

CASE REPORT

A Case of Herpetiform Appearance of Digital Mucous Cysts

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A digital mucous cyst (DMC) is clinically characterized by a round to oval, translucent, smooth nodule localized to the dorsal aspect of the distal digits near the distal interphalangeal joint. It usually presents as a solitary lesion, and multiple lesions are uncommon. An 88-year-old man presented with herpetiform translucent papules on the right thumb. We first diagnosed the lesion as molluscum contagiosum or herpetic whitlow. Histopathology showed a cystic space containing mucinous material and numerous fibroblasts surrounded by mucinous stroma in the upper dermis. The lining of the cyst wall was not apparent and mucinous material was stained with Alcian blue, indicating a diagnosis of DMC. (*Ann Dermatol* 22(2) 194~195, 2010)

-Keywords-

Digital mucous cysts, Herpetiform

INTRODUCTION

Digital mucous cysts (DMCs) were first described by Hyde¹ in 1883 under the name of synovial lesions of the skin, with other names proposed, including myxoid cyst, mucinous cyst, muroid cyst, and synovial cyst. It is clinically characterized by a round to oval, translucent, smooth nodule localized to the dorsum of the finger near the distal interphalangeal (DIP) joint². It usually presents as a solitary lesion, and rarely, as multiple lesions. However, the herpetiform appearance of DMCs on one

digit has not been reported in dermatologic literature.

CASE REPORT

An 88-year-old man presented with several round to oval dome shaped papules on his right thumb. The lesion first developed 2 years ago as a small solitary papule and subsequently several other papules developed around the first one. He had no past history of DMCs, osteoarthritis, or any other skin condition. Cutaneous examination revealed several grouped 2 to 3 mm round to oval translucent dome-shaped papules presenting as herpetiform lesions on the dorsum of his right thumb between the proximal nail fold and the DIP joint (Fig. 1). The remaining physical examination was unremarkable.

A punch biopsy was performed from one of the papules on his right thumb, and histopathology showed a cystic space containing mucinous material and a number of fibroblasts in the dermis (Fig. 2). The cystic space was surrounded by mucinous stroma and lining of the cyst wall was not

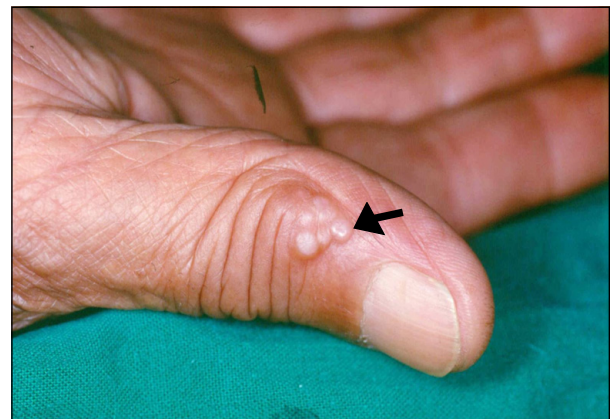


Fig. 1. Several small, round to oval, shiny, dome-shaped, whitish papules presenting as herpetiform lesions on the right thumb.

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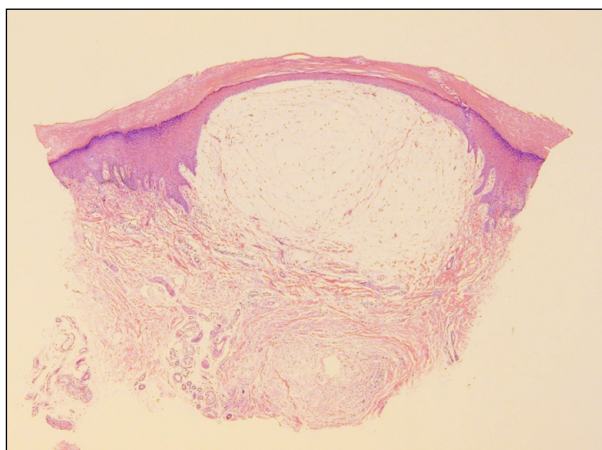


Fig. 2. Cystic space containing clear mucinous material in the dermis (H&E, $\times 40$).

apparent. Alcian blue (pH 2.5) staining was positive for mucin in the cystic spaces. From these findings, the diagnosis of a DMC was made. We recommended total excision of the lesion, but he declined treatment.

DISCUSSION

A DMC is solitary, translucent, round to oval, dome-shaped, skin-colored cystic nodular lesion on the digits of the hands². It contains a clear gelatinous fluid that may discharge spontaneously or on minor trauma. It is usually located between the crease of the DIP joint on the dorsal surface and the proximal nail fold. Less commonly, it is found between the proximal nail fold and the nail plate, beneath the nail matrix, or in the digit pulp. Most cysts occur in people 40 to 70 years old, and women are affected more than twice as often as men^{3,4}.

Two types of DMCs have been described. The first is the myxomatous type, which is analogous to focal mucinosis, and shows a large cystic space containing mucin surrounded by collagen fibers with no lining of the cyst wall. It results from an overproduction of hyaluronic acid by the fibroblasts, and it is not anatomically connected with the adjacent DIP joint^{2,5}. Histologically, there are ill-defined areas of mucinous material in its early stages. Subsequently, multiple clefts form and then coalesce into one large cystic space containing mucin composed largely of hyaluronic acid. The collagen at the periphery of the cysts appears compressed. The second type is the ganglion type, which is associated with changes of degenerative joint disease and commonly seen in elderly patients with osteoarthritis and osteophytes. It results from herniation of the tendon sheath or joint linings, thus representing a ganglion⁶. The ganglion type shows evidence of a pedicle

leading to the joint space, and may show an epithelial lining². Methylene blue injection can identify communication between the cyst and DIP joint⁷. Both types of DMCs are characteristically present as a solitary lesion, and multiple lesions are rare. Our patient had herpetiform papules on his right thumb. Although there was no history of direct skin-to-skin contact, trauma, HSV infection, or HIV infection, we first diagnosed the lesion to be molluscum contagiosum or herpetic whitlow. Histopathology showed a cystic space containing mucinous material stained with Alcian blue (pH 2.5) and the lining of the cyst wall was not apparent. Therefore, we diagnosed the patient with the myxomatous type of DMCs.

Several cases of multiple DMCs have been reported in the dermatologic literature. Connolly and de Berker⁸ reported DMCs involving the fingers of both hands due to repetitive occupational trauma. Kivanc-Altunay et al.⁹ reported digital subungual mucous cysts on all toes. However, DMCs presenting as herpetiform lesions, as in our patient, have not been previously reported. Lack of awareness of its special clinical feature may contribute to erroneous diagnosis. Molluscum contagiosum, herpetic whitlow, and some benign tumors may be difficult to differentiate. Correct diagnosis can be confirmed by histopathology and radiological exam like ultrasonography and MRI.

REFERENCES

- Hyde JN. A practical treatise on diseases of the skin, for the use of students and practitioners. Philadelphia: Lea & Febiger, 1883:423.
- Hernandez-Lugo AM, Dominguez-Cherit J, Vega-Memije ME. Digital mucoïd cyst: the ganglion type. *Int J Dermatol* 1999;38:533-535.
- Karrer S, Hohenleutner U, Szeimies RM, Landthaler M. Treatment of digital mucous cysts with a carbon dioxide laser. *Acta Derm Venereol* 1999;79:224-225.
- Miller PK, Roenigk RK, Amadio PC. Focal mucinosis (myxoid cyst). Surgical therapy. *J Dermatol Surg Oncol* 1992;18:716-719.
- Salasche SJ. Myxoid cysts of the proximal nail fold: a surgical approach. *J Dermatol Surg Oncol* 1984;10:35-39.
- Armijo M. Mucoïd cysts of the fingers. Differential diagnosis, ultrastructure, and surgical treatment. *J Dermatol Surg Oncol* 1981;7:317-322.
- de Berker D, Lawrence C. Ganglion of the distal interphalangeal joint (myxoid cyst): therapy by identification and repair of the leak of joint fluid. *Arch Dermatol* 2001;137:607-610.
- Connolly M, de Berker DA. Multiple myxoid cysts secondary to occupation. *Clin Exp Dermatol* 2006;31:404-406.
- Kivanc-Altunay I, Kumbasar E, Gokdemir G, Koslu A, Tekkesin M, Basak T. Unusual localization of multiple myxoid (mucous) cysts of toes. *Dermatol Online J* 2004;10:23.