1. Introduction

Leishmaniasis designates a human disorder produced by protozoan parasites of the genus *Leishmania*. There are four major clinical types of this infection: cutaneous, diffuse cutaneous, mucocutaneous, and visceral [1]. The clinical manifestations of leishmaniasis depend on the interaction between the characteristic virulence of the species and the host’s immune response [2]. The cutaneous form of the disease, one of the most important causes of chronic ulcerative skin lesions. Cutaneous leishmaniasis (CL) is characterized by the development of single or multiple localized lesions on exposed areas of skin that typically ulcerate and generally heal spontaneously within 3–6 months [1]. We present one case of cutaneous leishmaniasis in the knee area, a very unusual localization.

2. Case report

A man of 52 years old silver mine worker from Cerro Rico, Potosi Municipality, Bolivia, presented with a two-months history of an ulcerative lesion over the knee. At physical examination, an ulcerated lesion of 8 cm x 13 cm in diameter, with an indurated base and raised, infiltrative borders was noted (Figure 1). The rest of the skin was normal. There was no history of pain and tenderness. He had no history of fever, weight loss or weakness. Clinical examination showed no significant abnormality. No regional lymphadenopathy or clinical signs of visceral involvement were detected. On investigations, chest X-ray did not show any abnormality. A complete blood cell count and blood chemistries gave results within normal limits. *Leishmanin* skin test was positive: indurated papule, 22 mm diameter. An excision biopsy of the lesion was done and routine histopathological examination was done. Histopathological study showed ulceration of epidermis and a diffuse inflammatory infiltrate in the dermis composed of lymphocytes, histiocytes, plasma cells and giant cells with granuloma formation and presence of *Leishmania amastigotes*. Culture was attempted in RE III medium but was unsuccessful because of overgrowth of yeast. The diagnosis of cutaneous leishmaniasis was made. The patient was treated with meglumine antimoniate intramuscular (20 mg of Sb+/kg/day) three weeks, with complete cicatrization of the lesion.

3. Discussion

*Leishmania* is a protozoa that may infect the skin, mucous, and viscera. The geographical distribution of CL is mainly determined by the sandfly vectors. CL is an infectious disease caused by protozoa of the gender *Leishmania*, transmitted by stings of female insects of the gender Phlebotomus in the old world and Lutzomyia in the new world. The old world cutaneous leishmania comprise three species – *Leishmania tropica*, *Leishmania major* and...
Leishmania aethiopica. The areas of disease are Middle East, Northern Africa, Sub Saharan Africa, East Asia and Southern Europe. The species of cutaneous leishmaniasis of the new world are more numerous and more difficult to classify. They produce disease that are more chronic than old world. The species are—Leishmania braziliensis, Leishmania mexicana, Leishmania guyanensis, Leishmania panamensis, Leishmania peruviana. The areas of disease are South America and the Carribean Islands where the preferred term is "Tegumentary" or mucocutaneous leishmaniasis. Morphology and histology of the cutaneous leishmania of the old and new world are similar[3].

In the last years, an increment of the number of cutaneous leishmaniasis in in the poor working conditions of Cerro Rico in Potosi, Bolivia, have been observed. In this patient, the clinical characteristics of the lesion suggested CL. After biopsy and histopathological study, the diagnosis of leishmaniasis was confirmed. The patient informed the habit of sleeping undressed and outside the house. There are few published cases of leishmaniasis located in the knee area, settling down in most of them that the lesions are due to direct inoculation of the parasite[1]. Some authors suggest that the genital localization can result in the possible blood dissemination. The diagnosis of cutaneous leishmaniae is usually made on clinical grounds like endemic area, clinical dissemination. The diagnosis depends on demonstrating either amastigotes in tissue or promastigotes in culture[7]. The diagnosis in our case was based on the presence of amastigotes in the stains with Giemsa technique and hematoxylin and eosin, which may quickly yield a diagnosis in some patients. Differential diagnosis for CL includes secondarily infected insect bite, sporotrichosis, or more rarely cutaneous tuberculosis; early detection of the infection is necessary in order to start effective treatment and prevent more serious complications[8]. The reported case presented an unusual localization of cutaneous leishmaniasis, which should be outlined mainly in those patients coming from endemic areas, being the key to practice necessary complementary exams to confirm the diagnosis[9].

Figure 1. Clinical aspects of the lesion when the patient sought treatment at the University Hospital.

In areas where leishmaniasis is endemic such as in the south America countries, even in the absence of an appropriate history of exposure to Leishmania, such a possibility may be kept in mind for any ulcerated lesion[8]. The definitive diagnosis depends on demonstrating either amastigotes in tissue or promastigotes in culture[7]. The diagnosis in our case was based on the presence of amastigotes in the stains with Giemsa technique and hematoxylin and eosin, which may quickly yield a diagnosis in some patients. Differential diagnosis for CL includes secondarily infected insect bite, sporotrichosis, or more rarely cutaneous tuberculosis; early detection of the infection is necessary in order to start effective treatment and prevent more serious complications[8]. The reported case presented an unusual localization of cutaneous leishmaniasis, which should be outlined mainly in those patients coming from endemic areas, being the key to practice necessary complementary exams to confirm the diagnosis[9].

Conflict of interest statement

We declare that we have no conflict of interest.

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