



Case Report

Molluscum Contagiosum of Areola

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Keywords: *Areola, Molluscum Contagiosum, Histopathology, Cytology*

ABSTRACT

Molluscum contagiosum is an extremely contagious under-reported viral infection of the skin and occasionally of the mucous membranes which is caused by a double-stranded DNA poxvirus called the molluscum contagiosum virus. Molluscum contagiosum lesions are typically flesh-colored, dome-shaped, and pearly in appearance. Any area of the body can be infected by this virus, however most commonly involved parts are the face, trunk, arms, groin, and the legs. The areola and nipple are very rare locations to develop molluscum contagiosum. We herein describe an unusual case of molluscum contagiosum of the right areola in a 48-year-old woman and review the various clinicopathological characteristics of this ubiquitous condition.

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Introduction

Molluscum contagiosum is a common, self-limiting cutaneous lesion associated with molluscum contagiosum virus (MCV), a member of the poxviridae family. MCV primarily infects humans, though equids can rarely be infected. Four types of MCV are known, MCV-1 to -4; MCV-1 is the most common and MCV-2 is seen usually in adults.^[1] This virus is mainly spread from person to person by touching the affected skin. However, there are other important risk factors for enhancing the virulence of this pathogen like being sexually active, and those who are immunodeficient.^[2] It frequently occurs on the face, trunk, and extremities of children and adolescents; though it is also commonly encountered on the genitals of young adults as a result of sexual contact. However, dermatosis of areola and nipple due to molluscum contagiosum is rare which has been seldom reported in the world literature. We report one such unusual case of molluscum contagiosum involving the right areola in a 48-year-old woman along with review of the literature.

Case Report

A 48-year-old female presented in the surgery outpatient department of our hospital with a 7x6 mm flattened papule on her right areola. It was flesh-coloured, firm on palpation, non-tender and non-pruritic. She neither had any nipple discharge nor any lumps in both the breasts. There was no history of any recent trauma, sexual contact,

or any contact with persons who had similar lesions. History of any similar lesions elsewhere on her body was non-contributory. There was no significant axillary lymphadenopathy. Her general physical examination, routine haematological as well as biochemical parameters were within normal range. Her systemic examination was within normal limits. All the serological tests including HIV were non-reactive. A provisional clinical diagnosis of benign adnexal tumor was made. The lesion was excised and sent for histopathology examination.

Microscopic sections revealed proliferating squamous epithelial lining and smooth muscle bundles of the areola in superficial and mid dermis. The lining squamous cells had eosinophilic granular inclusions (Molluscum bodies/Henderson Patterson bodies) within the cytoplasm which were displacing the nucleus and enlarging the cell (Figure a & b). Based on these findings, a final diagnosis of molluscum contagiosum of the right areola was made. The patient was referred for appropriate therapy and was lost to follow-up.

Discussion

Molluscum contagiosum is usually a benign and a self-limiting viral infection of the skin which was first described by Bateman in 1817.^[3] Henderson and Paterson later identified the distinctive intracytoplasmic inclusion bodies, now referred to as “molluscum bodies” or “Henderson-

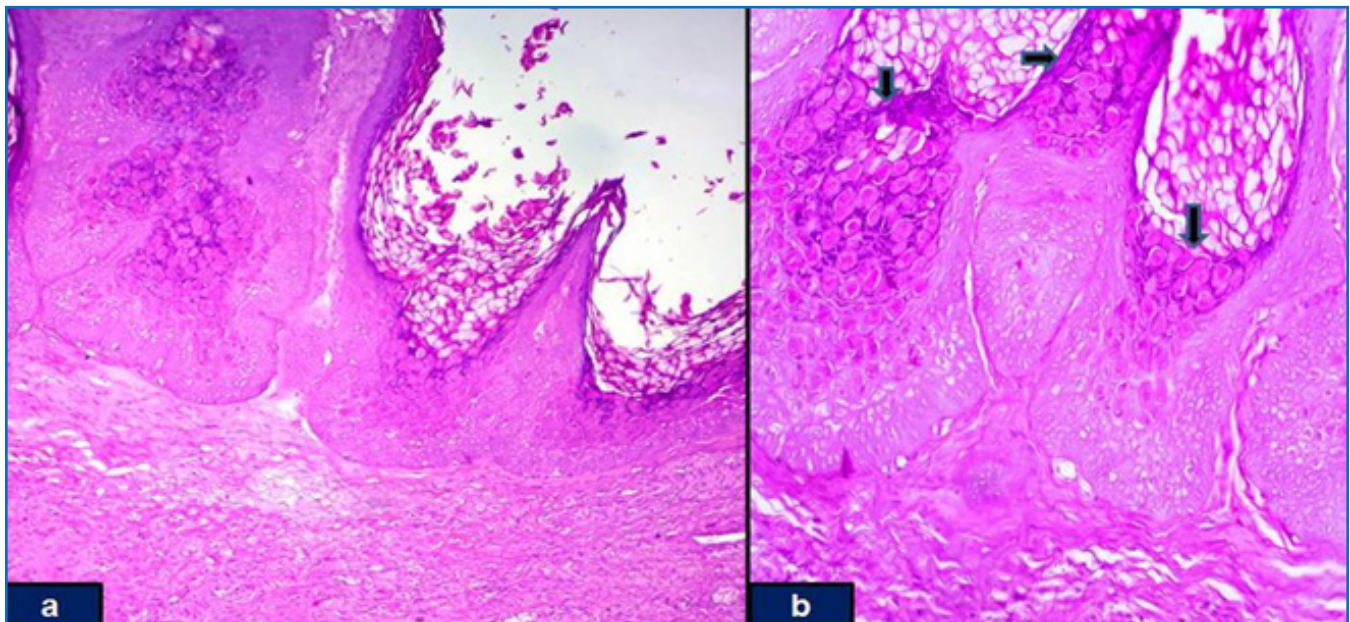


Fig. a: Molluscum contagiosum lesion with invaginated epithelium and underlying smooth muscle bundles of the areola (H and E, $\times 10$).

Fig. b: Higher magnification of epidermis demonstrating intracytoplasmic eosinophilic inclusions (molluscum bodies) in the keratinocytes (H and E, $\times 40$).

Paterson bodies” - that represent the histological hallmark of the lesions.^[4] In 1905, Juliusberg demonstrated the infectious nature of this condition by inoculating himself and two colleagues with the ground-up contents of multiple molluscum contagiosum lesions.^[5]

Approximately 122 million people were affected worldwide by it as of 2010 (1.8% of the population).^[6] There has been a global rise in molluscum infections since 1966, as these infections are not routinely monitored because they are seldom serious and routinely disappear without treatment. However, this viral infection is highly transmissible and some growths can remain for up to 4 years if not treated. Spread of MCV is through direct skin contact (e.g., contact sports or sexual activity), contact with an infected surface (fomite), or autoinoculation (self-infection) by scratching molluscum lesions and then touching other parts of the skin not previously affected by the virus.^[1] Molluscum contagiosum occurs predominantly in children, adolescents, sexually active adults, in individuals with impaired cellular immunity and in association with HIV and HPV infections.^[7] In immunocompetent hosts, molluscum contagiosum usually resolves itself. However, in patients with underlying immune dysregulation, which is characterized by a T helper 2 (Th2) cytokine switching pattern within the skin, the lesions may be more diffuse, remain for longer periods of time, and may be more therapy resistant. This most probably reflects the local deficits in cellular immune reactions within the skin, which are mediated primarily by a T helper 1 (Th1) cytokine pattern.^[8] Antibody to pox virus may be seen in 60% patients with skin lesions but are less frequent in AIDS patients.^[9]

The most common locations are the face, arms, legs, torso, and armpits in children while adults typically have molluscum lesions in the genital region and this is considered to be a sexually transmitted infection; however, if genital lesions are found on a child, sexual abuse should be suspected.^[1] Other rare sites are the areola, nipple, eyelids, palms, soles and mucous membranes.^[10-17] These lesions are generally not painful, but they may itch. Picking the lesions may lead to a spread of the viral infection, an additional bacterial infection, and scarring.^[1,18] In about 10% of the cases, eczema develops around the lesions.

Molluscum contagiosum lesions have a characteristic appearance and are usually asymptomatic. They are often 1-5 mm in diameter, pearly, dome-shaped, flesh-colored papules with central umbilication.^[19] They can be solitary or multiple and diffuse (mainly seen in immunocompromised patients or those with atopic dermatitis).^[20]

The diagnosis of molluscum contagiosum is made on the clinical appearance; the virus cannot routinely be cultured. However, both the cytology and histopathology play a pivotal role in identifying this infection. Histopathological examination of excisional/punch/shave biopsy can be both confirmative of the clinical challenging cases (lesions lacking the characteristic clinical presentation) as well as therapeutic towards the patient. Histologically, molluscum contagiosum is characterized by molluscum bodies (Henderson-Patterson bodies) in the epidermis, above the stratum basale, which consist of large cells with abundant granular eosinophilic cytoplasm (accumulated virions) and a small peripheral nucleus.^[21] Nevertheless, these molluscum bodies can also be identified on cytology as it has been reported by few authors that cytological sampling is easy, rapid and non invasive as the molluscum contagiosum lesions have a central pore from which white keratinous material can be expressed. This material can be applied to a slide and stained, using either Giemsa stain, Gram stain, Papanicolaou stain or Wright stain, thus it helps in clinching the accurate diagnosis without doing a excisional biopsy.^[12,22,23]

Differential diagnosis of molluscum contagiosum includes basal cell carcinoma, benign adnexal tumor, condyloma accuminatum, scabies, cutaneous fungal infections (coccidioidomycosis, cryptococcus, or histoplasmosis), glandular (adenomatous) hyperplasia, keratoacanthoma, leiomyoma, Paget’s disease, papilloma, papular granuloma annulare, syringoma, and verruca vulgaris.^[2,12]

Our case was unusual as she had molluscum contagiosum lesion on a rare site with unusual presentation i.e. the right areola without the characteristic central umbilication. Very few cases have been reported in literature about molluscum contagiosum developing on this uncommon site.^[10,11,24] On extensive reviewing, only three such cases have been documented. All the three patients were immunocompetent women. All were in their 20s, and each of them developed a solitary lesion on their areola. Each had confirmation of the diagnosis by histopathology.

The prognosis of these lesions is usually good, though the treatment of molluscum contagiosum is still debatable. The lesions are usually self-limiting in nature. They generally clear spontaneously in six to nine months.^[2, 16] However, owing to the highly contagious nature of the disease, to reduce the risk of sexual transmission, prevent autoinoculation, and to increase patient quality of life, many clinicians recommend to treat these lesions. Medical options include cantharidin, cidofovir, cimetidine, iodine,

imiquimod, salicylic acid, or retinoic acid. Alternatively, these lesions may be treated with cryotherapy, curettage, lasers or surgical excision.^[2, 25-28]

Conclusion

Molluscum contagiosum, though a common, self-limiting viral disease can present with atypical presentations at unusual sites. Therefore, this entity should always be kept in the mind while dealing with such breast lesions.

Acknowledgements

None

Funding

None

Competing Interests

None Declared

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