ONLINE EXCLUSIVE

# Well-defined macules on young girl's forearms

## Speaking to the teen without her mother in the room made the diagnosis crystal clear.

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A 14-YEAR-OLD AFRICAN AMERICAN GIRL was brought to our clinic because she'd had a rash for 2 weeks. The girl's mother reported that the rash had started as light red macules on her daughter's arms that darkened overnight and disappeared slowly. The patient's only complaint was that the rash burned. She denied using alcohol, tobacco, or illicit drugs. She'd had no recent illnesses, although she had recently begun taking amlodipine 10 mg for hypertension.

A physical examination revealed multiple dark circular macules with well-defined borders on the girl's forearm (FIGURE). Concerned that the rash was an allergic reaction to the amlodipine she'd recently begun taking, we switched her prescription to lisinopril 20 mg.

Despite the switch to lisinopril, the patient had new lesions a week later at follow-up. The rash appeared as 5×5 cm erythematous macules in different stages of healing with central clearing. The girl said the lesions were painful to the touch and burned continuously, but did not itch. We referred her to a local dermatologist, who took biopsies of the lesions and referred her to a regional dermatology clinic.

Two months later, before visiting the regional dermatology clinic, the patient returned to our office. The lesions, which were now mainly 5-cm ovals with overlying blisters, had spread to the patient's stomach and thighs. They were in various stages of healing, with one 7-cm bullous lesion located on the left arm. The patient said that other than the constant burning, she had no symptoms.

- WHAT IS YOUR DIAGNOSIS?
- HOW WOULD YOU TREAT THIS PATIENT?

**FIGURE**
"Burning" lesions on patient's left arm

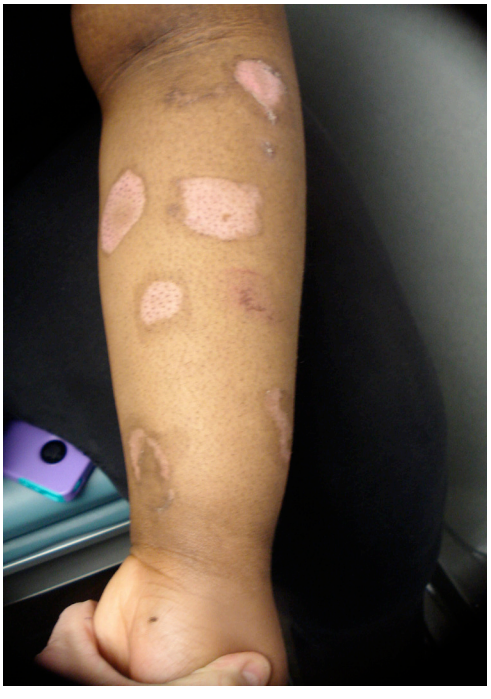

IMAGE COURTESY OF: KARIN COVI, MD

**In the "salt and ice challenge," individuals place ice on top of salt on their skin, which can result in frostbite-like burns.**

## Diagnosis: Salt and ice burns

The biopsy the local dermatologist took did not show any signs of an infectious disease. The physicians at the regional dermatology clinic recognized that the lesions were distributed only in places the patient could reach, and felt the wounds were self-inflicted. When they asked the patient about this with her mother in the room, she denied any self-injury. At the girl's next appointment with a different physician, she was asked about self-injury without her mother in the room, and she admitted to injuring herself using the "salt and ice challenge."

The salt and ice challenge involves putting salt on a person's skin and then laying ice cubes on top of the salt, which can result in a form of frostbite.[1,2] This "challenge" has become a dare among teens to see how long they can withstand the pain of the burn. In one case, a 12-year-old boy suffered third-degree burns in the shape of a cross on his back after withstanding the "challenge" for 20 minutes.[1]

## Diagnosis can be challenging without an accurate history

As this case illustrates, the burns from the salt and ice challenge might be difficult to distinguish from a rash without an accurate history from a patient or caregiver. Suspect a salt/ice burn in patients who have lesions with sharply demarcated borders that may be blistered in appearance or have bullous like characteristics.[3,4] Unlike most rashes, a burn typically will not itch until well into the healing process.

Also, check for blanching and fever—both of which can signal that other factors are at play. Blanching is characteristic of conditions such as drug eruptions, viral exanthems, and roseola. A fever may suggest that a rash is associated with infectious diseases, such as Lyme disease or Rocky Mountain spotted fever.[3]

## Family support is key to helping nonsuicidal patients who self injure

Nonsuicidal self injury (NSSI)—self inflicted, deliberate, direct destruction of body tissue without conscious suicidal intent—is prevalent in up to 45% of adolescents worldwide.[5,6] An Australian study that followed 1973 adolescents for one year found that low self-esteem and poor self-efficacy were prominent predictors of NSSI.[6] These researchers also found that family support is important to getting patients to refrain from NSSI.[6]

**Peer pressure** is a major issue that most adolescents will face. Encourage patients to be open with you and their family about any concerns or issues they may be facing.

**Our patient.** She was referred to a counselor for family therapy as well as started on citalopram 20 mg for depression. Follow-up appointments were made monthly to reassess mood as well as monitor the healing of her burns. Some of the superficial burns healed completely. However, the deeper ones—where she kept up the "challenge" for longer periods of time—scarred. The large rash on her arm that had blistered ended up forming a keloid. At her 6-month follow-up appointment, she remained free of further NSSI. JFP

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