For several weeks, a 16-year-old girl has had an itchy rash on her calf. Her primary care provider, believing it to be fungal, prescribed nystatin cream and oral terbinafine (250 mg/d for a month). This treatment regimen had no effect. In desperation, her grandmother mixed together a “family recipe” of peroxide, man-teca (lard), and alcohol. This concoction was applied to the rash for several days—but alas, even this secret formula failed to bring improvement.

The patient has an extensive history of atopy, including eczema and seasonal allergies. The family has one small dog that stays indoors; there are no new pets in the household.

On the patient’s left medial calf is a round, well-defined, 4-cm patch of scaly skin. The lesion is brownish pink, consistent with her type IV skin. Closer inspection suggests the surface was initially covered with tiny blisters (vesicles); additional questioning confirms this.

Elsewhere, her skin is quite dry. No changes are seen on her knees, elbows, or scalp.

The most likely diagnosis is
a) Fungal infection
b) Psoriasis
c) Nummular eczema
d) Impetigo

ANSWER
The correct answer is nummular eczema (NE; choice “c”).

Although fairly common, NE is not a well-known diagnostic entity. Its round shape and scaly surface are often misdiagnosed as fungal infection (choice “a”). But such an infection would have responded to the prescribed medication. In addition, there was no likely source (a new cat, dog, or ferret; participation in a contact sport, such as wrestling), making this diagnosis unlikely.

The scale of psoriasis (choice “b”) is typically white, tenacious, and much thicker than that seen in this case. Other signs would have been visible on the knees, elbows, scalp, or nails.

Impetigo (choice “d”), a superficial skin infection caused by staph and/or strep, first requires a break in the skin to gain entry (eg,
picked-over acne, scratches). It manifests with a honey-colored crust on a red base, which were missing in this case.

**DISCUSSION**

NE is fairly common (seen in every 1 per 1,000 dermatology visits) and can be found on the arms as well as the legs. Predisposing factors include atopy and dry skin—but truth be told, there are many aspects of this condition that remain unexplained. While histopathologic studies can confirm the diagnosis, they offer little explanation of its origin.

What we do know: NE usually begins with a tiny papule, then a surrounding scaly rash develops as the papule disappears. The lesions, which can appear in multiples, are benign and will eventually clear on their own. This is fortunate, because NE can be very difficult to treat.

In this case, the standard regimen was prescribed: a class I topical steroid (clobetasol) to be used under occlusion. For prevention, patients should avoid scented, colored products; long, hot showers (or hot tubs); and heavy moisturizers.

But the bigger take-home message is that not all round, scaly lesions are of fungal origin. The differential includes several items—NE among them.