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Heat Therapy Shown Effective in Treating Cutaneous Leishmaniasis Among U.S. Soldiers in Iraq

A single session of heat therapy using the Thermomed™ device appears to be as effective as a 10-day intravenous course of sodium stibogluconate (Pentostam) for the treatment of *Leishmania major* skin lesions, according to a new study by Naomi Aronson and her colleagues at the Uniformed Services University of the Health Sciences (USU) and Walter Reed Army Medical Center (WRAMC). Results from the randomized treatment trial, which involved 56 military personnel who contracted *L. major* while serving in Iraq, are reported March 5 in the open-access journal [*PLoS Tropical Neglected Diseases*](#).

Endemic to Iraq and Afghanistan, more than 1,300 American military and civilian personnel have developed cutaneous leishmaniasis, a parasitic skin infection, since operations commenced in these countries. Initially, the primary treatment option was evacuation to WRAMC for sodium stibogluconate treatment under an investigational drug protocol. Aronson and colleagues therefore tested the efficacy of the Thermomed™ device, a potential tool for on-site treatment.

The patients treated in the study received either a single session with the Thermomed™ device or a daily intravenous infusion of sodium stibogluconate, a pentavalent antimony drug, over a period of 10 days. Patients were then checked at two-, six-, and 12-month intervals to assess the healing process. Both treatments resulted in comparable rates of healing. The number and severity of the side effects were greater with sodium stibogluconate treatment, however these resolved over time without long-term effect.

Aronson and colleagues suggest that a rugged, battery-operated device such as the ThermoMed™, which could be forward-deployed in the field to effectively treat *L. major* skin lesions, is not just operationally significant for the military, but may offer non-governmental agencies another method of treatment for cutaneous leishmaniasis.

Located on the grounds of Bethesda's National Naval Medical Center and across from the National Institutes of Health, USU is the nation's federal school of medicine and graduate school of nursing. The University educates health care professionals dedicated to career service in the Department of Defense and the U.S. Public Health Service. Medical students are active-duty uniformed officers in the Army, Navy, Air Force and Public Health Service who are being educated to deal with wartime casualties, natural disasters, emerging infectious diseases, and other public health emergencies. Of the University's nearly 4,400 physician alumni and more than 400 advanced practice nurses, the vast majority serve on active duty and are supporting operations in Iraq, Afghanistan, and elsewhere, offering their leadership and expertise. The University also has graduate programs open to civilian and military applicants in biomedical sciences and public health committed to excellence in the didactic and research training which have awarded more than 300 Ph.D. and 100 M.S. degrees to date.

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