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Medical Imaging

Casos clínicos de Zoonosis reportadas en una Institución de Salud de Guatemala en noviembre 2022

Clinical cases of Zoonoses reported in a Guatemalan Health Institution in November 2022

Cas cliniques de zoonoses signalés dans un établissement de santé guatémaltèque en novembre 2022

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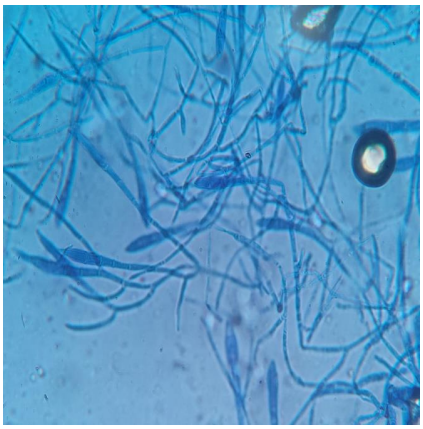

ABSTRACT

Zoonotic diseases in the Americas constitute a health problem; are infectious diseases transmitted naturally from animals to humans. The close interaction between humans and animals, as well as the increase in commercial activity and the movement of people and animals, have led to a greater spread of zoonoses. This can also be promoted by the adoption of stray animals without being treated by a veterinarian.

Key words: Zoonosis, mycosis, Microsporum canis

RESUMEN

Las enfermedades zoonóticas en las Américas, constituyen un problema de salud; son enfermedades infecciosas transmitidas de forma natural de animales al ser humano. La estrecha interacción entre

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hombres y animales, así como el aumento de la actividad comercial y la movilización de personas y animales, han propiciado una mayor diseminación de las zoonosis. Ésta puede ser impulsada también por la adopción de animales callejeros sin ser tratados por médico veterinario.

***Palabras clave**: Zoonosis, micosis, Microsporum canis*

RÉSUMÉ

Les maladies zoonotiques dans les Amériques constituent un problème de santé; sont des maladies infectieuses transmises naturellement de l'animal à l'homme. L'interaction étroite entre l'homme et l'animal, ainsi que l'augmentation de l'activité commerciale et des déplacements de personnes et d'animaux, ont entraîné une plus grande propagation des zoonoses. Cela peut aussi être favorisé par l'adoption d'animaux errants sans être soignés par un vétérinaire.

***Mots clés:** Zoonose, mycose, Microsporum canis*

IMAGE EXHIBITION

Macroscopic and microscopic observation image of Microsporum canis in culture is presented. Image capture date: November 14, 2022. Microscopic observation of arthroconidia was performed in a sample of the right upper limb (KOH) lesion. Lactophenol blue was used in a microscopic culture sample where macroconidia were observed.

Microbiologically, the Microsporum contains rough-walled, multicellular, spindle-shaped macroconidia, forming on the ends of the hyphae. Microsporum species usually infect the skin and hair, but rarely the nails. Colonies of this species usually have a brown coloring and become cottony after two to four weeks in culture. They grow well on Sabouraud glucose agar at room temperature.

Below are laboratory images of a pediatric clinical case observed in a Health Institution, in the metropolitan area of Guatemala C.A. Note the scaly erythematous macule with active border.

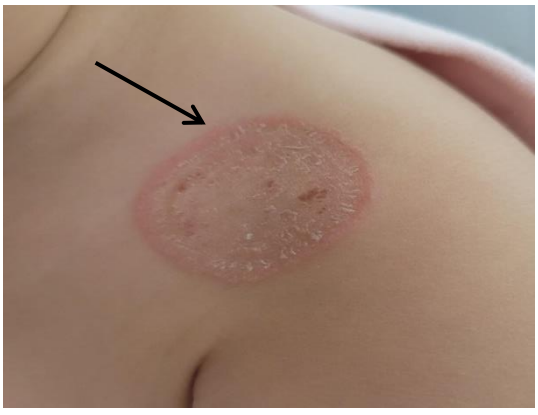

Figure 1. Shoulder injury in a pediatric patient.

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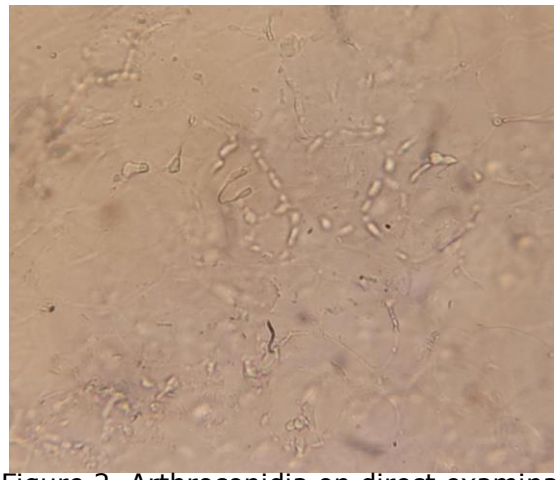

Figure 2. Arthroconidia on direct examination of the lesion. (KOH)

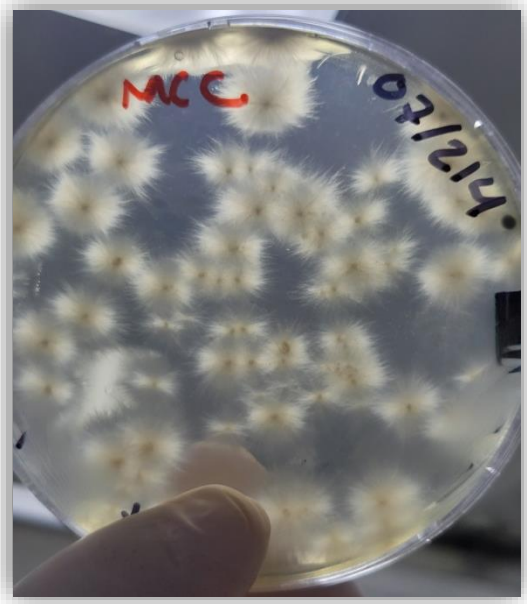

Figure 3. Macroscopic colonies of M. canis in Mycosel culture. 8 days of incubation.

The Microsporum canis species under the microscope presents a white, flat, velvety colony, which develops in 7 to 14 days. It is characterized by a strong yellow pigment, which can be seen on the reverse side of the colony on Sabouraud dextrose agar or on DTM. This last medium turns from amber to red as the fungus grows.

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In lactophenol blue, septate hyphae are seen, abundant ship-keel-shaped macroconidia and generally present more than six septa. The microconidia are few and small in the shape of a rod, another structure that can occur is the chlamydoconidia that are round and refringent.

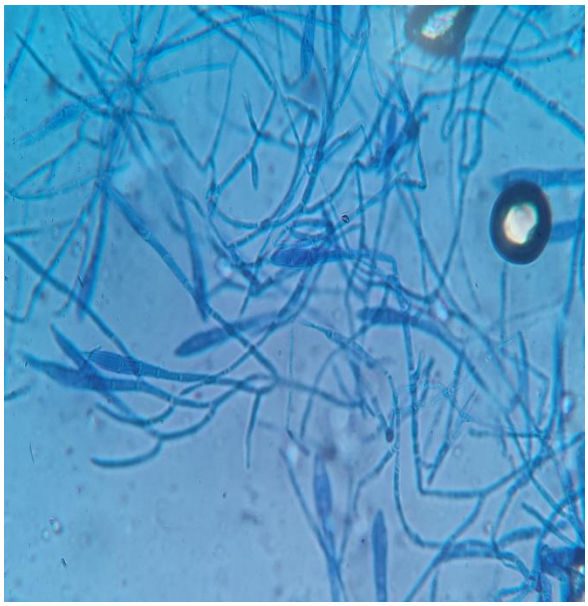

Figure 4. Septate macroconidia observed with lactophenol blue, 10X magnification.

The conidia of the dermatophytes, upon reaching the skin, grow in the horny layer to form annular lesions with an intense inflammatory reaction. Reaction that leads to the destruction and elimination of the fungus from the central area, continuing its growth towards the uninfected skin. The lesions are transformed into annular plaques with a clear center and the inflammatory process is distributed only on the periphery; forming the "active edge", made up of papules and/or vesicles.

Because zoonoses in Guatemala continue to be a public health problem, research programs and projects are required to generate updated information, for decision-making and timely treatment. The search for solutions to these problems requires the multidisciplinary contribution, intervention and collaboration of professional teams from the human, animal and environmental health sectors.

FINANCING

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CONFLICTS OF INTEREST

No conflicts of interest are declared.

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