Home Laundering of Surgical Attire

Could I be exposing my patients to pathogens by laundering my scrub clothes at home?

Three patients who underwent coronary artery bypass grafting surgery in one health care facility were readmitted with deep sternal infections caused by *Gordonia bronchialis* three weeks to eight months after surgery. The patients all required debridement of the flap grafts and intravenous antimicrobial therapy.

A team investigating the outbreak cultured the scalps, nares, pharynx, axilla, hands, and surgical scrubs of health care providers involved in the care of any of these patients. A nurse anesthetist who had provided care for all three of the patients was implicated as the cause of the surgical site infections. *G bronchialis* was isolated from her scrub attire, axilla, hands, and purse. Cultures taken from her roommate, who was also a nurse, showed the same microorganism. The distinct strains of *G bronchialis* matched those causing the infections.

After she was notified of the culture results, the nurse anesthetist discarded her front-loading washing machine that had a persistent odor. During the next year, the nurse anesthetist’s and her roommate’s scrub attire, hands, nares, and scalp tested negative for *G bronchialis*. The authors of the case report concluded that the home washing machine was the likely bacterial reservoir.

Home laundering may not reliably kill all pathogens, and the pathogens may survive in the form of biofilms within the washing machine. Energy-conserving measures, such as washing in cooler water or using less water per wash cycle, may contribute to the problem. The authors recommended that hospital laundering be implemented for scrub attire as a measure to reduce patients’ risk of developing a surgical site infection. This report is the first to demonstrate a causal relationship between home laundering and human disease.

Reference


**TAKEAWAY**

Home laundering of scrub attire presents the possibility of bringing contaminates from the home into the health care environment and potentially putting patients at risk. Likewise, there is the potential to transport pathogens from scrub attire into the home or community by bringing scrub clothes home for laundering.
Improper Use of Face Masks

Why can’t I wear my mask under my nose?

An infection control team in a French hospital conducted an investigation after three patients developed surgical site infections caused by methicillin-susceptible Staphylococcus aureus (MSSA) within a 12-day period. Factors common to all three patients were that they were treated in the same OR by the same surgeon, and all the patients were cared for on the same unit and by the same health care workers during their hospital stays. The team performed environmental sampling of surfaces in the OR and took nasal swabs from the patients and health care workers.

During a multidisciplinary team meeting, the OR nurses expressed concern over deviations in perioperative hygiene practices. The infection control team then conducted an audit of hygiene practices in the OR and identified deviation from standard practices related to the initial installation of surgical drapes; manipulation of glasses and surgical masks by some surgeons during surgical procedures; and misuse of surgical masks, including masks worn not covering the nose and masks not changed between surgeries.

Environmental sampling in the OR was negative for MSSA. Infection cultures from all three patients matched the nasal carriage strain of MSSA from the surgeon, who consistently wore his surgical mask under his nose. The infection control team concluded that the MSSA was likely transmitted by the surgeon to the patients as a result of improper use of the surgical mask. This case report reinforces the role of the surgical mask in surgical site infection prevention.

Reference


TAKEAWAY

The surgical mask protects the patient from what you may unknowingly carry in your nose and mouth. It also protects you from exposure to body fluids from the patient. Just take a look at what is on your mask at the end of a surgical procedure.
Mycobacterium Transmission from Body Hair

Why can’t I wear a skull cap instead of a bouffant cap?

Between August and November 2003, 15 women in one medical center in Israel contracted surgical site infections after insertion of breast implants. Researchers conducted a case control study and an extensive environmental investigation. They identified the organism as a rapidly growing mycobacteria.

The researchers obtained samples from the fingers, nares, hair, and axillae of the OR staff members. The significant risk factor for infection was determined to be performance of the implant procedure by a specific surgeon. Identical strains of mycobacteria were isolated from the patients’ surgical wounds and from the surgeon’s eyebrows, hair, face, nose, ears, and groin, as well as from an outdoor whirlpool at the surgeon’s home.

The surgeon stopped using the whirlpool and began cleaning his body with a shampoo that contained triclosan. During surgery, the surgeon wore a hood-style cap that covered all exposed facial areas. After these interventions were put in place, the infection outbreak ended. Weekly cultures of samples from the hair-growing areas of the surgeon’s body were negative for mycobacteria during two years of follow-up. This investigation highlights the possibility that human skin can be colonized by environmental mycobacteria, which could then be transmitted to another person during surgery. Covering facial hair is one intervention that may help prevent infection transmission. Head coverings and hoods should fully cover the scalp and all hair on the head, including beards and facial hair.

Reference