Acinetobacter Infections in Military Personnel 2003-2004

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Acinetobacter baumannii is a gram negative rod that can colonize a healthy host. It is characterized by a high degree of innate and acquired antibiotic resistance. While it is an environmental saprophyte, it is also a well-established hospital-acquired pathogen especially in intensive care and surgical units.

Much attention has been paid both in medical literature and the lay press to outbreaks of Acinetobacter infection in military personnel in Iraq, Kuwait, and Afghanistan. One of the first reports of Acinetobacter infection in soldiers originated from a Navy ship on April 17, 2003, where multi-drug resistant Acinetobacter infections were isolated from contaminated wounds (5). A warning was subsequently issued from the United Kingdom regarding the presence of Acinetobacter infections from soldiers returning from Iraq in October, 2003 (3). Since the first reports of Acinetobacter infections, recommendations have been made to screen for Acinetobacter infections in military personnel injured in the field and to institute infection control measures with isolation and cohorting of infected patients (2). It remains unclear whether soldiers were colonized with the bacteria during active duty, infected as a result of contamination during the traumatic injuries, or infected following entry into medical triage areas or admitted to tertiary care hospitals. Acinetobacter isolates from soldiers have been highly resistant in vitro to multiple antibiotics, a feature typical of Acinetobacter isolates acquired in the hospital.

A total of 102 cases of Acinetobacter bacteremia have been reported in soldiers by November 2004 (2). At 2 individual tertiary care hospitals, this represented approximately a 20-30 fold increase of Acinetobacter infections prior to the military action. In the Middle East or Afghanistan, up to 90% of these patients had suffered traumatic (and presumably grossly contaminated) wounds during active service. Blood cultures were frequently positive within 48 hours of admission, indicating infection or at least colonization prior to hospitalization. Using in vitro microdilution testing, 82%-87% of isolates were sensitive to imipenem and 48-80% were sensitive to amikacin, although it is

noted that 35% were sensitive only to imipenem and 4% were resistant to all antibiotics tested.

It is noteworthy that Acinetobacter species were also noted to be a common pathogen implicated in wound infections during the Vietnam conflict (4) and the Iran-Iraq war (1), but not in the 1991 Gulf war.

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