

## Dermoscopic rosettes as a clue for atypical molluscum contagiosum

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### RESUMEN

El molusco contagioso (MC) es una infección viral frecuente, generalmente fácil de diagnosticar gracias a sus manifestaciones clínicas características. Sin embargo, las presentaciones clínicas atípicas pueden suponer un desafío diagnóstico. La dermatoscopia ha ayudado en estos casos complejos, al mostrar un patrón dermatoscópico característico compuesto por un poro central o umbilicación junto con estructuras amorfas polilobulares de color blanco a amarillo, rodeadas de vasos lineales o ramificados ("vasos en corona"). Sin embargo, se pueden encontrar patrones dermatoscópicos adicionales. Presentamos dos casos de MC donde se observaron rosetas en la dermatoscopia.

**Palabras claves:** dermatoscopia; rosetas; molluscum contagiosum

### SUMMARY

Molluscum contagiosum (MC), a frequent viral infection, is generally easy to diagnose because of its characteristic clinical features. However, atypical presentations can be a diagnostic challenge for clinicians. Dermoscopy has helped in this cases by showing a characteristic dermoscopic pattern composed of a central pore or umbilication in conjunction with polylobular white to yellow amorphous structures, surrounded by linear or branched vessels ("red crown"). However, additional dermoscopic patterns can be found. Herein we present two MC cases where rosettes were seen on dermoscopy.

**Key words:** Dermoscopy; rosettes; molluscum contagiosum.

**M**olluscum contagiosum (MC), a viral infection caused by molluscipoxvirus, is generally easy to diagnose because of its characteristic cutaneous feature of umbilicated papules.<sup>1</sup> However, atypical presentations can be challenging to diagnose especially when they lack the classic umbilication. Dermoscopy has helped in the diagnosis of MC by showing a characteristic dermoscopic pattern composed of a central pore or umbilication in conjunction with polylobular white to yellow amorphous structures, surrounded by linear or branched vessels ("red crown").<sup>1</sup> However, additional dermoscopic patterns can be found. Herein we present two MC cases where dermoscopy was the diagnostic key.

### CASE 1

A 35-year-old woman was referred for a 3-week perioral dermatitis. The patient reported that, a few days after having her mustache waxed, multiple lesions have appeared throughout the supralabial area.

Cutaneous examination showed multiple erythematous, non-follicular papules (Figure 1a). Dermoscopy showed rosettes with polarized light yielding the diagnosis of CM (Figure 1b). The patient was treated with liquid nitrogen and extrusion of the MCs with complete resolution of the lesions. HIV and other sexually transmitted diseases' serologies were negative.

### CASE 2

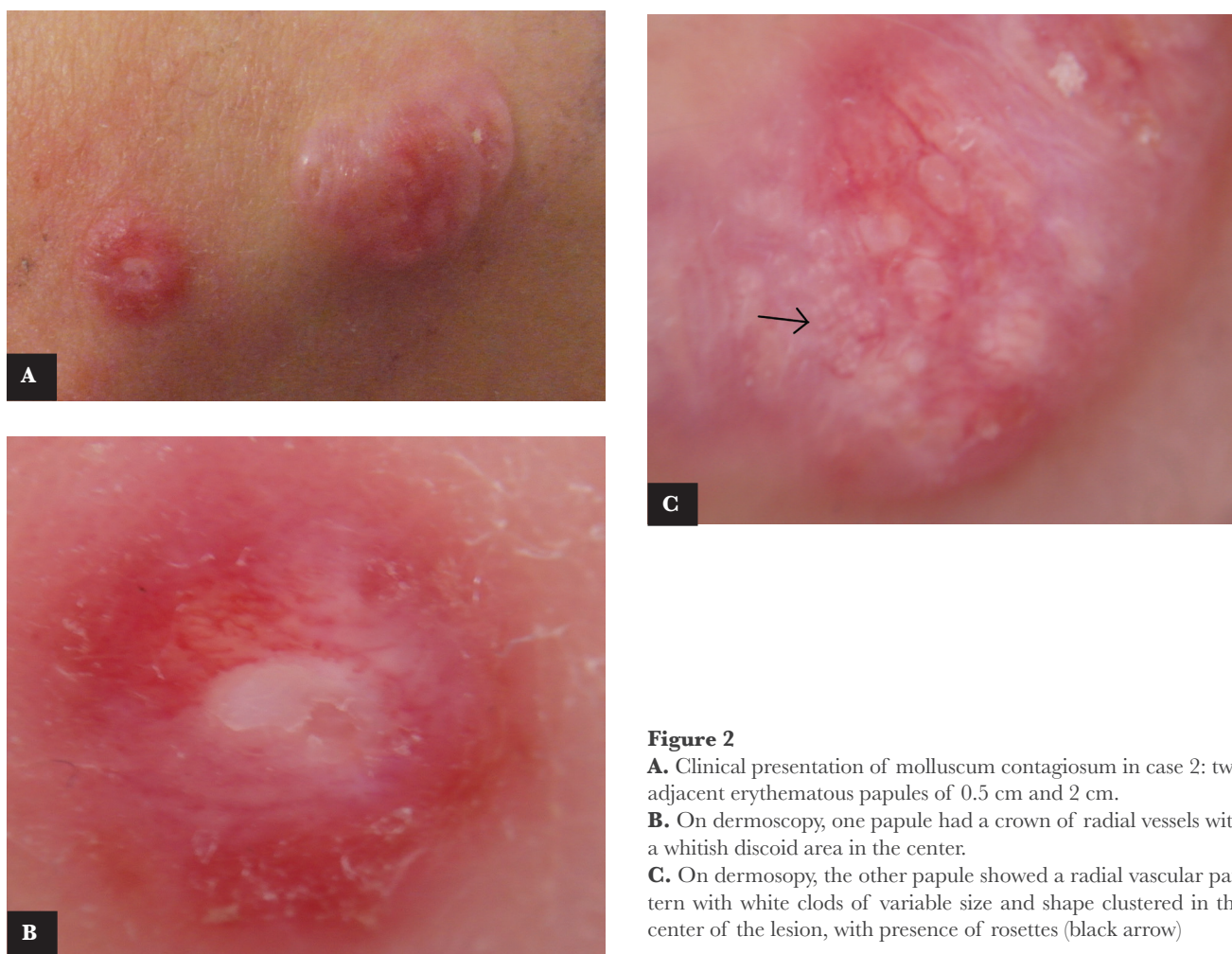
A 10-year-old girl was referred for a refractory lesion on the knee. The patient reported that for 8 months she had had two consecutive knee injuries. On physical examination two adjacent erythematous papules were noted (figure 2a); one had a mixed vascular pattern with a whitish discoid area located in the center of a lesion (figure 2b); the second lesion had a radial vascular pattern with a polylobular structure with a presence of rosettes (Figure 2c). The diagnosis of MC was made and topical 10% potassium hydroxide was prescribed with healing of both lesions.



**Figure 1**

**A.** Clinical presentation of molluscum contagiosum in case 1: multiple small erythematous papules in the supralabial area.

**B.** Dermoscopy showed multiple papules with rosettes or a four-leaved clover structures






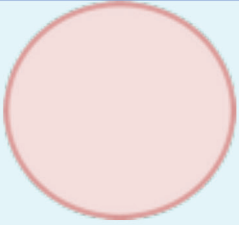


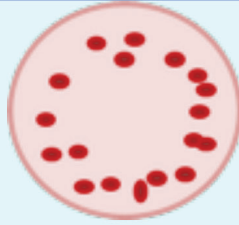
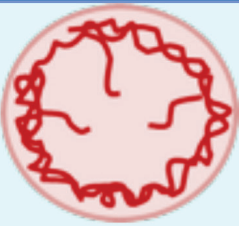
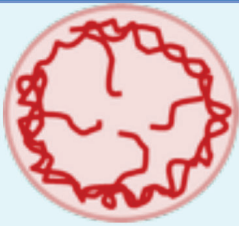
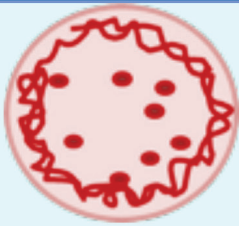
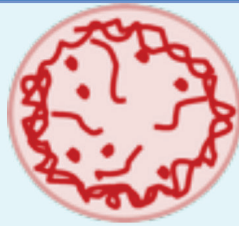
**Figure 2**

**A.** Clinical presentation of molluscum contagiosum in case 2: two adjacent erythematous papules of 0.5 cm and 2 cm.

**B.** On dermoscopy, one papule had a crown of radial vessels with a whitish discoid area in the center.

**C.** On dermoscopy, the other papule showed a radial vascular pattern with white clods of variable size and shape clustered in the center of the lesion, with presence of rosettes (black arrow)

**Table 1**

PATTERNS OF WHITE STRUCTURES			
			
a) <b>Roundish</b> (a solitary homogeneous whitish discoid area located in the centre of a lesion)	b) <b>Four-leaved clover-like or Rosette</b> (white structure arranged in a four-way shape, similar to a four-leaved clover)	c) <b>Polylobular structure</b> (white structures of variable size and shape clustered in the centre of the lesions)	
SINGLE VASCULAR PATTERN			
			
a) <b>Without vessels</b>	b) <b>Radial</b> (vessels perpendicular to the center that extend without passing through the orifice)	c) <b>Crown</b> (vessel surrounding the lesión)	d) <b>Punctiform</b> (vessels spread throughout the lesion in a punctiform pattern)
MIXED VASCULAR PATTERN			
			
e) <b>Crown + Radial</b>	f) <b>Flower vascular pattern</b> (crown pattern associated with a radial pattern in an organized form that resembles the petals of a flower)	g) <b>Crown + punctiform</b>	h) <b>Crown + radial + punctiform</b>



**Table 2**

Dermoscopic findings of differentials of molluscum contagiosum

Molluscum contagiosum <sup>1,2,3</sup>	White-yellowish structures of variable size and shape, including rosettes, clustered in the center of the lesions, surrounded by radial, crown or punctiform vessels.
Non-pigmented BCC <sup>4</sup>	Asymmetrical arborizing vessels, pink color, and focal ulceration. Shiny white blotches and strands may be seen.
Sebaceous hiperplasia <sup>5</sup>	White-yellowish umbilicated, polylobular or structureless centre (no rosettes have been described), surrounded by crown vessels that extend towards the center without crossing it.
Common Warts <sup>6</sup>	Bonbon toffee sign: Association of a central umbilication or small crater surrounded by white-yellowish globules or structures.
Genital Warts <sup>7</sup>	Multiple densely packed papillae, each containing a central red dot or loop, which is surrounded by a whitish halo. Often associated with hemorrhages.
Trichoepithelioma <sup>8</sup>	There are variable patterns, which include fingerlike, knoblike, mosaic, and unspecified patterns. Among the vascular features, glomerular, hairpin/dotted, and glomerular/dotted vessels are the most frequent finding.

Multiple dermoscopic patterns have been described in MC and are summarized in table 1.<sup>1,2</sup> Rosettes are dermoscopic structures visible exclusively under polarized light, characterized by four white shiny points arranged as a four-leaf clover or four-dot clouds arranged in a square.<sup>1</sup> They are a form of shiny white structures and can only be visualized under polarized light. In contrast to shiny white lines and blotches, which are probably caused by fibrotic dermal changes, the exact histopathological correlate of rosettes is unknown.<sup>3</sup> In the case of MC, in one article, rosettes were histologically correlated with the inverted lobes of the acanthotic epidermis.<sup>2</sup> It has been hypothesized that rosettes correspond to a solitary molluscum lobule with a crater.<sup>2</sup> While they are not specific to any particular condition, they are more frequent in sun-exposed lesions such as actinic keratosis, squamous cell carcinomas and rarely in melanoma. Rosettes have also been described in inflammatory and infectious diseases such as lupus, papulo-pustular rosacea and rarely MC.<sup>2,3</sup> Therefore, dermoscopy can be a quick and simple technique that complements clinical examination that can help us diagnose doubtful MC (Table 2) cases and improve the management of our patients.

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