SUBMITTED 30 MAR 22
REVISION REQ. 14 JUN 22; REVISION RECD. 16 JUN 22
ACCEPTED 21 JUL 22
ONLINE-FIRST: AUGUST 2022
DOI: https://doi.org/ 10.18295/squmj.8.2022.048

Long-standing Lymphocutaneous Sporotrichosis

Israel Perez-López and *Ricardo Ruiz-Villaverde

Department of Dermatology, Hospital Universitario San Cecilio, Inst Invest Biosanitaria IBS, Granada, Spain
**Corresponding Author's e-mail: ismenios@hotmail.com*

Introduction

A 36-year-old male, farmer, with no relevant personal or family medical history , attended our Dermatology outpatient clinic, complaining of a warty plaque on the back of his right hand that involved the entire dorsal aspect of the third finger and that presented two satellites lesions on the arm with a linear arrangement (Fig.1.). Locoregional adenopathies were not noted. He recalled a previous traumatic history performing his work 10 months earlier. Two weeks later the lesions began to develop until they reached their current state.

Laboratory examinations included blood sample test (haemogram and basical coagulation), general biochemistry (lipid profile, hepatic and renal function), autoimmunity (autoantibodies, immunoglobulins, complements), thyrotropin and thoracoabdominal CT was requested to evaluate systemic dissemination with normality of all the tests mentioned. No skin biopsy was performed. Regarding the initial clinical suspicion of sporotrichosis, we started treatment with Itraconazole 200mg/12h, which had to be discontinued due to gastrointestinal discomfort 10 days later. The study by PCR assay of M. tuberculosis complex and Non tuberculous Mycobacterium spp was negative. However, culture showed positive results for Sporothrix schenckii in five days (being reported two days later). One week later the patient began treatment with liposomal Amphotericin B at a dose of 5 mg/kg/day for 3 days as an induction regimen

and then once monthly as maintenance treatment until resolution of the clinical course, four months later with no skin lesions. There have been no recurrences of the lesion six months after the end of treatment. Written informed consent of the patient for publication purposes has been obtained.

Comment

Sporotrichosis is a subcutaneous mycosis caused by a dimorphic fungus of the genus Sporothrix. Sporotrichosis can be observed in any part of the world, with some areas of "hyperendemicity", being particularly frequent in tropical and subtropical countries (in Peru the reported incidence is 1/1,000 cases/year, while in the United States it is 1- 2 cases per million) due to more occupational exposure.[1]

Without predilection for age, sex or race, the occurence of the disease depends on the fungus being in the environment and traumatic inoculation into the skin . The male predominance is believed to be due to greater exposure rather than greater predisposition. Traumatic inoculation is the reason why the extremities (particularly upper extremities) and bare parts are affected most often. Single or multiloculated cutaneous forms, lymphocutaneous, as in the case at hand, and systemic (may compromise lung, breasts, liver, kidney, eyes, heart, and genitalia) have been described.[2] Culture in Sabouraud Dextrose Agar continues to be the gold standard, since histological study may be less profitable and require histochemical techniques such as PAS, Groccot or Gomori to identify fungal structures. In some reference centers, PCR assay is used for its diagnosis, although the kits are not commercially available. The differential diagnosis following a sporotrichoid eruption pattern is wide, encompassing cutaneous tuberculosis, leishmaniasis, nocardiosis, chromoblastomycosis, blastomycosis, paracoccidioidomycosis, and atypical mycobacteriosis.

The first line of treatment in the lymphocutaneous variety is oral itraconazole 100mg/day.[3] Oral terbinafine has been used with moderate success and in more resistant cases the use of oral saturated solution of potassium iodide (SSKI) has been reported. This last modality lacks a standardized commercial formulation and its metallic taste and uncertain mechanism of action have relegated it to a second or third line choice. Liposomal amphotericin B may be a more effective option in immunosuppressed patients or those with low therapeutic adherence.[4] Among its side

effects are fever, headache, malaise, hypokaliemia, hypomagnesemia, cardio and nephrotoxicity. The use of other less conventional treatments such as photodynamic therapy has only been carried out in case series and with uneven results.[5]

Author Contributions

IPL and RRV were both involved in conceptualization, collection of data, writing and final approval of the manuscript.

References

1. Sharma B, Sharma AK, Sharma U. Sporotrichosis: a Comprehensive Review on Recent Drug-Based Therapeutics and Management. Curr Dermatol Rep. 2022 Mar 17:1-10. doi: 10.1007/s13671-022-00358-5.
2. Martínez-Herrera E, Arenas R, Hernández-Castro R, Frías-De-León MG, Rodríguez-Cerdeira C. Uncommon Clinical Presentations of Sporotrichosis: A Two-Case Report. Pathogens. 2021 Sep 27;10(10):1249. doi: 10.3390/pathogens10101249.
3. Poester VR, Basso RP, Stevens DA, Munhoz LS, de Souza Rabello VB, Almeida-Paes R, Zancopé-Oliveira RM, Zanchi M, Benelli JL, Xavier MO. Treatment of Human Sporotrichosis Caused by *Sporothrix brasiliensis*. J Fungi (Basel). 2022 Jan 10;8(1):70. doi: 10.3390/jof8010070.
4. Belda W Jr, Domingues Passero LF, Stradioto Casolato AT. Lymphocutaneous Sporotrichosis Refractory to First-Line Treatment. Case Rep Dermatol Med. 2021 Oct 6;2021:9453701. doi: 10.1155/2021/9453701.
5. Legabão BC, Fernandes JA, de Oliveira Barbosa GF, Bonfim-Mendonça PS, Svidzinski TIE. The zoonosis sporotrichosis can be successfully treated by photodynamic therapy: A scoping review. Acta Trop. 2022 Apr;228:106341. doi: 10.1016/j.actatropica.2022.106341.

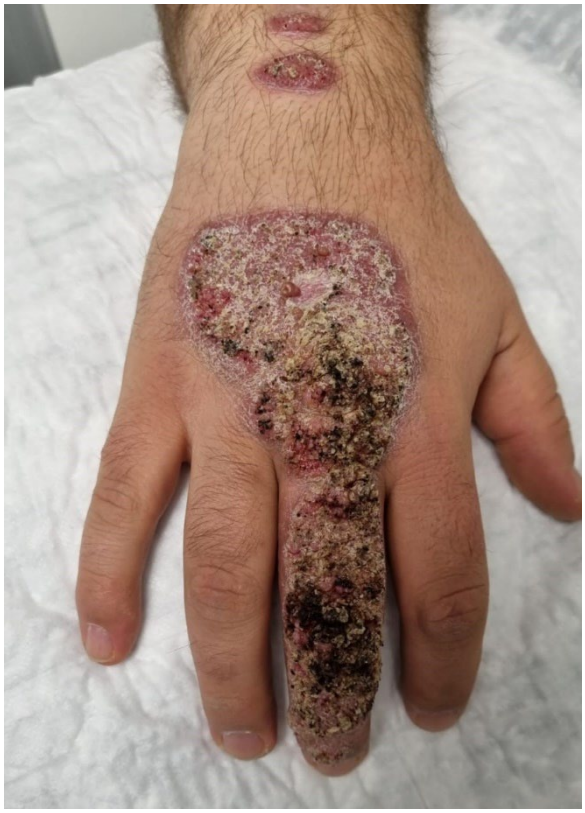

Fig. 1: Verrucous plaque on the back of the right hand that involved the entire dorsal aspect of the third finger with two satellites lesions on the arm with a linear arrangement.