

Lesions' Pattern Helps Line Up Diagnosis



Six months ago, a 6-year-old boy developed asymptomatic lesions on his elbows, then his knees. They slowly spread to other areas, including his forearms. One primary care provider diagnosed probable warts; another, molluscum. The prescribed treatments—liquid nitrogen and tretinoin, respectively—had no effect.

The boy's mother became alarmed when the lesions started to form in long lines on his arms. At that point, she decided to bring him to dermatology for evaluation. Aside from his skin condition, the child is healthy, according to both his mother and the

records provided by his primary care provider's office.

The lesions are particularly numerous over the extensor surfaces of the legs—especially the knees—but are also seen on the extensor forearms and elbows. The lesions are exquisitely discrete, identical, tiny white pinpoint papules, all with flat tops. None are umbilicated. In several areas of the arms, linear collections of lesions, some extending as long as 6 cm, are noted. The rest of his exposed type V skin is unremarkable.

The most likely diagnostic explanation for these lesions is

- Molluscum contagiosum
- Lichen nitidus
- Warts
- Lichen planus

ANSWER

The correct answer is lichen nitidus (choice “b”), a harmless, self-limited condition of unknown origin. The lesions' flat-topped



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(planar) surfaces and tendency to form in linear configurations along lines of trauma (so-called *Koebner phenomenon*) are also features seen in lichen planus (choice “d”) lesions; however, the latter are almost always pruritic and purple in color. Ironically, the histologic pattern seen in both is almost identical.

An extremely common condition, molluscum contagiosum (choice “a”) presents with multiple tiny papules. But these are not planar, and most will have an umbilicated center. See the Discussion for ways to distinguish it from lichen nitidus.

Flat warts (choice “c”), known as *verruca plana*, can strongly resemble lichen nitidus, but they are not as flat-topped and do not appear white. They do Koebnerize, however, which occasionally makes the distinction difficult.

DISCUSSION

Lichen nitidus (LN) is an unusual but benign condition primarily affecting children and young adults. Due to the contrast, the white planar papules are easier to see on darker skin. As is the case with many dermatologic diagnoses, LN is easily identified if you’ve heard of it and therefore know what to expect—but much more difficult if you haven’t.

LN’s unique manifestation distinguishes it from other items in the differential. For example, molluscum and LN can easily be confused, especially since both primarily affect children. But the pathognomic central umbilication of molluscum lesions is the key distinguishing feature; the

best way to highlight it is with a short blast of liquid nitrogen. (Usually, though, the planar surfaces of LN are sufficient to distinguish it from other conditions.)

In the United States, the term *Koebner phenomenon* refers to the tendency for lesions to form along areas of trauma, usually in a linear configuration. All four items in our differential can present in this way. However, the term *auto-inoculation* might be more properly applied to conditions such as warts and molluscum, since the trauma has merely inoculated the organism into the skin. Inflammatory conditions such as LN and lichen planus are not truly “spread” by the trauma.

Linearly configured lesions are sufficiently unusual in dermatology to warrant their own differential. Among those that can present

in this manner are psoriasis, lichen sclerosus et atrophicus, and vitiligo.

TREATMENT/PROGNOSIS

Our LN patient did not require any treatment, nor was any possible. The condition is quite likely to clear on its own, leaving little if any evidence in its wake.

I often show affected patients and/or their parents pictures of these types of conditions from our textbooks, for added reassurance. And in this day and age, I direct them to websites where they can do more investigation on their own time.

The effective practice of dermatology (and of all medicine, for that matter) includes more than merely making a correct diagnosis: I believe we’re obliged to “sell” it as well. **CR**



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