DISSEMINATED TUNGIASIS IN PATIENT WITH MENTAL DISORDER TREATED IN THE BRAZILIAN AMAZON: A CASE REPORT

TUNGÍASE DISSEMINADA EM PACIENTE COM TRANSTORNO MENTAL ATENDIDO NA AMAZÔNIA BRASILEIRA: RELATO DE CASO

TUNGIASIS DISEMINADA EN UN PACIENTE CON TRASTORNO MENTAL ATENDIDO EN LA AMAZONÍA BRASILEÑA: INFORME DE UN CASO

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Marcel Gonçalves Maciel[1], Djane Clarys Baia da Silva[2], Jordana Pereira Gonzaga[3], Amaury Trindade de Castro[4], João Paulo Alves Araújo[5], Luiz Henrique Gonçalves Maciel[6], Clodoaldo da Silva Almeida[7] and Michael Nosano Yakubu[8]

ABSTRACT

Tungiasis is a zooanthropophilic infection caused by the parasite *Tunga penetrans.* We report the case of a psychiatric patient, a Haitian migrant with disseminated tungiasis A 28-year-old Haitian man, HIV-negative and homeless in a city near Manaus, presented with crusty and pruritic lesions on his upper and lower limbs. Based on the characteristics of the

[1]Dr. in Tropical and Infectious Diseases
Amazonas State University
Manaus, Amazonas, Brazil
mgmaciel@uea.edu.br
[2]Dr. in Tropical and Infectious Diseases
Amazonas State University
Manaus, Amazonas, Brazil
djane.claryss@gmail.com
[3]Master in Public Health
Amazonas Military Fire Department
Manaus, Amazonas, Brazil
jjordda@yahoo.com.br
[4]Master in Applied Sciences in Dermatology
Amazonas Military Fire Department
Manaus, Amazonas, Brazil
amaurytrincastro@yahoo.com.br
[5]Master's Degree in Nursing
Federal University of Amazonas
Manaus, Amazonas, Brazil
jpaa961@gmail.com
[6]Master in Tropical and Infectious Diseases
Amazonas State University
Manaus, Amazonas, Brazil
luizmaciel.lh@gmail.com
[7]Dr. in Nursing in Adult Health
University of São Paulo
São Paulo, São Paulo, Brazil
clodoaldoalmeida@usp.br
[8]Dr. in Tropical and Infectious Diseases
Federal University Wukari
Wukari, Taraba, Nigeria
nosano.yakubu@fuwukari.edu.ng

lesions and the parasites collected, the patient was diagnosed with disseminated tungiasis by dermoscopy and histopathological examination. Subsequently, the parasite was identified as *Tunga penetrans*. The case reinforces the importance of surveillance of tungiasis even in endemic areas, such as Brazil and Haiti, particularly among individuals facing socioeconomic vulnerability and mental health disorders, as they may neglect hygiene and health practices, increasing the risk of severe infestations and disease progression.

Keywords: Tungiasis; Disseminated tungiasis; Tunga penetrans.

RESUMO

Tungíase é uma infecção zooantropofílica causada pelo parasito *Tunga penetrans*. Relatamos o caso de um paciente psiquiátrico, um migrante haitiano com tungíase disseminada. Um haitiano de 28 anos, HIV negativo e morador de rua em uma cidade próxima a Manaus, apresentou lesões crostosas e pruriginosas nos membros superiores e inferiores. Com base nas características das lesões e nos parasitas coletados, o paciente foi diagnosticado com tungíase disseminada por dermatoscopia e exame histopatológico. Posteriormente, o parasita foi identificado como Tunga penetrans. O caso reforça a importância da vigilância da tungíase mesmo em áreas endêmicas, como Brasil e Haiti, particularmente entre indivíduos em vulnerabilidade socioeconômica e transtornos de saúde mental, pois podem negligenciar práticas de higiene e saúde, aumentando o risco de infestações graves e progressão da doença.

Palavras-chave: Tungíase, Tungíase disseminada, Tunga penetrans.

RESUMEN

La tungiasis es una infección zooantropófila causada por el parásito *Tunga penetrans*. Reportamos el caso de un paciente psiquiátrico, un migrante haitiano con tungiasis diseminada. Un hombre haitiano de 28 años, VIH negativo y sin hogar en una ciudad cerca de Manaus, presentó lesiones costrosas y pruriginosas en sus extremidades superiores e inferiores. Con base en las características de las lesiones y los parásitos recolectados, el paciente fue diagnosticado con tungiasis diseminada por dermatoscopia y examen histopatológico. Posteriormente, el parásito fue identificado como *Tunga penetrans*. El caso refuerza la importancia de la vigilancia de la tungiasis incluso en áreas endémicas, como Brasil y Haití, particularmente entre individuos que enfrentan vulnerabilidad socioeconómica y trastornos de salud mental, ya que pueden descuidar las prácticas de higiene y salud, aumentando el riesgo de infestaciones graves y progresión de la enfermedad.

Palabras clave: Tungiasis, Tungiasis diseminada, Tunga penetrans.

INTRODUCTION

Tungiasis is a zooanthropophilic infection caused by the parasite *Tunga penetrans* (Harvey et al., 2021). It is a highly neglected disease found in the Americas (Chen et al., 2011) the lesion is papular or nodular, gray, white, or yellow color with a small central opening, ranging from brown to black (Rosmaninho et al., 2010). It is possible that the site of infection, in addition to being inflamed and painful, may present a secondary infection (Chen et al., 2011). To avoid severe forms, early recognition of the infestation and immediate treatment are necessary (Pallangyo & Nicholaus, 2016). We report the case of a psychiatric patient, a Haitian migrant with disseminated tungiasis. At the end of the introduction, the objectives of the work must be clearly outlined, in a specific and measurable way. If you wish, you can create an exclusive subitem for the objective. Furthermore, it is essential that they are formulated in an achievable way, ensuring that the reader fully understands the scope of the study and what will be covered and evaluated. This study was approved by the Research Ethical committee of Universidade do Estado do Amazonas (UEA) with the certificate number: CAAE: 60838422.0.0000.5016 and the informed consent was obtained from all participants.

CASE REPORT

A 28-year-old Haitian man, HIV-negative and homeless in a city near Manaus, presented with crusty and pruritic lesions on his upper and lower limbs. He was referred to the reference unit for tropical and infectious diseases in the Brazilian Amazon. Upon admission, the patient did not communicate in Portuguese, making it difficult to collect clinical history. He was disoriented with delusions, and leaks of ideas, afebrile, anicteric, acyanotic, eupneic on room air, dehydrated, malnourished, with poor hygiene, foul odor, and non-cooperative. The nodular and verrucous lesions had blackened central holes, fish-eye lesions, and affected the hands, feet, elbows, and the region close to the left knee (figure 1). Based on the characteristics of the lesions and the parasites collected, the patient was diagnosed with disseminated tungiasis by dermoscopy and histopathological examination. Subsequently, the parasite was identified as *Tunga penetrans*.

Figure 1: Nodular and verrucous lesions had blackened central holes affecting the feet (A) hands (B), a region close to the left knee (C), and elbows.

Initially, ivermectin 18 mg once a week and loratadine 10 mg per day were prescribed. After five days of hospitalization, amoxicillin + clavulanate (500 mg + 125 mg) four times a day for 7 days were included in the therapeutic plan. A bath with 2% chlorhexidine and 1% salicylate petroleum jelly was applied once a day. Removal of the parasites was also a prescribed action, but the patient refused. On the thirteenth day of hospitalization, the lesions showed scaling and signs of improvement. However, the patient absconded on the thirtieth day, after receiving four doses of ivermectin and demonstrating significant regression of the lesions.

DISCUSSIONS

Tungiasis primarily affects the poorest populations, who have limited access to adequate sanitation, housing, education, and health services (Pallangyo & Nicholaus, 2016;

Feldmeier, et al., 2014). Additional risk factors include living with domestic animals, lack of footwear, and poor personal and household hygiene (Girma et al., 2018). In this case, the patient presents high sociodemographic and health vulnerability, factors that likely increased his risk of infestation and dissemination. It is not known how long the patient has been in Brazil or homeless, as his clinical history was not collected.

A study in four areas of Haiti showed that the overall tungiasis prevalence was 31.1% and related to the country's commonly impoverished population (Louis, 2014). Contact of the feet with the ground favors infestation, typically affecting the feet and legs, especially the toes and subungual areas, regions that were also affected in this patient (Chen et al., 2011). The diagnosis of tungiasis is clinically made by dermoscopy or through histopathological examination (Criado, et al., 2013).

In this case, the lesion with a blackened central point, known as a fish-eye lesion, was crucial for defining the diagnosis and guiding treatment, with subsequent identification of the parasite. The treatment of choice is complete surgical excision of the lesion, however, due to the patient's psychiatric condition, excision was not performed, but the lesions improved with the use of oral ivermectin and antibiotics.

CONCLUSION

The case reinforces the importance of surveillance of tungiasis even in endemic areas, such as Brazil and Haiti, particularly among individuals facing socioeconomic vulnerability and mental health disorders, as they may neglect hygiene and health practices, increasing the risk of severe infestations and disease progression.

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