Infection Transmission

Do you change out of soiled scrubs as soon as possible, clean your contaminated skin with soap and water, and don clean scrubs?

Following blunt trauma, a 55-year-old patient developed necrotizing fasciitis. He was taken to the operating room by a team of surgeons who performed extensive debridement of both lower legs and hip disarticulation. The patient developed septic shock. Blood and wound cultures obtained by the surgical team grew *Streptococcus pyogenes*, a group A *Streptococcus*.

On day three of the patient’s stay, Surgeon A, a participant in the surgical debridement, developed a sore throat and was diagnosed by her physician with group A streptococcal pharyngitis. She received a broad spectrum antibiotic and recovered.

On day eight, Surgeon B, who had assisted with the disarticulation of the patient’s left hip developed malaise, fever, and chills and the following day developed erythema and edema of the right foot and thigh. His physician also noted he had extensive tinea pedis (athlete’s foot). Surgeon B was hospitalized and received intravenous antibiotics and fluid hydration, but his condition deteriorated. He developed toxic shock syndrome and progressive lower-extremity erythema that required surgical debridement. Blood cultures taken from Surgeon B grew *S pyogenes*. He gradually recovered after 12 days.

In the meantime, the index patient died on hospital day 10 despite debridement and treatment with broad-spectrum antibiotics and immunoglobin. During investigation by the surgical team of infection-control practices in the operating room, Surgeon A noted that her mask fit loosely and she did not wear eye protection while using electrocautery, surgical saws, and pulsatile lavage. There was also gross contamination through the surgical gowns of both surgeons and soaking of Surgeon B’s socks with blood and body fluid that exposed his feet and could have been the portal of entry for infection through his tinea pedis. Replacement scrubs were not readily available, and both surgeons wore contaminated clothing after the procedure had concluded.

**TAKEAWAY**

Contaminated clothing should be removed as soon as possible after blood and body fluid exposures, and contaminated skin should be cleaned with soap and water. Snug fitting masks protect the patient from infectious organisms and also act as a barrier to prevent transmission from the patient to the health care worker. Taking extra precautions with a pulse lavage to prevent splashing and splatter and wearing waterproof boot covers could also prevent blood soaking through surgical attire to skin.

Reference