In the name of God

Shiraz E-Medical Journal
Vol. 13, No. 4, October 2012

http://semj.sums.ac.ir/vol13/oct2012/91011.htm

Fluconazole in the Treatment of Cutaneous Leishmaniasis in a Kidney Transplant Patient a Case Report

Maryam Rahbar[1], Seyed Seifollah Beladi Mousavi[2*], Marzieh Beladi Mousavi[3]

[1]Department of nephrology, sina hospital, Tehran University of Medical Sciences, Tehran, Iran
[2] Department of internal medicine, Faculty of medicine, Jundishapur University of Medical Sciences, Ahvaz, Iran
[3] Islamic Azad University Behbahan Branch, Behbahan, Iran

* Corresponding Author: Seyed Seifollah Beladi Mousavi, Associate Professor, Department of internal medicine, Faculty of Medicine, Jundishapur University of Medical Sciences, Ahvaz, Iran. Tell: +98-9163068063, Email: Beladimusavi@yahoo.com

Received for Publication: July 13, 2012, Accepted for Publication: August 13, 2012.

Abstract

Leishmaniasis is a well recognized opportunistic infection, which caused by an intracellular protozoan parasite belonging to genus Leishmania. Although, in healthy subjects the mortality and morbidity from this infection is not significant, however in immunosuppressed patients it can cause an overwhelming visceral disease.
We report a case of cutaneous leishmaniasis in a 54 years old diabetic man after kidney transplantation. He had successful unrelated kidney transplantation 14 months before presentation of skin lesions. In physical examination, the patient had multiple itchy and erythematous nodules and ulcers in diameter of 1×2 cm with central ulceration over his arms and hands compatible with a diagnosis of cutaneous leishmaniasis. The patient was given intramuscular Glucantime 20 mg/kg but he didn't tolerate it. In finally he was treated with fluconazole and after two weeks the ulcers healed.
Conclusion: Cutaneous leishmaniasis should be considered as a differential diagnosis of each nodule or chronic skin lesion in kidney transplant patients. Although, antimonials are the first line drug, fluconazole can also used in the treatment of cutaneous leishmaniasis.

Keywords: Leishmaniasis; Kidney transplantation; Fluconazol

Introduction

Leishmaniasis is a well recognized opportunistic infection, which caused by an intracellular protozoan parasite belonging to genus Leishmania and is transmitted by the bite of a Phlebotomus sandfly. Leishmania organisms are endemic in scattered foci in more than 80 countries and the overall prevalence of leishmaniasis is estimated to be 12 million cases worldwide. Although more than 20 Leishmania species have been identified, however most species cause disease predominantly in animals and humans become infected incidentally when they enter endemic areas.(1, 2)

Although, in healthy subjects the mortality and morbidity from this infection is not significant and most of the patients cured with or without treatment, however depending on the species of *leishmania* and especially in immunosuppressed patients including solid organ transplant recipients it can cause an overwhelming visceral disease and lethal systemic illness.(3-5)

We describe a renal transplant patient with cutaneous leishmaniasis and his response to therapy.

Case Presentation

The patient was a 54 years old diabetic man with End Stage Renal Disease (ESRD) from Iran who underwent successful unrelated kidney transplantation 14 months before presentation of his skin lesions. The patient did not have a history of bitten by sand flies but he had a history of traveling to endemic area.

He was received cyclosporine 75 mg BID, mycophenolate mofetil 1 gram BID and prednisolone 5 mg daily.

The lesion started as an itchy and erythematous papule which slowly enlarged over his arms and hands. The patient did not have accompanying fever, chills, myalgia and did not experience other systemic symptoms. On examination, he had multiple erythematous nodules and ulcers in diameter of 1×2 cm with central ulceration. A clinical diagnosis of cutaneous leishmaniasis was made by dermatologist and confirmed in direct smear and pathology. The patient was given intramuscular Meglumine Antimoniate (Glucantime) 20 mg/kg but the ulcer failed to heal despite 2doses and he also was suffering from severe illness and myalgia and therefore we discontinued therapy after 2 doses. In finally he was treated with oral fluconazole 100mg BID and after a week, healing of **the ulcers began** and was complete after 3 weeks.

Discussion

Although, Leishmania organisms are endemic in scattered foci in more than 80 countries including southern and central part of Iran, however there are few case reports about cutaneous leishmaniasis in transplant patients.(6)

The clinical spectrum of leishmaniasis ranges from a subclinical and focal self-resolving cutaneous lesion to disseminated visceral leishmaniasis. Leishmania organisms could remain in macrophage and T cell for a long time in a healthy subject with intact immune system and if the patient becomes immunosuppressive for example due to AIDS and or immunosuppressive therapy for organ transplantation, it can disseminate and cause lethal systemic illness.(3, 7) Although our patient was a diabetic and immunosuppressive patient, fortunately he didn't have any systemic symptom.

Treatment of cutaneous leishmaniasis is often difficult and the response to the treatment cannot be predicted in an individual case. The most commom and the first line drug in the treatment of cutaneous leishmaniasis is pentavalent antimonials (sodium stibogluconate (pentostam) and meglumine antimonite (glucantime), but its use limited by the emergence of resistance and they also have associated with some adverse effect such as myalgia, as well as possible liver or cardiovascular toxicity.(8) In the treatment of our patient, we first time used intramuscular glucantime, but he couldn't tolerate it and fortunately he responded to fluconazole.

There are few reports about the use of antifungal agent such as fluconazole in the treatment of cutaneous leishmaniasis with conflicting results and therefore further study of these oral agents for cutaneous leishmaniasis in transplant patients may be warranted.

As an example in the study of Saenz RE et al, the response rate of cutaneous leishmaniasis to ketoconazole was 76%, in contrast to lower response rate in the study of Dedet JP et al and the study of Ozgoztasi O et al.(9-11)

Conclusion

In conclusion, physicians should be consider cutaneous leishmaniasis in the differential diagnosis of each nodule or chronic ulcerative skin lesion in kidney transplant patients especially in patients with a positive history of traveling to endemic area. Although, antimonials are the first line drug, this case emphasize the point that fluconazole can also be used in the treatment of cutaneous leishmaniasis.

These cases emphasize the point that when assessing lesions of possible infective etiology, a detailed travel history and knowledge of the common infective agents in the location concerned are of great importance in arriving at a diagnosis and appropriate treatment.

References

1. Magill AJ. Epidemiology of the leishmaniases. Dermatologic clinics. 1995;13(3):505.
2. Desjeux P. Leishmaniasis. Public health aspects and control. Clinics in dermatology. 1996;14(5):417.
3. Berenguer J, Gomez-Campdera F, Padilla B, Rodriguez-Ferrero M ,Anaya F, Moreno S, et al. Visceral leishmaniasis (Kala-Azar) in transplant recipients: case report and review. Transplantation. 1998;65(10):1401-4.
4. Pearson RD, de Queiroz Sousa A. Clinical spectrum of leishmaniasis. Clinical Infectious Diseases. 1996.11-1:
5. Wilson ME, Streit JA. Visceral leishmaniasis. Gastroenterology Clinics of North America. 1996;25(3):535.
6. Choi CM, Lerner EA, editors. Leishmaniasis as an emerging infection. Journal of Investigative Dermatology Symposium Proceedings; 2001: Nature Publishing Group.
7. Pineda JA, Gallardo JA, Macías J, Delgado J, Regordán C, Morillas F, et al. Prevalence of and factors associated with visceral leishmaniasis in human immunodeficiency virus type 1-infected patients in southern Spain. Journal of clinical microbiology. 1998;36(9):2419-22.
8. Hadighi R, Boucher P, Khamesipour A, Meamar A, Roy G, Ouellette M, et al. Glucantime-resistant Leishmania tropica isolated from Iranian patients with cutaneous leishmaniasis are sensitive to alternative antileishmania drugs. Parasitology research. 2007;101(5):1319-22.
9. Dedet JP, Jamet P, Esterre P, Ghipponi PM, Genin C, Lalande G. Failure to cure Leishmania braziliensis guyanensis cutaneous leishmaniasis with oral ketoconazole. Transactions of the Royal Society of Tropical Medicine and Hygiene. 1986;80(1):176.
10. Ozgoztasi O, Baydar I. A randomized clinical trial of topical paromomycin versus oral ketoconazole for treating cutaneous leishmaniasis in Turkey. International journal of dermatology. 2008;36(1):61.3-
11. Saenz RE, Paz H, Berman JD. Efficacy of ketoconazole against< i> Leishmania braziliensis panamensis</i> cutaneous leishmaniasis. The American journal of medicine. 1990;89(2):147-55.