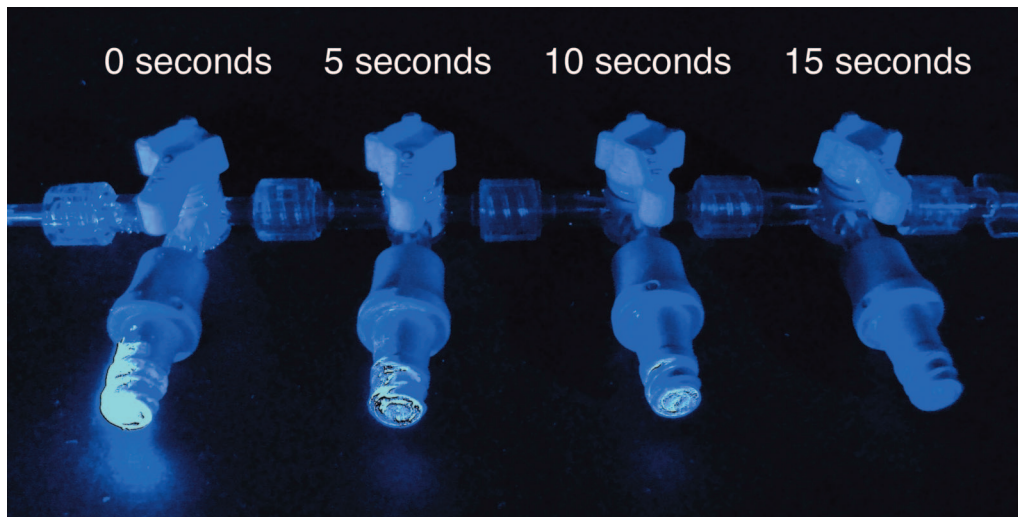


Scrub the Hub! Catheter Needleless Port Decontamination

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THE central venous catheter (CVC) is an essential tool in the care of critically ill and high-risk intraoperative patients. Catheter-related bloodstream infection (CR-BSI) related to CVC insertion technique has been greatly reduced by the use of preventive protocols.¹ However, late CR-BSI remains a significant threat to patient safety and healthcare cost containment. Appropriate

CVC maintenance may be the most important factor in the prevention of late CR-BSI.² Even transient improper CVC maintenance (e.g., with perioperative drug administration) may cause life-threatening CR-BSI.

We examined the effect of scrub duration on macroscopic contamination of needleless CVC connector hubs to illustrate the importance of hub cleaning. We applied commercially available fluorescein-impregnated powder (Brevi Corporation, Salt Lake City, UT) to CVC hubs and subsequently scrubbed the hubs with 70% isopropyl alcohol pads for 0 (control), 5, 10, and 15 s. Using ultraviolet light, we exposed residual fluorescent powder on the CVC hub.

We found a direct relationship between scrub duration and powder contamination, particularly in areas with complex 3-dimensional topography. The correlation between this finding and the incidence of bacterial contamination is unclear, although Menhay has previously questioned the efficacy of a 3–5 s alcohol scrub for heavily contaminated CVC hubs.³ Anesthesiologists are encouraged to follow best-practice guidelines for CVC maintenance, including attention to disinfection of CVC hubs with isopropyl alcohol pads before syringe or infusion tubing connection. Future studies are needed to determine whether increasing scrub duration will also reduce bacterial colonization and CR-BSI outcomes.

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