

What Is Your Diagnosis?



A 21-year-old woman presented with a skin lesion on the inferior medial quadrant of her right breast of 6 months' duration. The patient described the lesion's initial appearance to be similar to a pimple that resolved but returned shortly thereafter. It then slowly grew to the presenting size. The lesion was not tender and it did not bleed, drain, or itch. The patient denied similar lesions as well as a personal or family history of skin cancer or breast cancer. She did not recall trauma to the area. The patient stated she was in good health with no other symptoms. On examination, a 6×6-mm erythematous, slightly raised papule with overlying glandularlike features was noted. A 5-mm punch biopsy was performed.

PLEASE TURN TO PAGE 170 FOR DISCUSSION

Justin P. Bandino, MD; Wendi E. Wohltmann, MD; Chad M. Hivnor, MD; San Antonio Uniformed Services Health Education Consortium, Texas.

The authors report no conflict of interest.

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The Diagnosis: Giant Molluscum Contagiosum

A 21-year-old woman presented with a 6×6-mm erythematous, slightly raised papule on the inferior medial quadrant of her right breast (Figure 1). Histopathologic examination of the skin biopsy specimen revealed large intracytoplasmic inclusion bodies in epidermal keratinocytes (Figure 2). This finding of classic molluscum bodies (Henderson-Patterson bodies) aided in the diagnosis of an unusual clinical presentation of molluscum contagiosum (MC).

Molluscum contagiosum occurs worldwide and is caused by the MC virus (MCV), a large, double-stranded DNA virus and a member of the Poxviridae family. Similar to the rest of the Poxviridae family, it is characterized by cytoplasmic replication. Up to 4 subtypes have been described and distribution may vary geographically, but disease from all subtypes results in similar lesions.¹ The genome of MCV type 1 has been sequenced,² and it has subsequently been noted that this subtype is responsible for 90% of cases in the United States.³ Transmission is via skin-to-skin contact and includes autoinoculation, but fomite transmission also is possible.

Molluscum contagiosum presents in 3 patient populations: children, sexually active adults, and immunocompromised patients. In children, MC is common and occurs on exposed skin sites as a benign and self-limited process, usually spontaneously resolving. Asymptomatic children likely predominate; however, one study estimated that less than 5% of children in the United States have clinical evidence of

infection.³ In sexually active adults, MC typically is a sexually transmitted infection and presents in the genital region, also spontaneously regressing. Incidence of such cases has greatly increased, as one review reported a 400% increase in cases of genital MC in England from 1971 to 1985, and a 10-fold increase in cases in the United States from 1966 to 1983.⁴ In



Figure 1. Elevated papule with glandularlike features on the right inferior medial breast.

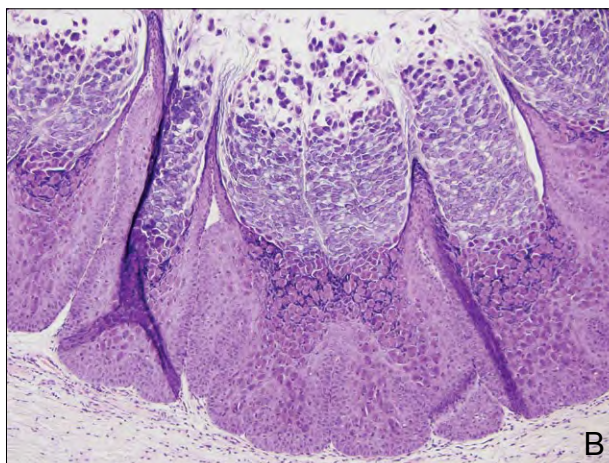
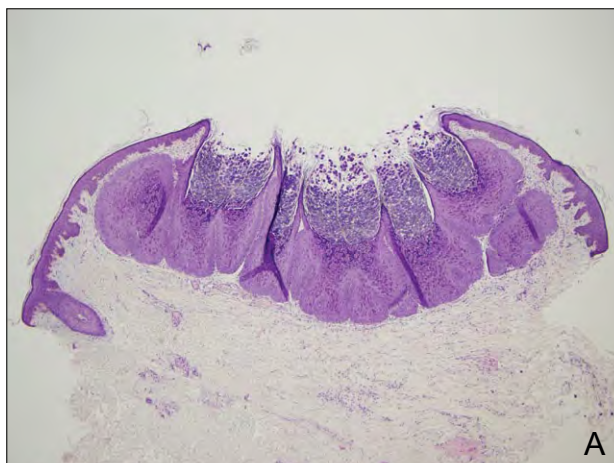


Figure 2. A punch biopsy specimen from the right inferior medial breast showed large intracytoplasmic inclusion bodies in epidermal keratinocytes (A and B)(H&E; original magnifications ×4 and ×10, respectively).

immunocompromised patients, such as human immunodeficiency virus (HIV)-infected patients, widespread and giant mollusca can occur and will continue to enlarge without aggressive therapy. Facial involvement is common, usually spread by shaving in males, and a risk for ocular lesions exists.⁵ These infections can represent late-stage HIV; they can be severely disfiguring and resolution does not occur until highly active antiretroviral therapy is initiated. As an example, the AIDS epidemic in the 1980s led to a great increase in the number of adult MC cases, but highly active antiretroviral therapy has since resulted in a considerable decrease in cases and complications.^{6,7}

In the clinical setting, the classic immunocompetent child with nongenital MC will present with discrete, small (2–5 mm diameter), flesh-colored papules that are dome shaped and typically umbilicated. A single lesion or a small grouping of lesions is normal, though a patient with atopic dermatitis can present with a more widespread distribution.³ Erythema of the surrounding skin may result from scratching or spontaneous regression. Although multiple lesions may take 6 to 9 months to completely resolve, individual lesions typically last for approximately 6 to 8 weeks.⁸ As a sexually transmitted infection, MC typically presents with similar small umbilicated papules over the genitalia.

Clinical diagnosis can be difficult, particularly in a healthy young adult with an atypical-appearing giant molluscum (>5 mm), as in our patient. According to our patient's demographics, sexually transmitted genital MC would be expected, but the lesion was not found near the genitals and the patient denied history of sexual activity. In addition, many of the classic clinical features such as the dome shape and umbilication were not present, and even on dermoscopy, the glandularlike morphology seen is not an expected finding. Therefore, the more likely differential included verruca vulgaris, Degos acanthoma, accessory nipple, basal cell carcinoma, and an atypical dermatofibroma. Other possibilities included appendageal tumors, condylomata acuminatum, juvenile xanthogranuloma, and papular granuloma annulare.⁹ In immunocompromised patients, cutaneous cryptococcosis and cutaneous histoplasmosis also can mimic MC, and coinfection of the same skin lesion with MCV and cryptococcosis in an HIV-infected patient has been reported.¹⁰ In difficult or atypical cases, additional methods can be used to confirm the diagnosis, including histologic evaluation of biopsy, microscopy of the extruded molluscum plug, and even real-time polymerase chain reaction and pyrosequencing.¹¹

Giant MC is known to present in immunocompromised patients, but cases in immunocompetent patients are rare. Some reported cases involve

immunocompetent children,^{12,13} with a possible predilection for the anogenital region,¹⁴ but an English-language literature search using PubMed with the search term *giant molluscum contagiosum* revealed fewer than 5 cases of giant MC in immunocompetent adults.^{15–17} One article astutely suggested, however, that even these cases may be misleading in that the patients were determined to be immunocompetent via HIV serology alone rather than a full immunodeficiency workup.¹⁸ Because cell-mediated immunity is responsible for eliminating MC infection, a full immunologic workup may find an occult defect.

Molluscum contagiosum usually is self-limited and treatment of typical nongenital lesions generally is not indicated. Many options do exist, including curettage; cryotherapy; laser therapy; and topical medications such as salicylic acid/lactic acid, trichloroacetic acid, potassium hydroxide, and cantharidin. Topical imiquimod also has been used with an 82% cure rate.¹⁹

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The use of an ice bath is contraindicated in patients with pertinent comorbidities, such as Raynaud syndrome, vasculopathy, cryoglobulins, and peripheral vascular disease, but does not preclude the use of the remainder of the technique. The addition of the surgical soap to the ice bath begins the sterilization process; however, we still recommend further cleaning around the nail folds and a thorough routine surgical scrub prior to the actual procedure.

The fingernail cocktail is an effective, inexpensive, and readily available method that reduces discomfort and improves antisepsis. The cocktail also offers the following practical advantages when performing nail procedures: (1) the concept adds humor and distraction to an anxiety-provoking procedure; (2) it allows patients to participate in their initial anesthesia, giving them a greater degree of control over their experience; and (3) the preoperative 10- to 15-minute antiseptic soak greatly softens the nail plate, reduces tissue trauma during partial nail avulsions as well as punch biopsies, and improves the antiseptic technique.

Sincerely,
Tiffany Brazeal, MD
James O. Barlow, MD

Dr. Brazeal is from the Department of Dermatology, Mayo Clinic Scottsdale, Arizona. Dr. Barlow is from private practice, Mountain View, California, and Mayo Clinic Scottsdale.

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