

UC Davis

Dermatology Online Journal

Title

Fibro-osseous pseudotumor on the hyponychium of the great toe

Permalink

<https://escholarship.org/uc/item/1xk336qz>

Journal

Dermatology Online Journal, 25(1)

Authors

Rosales Santillan, Monica
Tschen, Jaime A

Publication Date

2019

DOI

10.5070/D3251042614

Copyright Information

Copyright 2019 by the author(s). This work is made available under the terms of a Creative Commons Attribution-NonCommercial-NoDerivatives License, available at <https://creativecommons.org/licenses/by-nc-nd/4.0/>

Peer reviewed

Fibro-osseous pseudotumor on the hyponychium of the great toe

Monica Rosales Santillan¹ MD, Jaime A Tschen² MD

Affiliations: ¹The University of Texas McGovern Medical School at Houston, Houston, Texas, USA, ²St. Joseph Dermatopathology, Houston, Texas, USA

Corresponding Author: Monica Rosales Santillan, 6431 Fannin St., Houston, TX 77030, Tel: 713-500-6500, Email: Monica.RosalesSantillan@gmail.com

Abstract Fibro-osseous pseudotumor of the toe is a benign soft tissue tumor that is predominant in the young adult population. Although the etiology is unknown, a history of trauma has been reported to precede tumor development. The differential diagnosis includes myositis ossificans, extraskeletal osteosarcoma, and pyogenic granuloma. Once removed, the tumor typically has no recurrence. Surgical excision is the treatment of choice. We present a patient with fibro-osseous pseudotumor of the great toe, which had no recurrence following excision.

Keywords: fibro-osseous pseudotumor; myositis ossificans; osteosarcoma

Introduction

Fibro-osseous pseudotumor of the toe is a benign tumor with unknown etiology. It is predominant in young women. According to the reported cases in the literature, this tumor usually has no recurrence following excision. We present a 40-year-old woman with fibro-osseous pseudotumor of the great toe.

Case Synopsis

A 40-year-old woman presented for evaluation of a nodule located on the hyponychium of the great toe that had been progressively growing for three months. She had no history of right toe trauma, similar lesions, or family history of similar growths.

There was no pruritus, bleeding, or tenderness to palpation of the nodule. Cutaneous examination revealed a 0.9cm×0.8cm fleshy, well-defined, pink nodule located on the hyponychium of the right great toe (**Figure 1**). The clinical differential diagnosis included pyogenic granuloma and fibro-osseous pseudotumor.

The nodule was excised. Histopathology demonstrated cellular fibrous tissue osteoid islands located under an ulcerated epidermis (**Figure 2A**). Furthermore, a photomicrograph with polarized light revealed lamellar bone fragments within the nodule (**Figure 2B**). These pathologic findings were



Figure 1. A 0.9cm×0.8cm fleshy, well-defined, pink nodule located on the hyponychium of the right great toenail.

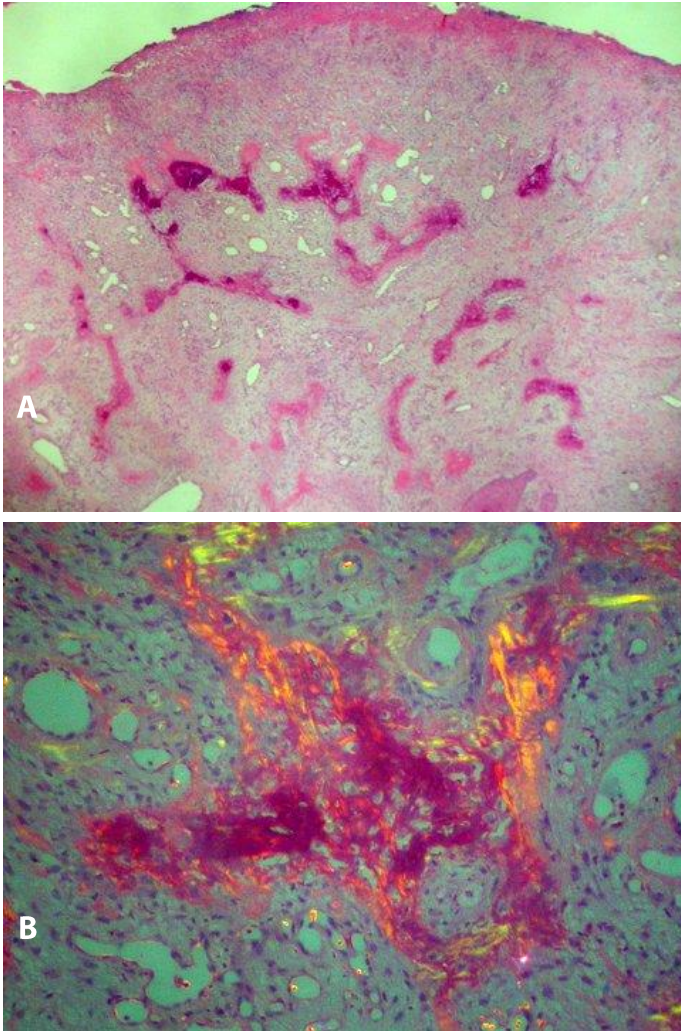


Figure 2. **A)** Cellular fibrous tissue osteoid islands found under an ulcerated epidermis. H&E, 100 \times . **B)** Photomicrograph with polarized light showing lamellar bone fragments, 200 \times .

consistent with a diagnosis of fibro-osseous pseudotumor. At 3-month follow-up, the patient had no pseudotumor recurrence.

Case Discussion

Fibro-osseous pseudotumor is a benign tumor located in the soft tissue with localized areas of osseous differentiation [1]. It has predominance in young adults, with women being more commonly affected [1, 2]. The etiology is unknown, but it has been suggested that fibro-osseous pseudotumor may be related to a history of trauma [1-3]. In a histopathological study by Dupree et al. [1], 9 of 21 cases presented with a history of trauma. In the study by Spjut et al. [3], 4 of 12 cases reported trauma prior to the appearance of the growth.

The differential diagnosis of fibro-osseous pseudotumor includes myositis ossificans, pyogenic granuloma, and extraskeletal osteosarcoma. Sleater et al. [4] evaluated both fibro-osseous pseudotumor and myositis ossificans with different immunohistochemical stains. Staining for Ki-67 was positive in both fibro-osseous pseudotumor and myositis ossificans, particularly in the immature spindle cells [4]. Myositis ossificans demonstrated a more prominent pattern of osteoid metaplasia intermixed with immature spindled regions [4]. Fibro-osseous pseudotumor may appear like pyogenic granuloma on clinical presentation [5]. Histopathologic examination is necessary to distinguish it from pyogenic granuloma [5].

Extraskeletal osteosarcoma also has heterotopic ossification like fibro-osseous pseudotumor of the digit [6]. Histopathology examination can determine the presence of malignant cells with atypical features in order to differentiate extraskeletal osteosarcoma from fibro-osseous pseudotumor of the digit [6]. In addition, extraskeletal osteosarcoma presents in an older population [6].

A recent literature search demonstrated 7 cases of fibro-osseous pseudotumor in the subungual region of the toe. The cases reported in the literature demonstrated no recurrence of this benign tumor [1-3, 7]. Our patient also had no recurrence on follow-up.

Owing to concern for other etiologies on initial presentation, patients with fibro-osseous pseudotumor may receive unnecessarily aggressive management [3-6]. Therefore, it is important to have a good differential diagnosis prior to starting intervention [5]. In the study by Dupree et al. [1], 6 of 7 available cases with follow-up information had no recurrence of the tumor following excision. Chaudry et al. [2] had two cases with recurrence but no cases demonstrated signs of metastasis. Surgical excision is currently the standard treatment for fibro-osseous pseudotumor of the digit [7].

Conclusion

Fibro-osseous pseudotumor is a benign soft tissue tumor that may present on the hyponychium of the

toe. Young women are predominantly affected. Histopathology helps differentiate this tumor from other diagnoses, such as pyogenic granuloma.

Recurrence typically does not occur following excision, which is the treatment of choice.

References

1. Dupree WB, Enzinger FM. Fibro-osseous pseudotumor of the digits. *Cancer*. 1986;58(9):2103-9. [PMID: 3463398].
2. Chaudhry IH, Kazakov DV, Michal M, Mentzel T, Luzar B, Calonje E. Fibro-osseous pseudotumor of the digit: a clinicopathological study of 17 cases. *J Cutan Pathol*. 2010;37(3):323-329. [PMID: 19678826].
3. Spjut HJ, Dorfman HD. Florid reactive periostitis of the tubular bones of the hands and feet. A benign lesion which may simulate osteosarcoma. *Am J Surg Pathol*. 1981;5(5):423-33. [PMID: 6945056].
4. Sleater J, Mullins D, Chun K, Hendricks J. Fibro-osseous pseudotumor of the digit: a comparison to myositis ossificans by light microscopy and immunohistochemical methods. *J Cutan Pathol*. 1996;23(4):373-377. [PMID: 8864927].
5. Gomez-Zubiaur A, Pericet-Fernandez L, Velez-Velazquez MD, Cabrera-Hernandez A, Piteiro-Bermejo AB, Bea-Ardebol S, Medina-Montalvo S, Trasobares-Marugan L. Fibro-Osseous Pseudotumor of the Digits Mimicking Pyogenic Granuloma. *Pediatr Dermatol*. 2017;34(3):e126-e127. [PMID: 28318050].
6. Choi KH, You JS, Huh JW, Jeong YI, Kim MS, Jue MS, Park HJ. Fibro- Osseous Pseudotumor of the Digit: A Diagnostic Pitfall of Extraskeletal Osteosarcoma. *Ann dermatol*. 2016;28(4):495-6. [PMID: 27489434].
7. Meani RE, Bloom RJ, Battye S, Chamberlain AJ. Subungual fibro-osseous pseudotumour of the toe. *Australas J Dermatol*. 2016;57(2):e57-60. [PMID: 25990793].