

Pacini Neuromas Presenting as Soft Tumors on the Volar Aspect of the Fingertips

Hye Min Lee, Hye Kyung Lee¹, Joong Sun Lee, Dae Won Koo, Kyung Eun Jung

Departments of Dermatology and ¹Pathology, Eulji University School of Medicine, Daejeon, Korea

Dear Editor:

Pacini neuroma is a rare benign skin tumor characterized by the proliferation of normal-sized or enlarged Pacinian corpuscles¹, presenting as a tender, flesh-colored, single papule or nodule that usually occurs on the volar aspect of the fingertip. To the best of our knowledge, multiple soft tumor-like Pacinian neuromas have never been reported in the English-language literature. We report a case of flesh-colored soft masses in the digits of a 55-year-old Korean man. The masses had been slowly growing during a 4-year period. He was a butcher by profession, and therefore, he had used a knife to dress meat for a long time. Considering his medical history, he had experienced right-sided hemiplegia after a cerebral hemorrhage 2 years ago. Therefore, he felt no sensation from the skin lesions. Physical examination revealed ill-demarcated, 1.5 cm, flesh-colored, protruding soft masses on

the volar aspect of the right fourth and fifth fingertips (Fig. 1A). Skin biopsies were performed, and the pathologic findings were consistent with Pacinian neuromas having increased dermal fibrosis and adnexal structures (Fig. 1B). The patient did not want any treatment; therefore, he had only been observed closely. Pacinian corpuscles are the largest sensory nerve-end organs located in the deep dermis and subcutis, and they function as tactile receptors². Pacinian neuroma occurs mainly in middle-aged adults and can occur in any finger. According to previous reports, Pacinian neuroma clinically appears as a tiny papule or nodule, and it is usually accompanied by local tenderness. Sometimes, patients have no visible skin lesions^{3,4}. The etiology of Pacinian neuroma is unclear; however, some reports have proposed that repetitive trauma may be among the important precipitating factors⁵. Our patient had a clear history of repetitive trauma; th-

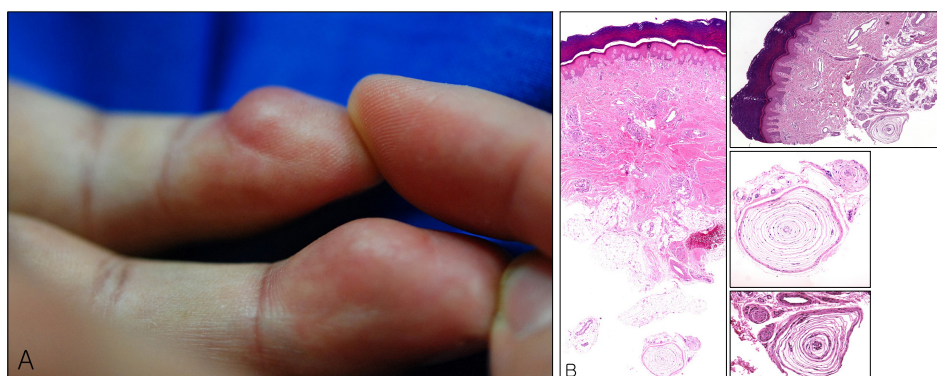


Fig. 1. (A) Flesh-colored, protruding, 1.5-cm soft tumor-like masses on the volar aspect of the right fourth and fifth fingertips. (B) Multiple (left) or enlarged (top right) Pacinian corpuscles in the subcutaneous tissue surrounded by numerous nerve fibers. Dermal fibrosis and increased adnexal tissues are also observed (H&E, $\times 40$; small boxes: H&E, $\times 200$).

Received July 4, 2013, Revised September 5, 2013, Accepted for publication September 26, 2013

Corresponding author: Kyung Eun Jung, Department of Dermatology, Eulji University Hospital, 95 Dunsanseong-ro, Seo-gu, Daejeon 302-799, Korea. Tel: 82-42-611-3037, Fax: 82-42-259-1111, E-mail: jke0224@eulji.ac.kr

This is an Open Access article distributed under the terms of the Creative Commons Attribution Non-Commercial License (<http://creativecommons.org/licenses/by-nc/3.0>) which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

erefore, this case strongly supports that hypothesis. Rhode and Jennings³ described 4 types of Pacinian neuroma histologically, which are as follows: (1) a single enlarged Pacinian corpuscle, (2) a grape-like structure of normal-sized Pacinian corpuscles, (3) slightly enlarged Pacinian corpuscles arranged in tandem, and (4) hyperplastic Pacinian corpuscles arranged along the entire length of the digital nerve. Later, Reznik et al.¹ considered types C and D as the same category. Important considerations within the differential diagnoses include neural-origin tumors such as schwannoma and glomus tumor. However, sometimes, other benign skin tumors such as mucoid cysts and fibromas could be considered as a differential diagnosis. The treatment of choice is surgical excision including the deep dermis and subcutis. In this case, the Pacinian neuromas appeared as exceptionally large, protruding masses, and we believe that they may have been induced by the accompanying dermal fibrosis and proliferation of the adnexal tissues. A literature review produced no reports of multiple and soft tumor-like Pacinian neuromas. Therefore, we herein report a case of uniquely presenting mul-

multiple Pacinian neuromas.

REFERENCES

1. Reznik M, Thiry A, Fridman V. Painful hyperplasia and hypertrophy of pacinian corpuscles in the hand: report of two cases with immunohistochemical and ultrastructural studies, and a review of the literature. *Am J Dermatopathol* 1998;20:203-207.
2. Kenmochi A, Satoh T, Fukuyama K, Yokozeki H. Pacinian neuroma. *J Eur Acad Dermatol Venereol* 2006;20:1384-1385.
3. Rhode CM, Jennings WD Jr. Pacinian corpuscle neuroma of digital nerves. *South Med J* 1975;68:86-89.
4. Choi Y, Lim WS, Jin SY, Lee JH, Lee AY, Lee SH. Pacinian neuroma on the tips of fingers. *Korean J Dermatol* 2011; 49:847-849.
5. Lang-Stevenson AI. Induction of hyperplasia and hypertrophy of pacinian corpuscles. *Br Med J (Clin Res Ed)* 1984; 288:972-973.

<http://dx.doi.org/10.5021/ad.2014.26.4.552>

An Unusual Presentation of a Progressive Zosteriform Macular Pigmented Lesion

Kum Hee Jung, Youn Mi Lee, Kyung Ho Lee, Chul Jong Park

Department of Dermatology, College of Medicine, The Catholic University of Korea, Seoul, Korea

Dear Editor:

Rower et al.¹ defined progressive cribriform and zosteriform hyperpigmentation (PCZH) in 1978 as a disease that fulfils the following criteria: 1) cribriform pigmented macules that form a zosteriform distribution, 2) no history of skin disease or injury that would suggest postinflammatory

hyperpigmentation, 3) an onset that arises well after birth, followed by gradual extension, 4) an onset that has no association with other skin diseases or internal abnormalities, and 5) characterized histologically by a mild increase in melanin pigment in the basal layer without nevus cells. In 1980, Simões and Piva² described the progressive zos-

Received June 22, 2013, Revised February 24, 2014, Accepted for publication April 10, 2014

Corresponding author: Chul Jong Park, Department of Dermatology, The Catholic University of Korea, Bucheon St. Mary's Hospital, 327 Sosa-ro, Wonmi-gu, Bucheon 420-717, Korea. Tel: 82-2-340-2115, Fax: 82-2-340-2118, E-mail: cjpark777@yahoo.co.kr

This is an Open Access article distributed under the terms of the Creative Commons Attribution Non-Commercial License (<http://creativecommons.org/licenses/by-nc/3.0>) which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.