

## An Unusual Skin Lesion and a Cuddly Hedgehog

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### Keypoints

#### What is known:

- Zoophilic dermatophytosis can be underestimated and misdiagnosed.
- Severe inflammatory response against dermatophytes increases the complexity of diagnosis.

#### What is added:

- Exotic animals, such as hedgehogs, are becoming more popular as household pets.
- Dermatophytes should be considered a zoophilic disease in children having this type of pet.

### Introduction

A previously healthy 11-year-old female patient presented to the emergency department with a two-day history of an itchy erythematous lesion with some pustules on her right palm (Fig. 1). However, the examination was unremarkable. She reported closely handling her African pygmy hedgehog two days earlier when a spine penetrated the skin, which was rapidly removed. A few days later, a single vesicle emerged, accompanied by local pain, pruritus, redness, and edema (Fig. 2). She was treated locally against bullous impetigo with topical fusidic acid and systemically with amoxicillin and clavulanic acid.

On the follow-up observation, eight days later, there was a significant improvement in the lesion. However, after two months, the lesion got worse (Fig. 3), and symptomatic zoophilic dermatophytosis was suspected. Potassium hydroxide microscopy of the lesion was positive. Additionally, fungal culture confirmed *Trichophyton mentagrophytes* infection. She was treated empirically with oral terbinafine 2.5 mg/kg/day, topical ciclopirox olamine, in addition to a diflucortolone valerate and isoconazol cream. She improved significantly within a month (Fig. 4) but reported associated abdominal pain which resolved after switching from terbinafine to oral griseofulvin 15 mg/kg/day. Complete healing took four months. Mycological diagnosis of the pygmy hedgehog was not possible. No other family members reported symptoms.

This case shows the complexity of diagnosing zoophilic dermatophytosis, which is mostly underestimated and associated with underrecognized pathogens.<sup>1</sup>

*Trichophyton mentagrophytes* is transmitted directly

to humans by pets, such as cats, dogs, hedgehogs, and rabbits. Once transmitted to humans, they easily spread from person to person.<sup>1</sup> These dermatophytes induce marked dermal inflammatory responses due to a hypersensitivity reaction. This may lead to misdiagnosis and wrong treatment, which perpetuate the potential source of infection.<sup>2,3</sup> Also known as cuddly toy mycosis, this infection usually occurs in prepubertal children and rarely complicates with bacterial secondary infection.<sup>4</sup>

**Keywords:** Adolescent; Erythema/etiology; Hedgehogs; Tinea/diagnosis; Tinea/drug therapy; *Trichophyton mentagrophytes*; Zoonoses/transmission



**Figure 1.** Itchy erythematous lesion with pustules on the right palm.

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**Figure 2.** Single vesicle associated with local pain, pruritus, redness, and edema.



**Figure 4.** Improvement of the lesions after one-month therapy.



**Figure 3.** Worsening lesions after the initial treatment.

#### Author Contributions

CSE and DM participated in the study conception or design. CSE, DM, MCB and SNF participated in acquisition of data. CSE and DM participated in the analysis or interpretation of data. CSE, MCB and SNF participated in the drafting of the manuscript. CSE, DM, MCB and SNF participated in the critical revision of the manuscript. All authors approved the final manuscript and are accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

#### Conflicts of Interest

The authors declare that there were no conflicts of interest in conducting this study.

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#### Confidentiality of data

The authors declare that they have followed the protocols of their work center on the publication of patient data.

#### Consent for publication

Consent for publication was obtained.

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