

Warts of the Fingertips in a Pediatric Patient With Type 1 Diabetes

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Case Presentation

An 11-year-old girl, diagnosed with type 1 diabetes 3 years ago, presented to the pediatric endocrinology clinic for her scheduled, quarterly follow-up visit. She and her mother received diabetes self-management instruction from a certified diabetes educator at the time of diagnosis and received ongoing self-management education at her regular visits.

Her glucose control was suboptimal, with an A1C of 11.4% (normal <6.5%). The patient was largely responsible for her own diabetes care because her mother is a single parent and works full-time. During the visit, the patient's mother mentioned that, in the past few months, the child had developed lesions on her fingertips. These lesions were appearing at the sites where she uses a lancet to prick her fingers for capillary blood glucose monitoring several times per day. The patient assured the diabetes care team that she used alcohol swabs to clean the skin on her fingertips before and after every fingerstick.

The patient's mother had applied an antibiotic ointment and hydrocortisone without improvement of the lesions or a change in their size. The lesions appeared to be growing but were described as painless, dark, and "bumpy." On physical examination, the patient was found to have multiple hyperkeratotic, hyperpigmented lesions of different sizes ranging from 2 to 4 mm on the fingertips on both hands. The lesions were not painful when pressure was applied.

Questions

1. What is the importance of physical examination at each diabetes care visit?
2. What is the significance of constant evaluation of patients' knowledge of self-management and care?

Commentary

After examination and questioning, our patient was given a clinical diagnosis of common warts. Common warts are the result of a cutaneous infection with human papillomavirus (HPV). Differential diagnoses for these lesions can include molluscum contagiosum, lichen planus, and different kinds of keratosis.

On further questioning by the care team, the patient revealed that she rarely changed the lancet on her lancing device and had been reusing the same lancet to prick her fingertips for weeks at a time. Using the same lancet resulted in subsequent inoculation of her fingertips with HPV.

Common warts appear most often on surfaces that may be subject to trauma (e.g., fingers, elbows, and knees) but may spread elsewhere by autoinoculation. In most cases, they are asymptomatic but sometimes cause pain when they are located on weight-bearing surfaces (e.g., plantar warts). Common warts tend to be sharply demarcated, round (but may be irregular), and firm and have a rough surface. They may be gray, yellow, brown, or black nodules that can range from 2 to 10 mm in diam-

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eter. Immunocompromised patients are at particular risk of developing generalized lesions such as warts that are difficult to treat.

Treatment options for warts include observation, mechanical destruction, and medication. The most commonly used treatments involve destroying the affected tissue by freezing (cryotherapy), burning, curetting, or the topical application of salicylic acid (available in creams and gels). Other methods (e.g., intralesional injections and laser therapy) may be used in resistant cases. Prognosis for this condition is good; up to 30% of warts disappear spontaneously within 6 months, and most lesions disappear within 3 years.

For patients with diabetes, it is important to check injection and fin-

gerstick sites at routine clinic visits. It is also important to recognize that all patients with diabetes require periodic reeducation. This young patient was not aware of the importance of changing her lancet every time she pricked her skin to monitor her blood glucose. The reuse of her lancets resulted in repeated local inoculation with HPV. Both the patient and her mother were advised to refrain from reusing lancets, and the patient was referred to a dermatology clinic for treatment of her warts.

Clinical Pearls

- Always do a thorough physical examination at each diabetes care visit. Check skin prick sites, as well as injection sites.
- Emphasize the importance of changing lancets for each skin

prick; this is as important as changing needles each time insulin is administered.

- Remember that ongoing diabetes education and reeducation is important even for patients who have had diabetes for a long time.

Duality of Interest

No potential conflicts of interest relevant to this article were reported.

Suggested Reading

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