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Cutaneous Leishmaniasis in Republic of Yemen

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CASE REPORT

ABSTRACT

Background: Cutaneous leishmaniasis is parasitic disease transmitted by the bite of an infected female phlebotomine sand-fly. Sandflies are noiseless fliers that rest in moist, dark places and are typically most active in evening and nighttime hours. Other modes of transmission are congenital and parenteral (blood transfusion, needle sharing, and laboratory accident).

Objective: The objective of the study was to identify the pattern of acute and chronic skin Disease.

Patients and Methods: 30 Yemeni males and females patients 2- 40 years old .The presentation of cutaneous disease varies depending on the stage of disease, although it mainly occurs in 2 forms, (1) an oriental sore caused by L tropica and (2) American cutaneous leishmaniasis caused by L brasiliensiss Lesions are usually found in exposed areas (eg, face, arms, legs). The skin lesion begins as a nontender, firm, red papule several centimeters in size at the site of the sandfly bite. In time, the lesion becomes darker, widens with central ulceration serous crusting, and granuloma formation. The border often has a raised erythematous rim known as the volcano sign. Investigations Skin slit and scraping stained with Geimsa stain showed amestigotes Donovani bodies .Skin biopsy and histopathological findings showed inflammatory granuloma with intracellular leishmanial bodies. All the thirty patients treated with antimonial drugs injection.

Results: The clinical data and the investigations showed that all the patients had cutaneous leishmaniasis.

Conclusion: cutaneous leishmaniasis is very common skin disease in republic of Yemen. It is endemic in some areas or regions .The local names of cutaneous leishmaniasis in Yemen are Othrah, shoknofah, Ebadah and oofeiah . No mucoucutaneous leishmaniasis or post kala azar syndrome.

KEYWORDS

Leishmaniasis, Cutaneous, Republic, Othrah, Shoknofah, Ebadah, Oofeiah

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INTRODUCTION AND EPIDEMIOLOGY

Leishmaniasis is a parasitic disease transmitted by sandflies infected with the protozoa *Leishmania*. Leishmaniasis is endemic in more than 70 countries worldwide and affects an estimated 12 million people. There are several clinical forms of leishmaniasis. The clinical manifestation of the infection depends on the species of *Leishmania*, which varies with geographical area and the host's immune response. Parasites causing human leishmaniasis are not found in New Zealand, Australia, the South Pacific, or Antarctica. Cutaneous leishmaniasis is the most common form of leishmaniasis affecting humans. It is a skin infection caused by a single-celled parasite that is transmitted by the bite of a phlebotomine sand fly.

There are about thirty species of *Leishmania* that may cause cutaneous leishmaniasis.(1-3). This disease is considered to be a zoonosis (an infectious disease that is naturally transmissible from animals to humans), with the exception of *Leishmania tropica* which is often an anthroponotic disease (an infectious disease that is naturally transmissible from humans to vertebrate animals. Cutaneous leishmaniasis is endemic in all tropical and subtropical areas of the world. The distribution of this disease is very tightly linked to geography, and villages even 15 miles apart can have very different rates of cutaneous leishmaniasis.(4-6). Most species of *Leishmania* are capable of infecting humans and causing cutaneous leishmaniasis. In the New World, these organisms include *L. amazonensis*, *L. braziliensis*, *L. guyanensis*, *L. lainsoni*, *L. lindenbergi*, *L. mexicana*, *L. naiffi*, *L. panamensis*, *L. peruviana*, *L. shawi*, and *L. venezuelensis*. Old World species that cause cutaneous leishmaniasis include *L. aethiopica*, *L. infantum*, *L. major*, and *L. tropica*. With the exception of *L. tropica* which is commonly associated with human settlements and therefore considered to be an anthroponotic species all of these organisms are zoonotic.

As demographic changes occur in developing nations, some species that have traditionally been considered to be zoonotic (e.g., *L. panamensis*) are becoming primarily human pathogens. Dogs and rodents serve as the primary animal reservoir hosts in the sylvatic cycle, but people with chronic PKDL can also serve as important reservoir hosts for cutaneous leishmaniasis. The most common vectors for cutaneous leishmaniasis in the Old World are sandflies of the genus *Phlebotomus*, while *Lutzomyia* and those within the family Psychodidae (especially the genus *Psychodopygus*) are the most common vectors in the New World. The patients presented to the clinic from different provinces in Republic of Yemen. Mareb they called it Skoknofah. Hajjah, Almahweet and Sanaa they called it Oofiah. Sharaab they called it Othrah. Thamar they called it Ebadah. CL has many local names, including Oriental sore, Baghdad boil, Chiclero ulcer, and Aleppo boil. It is caused byL. tropica,L. (7-9).

DISCUSSION & CONCLUSION

Cutaneous leishmaniasis is the most common form of leishmaniasis. Solitary lesions are typical, but multiple lesions do occur. The initial lesion is a small red papule, which gradually enlarges up to 2 cm in diameter. Central ulceration is typical. Ulcers can be moist and exude pus or dry with a crusted scab. Sores usually appear on exposed areas of the skin, especially the face and extremities. (10-12). The incubation time between an infected sandfly bite and lesion development is ranges from 2 weeks to 6 months. Lesions are usually painless, and most resolve spontaneously often leaving residual atrophic scarring. Time to resolution varies between 2 months to more than a year. Sporotrichoid spread with lymphocutaneous nodules may occur. Chronic disease can occur, and there is a risk of dissemination in immunodeficient patients. Diffuse cutaneous leishmaniasis is a rare presentation resulting from an anergic response to the parasite by the host. Erythematous papulo nodular skin eruptions in the face and upper chest. (Figures 1-22). The most common laboratory test use to diagnose the cutaneous leishmaniasis is skin slit and scraping. The specimen put in the slide and add Gemsia stain. Examine under the light microscope. It showed the leishmania donovani bodies surrounded by microphages. (13-17),(Figure 23). Skin biopsy and stain with hematoxylin and eosin 100% showed well defined inflammatory granuloma. Diffuse lymphohisteocytic infiltrate cells in the dermis and plasma cells. There are amistegots and kinytoplast leishmania donovani bodies. (Figure 24).

All the cases treated with antimonial drug intralesional and intramuscular injection, Topical antifungal used in the treatment of all cases supporting with good results. Avoid outdoor activities, especially at dusk and dawn when sandflies are the most active. Wear long-sleeved shirts, long pants, and socks tuck shirt into pants. Apply insect repellent on exposed skin and under the ends of sleeves and pant legs. The most effective repellents are those that contain the chemical DEET (N, N-diethyl-meta toluamide). Spray clothing, living and sleeping areas (including bed net) with permethrin- (18-21).containing insecticides. Localized cutaneous leishmaniasis often spontaneously resolves in 3-6 months without therapy, although some infections persist indefinitely. Most individuals respond exceedingly well to therapy: Rapid, complete resolution of the lesion(s), with decreased potential for secondary bacterial infections and diminished scarring, is the rule. (22-25). This is not to say that the disease is without morbidity, especially in areas where even minimal facial disfiguring can condemn young girls to life without the prospect of marriage or acceptance in society. Most cases of diffuse cutaneous leishmaniasis, post–kala-azar dermal leishmaniasis, and leishmaniasis recidivans are chronic and resistant to treatment. (26-32).

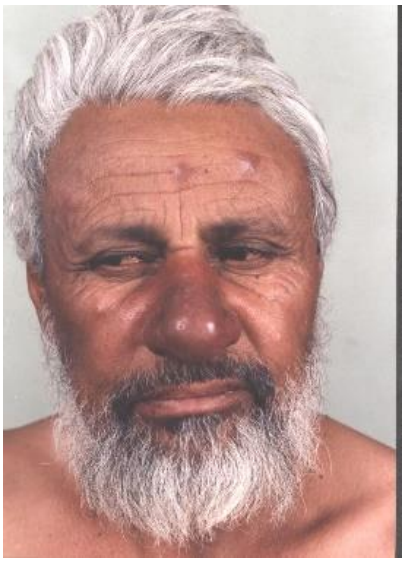

Figure 1: Diffuse cutaneous leishmaniasis face.

Figure 2: Diffuse cutaneous leishmaniasis upper chest.

Figure 3: Cutaneous leishmaniasis nose.

Figure 4: Cutaneous leishmaniasis nose.

Figure 5: Cutaneous leishmaniasis nose and lips.

Figure 6: Cutaneous leishmaniasis nose.

Figure 7: Cutaneous leishmaniasis face.

Figure 8: Cutaneous leishmaniasisneck.

Figure 9: Cutaneous leishmaniasis dorsum hands.

Figure 10: Cutaneous leishmaniasis arms (Recidevance).

Figure 11: Cutaneous leishmaniasis infantum face.

Figure 12: Cutaneous leishmaniasis infantum face.

Figure 13: Cutaneous leishmaniasis infantum face and arm.

Figure 14: Cutaneous leishmaniasis infantum nose and face.

Figure 15: Cutaneous leishmaniasis infantum nose.

Figure 16: Cutaneous leishmaniasis infantum face.

Figure 17: Cutaneous leishmaniasis infantum face.

Figure 18: Cutaneous leishmaniasis infantum nose.

Figure 19: Cutaneous leishmaniasis infantum face.

Figure 20: Cutaneous leishmaniasis infantum face.

Figure 21: Cutaneous leishmaniasis infantum nose.

Figure 22: Cutaneous leishmaniasis infantum nose.

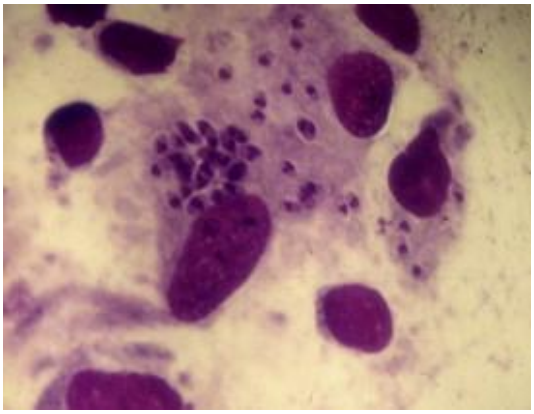

Figure 23: Skin slit and scraping stained with Geimsa stain showed leishmania amestigotes Donovani bodies.

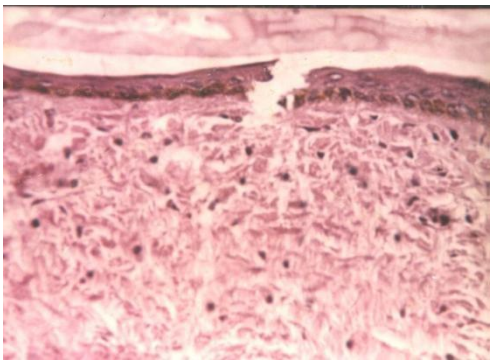

Figure 24: Skin biopsy.

The spectrum of histopathological changes seen in the dermis (haematoxylin and eosin stain ×400): Well defined Granuloma Multinucleated giant cells, diffuse lymphohistioplasmacytic infiltrate showing *Leishmania* amastigotes within macrophages.

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