Letters to the Editor

Patient Injury From Flash-Sterilized Instruments

To the Editor:

The recommended use of flash sterilization is for the emergency sterilization of unwrapped, nonporous metal items in gravity-displacement sterilizer for 3 minutes at 132°C.[1,2] Flash sterilization commonly is used in the operating room for emergency sterilization of dropped or otherwise contaminated instruments, instruments unintentionally left out of a surgical tray or, inappropriately, to compensate for inadequate inventories of instruments or implantable devices.[3]

We report here two patients who received clinically significant burns during surgery from instruments that had been flash sterilized.

Patient 1, a 22-year-old female, underwent a right anterior cruciate ligament reconstruction. She suffered a partial-thickness burn to her right thigh when a hot instrument (a shaver housing) was placed on her leg after being flash sterilized. This instrument required flash sterilization so it could be used on this patient, who was the second case. Approximately 15 minutes had elapsed from the time the instrument was sterilized until it was placed on the patient. The burn occurred following attempts to cool the instrument. The nurse was able to hold the instrument in her hand, although it felt warm. Skin grafting was not required but the injury resulted in a permanent scar.

Patient 2, a 67-year-old female, underwent a right total hip replacement. Hands-free retractors with weights had been used on the first case of the day and were not immediately resterilized after that first case in preparation for this patient, who was the second case. She suffered a full-thickness burn after a weight that had been flash sterilized was placed on her thigh. The surgeon placed the weight on her skin and after a few minutes, when he realized that the weight was still hot, he immediately placed a wet, cold towel over the area. Erythema was noted at the site of the weight in the operating room. The patient presented 2 weeks later with full-thickness burns to two areas on the thigh; one area measured 2 cm in diameter and the other 5 cm in diameter. Skin grafting was not required, but the injury resulted in permanent scars.

After these incidents, the following corrective actions were undertaken. First, additional surgical instruments were purchased to reduce the need for flash sterilization. Second, a policy was instituted requiring that all instruments be cooled following flash sterilization prior to use by the surgeon. This was accomplished by either air cooling or immersion in sterile saline. Third, all staff were educated regarding the need to cool flash-sterilized instruments prior to use. No additional burns have occurred in the year since these incidents.

We believe that this is the first report of clinically important burns in patients following the use of flash-sterilized instruments. We recommend that all healthcare facilities that use flash sterilization develop policies and educate staff to prevent the use of instruments hot enough to cause clinical burns. The use of flash sterilization should be limited to recognized indications.[4]

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William A. Rutala, PhD, MPH
David J. Weber, MD, MPH
Kathryn J. Chappell, RN, MSN
University of North Carolina
Chapel Hill, North Carolina

Environmental Sampling of *Acinetobacter baumannii:* Moistened Swabs Versus Moistened Sterile Gauze Pads

To the Editor:

The ability of the genus *Acinetobacter* to persist on hospital surfaces for several days is well known and contributes to the development of hospital outbreaks.[1] However, in large and sustained outbreaks, sources of *Acinetobacter baumannii* may remain obscure, and environmental studies may fail to find a common source of infection. In these endemic settings, rates of contamination have differed widely from one study to another, from 0% to 18%, probably depending on several factors such as the magnitude of the outbreak, the type of items sampled, and the technique used.[1]

In 1992, an epidemic due to multidrug-resistant *A baumannii,* centered in the four intensive-care units (ICUs), was noted in our 1,000-bed tertiary-care teaching hospital. From 1992 to 1996, most *A baumannii* strains were related by pulsed-field gel electrophoresis (PFGE) to a major clone that was susceptible only to imipenem, sulbactam, and polymyxins.[2] Several studies showed colonized or infected patients to be a major reservoir of infection.[2,3] Environmental cultures using moistened swabs showed rates of positive samples reaching 19%, similar to other reports.[1] From 1992 to 1996, isolation precautions were not enough to control the outbreak, and the infections became endemic, leading us to consider that some environmental reservoirs might remain unrecognized using the swab technique.

To improve the capacity to detect contamination, we modified the recommended swab technique by using moistened sterile gauze pads rather than the cotton applicator swab. The gauze was immersed, using sterile gloves, in a screw-cap container with 10 mL of brain-heart