



BRIEF REPORT

Molluscum Contagiosum Occurring in an Epidermal Cyst Developed on Frontal Hairline

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Dear Editor:

Molluscum contagiosum (MC) is a benign skin infection by the molluscum contagiosum virus (MCV). MCV infects epidermal keratinocytes that contain characteristic molluscum bodies and leads to epidermal hyperplasia¹. MCV infection in an epidermal cyst is a rare presentation and only a few cases were reported in the English literature (Table 1)²⁻⁴.

A 8-year-old girl presented with asymptomatic, solitary 1 × 1 cm sized, skin colored, round, subcutaneous nodule on the frontal hairline for several months (Fig. 1A). The patient had no known history or evidence at presentation of MCV lesions on the skin surface. A punch biopsy was performed under the clinical impression of epidermal cyst. Histopathologic findings revealed that there were multi-

Table 1. Summary of previous cases of molluscum contagiosum occurring in epidermal cyst

Age (yr)/sex	Site	Size (mm)	Other molluscum	Duration (mo)	Reference
33/male	Left thigh	?	Left eyelid	7	Hodge et al.
28/female	Eyelid	3	-	2	Fellner et al.
15/female	Scalp	4	Buttock, intergluteal fold	4	Hendrick et al.
11/female	Eyelid	10 × 20	-	4	Ueyama et al.
6/male	Left shoulder	4	-	4	Aloi et al.
23/male	Penile shaft	10 × 7	-	3	Park et al.
31/male	Left inguinal area	5 × 7	-	6	Park et al.
23/male	Inguinal area	7 × 3	Coexistence 2 lesions	1	Park et al.
68/male	Scalp, face, neck, upper back, chest	15 ~ 25	Coexistence 5 lesions	12	Egawa et al.
6/male	Left chest	15	-	6	Hu et al. ²
51/female	Left thigh	7	-	2	Phelps et al. ³
32/male	Left chest	10	-	3	
13/male	Right thigh	8	-	?	Kanitakis et al. ⁴
20/female	Temporal area	?	-	6	Basak et al.
24/male	Frontal of right auricle	24 × 27	-	4	Ghosh et al.
41/male	Back	8	-	?	Jung et al.
22/male	Pubis	10	-	4	Ramos et al.
78/male	Right eyebrow	20	-	24	Husein et al.

?: no data, -: no other molluscum.

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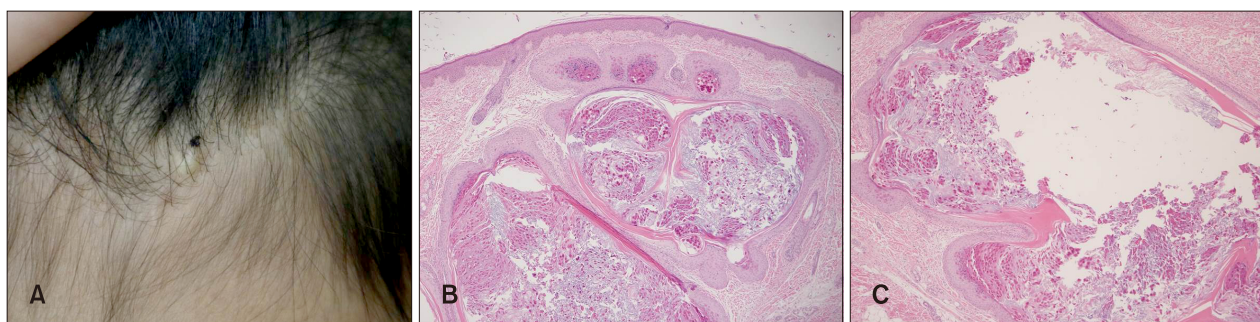


Fig. 1. (A) Solitary 1×1 cm sized, skin colored, firm, subcutaneous nodule on the frontal hairline. (B) Multiloculated cysts containing laminated horny material and abundant eosinophilic inclusion bodies, dispersed among the keratinous content (H&E, ×40). (C) Numerous molluscum bodies were seen in the marked hyperplastic and lobulated cyst wall. But the non-infected parts of cyst wall showed squamous epithelium, which was much thinner in comparison (H&E, ×40).

loculated cysts containing laminated horny material and abundant eosinophilic inclusion bodies, dispersed among the keratinous content, consistent with MCV cytopathic changes (Fig. 1B). The cysts were lined by stratified squamous epithelium, including a granular layer. There were prominent hyperplasia, hypergranulosis, and lobulated cystic walls and abundant molluscum bodies were observed in the infected cells with MCV. But, the non-infected parts of cyst wall showed squamous epithelium, which was much thinner in comparison (Fig. 1C). Based on these findings, she was diagnosed with MC occurring in an epidermal cyst. We received the patient's consent form about publishing all photographic materials.

The precise mechanism of MCV infection in an epidermal cyst is not well known, but there are two hypotheses. The first is the coinoculation of MCV at the time of development of the epidermal cyst, and the second is the invasion of MCV into a preexisting epidermal cyst via the ostium that connects the epidermis with the underlying epidermal cyst^{3,4}. Chiu et al.⁵ MCV in an epidermal cyst is still infectious through the ostium. So it is possible for MCV to penetrate from the skin into the epidermal cyst and also spread to the surrounding skin from the infected epidermal cyst.

In our case, despite existence of non-infected wall of the epidermal cyst, it was considered that MC occurring in an epidermal cyst was developed by the former mechanism. Because there were changes of MCV infection through the entire lamellar keratin content of cysts and multiloculated cystic structures. Also, no lesions of MC were observed involving other areas of the skin and have not subsequently developed MC on the neighboring skin of the infected epidermal cyst. Therefore, MC occurring in an epidermal cyst was caused by the MCV infection of a preexisting hair follicle and then secondary went through cystic transfor-

mation, possibly promoted by scratching².

In conclusion, MCV infection may have resulted in atypical features of the epidermal cyst, such as the marked hyperplastic, hypergranulosis, and lobulated cyst wall. We reported a rare case of MC occurring in an epidermal cyst located in frontal hairline.

CONFLICTS OF INTEREST

The authors have nothing to disclose.

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