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# Molluscum contagiosum with dermoscopic features in an unusual areola and nipple location

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## Abstract

Molluscum contagiosum is a common, contagious viral skin disease that often affects children and adolescents. Involvement of the areola and nipple are rarely reported. Herein we report two young women with molluscum contagiosum on the areola-nipple complex and we discuss the dermoscopic features of the lesions at this unusual site.

*Keywords: molluscum contagiosum, dermoscopy, dermatoscopy, areola, nipple, breast, atypical localization*

## Introduction

Molluscum contagiosum is a common skin disease associated with molluscum contagiosum virus, a member of the Poxviridae family. Lesions may be located anywhere; however, in children a predilection for the face, trunk, and extremities is observed, whereas in adults a predilection for the inner thighs and genitalia, is observed as a result of sexually transmitted infection [1, 2]. Lesions are generally small shiny flesh-colored and dome-shaped papules that show central umbilication. Lesions may be more extensive, atypical, and resistant to therapy in immunocompromised patients [1-3]. The nipple and areola are unusual sites of molluscum contagiosum [1-9]. We herein report two young women with molluscum contagiosum on the areola and nipple and discuss the dermoscopic features.

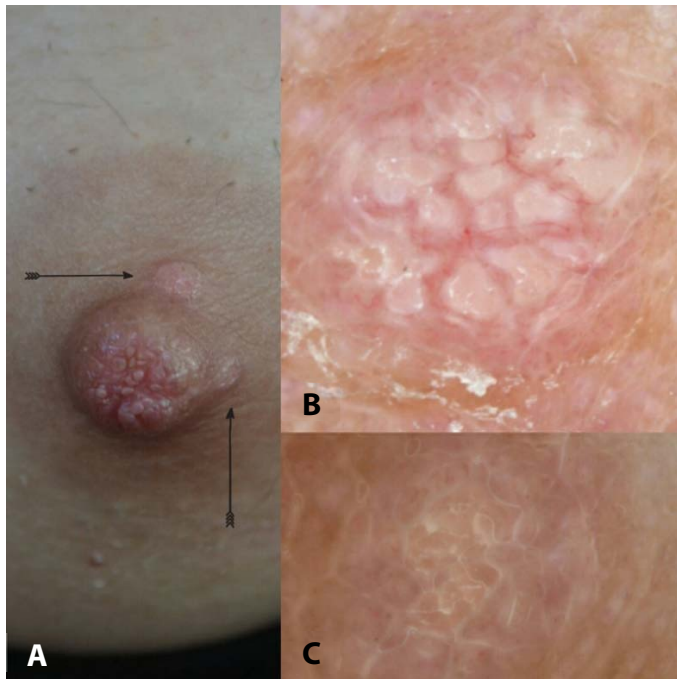
## Case Synopsis

Case 1: A 27-year-old woman, presented with a two-month history of two small painless papules on her right breast. Physical examination revealed two skin-colored, well-defined, round and non-tender papules with diameters of 3 and 4mm respectively, one being located adjacent to the nipple and the other on the areola (**Figure 1A**). Dermoscopy showed multiple white-yellow clods surrounded by fine serpentine vessels (**Figure 1B, C**).

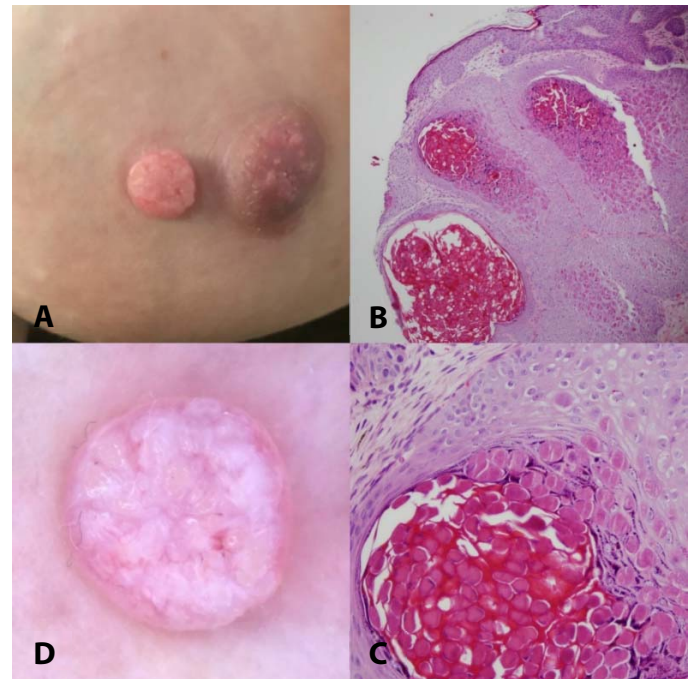
Case 2: A 24-year-old woman, presented with a 3-month history of an asymptomatic papule on her right areola. On examination, there was a pink, round, exophytic, 8mm papule on the right areola (**Figure 2A**). Dermoscopy again revealed multiple white-yellow clods surrounded by fine serpentine vessels (**Figure 2B**). Histopathologic examination was consistent with molluscum contagiosum in both cases (**Figure 2C, D**).

## Case Discussion

The nipple-areolar complex is one of the rare localizations of molluscum contagiosum. We discovered 8 cases of molluscum contagiosum located on the breast in the literature (**Table 1**), [1-9]. Including the current cases, all patients were female with ages ranging from 20 to 46 years (median 28.4). Similar to the present cases the reported patients were not immunosuppressed and had no significant diseases in their previous medical histories.



**Figure 1. A)** Skin colored papules, 3 and 4mm on areola and nipple, indicated by black arrows. **B, C)** The dermoscopic images of the larger nodule (B) and the smaller nodule (C) showing multiple white-yellow clods surrounded by fine serpentine vessels



**Figure 2. A)** Pink papule, 8mm, on the right areola. **B)** The dermoscopic image of the lesion showing multiple white-yellow clods surrounded by fine serpentine vessels. **C)** The endophytic epithelial proliferation in the lesion. H&E, 100x. **D)** Closeup view of intracytoplasmic eosinophilic inclusions containing virus particles (Henderson-Patterson bodies) H&E, 400x.

The papules were mostly solitary in the reported cases with one report containing no detailed information about the exact number of lesions [9]. Five lesions were located on the nipple and three were on the areola. In the present report, one of our patients had two molluscum papules, one of them being located on the areola and the other one adjacent to the nipple. The central umbilication was absent in eight of ten cases. All lesions were biopsied or examined by cytologic smear owing to atypical clinical presentations. There was no recurrence after treatment in the majority of the cases.

Dermoscopy is a non-invasive tool that facilitates the diagnosis of not only melanocytic and non-melanocytic lesions but also skin dermatoses and infections. The reported dermoscopic features of molluscum contagiosum include polylobular, white-yellow, amorphous structures in the center surrounded by crown vessels that do not cross the centers of the lobules [10]. Histopathological correlation of the aggregated central white-yellow clods correspond to lobulated, endophytic

epidermal hyperplasia with intracytoplasmic inclusion bodies known as molluscum or Henderson–Paterson bodies whereas the crown vessels correspond to dilated vessels in the dermis [11].

The prominent characteristics of the white structures in molluscum contagiosum have been variously described as roundish structures, four leaf clover-like structures, and polylobular structures. Variation in the morphology of the white structures may relate to different proliferative degrees of the inverted lobules of the acanthotic epidermis. It seems possible that the initial smaller lesion that has a four leaf clover-like structure could proliferate into a larger lesion that has a polylobular structure [12]. The reported vascular patterns of molluscum contagiosum have included crown, punctiform, and radial patterns that can occur as a single pattern or as any combination of these patterns [13]. In our cases we use descriptive definitions and observe short serpentine vessels surrounding the white-yellow clods.

The dermoscopic differential diagnosis of molluscum contagiosum consist of conditions with sebaceous differentiation such as nevus sebaceous, sebaceous adenoma, and especially sebaceous hyperplasia. Vessels surrounding the yellow clods are not only typical for molluscum contagiosum but also observed in sebaceous tumors [12]. However, the arrangement of multiple yellow-white clods is more regularly distributed over the lesion in molluscum contagiosum than sebaceous hyperplasia. Also, the clods are larger and the color is closer to white than yellow, which we believe could

be helpful in the differentiation of molluscum contagiosum from sebaceous tumors.

## Conclusion

Although the diagnosis of molluscum contagiosum is largely based on clinical features, the use of dermoscopy may be particularly helpful in atypical localizations.

## Potential conflicts of interest

The authors declare no conflicts of interests.

**Table 1.** Cases with molluscum contagiosum of nipple-areola complex.

Case	Age	Localization	Number of lesion	Symptom	Treatment	Response to treatment	Ref.
1	20	R. areola	1	Rapidly growing raised, flat, yellow papule	Shave excision	ND	[3]
2	20	R. nipple	1	Soft swelling attached to the nipple and blood-stained discharge	Topical 5% sodium nitrite with salicylic acid	Decreased swelling	[4]
3	22	L. areola	1	Initially painless, then infected and painful small superficial lesion	Removal with unspecified method	ND	[5]
4	24	L. nipple	1	Small, flesh-colored eczema like plaques, mostly asymptomatic, sometimes itchy.	Curettage	ND	[6]
5	24	R. areola	1	Asymptomatic, pink, round, elevated lesion	Excision	No recurrence	Current report
6	27	R. areola and R. nipple	2	Skin colored, small, mild tender painless lesions	Excision	No recurrence	Current report
7	28	L. areola	1	Asymptomatic flesh-colored flattened papule	Excision	No recurrence	[2]
8	45	L. nipple	1	Raised painless, umbilicated nodule; ulceration after treatment with caustic pencil	ND	ND	[7]
9	46	L. nipple	1	Asymptomatic cystic lesion	Excision	No recurrence	[8]
10	ND	L. nipple	ND	Pearly papular lesions with dimples in the center	Excision + 5% imiquimod	No recurrence	[9]

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