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Molluscum Contagiosum on the Sole of the Foot in an Elderly Patient: A Case Report

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Rockville, MD, U.S.A.**Corresponding Author:** Xingpei Hao, e-mail: xhao@footandankle-usa.com**Conflict of interest:** None declared**Source of support:** This work was supported by the Institutional Board of Foot and Ankle Specialists of the Mid-Atlantic**Patient:** Female, 71-year-old
Final Diagnosis: Molluscum contagiosum
Symptoms: Mass • pain
Medication: —
Clinical Procedure: Surgical excision
Specialty: Dermatology • Infectious Diseases • Pathology • Podiatry**Objective:** Rare disease**Background:** Molluscum contagiosum (MC) presents as skin-colored, dome-shaped, umbilicated papules or nodules on the skin and is caused by the MC virus. It predominantly occurs in school-aged children and mainly affects the face, neck, and central regions of the body but, rarely, the soles of feet are affected. Here, we describe the case of a 71-year-old woman with MC on the plantar heel.**Case Report:** A 71-year-old woman presented with a 3-mm, pale, pearly, round, verrucoid lesion along the plantar central aspect of the left heel, present for 1 week. Histopathological evaluation of the excisional biopsy revealed several clusters of hyperplastic keratinocytes containing lobulated, eosinophilic, intracytoplasmic inclusion bodies inverted into the dermal layer, which was diagnosed as MC.**Conclusions:** MC on the plantar heel is a rare, atypical presentation that needs to be differentiated from viral warts and other diseases.**MeSH Keywords:** Diagnosis, Differential • Molluscum Contagiosum • Pathology, Surgical • Therapeutics**Full-text PDF:** <https://www.amjcaserep.com/abstract/index/idArt/923777>

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Background

Molluscum contagiosum (MC) is caused by the molluscum contagiosum virus (MCV), a member of the *Poxviridae* family. MCV is a double-stranded DNA virus. At least 4 different genotypes (MCVI, II, III, and IV) have been identified [1–4]. MCVI is the most frequent type, accounting for 76–97% of infections, predominantly in children. MCVII is the second most common type, mainly affecting adults. Infections with MCVIII and MCVIV are rare [3]. MC is most commonly seen in the pediatric population [5]. It is mainly transmitted through direct skin to infected skin or fomite contacts in swimming pools, bathtubs, spas, or shared towels or sponges. Adolescents and adults can be infected through sexual or non-sexual contact. In children, MCs are usually widespread and distributed on the face, trunk, and extremities. In adults, the lesions characteristically involve the genital region, but extragenital or atypical appearance are more typically observed in people with immunosuppressive

conditions. Here, we describe the clinical presentations, histopathology, and treatment of an elderly woman with a rare presentation of MC on the plantar heel, with the goal to raise awareness of this skin condition.

Case Report

A 71-year-old woman presented with a painful lesion on the bottom of her left heel, present for 1 week. She rated the pain as 2 on a pain scale from 0 to 10. The patient's medical history included type II diabetes mellitus, with a current HbA1C value of 6.1, arthritis, hypertension, and thyroid disorder. Her medications included atorvastatin calcium, levothyroxine sodium, janumet (sitagliptin and metformin), and losartan potassium. System reviews were unremarkable. Dermatological exams revealed a pale, pearly, round, verrucoid lesion along the plantar central aspect of the left heel measuring 3 mm

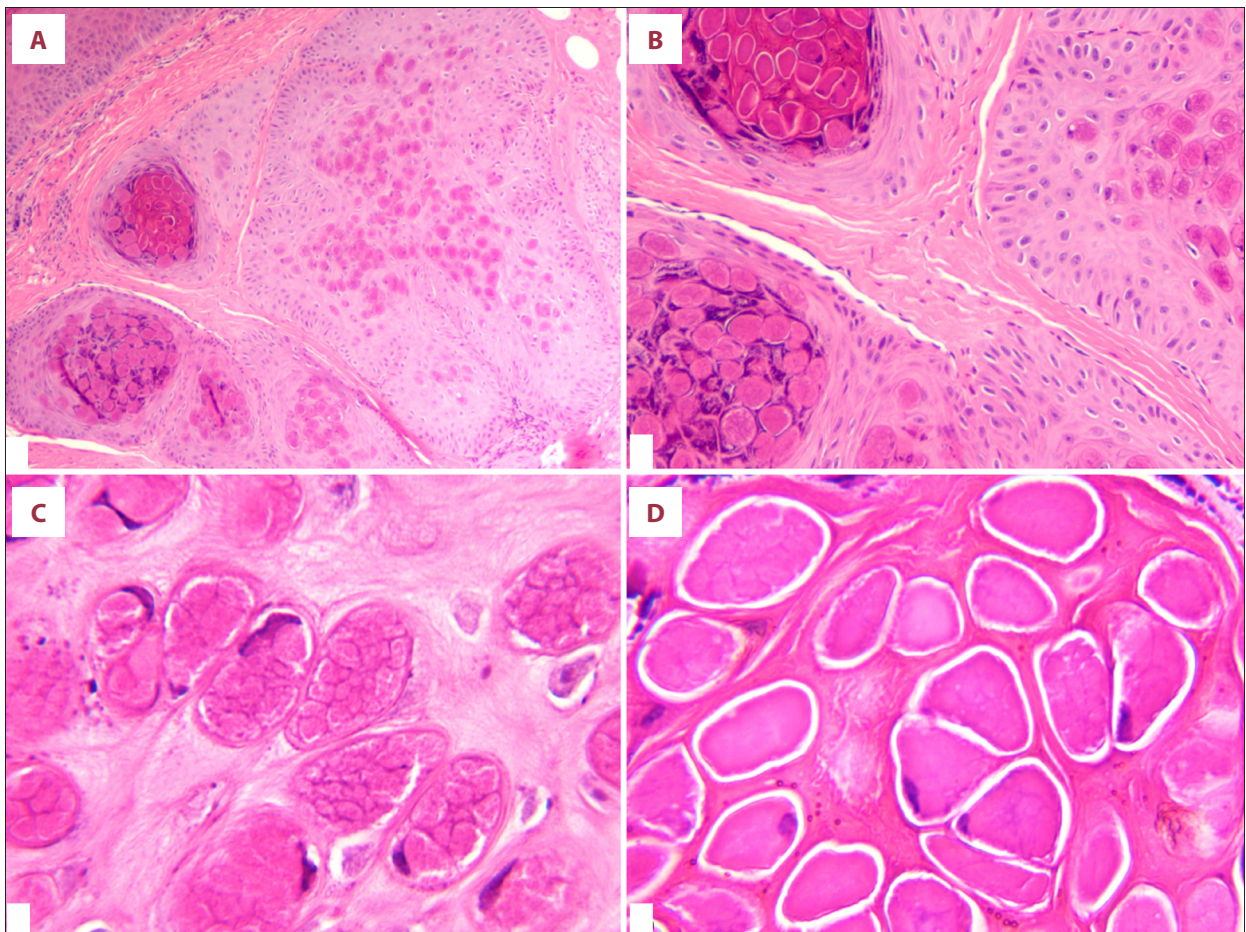


Figure 1. Histopathology of molluscum contagiosum on the sole. (A) Several clusters of hyperplastic keratinocytes containing eosinophilic, rosette-like, intracytoplasmic inclusion bodies (Henderson-Peterson bodies) in the upper dermis (HE 40×); (B) The same lesion as A in a higher magnification (HE 100×); (C). The peripherally displaced cellular nuclei and the eosinophilic, rosettes-like, intracytoplasmic inclusion bodies (HE 400×); (D). The peripherally displaced cellular nuclei and the homogeneous eosinophilic, intracytoplasmic inclusion bodies (HE 400×).

in diameter. Neither erythema nor drainage were noticed on the surface or surrounding the lesion. No similar lesions were found on any other areas of her skin. An excisional biopsy of the lesion, utilizing curettage, was performed. Pinpoint bleeding with debridement was observed. The tissue was immediately put into 10% neutral buffered formalin for fixation and submitted for pathology analysis. Gross examination revealed a pale, pearly, round, wart-like lesion measuring 4×3×2 mm in greatest dimensions. The entire tissue sample was submitted for tissue processing. Pathological evaluation showed several clusters of hyperplastic keratinocytes containing lobulated, rosette-like, eosinophilic, intracytoplasmic inclusion bodies (known as Henderson-Petterson bodies) inverted into the dermal layer. The epithelial nuclei were compressed and displaced peripherally in the cytoplasm by the viral inclusions (Figure 1). Since the lesion was entirely excised, no further treatment was provided. The patient recovered well and no recurrence was noted after 10 months.

Discussion

Molluscum contagiosum (MC) is uncommonly found on the plantar surface of feet. In 2012, Cohen and Tschen reviewed the literature and found 35 reported cases of MC on the sole of the foot [6]. Since then, 2 new cases, including the present case, have been reported [7]. A variety of clinical presentations of MCs on the sole of the foot have been described as being skin-colored, erythematous, brown, translucent, or waxy-yellow papules or dome-shaped nodules, 3 mm to 2 cm in diameter, with a central depression. These need to be differentiated from other lesions, including warts, callus, pyogenic granuloma, fibroma, keratoacanthoma, basal and squamous cell carcinoma in immunocompetent patients, and histoplasmosis and cryptococcosis in immunocompromised patients [8].

MC can be diagnosed based on either typical clinical presentation with an aid of a dermoscope [9] or histological evaluation of the biopsy or surgically-excised tissue. Histopathologically, MC features large intracytoplasmic eosinophilic inclusion bodies (Henderson-Petterson bodies) in the keratinocytes of the epidermis and subcutaneous region of the skin.

MC is a self-limited disease, with a duration from 6 to 9 months, in the majority of patients. Some cases last for more than 3 or

4 years [10]. Due to its contagious nature, treatment is needed to limit its transmission and autoinoculation, and to reduce potential complications [11]. Currently, there is no definitive treatment for MC. Several treatment options are available, including physical removal of the lesions by curettage or cryotherapy, pulsed dye laser therapy [1], electrodesiccation, or manual extrusion of the central core by squeezing [12]; chemical cytodestruction with chemotherapeutics (e.g., potassium hydroxide, salicylic acid, topical retinoids, cantharidin solution, and podophyllotoxin cream) [1,12]; and immune-modulating therapy with imiquimod and intralesional interferon alfa [1,13]. Because of the self-limited nature of MC, selection of treatment should be based on the location, size, number of lesions, patient age and general health, and minimal risk of adverse effects from the treatment, such as scarring and pain. In our case, surgical excision was chosen due to the wart-like appearance of the lesion. Surgical excision is therapeutically and diagnostically important. Any portion of the MC lesion remaining after excision or biopsy can be further treated with either physical, chemical, or immune therapies [6].

Conclusions

MC on the sole of the foot is a rare, atypical presentation, and needs to be differentiated from other benign and malignant lesions. Standard treatments include physical and chemical destructions of the lesions. Surgical excision is reserved for clinically doubtful cases and for differential diagnosis. Patients need to be followed up due to the potential for recurrence.

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Institution where work was done

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Conflicts of interest

None.

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