

## CASES FOR DIAGNOSIS

# Asymptomatic Pigmented Lesion on the Sole of a Young Woman

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## Clinical History

We present the case of a 32-year-old woman, with no personal or family history of interest, who was seen for a dark brown lesion on the arch of the right foot. The lesion had grown progressively over a period of 8 months. It was asymptomatic and no treatment had been performed.

## Physical Examination

Physical examination revealed a pigmented macule of mottled brown color, with a maximum diameter of about 2 cm, well-defined but somewhat irregular borders, and with a slightly velvety surface (Figures 1 and 2). The lesion was easily removed by scraping with a scalpel.



Figure 1.

## Additional Tests

The scales were viewed in 10% potassium hydroxide and samples were taken for culture.



Figure 2.

## What Was the Diagnosis?

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Manuscript accepted for publication November 10, 2008.

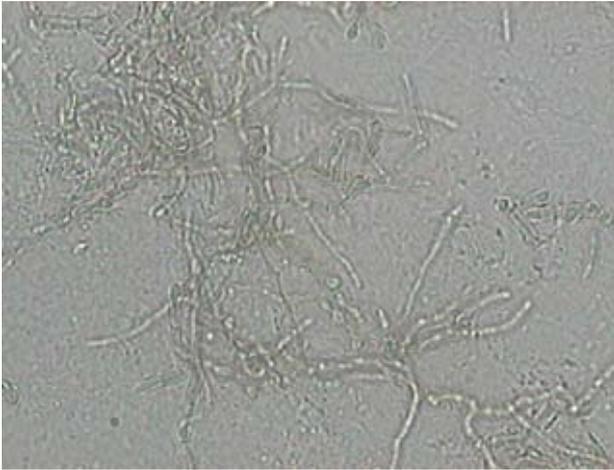


Figure 3.

## Diagnosis

*Tinea nigra plantaris.*

## Clinical Course

Numerous branching, septate hyphae were observed on viewing the scales with 10% potassium hydroxide (Figure 3). The culture was positive for *Exophiala werneckii*.

Treatment was started with topical oxiconazole and a keratolytic agent (10% salicylic acid), with complete resolution of the process in 1½ months.

## Discussion

*Tinea nigra* is a superficial fungal infection that is rare in Spain. It affects the corneal layer of the palmar and plantar surfaces. It is caused by *Phaeoannellomyces werneckii*, also known as *Exophiala werneckii*, *Cladosporium werneckii*, and *Hortaea werneckii*. It is a yeast-like dimorphic fungus, first described in 1921 by Horta<sup>1</sup>; it has been reclassified taxonomically several times, hence the different names.<sup>2</sup>

Clinically it produces a dark brown or black macule, usually solitary, with well-defined borders, almost always situated on the palm or, less frequently, on the sole. The lesion is asymptomatic and can grow slowly and eccentrically over a course of years. No predisposing factors have been reported. It is thought to be acquired by

direct contact from the floor or other surfaces.<sup>3</sup> It usually affects children and adolescents,<sup>3</sup> although it is also seen in adults, and is most common in tropical regions of Central America, Africa, and Asia<sup>2,3</sup>; the majority of cases in developed countries are imported. In our case the patient did not report travel to tropical regions.

The diagnosis is easy to confirm when, after taking scrapings from the lesion, the greenish-brown hyphae and spores are observed on direct microscopy with potassium hydroxide.<sup>2,4</sup> It is also possible to culture the fungus in conventional media. The differential diagnosis includes mainly other acral pigmented lesions such as nevi and melanomas, and other causes of acral pigmentation such as Addison disease.<sup>4,5</sup>

Treatment is performed with topical antifungal agents such as the imidazole derivatives or ciclopirox olamine,<sup>6</sup> achieving complete cure in about 4 weeks. Topical keratolytic agents have also been used to good effect. Some oral antifungal agents, such as terbinafine or griseofulvin, do not appear to be effective<sup>3</sup>.

Although this type of tinea is very rare in Spain, the number of cases is likely to rise due to the increase in immigration. In conclusion, we believe that it is important to know this tinea in order to establish the differential diagnosis with other lesions, particularly nevi and melanomas, and to avoid unnecessary biopsies or surgical excisions.

## Conflicts of Interest

The authors declare no conflicts of interest.

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