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Cutaneous Leishmaniasis in a 67 year-old Dutchman in Turkey

Ozgur Aydin*, Cicek Durusoy**, Cevdet Dogan**

Abstract

A67-year-old Dutch tourist presented to our hospital with a two-month history of asymptomatic reddish-brown papulonodules on his left leg. Histology confirmed the diagnosis of cutaneous leishmaniasis. The patient's decision to present himself to a local hospital avoided a possible delay in diagnosis, or inappropriate treatment upon his return. We reinforce the import message of considering tropical diseases in differential diagnoses of unusual lesions of patients, especially with a travel history.

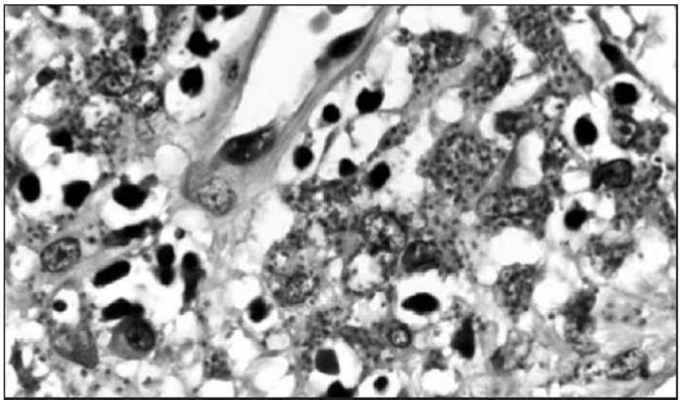
Leishmaniasis is a major world health problem, which is increasing in incidence.[1] It is a parasitic disease caused by intracellular protozoa, and transmitted by the bite of infected female phlebotomine sand flies. The disease is endemic in tropical and subtropical parts of the Old World, like the Middle East, East and North Africa, and Southern Europe, where the vector lives comfortably. Recently, the disease has been seen in unusual locations that reflect travel and immigration patterns.[2] Persons of all ages are at risk of leishmaniasis if they travel to endemic areas. Even short stay visitors can become infected, and the bite of only one infected sand fly may result in infection.

Case presentation

A 67-year-old Dutch patient presented with two-month history of an asymptomatic but persistent reddish-brown papulonodules on his leg *[Figure 1].* He had been staying in a hotel in the urban part of the city, where the flies were troublesome. He remem bered multiple bites although the room windows were protected with mosquito nets. A cutaneous punch biopsy was performed, and histology confirmed the diagnosis of leishmaniasis. Microscopic examination showed large macrophages filled with great number of round, oval organisms 2-4 microns in diameter *[Figure 2].* The patient was treated with injections of meglumine antimoniate into the lesion, three times a week, for about three weeks. The patient was closely followed for side effects and the lesion's response to the therapy.

Figure 1: Well papulary lesion with central ulceration.

Figure 2: Numerous leishmania organisms were clearly visible within macrophages (x100 original magnification).



Discussion

Although leishmaniasis is known to be a tropical disease, it is now becoming more frequently seen in other parts of the world. The geographical distribution of cases reflects travel and immigration patterns and, more recently, wars. Particularly in Northern Europe it is seen in travellers returning from endemic areas.

Leishmaniasis is a parasitic disease caused by intra-cellular protozoa, belonging to the genus Leishmania. The leishmaniases are caused by 20 species pathogenic for humans. Actually, each clinical syndrome can be produced by multiple species. In countries of the Mediterranean littoral, the disease occurs sporadically and the cause is, almost exclusively, *L. infantum.*[1] The disease is transmitted by the bite of infected female phlebotomine sand flies. The insect is about 1 / 4 of a mosquito in size, so window nets are of no use. The fly infects herself when she sucks an infected host. The host does not need to be a human, as some animals are known to be also infected.[4] The parasite passes 4 to 25 days in its vector before infecting a new target, thus the life cycle is completed. The early interactions between Leishmania and the host's immune response are closely linked to disease evolution or protection against the protozoan, and the ectoparasite saliva con-tributes directly to these interactions. Evidence opens up optimistic perspectives for improving vaccine development against Leishmania infection.

There are extremely variable forms of leishmaniasis, with a broad spectrum of clinical manifestations. The most common are cutaneous and visceral. Cutaneous forms of the disease normally produce skin ulcers on the exposed parts of the body such as the face, arms and legs. In the acute form generally a single lesion is seen. Multiple lesions may indicate multiple bites. The lesions start as papules, grow into nodules, that usually ulcerate, and ultimately heal spontaneously in 2-10 months with a depressed scar.[6] Visceral leishmaniasis which has a capacity to invade the whole body causes systemic complex symptoms, which is almost invariably fatal if not treated.[7]

Diagnosis usually is based on the appearance of the lesion. In more than 70% of cutaneous leishmaniasis cases, microscopy of the parasite in Giemsa stains or histological section can reveal the parasite and should be attempted first. In our experience, culture of the organisms is an option but is unreliable because organisms are difficult to isolate from the lesion, especially as the lesion becomes older. Polymerase chain reaction is being used more frequently and may be accurate in determining new-onset leishmaniasis. All the diagnostic procedures need special considerations .[8]

There is no single optimal treatment for all forms of cutaneous leishamaniasis due to the natural diversity of the parasites, and the wide spectrum of clinical features. Antiparasitic pentavalent antimonials, such as sodium stibogluconate or meglumine antimoniate, are still the mainstays of therapy, as they have been since 1940. Local and topical therapy is an important option for those patients not at risk of mucocutanous disease. Because systematic treatment may be associated with numerous side effects, local and tropical therapy should be considered as an important in patients not at risk of mucocutaneous disease. Relapses are common within three to six months, even after precise medical therapy, so a follow-up at six months is appropriate.[8]

Conclusion

After the bite of an infected sandfly, initial lesions can appear immediately, or the incubation period may be several months. Generally early diagnosis is not a problem if the patient applies to a local hospital, where the disease is commonly seen and well recog-nised. On the other hand, a late lesion appearing after several months in a patient who has returned to his ordinary life, may pose a dilemma for the native prac-titioner, even if the clinical settings are typical. Establishing a history of a travel to endemic places, might be critical in diagnosis of some diseases, and might avoid a delay in diagnosis and an appropriate treatment. Not only the travellers, but also the medical stuff living in temperate countries should be informed about tropical diseases, as global warming invites these diseases into new landscapes.

*Department of Pathology E-mail:darkeetar@yahoo.com **Department of Dermatology E-mail:cicekduru@hotmail.com, cevdetdogan@hotmail.com
Baskent University, Alanya Hospital, Antalya, Turkey Sarah Mah. Yunusemre Cad. NO:1 07400 Alanya Antalya/Turkey Tel: +90 2425112511 Fax: +90 2425112350

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