NAVY AND MARINE CORPS PUBLIC HEALTH CENTER

Leishmaniasis Medical Event Reports

Leishmaniasis is a parasitic disease spread by the bite of infective sandflies. Infection may manifest as skin lesions (cutaneous form of the disease) or as systemic disease affecting internal organs (visceral form of the disease). Cutaneous infections may or may not be painful and typically resolve without treatment, though resolution may be protracted and result in scarring. Treatment options are limited, the most effective treatment regimens requiring Investigative New Drug protocols only available in a few military medical treatment facilities. Given protracted operations in Iraq and Afghanistan since 2002, US military personnel have had increased exposure to infective sandflies. Infection can be reduced through effective implementation of personal protective measures such as wearing permethrin treated uniforms and using approved insect repellants. Leishmaniasis is a reportable disease per BUMED INST 6220.12. This report describes Medical Event Reports (MERs) for confirmed and suspect cases of leishmaniasis among active duty Navy and Marine Corps personnel recorded in the Naval Disease Reporting System (NDRS).

Background

Leishmaniasis is a parasitic disease spread by the bite of infected sandflies. Leishmaniasis presents in three clinical forms: cutaneous, mucocutaneous and visceral. The cutaneous form is the most frequently encountered presentation. While many infections are asymptomatic, mucocutaneous and visceral leishmaniasis can result in severe or fatal disease. Cutaneous leishmaniasis may manifest as painful or painless skin lesions that typically resolve without treatment, though resolution may be protracted and lead to scarring. Cutaneous infections may be allowed to heal spontaneously or can be treated using topical or oral medications. Heat and cryotherapy have also been shown to be effective means of treatment for this form. Treatment options for visceral or mucocutaneous leishmaniasis are limited. The most effective treatment regimen requires Investigative New Drug protocols are available at military medical treatment facilities or obtained through US Centers for Disease Control and Prevention Drug Service. Liposomal amphotericin B, an FDA approved medication, is a good alternative for the treatment of visceral disease. Asymptomatic and clinically resolved cases, even when treatment is successful, may continue to carry the leishmania parasite which can re-activate with a compromise of the carrier immune system.

Infection prevention depends on avoidance of bites by the sand fly vector. Effective implementation of personal protective measures including insecticide-impregnated uniforms and

the appropriate use of effective insect repellants are key elements of prevention. Additionally, suppression of the sand fly vector and control of mammalian reservoirs of the parasite can reduce risk of infection in fixed encampment sites.

US military operations in the Middle East have encountered leishmaniasis since World War II. In recent years U.S. military operations in this region and Afghanistan have increased service member's exposure to this infection. Clinical presentation of leishmaniasis in Iraq and Afghanistan is typically the simple cutaneous form of disease, with a single or few painless lesions that resolve without treatment. During the first Gulf War, there was an unexpectedly high rate of the visceral form among hospitalized service members with a diagnosis of leishmaniasis.

Data published in the April, 2007 edition of the *MSMR* describe the military's overall experience with leishmaniasis between 2001 and 2006. This report, based upon cases of leishmaniasis documented as reportable medical events and diagnosis codes recorded in MHS facility data, identified 1,287 total cases, over 95% of which were in active duty soldiers. The vast majority of these cases were the cutaneous form; four were confirmed visceral disease. Monthly estimated infection counts showed a peak from the summer of 2003 through spring of 2004, with a secondary peak in the fall of 2004. Monthly counts during these peaks ranged from approximately 45 to 130. After January of 2004, these counts fell off dramatically with 10 or fewer cases per month.

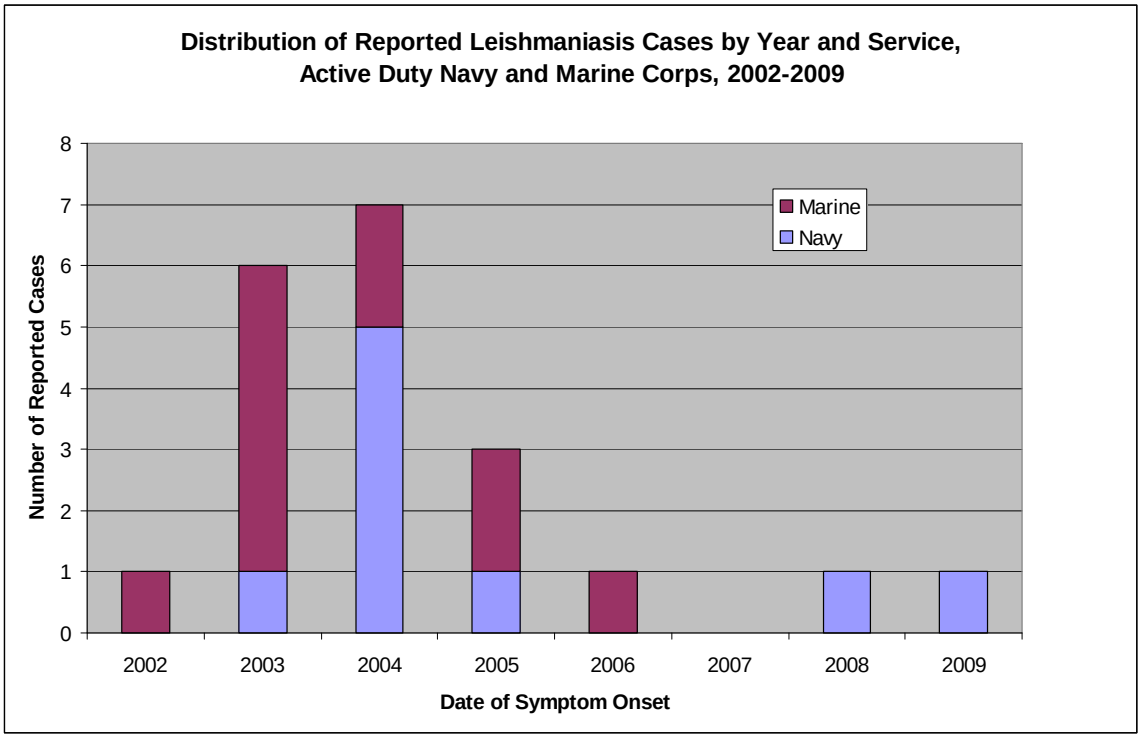
Navy and Marine Corps Experience

From 1 Jan 2002 to 31 Dec 2009, 20 cases of confirmed or suspected leishmaniasis in naval personnel were recorded in NDRS. Of the 20 cases, 11 (55%) were Marine Corps while the remaining were Navy. All cases were male. One case was reported as visceral leishmaniasis while the remaining cases were reported as cutaneous or unspecified disease.

Figure 1 shows the distribution of cases by year from 2002 to 2009. The majority of cases occurred in 2003 and 2004. Over the past 4 years, the Department of Navy has had 0-1 leishmaniasis cases reported yearly.

Discussion

Passive reporting of leishmaniasis in the Navy and Marine Corps may well impact the true representation of this disease. The decline in the numbers of reported cases in the Navy and Marine Corps may reflect a true decrease in infections due to better application of countermeasure. Evolution of operations in Iraq and Afghanistan may additionally have led to decreased exposure to specific areas of high risk for leishmania infection. Changing patterns for the management of cutaneous leishmaniasis in the operational theater, e.g. treatment in place, may also play a role. While reported cases of leishmaniasis in the Navy and Marine Corps have been few in recent years, the importance of preventive measures and prompt diagnosis remain paramount for the protection of forces deployed to regions where this disease is endemic.



If you have additional questions:

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