

# A Case of Deep Palmoplantar Wart Occurring on Proximal Nail Fold

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Deep palmoplantar warts (Myrmecia) are frequently tender papules or plaques caused by HPV-1. Myrmecia are usually misdiagnosed as paronychia or digital mucous cysts. They occur not only on the palms and soles but also on the lateral aspects and tips of the fingers and toes. We report a rare case of deep palmoplantar wart occurring on proximal nail fold, unusual site of right 5th finger in an 11-year-old girl. (*Ann Dermatol* 15(4) 163~165, 2003).

**Key Words :** Deep palmoplantar warts (Myrmecia), Proximal nail fold

Deep palmoplantar warts (Myrmecia) represent lesions of the DNA virus of the papova group, human papillomavirus, serotype 1 (HPV-1). They are frequently tender and may be associated with redness and swelling leading to be mistaken for paronychia or digital mucous cysts<sup>1,2</sup>. They occur not only on the palms and soles but also on the lateral aspects and tips of the fingers and toes<sup>4,5</sup>. Only one case of deep palmoplantar wart occurring on proximal nail fold has been reported in Korea<sup>2</sup>.

We present an 11-year-old girl who had tender nodule on proximal nail fold of right 5th finger and diagnosed it as myrmecia histopathologically.

## CASE REPORT

A 11-year-old girl was presented with a 3 week history of tender swollen nodule on the proximal nail

fold of right 5th finger. On closer examination, it was well-defined, brown colored, 0.8 × 0.8cm sized nodule (Fig. 1). Past history and family history was non-specific. Laboratory tests including a complete blood cell count, liver function test, and urinalysis were within normal limits or negative. We clinically diagnosed as paronychia accompanying the digital mucous cyst and performed surgical excision. The histopathologic examination revealed a dome shaped lesion with hyperkeratosis, parakeratosis, and acanthosis at lower magnification (Fig. 2A). The specimen showed large, irregularly shaped, eosinophilic intracytoplasmic inclusion bodies and vacuolized cells in the upper stratum malpighii at higher magnification. Vacuolated nuclei contained intranuclear eosinophilic inclusion bodies and there were a large number of eosinophilic keratohyaline granules in the granular layer (Fig. 2B). Studies classifying human papilloma virus type was not performed. We did not perform studies in order to classify the papillomavirus type. The lesion has not recurred for 10 months after surgical excision.

## DISCUSSION

The warts are classified according to location and shape clinically. The deep palmoplantar warts occur not only on the palms or soles which are

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Fig. 1. A 0.8 × 0.8cm sized, tender, brown-colored nodule on proximal nail fold of right 5th finger.

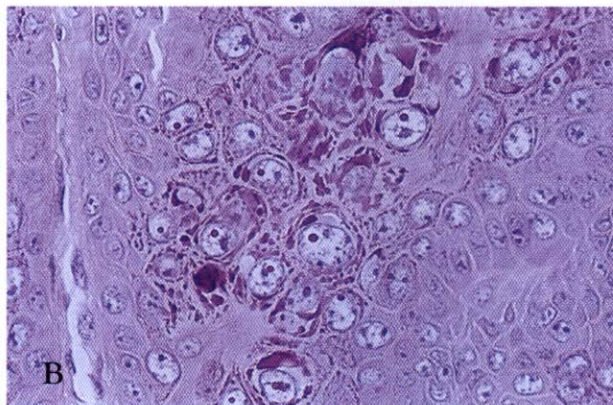


Fig. 2B. Large, irregularly shaped, eosinophilic intracytoplasmic inclusion bodies surrounded by a clear halo in the upper stratum malpighii (H&E, ×400).

weight-bearing areas, but also on the lateral aspects and tips of the fingers and toes. They are usually covered with a thick callus and characterized by much bulkier beneath the surface than they appear<sup>3,5</sup>. Deep palmoplantar warts are also known as inclusion warts or myrmecia, meaning anthill, because of classic dome shape. They are caused by the DNA virus of the papova group, human papillomavirus, serotype 1 (HPV-1). They are multiple

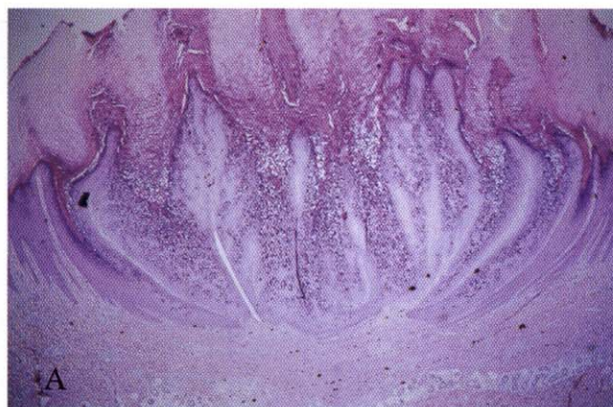


Fig. 2A. Histopathology shows hyperkeratosis, acanthosis and papillomatosis with a tendency to grow inward rather than outward from the surface (H&E, ×20).

but never confluent lesion in contrast to verruca vulgaris<sup>2,4,8,9</sup>. Myrmecia are generally fewer and respond better to treatment than do verruca vulgaris<sup>1,2</sup> and tend to resolve spontaneously.

Histopathologically, the lesion usually grows inward rather than outward from the surface and is dome-shaped with extensive hyperkeratosis, parakeratosis and acanthosis in epidermis. It is similar to that seen in typical cases of verruca vulgaris but surface papillomatosis is not prominent<sup>1,2</sup>. There are large, irregularly shaped and eosinophilic intracytoplasmic inclusion bodies and characteristic vacuolized cells in the upper stratum malpighii and a large number of eosinophilic keratohyaline granules in the granular layer. In addition, vacuolated nuclei contain intranuclear eosinophilic inclusion bodies, which are identifiable as keratohyaline granules by electron microscopic examination<sup>1,2,6,7</sup>. Inclusion bodies have led to confusion with molluscum bodies, which consist of numerous viral particles in molluscum contagiosum. Eosinophilic inclusion bodies of myrmecia disappear from the cells of the upper stratum corneum, however, the molluscum bodies displace the nucleus to the extreme periphery of the cell. Also the molluscum bodies become basophilic rather than eosinophilic above granular layer and break through the stratum corneum<sup>2,5</sup>.

Unlike verruca vulgaris, myrmecia is frequently tender and may be associated with redness and swelling, leading to be mistaken for paronychia or digital mucous cysts, especially when it occurs on an

unusual site. In this case, We clinically misdiagnosed her as digital mucous cyst, but can diagnose as myrmecia by typical feature of histopathologic examination.

We report a rare case of myrmecia, occurring on proximal nail fold of right 5th finger.

## REFERENCES

1. Holland TT, Weber CB, James WD : Tender peri-ungual nodules. Myrmecia (deep palmoplantar warts). Arch Dermatol 128:105-109,1992.
2. Yoo JM, Park HJ, Kim HO : A Case of deep palmoplantar wart located on the proximal nail fold. Kor J Dermatol 39:215-217,2001.
3. Kim KT, Hur W, Ahn SK, Kim SC, Lee SH : A case of subungual exostosis accompanied with myrmecia. Kor J Dermatol 31:123-126,1993.
4. Lyell A, Miles JAR : The myrmecia. A study of inclusion bodies in warts. Br Med J 1:912-916,1951.
5. Penneys N : Diseases caused by virus. In Elder D, Elenitsas R, Jaworsky C, et al : Lever's histopathology of the skin. 8th ed. Philadelphia: Lippincott-Raven, 1997, pp580-581.
6. Almeida JD, Howatson AF, Williams MG: Eletron microscope study of human warts : sites of virus production and nature of the inclusion bodies. J Invest Dermatol 38: 337-345,1962.
7. Chapman GB, Drusin LM, Todd JE: Fine structure of the human wart. Am J Pathol 42:619-629,1962.
8. Beutner KR: Human papillomavirus infection. J Am Acad Dermatol 20:114-123,1989.
9. Laurent R, Kienzler JL, Croissant O, Orth G : Two anatomoclinical type of warts with plantar localization : Specific cytopathogenic effects of papillomavirus. Arch Dermatol Res 274:101-111,1982.