Cutaneous leishmaniasis contracted in French Guiana: A case report

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Citation

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Abstract

We report the case of a 19 year old male who presented with an ulcerated skin lesion on his right forearm. Given his past history and the clinical picture, the diagnosis of cutaneous leishmaniasis was established. An oral antibiotic therapy was prescribed and cure was achieved within one month.

CASE REPORT

Mr. P. R. was a 19 year old single male, mechanic, without any children and with no significant past medical or surgical history. He came to consultation for an “ulcerated skin lesion on the anterior side of his right forearm”.

The history of his disease started two months earlier in French Guiana where he was posted during his national military service. It manifested itself with an erythematous, non pruriginous papule at the above mention body site. It grew progressively and became gradually ulcerated, covered with a crust cover while oozing purulent material. Moreover, the patient noticed enlarged lymph nodes along the path of lymphatic drainage of the lesion area. The lymph nodes were hypertrophied, like threaded beads, mobile, painless and without lymphangitis trails. Mr. P. R. remained afebrile at all times.

In his past, he mentioned that in the previous months he had traveled upstream the Moroni River with his regiment a few times. On these occasions, he had lived in the Amazonian jungle for several days. On one these trips he had captured a three-toed sloth which he had tamed and brought back home.

The biological check-up was negative. In particular the search for leishmaniae by needle aspiration under the crust after an antibiotic treatment remained unproductive. The leishmaniais serology did not evidence any specific antibodies. His pet was tested and harbored Leishmania tropica. The diagnosis of leishmaniasis was made based on the clinical picture and the epidemiology. The following treatment was given: Cloxacillin 500mg QID for 10 days with daily local antiseptic care. The lesion dried up gradually, the crust fell and the adenopathy regressed completely. One month later a scar could be observed with an elastic skin lightly shiny and salmon pink in color.

DISCUSSION

- The clinical picture presented by the patient is typical of cutaneous leishmaniasis found in French Guiana 1 (please see ulcer picture example below).
- The differential diagnosis includes sporotrichosis particularly because of the lymphadenopathy 2 .
- Contamination occurs through the bite of an infested phlebotomus mosquito 3 (sand fly). In this case, it is very likely that it took place during the stays in the Amazonian forest. Indeed, the mosquito size (2-3mm) enables it to fly through net holes 4,5 .
- Cutaneous leishmaniasis can be found throughout the world, distributed in vast foci: The dry form around the Mediterranean basin, in the Middle-east and in East Africa and the moist form in West Africa, Central and South America 6 .
- The incubation period varies from 2 to 4 months, but may be longer 7 .
- The parasitic search in the dermal oozing rarely isolates the leishmaniae, even after an antibiotic treatment 8 . A biopsy of the lesion edge has better yield but it leave an additional scar.
- To complete the parasitic investigation, one must

place the sample in a NNN culture medium and inoculate a fraction into a hamster 9 .

- Leishmaniasis has various reservoir animals such as rodents and three-toed sloth in French Guiana 10 .
- The Montenegro intradermal reaction performed with leishmanial antigen has relative value because it remains positive indefineltly 11 .
- The serology is not vey useful for the diagnosis of cutaneous leishmaniasis because it comes back negative most of the time, particularly in old world leishmaniasis.
- The prognosis is always favorable with spontaneous healing 12 .
- Treatment rests mainly on (1) Oral antibiotic therapy to clean bacterial secondary infections, which are very common and (2) Local antiseptic care with the same purpose 13 .
- When the lesion is on the face, one can use intradermal injections of antimonials around the ulceration to stop its progression. Good results can be expected. This intervention is needed because the leishmanial ulcer leaves non-esthetic scars 14 .
- Prevention consists of (1) at the individual level: Using repellents (creams or sprays), knowing that their effect is transient. In endemic areas, people use hetero-inoculation on a body area covered by clothes to avoid face scars. It provides long lasting although relative immunity 15 and (2) at the collective level: Spraying contact insecticides. Nevertheless, the animal reservoir and the disease geographical extension 16 are major obstacles to eradication.

Figure 1

Figure 1: Example of cutaneous leishmaniasis ulcer

References

1. Dedet J.P. Cutaneous leishmaniasis in French Guiana: A review. Am. J. Trop. Med. Hyg., 1990, 43, 25-28
2. Gharbi M.R. and Bensaid A. Leishmanioses cutanees. Med. Hyg., 1986, 44, 745-754
3. Dedet J.P. Leishmania et leishmanioses du continent americain. Ann. Inst. Pasteur, 1993, 4, 3-25
4. Lainson R. The American leishmaniases: Some observations on their etiology and epidemiology. Trans. Roy. Soc. Trop. Med. Hyg., 1983, 77, 569
5. Lainson R. and Shaw J.J. Epidemiology and ecology of leishmaniasis in Latin America. Nature, 1978, 273, 595
6. Grimaldi G. Jr.,, Tesh R.B. and McMahon-Patt D. A review of the geographical distribution and epidemiology of leishmaniasis in the new world. Am. J. Trop. Med. Hyg., 1989, 41, 687-725
7. Gentilini M. Medecine Tropicale, Paris, Flammarion pub., 1995
8. Veronesi R. Doencas infecciosas e parasitarias, Rio de Janeiro, Guanabara-Koogan pub. 1972
9. Bouree P. Aide-memoire de parasitologie et de pathologie tropicale, Paris, Flammarion pub., 2003
10. Pajot F.X., Le Pont F, Gentile B. and Besnard R. Epidemiology of leishmaniasis in French Guiana. Trans. Roy. Soc. Trop. Med. Hyg. 1982, 76, 112-113
11. Pessoa S.B. and Sousa Lopes J.A. Sobre a intradermoreacao de Montenegro em regiao endemica de leishmaniose tegumentar e visceral. Rev. Inst. Med. Trop. Sao Paulo, 1963, 5(4): 170-175
12. Lobo G. Leishmaniose tegumentar americana. Anais Bras. de Dermatol. Sif. 1947, 22:31-105
13. Berman J.D. Treatment of new world cutaneous and mucosal leishmaniases. Clin. Dermatol. 1996, 14:519
14. Fitzpatrick T.B. et al. Color atlas and synopsis of clinical dermatology, New York, McGraw-Hill pub., 1992
15. Groupe d'experts. Lutte contre les leihmanioses. OMS/WHO Rapp. Techn., Geneva, OMS pub, 1990, No793
16. Walton B.C. Leishmaniasis A world-wide problem. Int. J. Dermatol. 1989, 28, 305-307

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