Epidemiological Surveillance

Wound Infection Surveillance of War Wounds in British Forces Personnel
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Introduction: Deployed British military personnel sustaining battlefield wounds enter a single aeromedical evacuation pathway with rapid repatriation to a sole UK civilian hospital in Birmingham. A prospective wound infection surveillance system was established to identify true clinical wound infection in these patients.

Methods: All military patients admitted to the UK civilian hospital with battlefield wounds were included and followed-up on until hospital discharge. Wounds were clinically and objectively assessed for infection using Surgical Site Infection Surveillance (UK definitions). Variables possibly affecting outcome such as type of injury and surgical interventions also were recorded.

Results: In the 12-month period (April 2008–April 2009) 162 patients were captured by WISS. Thirty-six distinct wound infection episodes occurred in 27 individuals—a wound infection rate of 16%. A total of 75% of these were classified as “deep” infections. All were contaminated at time of injury, most often blast injury (88%). No deaths resulted from wound infection. Microbiology varied, but Acinetobacter species caused no clinical infections despite significant rates (37%) of colonization.

Conclusions: The low clinical wound infection rate reflects the quality of primary surgical care. The results are a critical performance indicator of surgical and post-trauma care, forming an integral part of patient management. The wound infection surveillance system now will be extended to include long-term follow-up.

Keywords: British forces; infection; military personnel; wound; wound infection; war

Medical Evacuation

A Pilot Study of Performance of LTV1000 and TbirdVSO2 Ventilators Stimulated at Altitude: Study of Tidal Volume
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Introduction: Military air evacuations require a great amount of flexibility in terms of ventilator options, without alteration of tidal volume across a wide range of hypobarometric conditions. The performance of two ventilators was studied using an advanced turbine delivery system: (1) a LTV1000; and (2) a TbirdVSO2. The ventilators’ abilities to deliver a set tidal volume (V_t set) in the face of cabin altitude change and variable compliance and resistance were compared.

Methods: A decompression chamber was used to mimic the hypobarometric environment at a range of cabin simulated