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Comparison of Nosocomial Infections in Trauma and Surgical Patients

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Wallace and colleagues from the Division of Trauma Surgery and Critical Care, University of California-Irvine Medical Center, conducted a study to determine whether there is a difference in rates of nosocomial infections between trauma and surgical patients in the SICU. From January 1995 through December 1997, they reviewed 1,272 trauma and 2,443 surgical admissions to SICU. They documented all cases of nosocomial pneumonia, urinary tract infections, bloodstream infections, and surgical-site infections. From these data they determined infection rates per 100

admissions. They also identified all device-related nosocomial infections and calculated infection rates by current CDC standards (number of device infections ÷ number of device-days × 1,000). They found that the overall trauma patient infection rate was 11.6% compared with 6.4% for surgical patients ($P < .001$). Using conventional infection-rate criteria, trauma patients had higher frequencies of ventilator-associated pneumonia (6.1% vs 2.5%; $P < .001$), urinary tract infection (2.4% vs 1.8%; $P < .02$), and bloodstream infection (2.5% vs 1.3%; $P < .01$). However, when using the CDC guidelines, which correct for the number of device-days for infections, only the difference in rate of pneumonia between the two groups reached statistical sig-

nificance (23.9 for trauma patients vs 16.7 for the surgery group; $P < .005$).

The authors concluded that trauma patients are at higher risk for nosocomial infections than routine surgical patients. Because of this difference, centers should collect and report data separately for trauma and surgical patients in the ICU. Specific attention should be focused on the causes and prevention of increased rates of nosocomial pneumonia in trauma patients.

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