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Fibro-Osseous Pseudotumor of the Digit Presenting as an Enlarging Erythematous Subungual Nodule

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Dear Editor:

A 27-year-old man presented with a tender nodule on the distal aspect of the right third toe, slowly growing in size over a 2-month period. He had a history of trauma in the right third toe during exercise two months prior to his visit. Initially, the nodule was soft in consistency but with time enlarged in size and became hard. An examination revealed an erythematous, eroded, hard mobile nodule measuring 0.5×0.5 cm in size (Fig. 1). The initial clinical suspicion was that it was a viral wart; thus, a punch biopsy was done. Microscopic examination showed the lesion was multinodular with irregular margins in the dermis. The nodules consisted of a mixture of fibroblasts, mixoid matrix, and focal deposits of osteoid with irregularly distributed osteoblasts (Fig. 2A). The osseous trabeculae were

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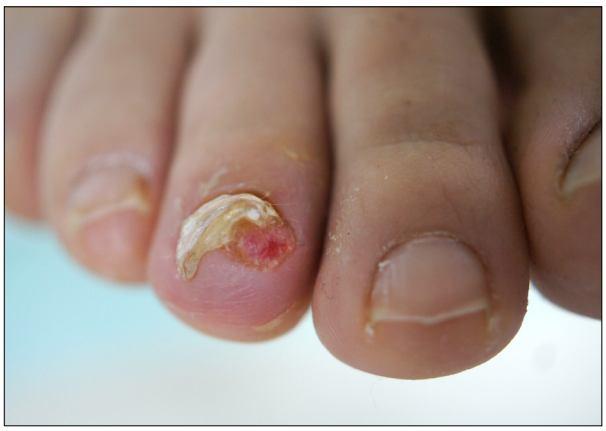

Fig. 1. A solitary, tender, and reddish nodule on the right third toe.

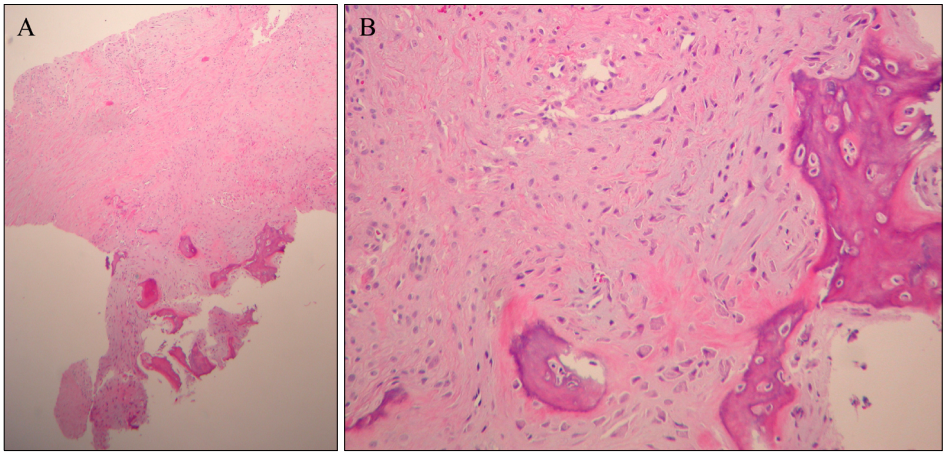

Fig. 2. (A) The lesion had variable cellularity and consisted of a mixture of loosely or compactly arranged fibroblasts and trabeculae of the bone showing varying degrees of maturation (H&E, ×40). (B) Newly formed trabeculae of the osteoid and bone were distributed haphazardly without zoning phenomenon. The trabeculae of the bone were rimmed by fibroblasts and osteoblasts (H&E, ×200).

haphazardly distributed without peripheral zoning. The osseous trabeculae were rimmed by proliferated fibroblasts and osteoblasts (Fig. 2B). The diagnosis was confirmed by histopathologic findings as fibro-osseous pseudotomor of the digits (FOPD). The tumor was completely excised, and no connection with the underlying bone was observed. No recurrence was noted during a follow-up period of 6 months.

FOPD is a rare benign ossifying lesion proposed as a unifying term by Dupree and Enzinger[1]. FOPD may occur anywhere in the body but is most common in the finger, especially in the region of the proximal phalange[1,2]. In Korea, only 3 cases of FOPD of the finger and 1 case of FOPD of the toe have been reported. Typically, this lesion affects young adults, mainly women, and presents as a soft tissue mass growing over a period of weeks or a few months[2]. Pain, tenderness, and functional limitation may be present. The pathogenesis of FOPD is thought to be related to repeated trauma to the area; however, a specific history of antecedent trauma was revealed in a small number of cases[1].

The essential histologic features include localization in the subcutaneous tissue without muscular involvement, a disorderly multinodular growth pattern with indistinct borders, and a fibroblastic proliferation showing varying degrees of cellular atypia and haphazardly arranged osseous trabeculae without the zoning phenomenon[1,3]. Main pathologic differentials to this entity are myositis ossificans, extraskeletal osteosarcoma, and subungual exostosis. Mysositis ossificans usually occur after trauma, in the deeper aspect of proximal soft tissues and histopathologically show a typical zonation pattern[3]. Extraskeletal osteosarcoma should always be ruled out; however, it shows destructive stromal invasion, obvious cytologic atypia and immature osteoid directly formed by tumor cells[4]. Subungual exostosis can appear clinically and histopathologically very similar to FOPD, except for the presence of a connection to the underlying phalangeal bone, the presence of bone marrow tissue, and the feature of an overlying fibro-cartilaginous cap[5].

FOPD has an excellent prognosis following complete excision with low risk of recurrence (0%～14%)[5]. No cases of malignant transformation or metastases are on record[1,5]. We report herein a rare and typical case of FOPD of the toe and suggest that FOPD should be considered in the differential diagnosis of any digital mass.

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CONFLICTS OF INTEREST

The authors have nothing to disclose.

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A Case of Wolf's Isotopic Response Presenting as Bullous Pemphigoid

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Dear Editor:

Wolf's isotopic response refers to a phenomenon in which a new skin disorder develops at the site of another, unrelated, and already healed skin disease. According to a report by Ruocco et al.[1] in 2014, there are approximately 200 cases of such a condition. Majority of primary infections includes infection by varicella zoster virus. In contrast the secondary skin lesion includes various cutaneous conditions such as granulomatous reaction, malignant tumor, dysimmune reaction, and morphea[2]. In this report the authors present a case of bullous pemphigoid (BP) with Wolf's isotopic response in a Korean female patient.

An 80-year-old female patient presented with an itchy erythematous patch, bullae, and ulceration on the right T3 dermatome. (Fig. 1) The bullous lesions had persisted for the last 2 months, and the patient had suffered from herpes zoster at the same site 6 months prior to this visit. Incisional biopsy of the affected lesion revealed subepithelial vesicles with dermal infiltration of lymphocytes, histiocytes, and eosinophils (Fig. 2A). Direct immunofluorescence with fluorescein isothiocyanate revealed linear deposition of immunoglobulin G in the basement membrane zone (Fig. 2B). With the final diagnosis of BP with Wolf's isotopic response, the patient was started on systemic steroid therapy and she showed clinical improvement. The patient has tapered oral methylprednisolone and is now free of new bulla with topical steroid and 1 gram of tetracycline and nicotinamide per day.

Recently Ruocco et al.[1] analyzed the previously reported cases of Wolf's isotopic response. Although numerous skin conditions have been identified as a result of Wolf's isotopic response, bullous disorders such as pemphigus vulgaris and BP were seldom seen. Up until now only one

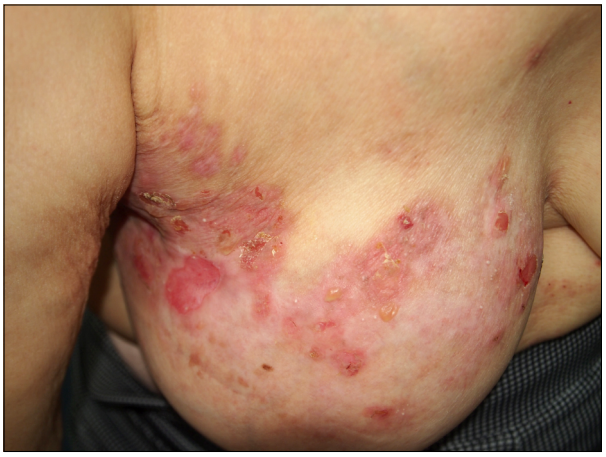

Fig. 1. Erythematous patch, bullae, and ulceration on right T3 dermatome.

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