Soldiers Back From Iraq May Develop Cutaneous Leishmaniasis Months Later

BY DAMIAN McNAMARA
Miami Bureau

MIAMI BEACH — Some American soldiers are returning from Iraq with a dormant pathogen in tow: cutaneous leishmaniasis.

Symptoms of the infection can take 4-6 months after a bite from an infected sand fly to appear, and unknowingly infected military personnel are returning to their communities before the lesions develop. This puts local doctors in the position of having to treat this tropical infection.

There is a seasonal variance to this protozoan parasitic infection that corresponds with the activity of sand flies in the Middle East. During the 2003-2004 season, localized cutaneous leishmaniasis was frequently diagnosed in U.S. military personnel, with most infections caused by *Leishmania major*, according to a presentation at the annual meeting of the American Society of Tropical Medicine and Hygiene. More than 500 have been reported cases since January 2003 among U.S. soldiers stationed in Iraq, according to U.S. Army medical research data.

Experience with 300 soldiers treated at Walter Reed Army Medical Center in Washington demonstrates that there are multiple presentations for localized cutaneous leishmaniasis. Of the infected patients, 98% were male, 96% were in the U.S. Army, and 91% were enlisted personnel. Almost three-quarters (73%) were white; 16% were African American, 6% were Hispanic, and 5% were from other ethnic groups. "Patients with lighter skin were overrepresented in our cohort," said Naomi E. Aronson, M.D., professor of medicine and director of the infectious diseases division, Uniformed Services University of the Health Sciences, Bethesda, Md.

Cutaneous leishmaniasis manifests after the multiplication of leishmania in phagocytes in the skin. The mean number of cutaneous lesions was 3, and the range was 1-47. The mean time between appearance of a lesion and treatment was 13 weeks.

Papules often appear first, followed by ulcerative lesions. Lesions commonly appear in pairs. Nodules are uncommon. A rare presentation is a large psoriasiform-type plaque containing several small lesions. "I've seen about 10 cases of this form," Dr. Aronson said.

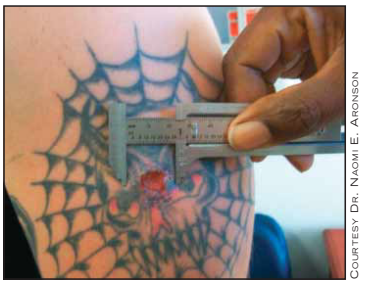
Facial lesions, including those on the lips or pinna of the ear, tend to be more inflammatory, she added. Leishmaniasis lesions do not typically feature purulent drainage; if the lesion is tender with pus, it is likely a bacterial superinfection, she explained. Both the lesions and the resultant bacterial infection may require concurrent treatment courses.

Sand flies are attracted to bright colors, so soldiers are sometimes bitten on exposed tattoos. Dr. Aronson said, "A common complaint in our clinic is 'the sand fly messed up my tattoo.' "

The cutaneous form of the disease is ultimately self-healing, although disfiguring scars can remain. The visceral and mucosal forms of leishmaniasis are often more serious and sometimes fatal.

Educate patients that not all treatments are 100% effective, Dr. Aronson suggested. "It is important to give patients realistic expectations that leishmaniasis may not be gone, but it should improve."

There is no Food and Drug Administration-approved treatment for leishmaniasis. Topical treatments include heat therapy and cryotherapy. Some lesions will respond to treatment with ThermoMed (Thermosurgery Technologies, Inc.) but others only partially respond, Dr. Aronson reported. A clinical trial investigating the technology is underway at Walter Reed Army Medical Center. Cryotherapy with liquid nitrogen is another treatment strategy.



COURTESY DR. NAOMI E. ARONSON

Sand flies are attracted to bright colors, and soldiers may be bitten on tattoos.

Standard therapy for all forms of the disease is pentavalent antimony of sodium stibogluconate (Pentostam, GlaxoSmithKline) or meglumine antimonate (Glucantime, Aventis). The usual parenteral regimen of sodium stibogluconate, for example, is 20 mg/kg per day for 20 days.

Pentavalent antimonials are available only through an Investigational New Drug (IND) protocol from the Centers for Disease Control and Prevention. Investigational agents require a lot of paperwork—and institutional review board approval—before they are available for use, Kenneth R. Dardick, M.D., said during a separate presentation at the meeting.

It is possible that physicians working in a community hospital will see only one or two cases of this rare disease. Physicians unfamiliar with use of pentavalent antimonials should consult military and/or CDC infectious disease experts, suggested Dr. Dardick, a family physician at Mansfield Family Practice, Windham Hospital, Storrs, Conn.

The IND requirements "can be novel for a community hospital," he said. "But cutaneous leishmaniasis can be successfully diagnosed and treated in a community hospital with appropriate index of suspicion." ■

GIs in Iraq Got Rare Pneumonia

Acute eosinophilic pneumonia is considered a rare disease, but it occurred at an increased rate among a population of soldiers serving in or near Iraq between March 2003 and March 2004, and may be associated with new-onset smoking and/or dust inhalation, an epidemiologic study shows.

Of 183,000 military personnel deployed in or near Iraq during the study period, 18 developed acute eosinophilic pneumonia (AEP), for an incidence of 9.1/100,000 patient-years.

Two patients died and the remaining soldiers responded to treatment.

No known causes of pulmonary eosinophilia, common sources of exposure, clustering, or person-to-person transmissions were identified, reported Andrew F. Shorr, M.D., of Walter Reed Army Medical Center, Washington, and his colleagues (JAMA 2004;292:2997-3005).

All the patients were smokers, and 78% had recently started smoking. Compared with 48 controls, new-onset smokers had a significantly increased risk of AEP (odds ratio 122).

Prior studies have also suggested a link between new-onset smoking and AEP. All but one patient reported significant exposure to fine airborne sand or dust.

AEP should be considered, and bronchoscopy performed, in military personnel with unexplained respiratory failure, the investigators concluded.

Most patients survive when treated promptly with corticosteroids, they said.

—Sharon Worcester

Researchers Still Puzzled About U.S. Monkeypox Outbreak

BY DAMIAN McNAMARA
Miami Bureau

MIAMI BEACH — Investigators at the Centers for Disease Control and Prevention are still perplexed as to why a monkeypox outbreak in the United States was less virulent than a simultaneous outbreak in Africa. But genetic differences in the pox strains may provide an answer.

"Early in our outbreak, we noted that monkeypox in the United States appeared to be milder than what we expected," Anna M. Likos, M.D., a researcher in the Epidemic Intelligence Service at the CDC, said at the annual meeting of the American Society of Tropical Medicine and Hygiene.

The first human monkeypox infection reported in the United States stemmed from a shipment of infected rodents that arrived from Ghana in June 2003 (Family Practice News, July 1, 2003, p. 6). A pet distributor in Illinois acquired the rodents and other small mammals and then sent them on to a number of distributors in Iowa and Texas. By August 2003, there were 37 confirmed human infections.

Dr. Likos and her colleagues compared 266 African cases (260 from the Democratic Republic of the Congo and 6 from West Africa) that had direct evidence of monkeypox infection with the cases in the United States. Infected Americans had significantly fewer lesions, lower rates of hospitalization, and no deaths. Higher complication rates in the Congo could have been attributed to differences in hygiene or socioeconomic status, but the investigators decided to look further.

'Early in our outbreak, we noted that monkeypox in the United States appeared to be milder than what we expected.'

"It is interesting to note that the only country with deaths was the Democratic Republic of the Congo. No deaths were reported in the United States," Dr. Likos said.

Researchers sequenced the genomes of the different strains. They found that the U.S. and West African strains were essentially the same, which makes sense because the rodents were imported from Ghana. A strain with different protein and amino acid sequences caused the outbreak in the Congo. These genomic differences may explain the differences in disease manifestations, Dr. Likos explained, "although more work needs to be done."

CDC investigators visited the Illinois animal distributor facility and found it to be clean. The animals were kept in close proximity, but "the mode of transmission among the animals is unknown," said Christina Hutson, guest researcher at the CDC's Poxvirus Program.

"Introduction of monkeypox to North America may pose a very strong potential threat to the health of native rodent species and perhaps to humans," Ms. Hutson said.

Of particular concern is transmission of monkeypox to North American prairie dogs, which are proving to be an especially suitable reservoir. "High levels of virus in some of these animals may explain why they could transmit the virus to humans … prairie dogs are exceptional vectors to humans and other animals," she explained.

The investigative work is ongoing. CDC researchers plan to do a complete diagnostic evaluation of existing specimens and to continue the genomic comparisons to obtain additional clues, in case monkeypox reemerges in the United States.

"These were all observational infections—so we have a lot of questions remaining," Ms. Hutson said. ■