin-resistant enterococci (VRE), and pan-resistant *Acinetobacter* (PRA) bacteria could be transferred from a white cotton lab coat to pigskin 1 minute, 5 minutes, and 30 minutes after inoculation.

"Previous research has indicated that you could isolate organisms from materials such as hospital curtains, neckties, and lab coats, but we wanted to find out if you could take the inoculum from the cloth of a lab coat, transfer it to skin, and isolate the inoculum from the skin," Dawn L. Butler said in an interview during a poster session at the annual meeting of the Society for Healthcare Epidemiology of America. "We did."

Ms. Butler, a second-year medical student at the university, and her associates diluted MRSA, VRE, and PRA and inoculated them onto swatches of one clean, cotton medical lab coat. Next, they rubbed sanitized pieces of pigskin across the inoculated swatches, and a touch prep of the pigskin onto selective media was performed to determine if the inoculated organism could be isolated from the pigskin.

These steps were performed for each of the three study isolates at 1 minute, 5 minutes, and 30 minutes. Selective media were used to prevent growth of contaminants, followed by incubation of the cloth swatches for 24 hours in thioglycolate broth to verify the viability of organisms.

All of the swatches had grown organisms on respective selective media at 24 hours, confirming organism viability on the cotton lab coat.

"Everybody criticizes the British for banning white lab coats in the health care setting, saying that nobody's ever shown that lab coats can transmit an infection," Dr. Michael Edmond, chair of the division of infectious diseases at VCU, said at the meeting. "This shows that it's biologically plausible, because in the laboratory we did transmit the organism from the coat to the skin."

It's possible to 'take the inoculum from the cloth of a lab coat, transfer it to skin, and isolate [it] from the skin.'

MS. BUTLER

In a related poster, 141 physicians from nine VCU departments were surveyed about their attitudes regarding white lab coats. Most of the respondents (90%) were aged 29-39 years. Slightly more than half were men (52%) and the majority were medical residents (42%), followed by interns (35%), attending physicians (17%), and fellows (6%), reported Dr. J. Daniel Markley Jr., a second-year internal medicine resident at the university.

Previous studies have shown that nosocomial pathogens can persist on fabric for months, but when the survey participants were asked how long a microbe can survive on fabric, 2% said hours, 49% said days, 28% said weeks, 18% said months, and 3% said years.

While 90% of respondents reported wearing their white coats daily or most days of the week, 62% said that they wait 2 weeks or longer to launder them.

Nearly half of respondents (49%) believed that patient perception of physicians would be adversely affected if white coats were discontinued, yet 74% believed that banning white coats could have a significant effect on hospital-acquired infection.

Dr. Markley also reported that 87% of male physicians would stop wearing ties if recommended and 42% of respondents would stop wearing a watch, but only 48% would comply with a "bare below the elbow" policy. They wouldn't want to wear a lab coat with short sleeves "because they don't want to be viewed as a dentist," Dr. Markley said.

The researchers had no conflicts of interest to disclose. ■