

Itchy rash near the navel

Dean A. Seehusen, MD, MPH,
and J. Scott Earwood, MD
Department of Family
and Community Medicine,
Eisenhower Army Medical Center,
Fort Gordon, GA

An 8-year-old boy presented with a pruritic periumbilical rash that he'd had for several months. The rash intensified during the day and improved at night. Some days the rash was much worse than others.

The patient's mother noted he had recently begun tucking the front of his shirt into his pants. Over-the-counter steroid creams had provided intermittent improvement. He had no significant past medical history and took no other medications.

Examination revealed a 4-cm patch of erythema, scaling, and excoriation without a clear border and no central clearing (**FIGURES 1 AND 2**). The rest of the skin exam was unremarkable.

■ **What is your diagnosis?**

■ **What therapy would you advise?**

FIGURE 1

The periumbilical rash



A pruritic rash near the navel, which worsened during the day and improved at night.

FIGURE 2

A closer look



A close-up of the area of erythema, scaling, and excoriation.

CORRESPONDENCE

Dean A. Seehusen, MD, MPH
Department of Family and Com-
munity Medicine, Eisenhower Army
Medical Center, Fort Gordon, GA
30509

dseehusen@msn.com

FAST TRACK

Nickel allergy is on the rise; it may reflect the increasing popularity of body piercing

Diagnosis**Blue jean button dermatitis**

Contact dermatitis secondary to nickel allergy is a type IV hypersensitivity reaction to the nickel contained in many blue jean snaps and buttons (**FIGURE 3**). The rash is typical of contact dermatitis. Macular erythema, sometimes accompanied by papules or vesicles, is also common.

The border is usually ill-defined, and the lesion may become fissured and excoriated. Long-standing cases may become lichenified and scaly. Occasionally, secondary eruptions on flexor surfaces appear.

More common among women

Nickel allergy is relatively common; up to 20% of women and 4% of men are affected.¹ This discrepancy is thought to be due to the ways in which individuals become sensitized to nickel.

Many women develop a nickel allergy after getting their ears pierced with nickel-containing studs, whereas men tend to be sensitized by an occupational exposure. Nickel allergy appears to be increasing, which may reflect the more common practice of body piercing in general.

How much nickel is too much?

Sensitized patients will react to a metal if more than 1 part in 10,000 is nickel. Metal objects can be tested for nickel content by using a cotton-tipped applicator to apply a few drops of dimethylglyoxime in ammonium hydroxide to the object. If greater than 1 part per 10,000 is nickel, the cotton will turn pink. Recently, Byer and Morrell found that 10% of blue jeans buttons, and more than 50% of belt buckles, test positive.²

Differential diagnosis

The differential diagnosis for a pruritic periumbilical rash in a child would in-

clude psoriasis, scabies, tinea corpus and pityriasis rosea.

Psoriatic lesions

The periumbilical area is a common location for psoriatic lesions. More often involved areas include the scalp and areas of trauma such as the knees, elbows, hands and feet. The lesions of psoriasis tend to have a sharp border and characteristically have silvery white scales associated with them. Psoriasis is often associated with nail abnormalities and arthritis.

Scabies

Scabies is a parasitic infestation with the mite *Sarcoptes scabiei*. Scabies causes an intensely pruritic rash that is classically worse in the finger and toe webs, along the belt line, the groin and axillary regions and, often, periumbilically.

The rash of scabies consists of linearly arranged papules and vesicles due to a hypersensitivity reaction to the mite's eggs and feces which are left behind as it burrows through the skin. Excoriation often obscures the typical findings and may be extensive. Treatment of scabies with steroid creams often leads to diffuse erythema and crusting.³

Tinea corpus

Tinea corpus is a dermatophyte infection of the body. These lesions are typically oval and pruritic. Tinea corpus lesions tend to enlarge slowly with a clearly demarcated, slightly raised, erythematous border and central clearing. Satellite lesions may be seen. Applying topical steroids to tinea corpus may result in initial improvement with subsequent flare as the body's immune response is suppressed.

Pityriasis rosea

Pityriasis rosea is a common pruritic exanthem that can begin as a solitary lesion

on the trunk (herald patch). The herald patch is typically an erythematous oval lesion several centimeters in size with a collarette of scales along its border. Typically, within a week numerous other salmon-colored lesions appear on the trunk along Langer's lines.

The age of peak incidence is during the third decade of life but it does develop in children. Therapy is conservative and targets the control of pruritus.⁴

Treatment

A simple solution

The mainstay of therapy is avoidance of nickel-containing metals. Buttons can be replaced with plastic ones, or covered with cloth. Patients should not coat buttons with nail polish—it doesn't work very well.

Stainless steel is a good option for piercings because nickel tends to be tightly bound within the alloy. Topical steroids can be used to speed resolution of the rash and antihistamines may help with pruritus.

Outcome

The patient was placed on a topical steroid (triamcinolone 0.1% ointment). His mother sewed a piece of cloth over the inside of all his pants buttons. The ointment was only given because the mother

FIGURE 3

It all lines up



The child's nickel allergy rash aligns with the snap and button of his blue jeans.

wanted something that would make the rash go away quickly. Within a week, he was no longer itching and his rash was nearly gone.

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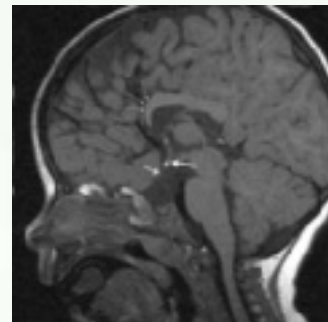
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A 2-year-old boy's height and weight were below the 5th percentile and he was developmentally delayed. Another physician had diagnosed him with hypothyroidism, yet he was not taking any medications. Ophthalmologic exam revealed an inability to follow objects, but the patient did blink to bright light. An MRI of his brain revealed hypoplastic genu of the corpus callosum, cavum septum pellucidum, ectopic posterior pituitary, and small anterior pituitary. There was also enhancement of the inferior hypothalamus.



What is **your** diagnosis?