

INFORMATION PAPER

DASG-PPM-NC
10 Dec 2003

SUBJECT: Leishmaniasis Among Soldiers Deployed to Operation Iraqi Freedom (OIF)

1. Purpose. To provide information about cutaneous leishmaniasis among soldiers deployed to OIF.

2. Facts.

a. Synopsis. Cutaneous Leishmaniasis (CL) is a non life-threatening parasitic disease spread by the bite of infected female sand flies. As of today 127 soldiers have a confirmed diagnosis of CL among troops deployed to OIF. All have been treated at Walter Reed Army Medical Center (WRAMC), the DOD referral center for treatment of leishmaniasis. Of those for whom a location of likely exposure was known, slightly over half of the soldiers were most likely exposed in central Iraq (especially Balad), about one third were exposed in northern Iraq (Tikrit, Mosul etc.), and about one tenth in the vicinity of Tallil Airbase in southern Iraq. There are neither vaccines nor medication effective for prevention of leishmaniasis. Prevention requires command emphasis on use of personal protective measures against biting insects with DEET-containing repellents, and uniforms and bed nets impregnated with permethrin.

b. The Disease. CL typically presents as ulcerous skin lesions, characterized by one or more open, (crater-like) skin sores that develop over weeks to months after a person is bitten by an infected sand fly. This protracted delay in the appearance of the characteristic lesions, coupled with the mobility of military personnel, often complicates identifying the specific location of initial infection. While CL is non-fatal, the skin sore can be unsightly and leave a permanent scar. Visceral leishmaniasis (VL) is another, more serious internal form of the disease infecting the liver, spleen and bone marrow; however, there have been no VL cases in any Service member to date.

c. Treatment. Definitive treatment involves evacuation from theater to WRAMC. CL is treated with Pentostam™ intravenously for twenty days. This product is administered voluntarily under an FDA-approved Investigational New Drug (IND) protocol at WRAMC, the only DoD facility with this approval. Pentostam™ can have side effects, from muscle and joint pain to inflamed pancreas. WRAMC monitors Pentostam™ treatment in Soldiers closely, and adjusts use accordingly. The Pentostam™ treatment has been 95% effective in Soldiers. Even if left untreated, CL is a self-limited infection and will heal spontaneously within weeks or months, and in some cases, may last for a year or more.

d. Leishmaniasis Prevention. Because there are neither vaccines nor medication effective for prevention of leishmaniasis, prevention efforts are accomplished by (1) suppressing the reservoirs including dogs and rodents, (2) suppressing the insect vector

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(sand fly) which is critical to preventing exposure in stationary troop populations, and (3) command emphasis on personal protective measures (PPM). Effective PPM measures include (1) application of repellent lotion containing DEET specifically formulated for extended use to exposed skin, (2) proper wear of the battle dress uniform (BDU), preferably Permethrin treated, with sleeves rolled down and pants tucked into boots, and (3) use of Permethrin treated bed nets and screened enclosures.

e. Troop Education. The US Army Center for Health Promotion and Preventive Medicine produced and distributed laminated, wallet-size information cards (attached) to deployed troops. These cards contain information on leishmaniasis including contact information, diagnostic support and treatment, and preventive measures against sand flies. A website has been developed by the DoD Deployment Health Clinical Center (<http://www.pdhealth.mil/leish.asp>) to provide troops, family members, and health care providers information on this disease.

Mr. Paul Repaci/DASG-PPM-NC/681-2949
Approved by: COL Underwood