

INFORMATION PAPER

DASG-PPM-NC
18August 2004

SUBJECT: Emerging Health Issues: Leishmaniasis among Soldiers in OIF/OEF

ARMY POSITION:

Prevention and treatment of leishmaniasis among troops deployed to Southwest Asia is a top force health protection priority for the Army. Soldiers with more serious forms of this infection require medical evacuation to CONUS for diagnosis and treatment.

KEY POINTS:

a. Leishmaniasis is an infectious disease transmitted by the bite of an infected sand fly found throughout tropical areas worldwide, including Southwest Asia. Leishmaniasis occurs as a skin infection (cutaneous leishmaniasis-CL) or as an infection of the liver, spleen and other internal organs (visceral leishmaniasis-VL).

b. Since Jan 03, 654 Soldiers deployed to Southwest Asia have been diagnosed with CL and three with VL. All have recovered although some have required 2 or 3 courses of treatment. All but one of these cases is judged to have resulted from exposure to infected sand flies in CY03. One Soldier acquired CL in Iraq in early March 2004.

c. There are no vaccines or medications effective for prevention of leishmaniasis. This disease can be prevented only through protection from the bite of the infected sand flies through the proper use of barriers such as bed nets and clothing treated with permethrin before use, and applying insect repellent on exposed skin.

d. Treatment for CL includes use of intravenous medication for large, numerous, or potentially disfiguring skin lesions. Pentostam[®], the medication of first choice for more severe cases of Old World CL, can be administered only under an FDA-approved Investigational New Drug (IND) protocol. Two Army medical centers in the US have approval to use this medication for CL. Other treatment options for less serious CL, including the use of a device to apply mild heat directly to the lesions, are being investigated for wider use by the military.

BACKGROUND:

a. The sand flies that transmit leishmaniasis in Southwest Asia are active from March through November. Slightly over 50% of the CL cases from OIF-1 were exposed in central Iraq (especially the area northeast of Baghdad, near the Iranian border), 33% in northern Iraq (Tikrit, Mosul, etc.), and 10% in southern Iraq. One VL case was exposed in Iraq; the other two with VL acquired their infections in Afghanistan.

b. CL typically presents as one or more open skin sores that develop over weeks to months after a bite by an infected sand fly. While CL is not life threatening, the skin sores may result in permanent scarring. Visceral leishmaniasis (VL) is a more serious,

potentially fatal, internal form of the disease, infecting the liver, spleen and bone marrow. VL can occur ten days to several years after the bite of the infected sand fly.

c. Recognition and diagnosis of these infections may be delayed for weeks to months after exposure. Major emphasis is placed on educating the Soldier on identification and treatment options while deployed and afterwards. Small (less than 2 cm) and sparse (5 –10) CL lesions may not require specific treatment. Small lesions may also be treated with liquid nitrogen.

d. Pentostam[®], the intravenous medication of choice for CL, is provided in the US only under an FDA-approved Investigational New Drug protocol available in DOD only at Walter Reed or Brooke Army Medical Centers. Depending on severity, treatment lasts ten to twenty days. Although this treatment is very effective, side effects are possible including muscle and joint pain and pancreatic inflammation, all of which resolve after treatment is stopped.

e. Another treatment for CL currently being investigated is an FDA-approved device (ThermoMed[™]) that provides controlled localized current field radio frequency heat directly to the skin lesion. Fifty-four patients have been enrolled in a clinical trial at Walter Reed comparing Pentostam[®] and ThermoMed[™] treatment. Follow-up will continue through Mar 05.

f. Although no cases of transfusion-acquired leishmaniasis have been reported in the US, all US personnel deployed to Southwest Asia are deferred from donating blood for 12 months after redeployment. Individuals diagnosed with leishmaniasis incur a lifetime prohibition on donating blood.

g. Troop commanders must emphasize the use of personal protective measures including: application of repellent lotion containing DEET, proper wear of permethrin-treated uniforms, and sleeping under permethrin-treated bed nets or within screened enclosures.

LATEST RECAP:

a. Commanders have been reminded that all personnel must have adequate supplies of DEET, permethrin and bed nets and are trained in their use.

b. Alternative treatments for CL are under investigation.

c. CL case rates have decreased since the end of last year's transmission season in November. There has been one case resulting from exposures this year.

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