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## Serratia Outbreak From Contaminated Pressure-Monitoring Equipment

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Harnett and colleagues, from the United Kingdom, have reported on an outbreak of *Serratia liquefaciens*. Between October and December 1999, *S. liquefaciens* was isolated from 11 patients in an adult critical-care unit. One patient was infected on two separate occasions. In total, there were 10 positive blood cultures and 5 positive intravascular catheter tips. Eight cases were clinically infected, 3 were possibly infected, and 1 was not. All patients with clinical isolates received appropriate empirical antibiotic treatment.

Environmental investigation revealed

*S. liquefaciens* in syringes and connector tubing used to calibrate the intravascular-line pressure-monitoring equipment of eight patients. Three of these patients also had clinical isolates of *S. liquefaciens*. Analysis by pulsed-field gel electrophoresis found clinical and environmental isolates to be of the same strain. The most likely mode of transmission was a nonsterile sphygmomanometer tip used daily for calibration. Inadequate microbiological sampling methods may have limited detection of *S. liquefaciens*. Several other examples of poor infection control techniques were identified during the outbreak, notably lapses in hand hygiene during intravascular pressure monitoring. It also was observed that unlabelled multidose heparin and insulin vials were shared

between patients, and personal hand creams were used by staff. However, these were not directly implicated in the outbreak. The outbreak ended when poor infection control practices were corrected. Calibration syringes and connector tubing were discarded after a single use. The sphygmomanometer was replaced by a pneumatic pressure transducer tester with connector tube and the frequency of calibration reduced to a single test following line insertion only. The nondisposable tube was disinfected with alcohol wipes between patients.

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