

LEISHMANIASIS in Panama

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Leishmaniasis in Panama is basically a zoonosis of forest animals caused by several species of *Leishmania*, a protozoan parasite which infects the skin of its host. *Leishmania braziliensis* has been cultured from a variety of animals, whereas only a small number of rodents from an area of Northwest Panama have been found infected with *Leishmania mexicana*. A recently described species, *Leishmania hertigi*, has been repeatedly recovered from the tropical porcupine. The latter infection does not cause skin lesions in these hosts.

Up to the present time, only *L. braziliensis* has been implicated in human infections in Panama. If man invades and disturbs the environment, particularly around tree buttresses on the jungle floor or up in the canopy, he may become an accidental host of this organism. Transmission occurs by the bite of several species of sandflies during a blood meal.

CLINICAL FINDINGS.

The most frequent lesions of human cutaneous leishmaniasis begin on exposed surfaces (arms, legs, face or trunk if not clothed) as tiny erythematous nodules

which may be single or multiple. The onset may be as early as three weeks and as long as three months after exposure, but most commonly, it is three to five weeks. Over the next several weeks the nodule enlarges, becoming papular and shiny, until it reaches about 1 cm in diameter; at this time the center breaks down and appears necrotic, probably due to an impaired blood supply to the skin in that area. The lesions may be slightly pruritic, but are almost never painful. It is usually at this time that the patient seeks medical attention. If no treatment is instituted, the lesion rapidly enlarges by several more centimeters, becoming round or elliptical with an elevated and rolled border (Figure 1). Secondary bacterial infection is common. At the base of the crater there is usually reddish granulation tissue covered with either necrotic material or a dry brownish-white crust which may be easily removed with forceps after soaking in warm soapy water. If the patient is treated by himself or non-medical personnel, the crater may take on a variety of appearances and become severely infected. At this time chains of lymph nodes, measuring about 0.5 cm. in diameter, are commonly found by carefully palpating appropriate areas; these represent local extension.

Metastasis to the mucous membranes of the mouth, nose, and throat may occur in untreated cases, although it is not seen as commonly in Panama as in other South American countries. This is called mucocutaneous leishmaniasis and is associated with a variety of lesions, such as perforated septum, or loss of the

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