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1578-2190/

Osteonevus of Nanta: A Rare Skin Condition☆

Osteonevus de Nanta, un fenómeno cutáneo poco habitual

To the Editor:

Osteonevus of Nanta is a rare condition characterized by osseus metaplasia in an intradermal nevus.[1] The lesion was first described by Heidesfield in 1908, and in 1911, it was reported in a publication by French dermatologist André Nanta.[2]

Bone formation in the skin is uncommon and can be primary (when there is no evidence of a pre-existing lesion) or secondary to an inflammatory and/or neoplastic process.[3] Secondary bone formation has been reported in a range of lesions, including pilomatrixoma, basal cell carcinoma, acne, pyogenic granuloma, and dermatofibroma. Ossification of an intradermal nevus, however, is very rare.[1,4]

A 38-year-old man with no remarkable history presented with a hyperpigmented lesion on his left cheek that had grown and become progressively harder with time. Physical examination showed a hard, black nodule that measured 1.5 cm in diameter and was not painful on palpation (Fig. 1). The lesion was fully excised and a sample sent for evaluation. Histologic examination showed nests of nevus cells with appropriate maturation in the superficial dermis and, underneath, in the deep dermis, bone marrow trabeculae containing osteocytes (Fig. 2). Signs of intramedullary hematopoiesis and mature adipocytes were observed in the center (Fig. 3). The lesion was diagnosed as osteonevus of Nanta and the patient was scheduled for regular follow-up.

Primary cutaneous bone formation has been described in Albright hereditary osteodystrophy, progressive osseous heteroplasia, myositis ossificans progressiva, and osteoma cutis.[4] Secondary cases, in turn, have associated with scars, pyogenic granuloma, epidermal cyst, fibroxanthoma, and lipoma, and there have also been reports at the site of trauma or injection.[3,4] Rarer associations include burns, dermabrasion, stasis dermatitis, and cutaneous metastases from breast, bladder, or bronchial cancer.[5] Benign tumors, and melanocytic nevi in particular, are the most common causes of secondary osteoma formation.[3]

Clinically, osteonevus of Nanta resembles an intradermal nevus, is more common in women,[6] and tends to be located in the upper part of the body, inparticular the face, suggesting a potential pathogenic role for repeated hair follicle trauma and chronic inflammation.[3,7] Lesions with necrosis, bleeding, and tissue regeneration could affect physical and chemical factors, such as calcium and phosphorous ion concentrations, pH, oxygen levels, and enzyme activity.[3] These factors could induce a granulomatous reaction, triggering the transformation of mesenchymal cells into osteoblasts and resulting in

Figure 1 Black nodule with a diameter of 2 cm on the left cheek. Note the ill-defined borders and hair follicles.

☆ Please cite this article as: Alvarado AV, Dávila-Rodríguez JJ, Vélez B, Montenegro-Zumárraga M. Osteonevus de Nanta, un fenómeno cutáneo poco habitual. 2019;110:329–331.

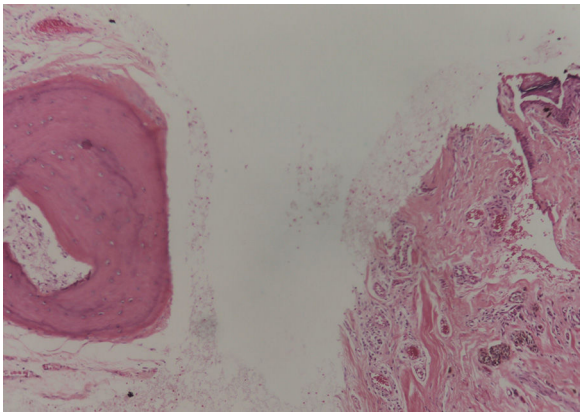

Figure 2 Benign nevus cells in the papillary dermis. Under these are bony spicules with osteocytes and osteoblasts. Hematoxylin-eosin, original magnification ×4.

bone formation.[3] The most likely mechanism, however, is fibroblast differentiation (stimulated or not) in bone tissue.[6]

The higher incidence observed in women has also raised the possibility of a pathogenic role for estrogen.[6] Estrogen would bind to osteoblast surface receptors, triggering the release of cytokines and inhibiting bone resorption and osteoclastic activity.[1] Certain cytokines, together with cell adhesion proteins and β-transforming factor in particular, would allow mesenchymal stem cells to differentiate into osteoblasts, initiating ossification.[8]

Histologic examination of osteonevus of Nanta shows signs of ossification under nevus cells.[3] Characteristic findings include laminated or globular bone with a central cavity containing adipose tissue, osteoblasts, osteoclasts, blood vessels, and occasionally bone marrow elements; hair follicles are almost invariably observed in the lesions.[7,9]

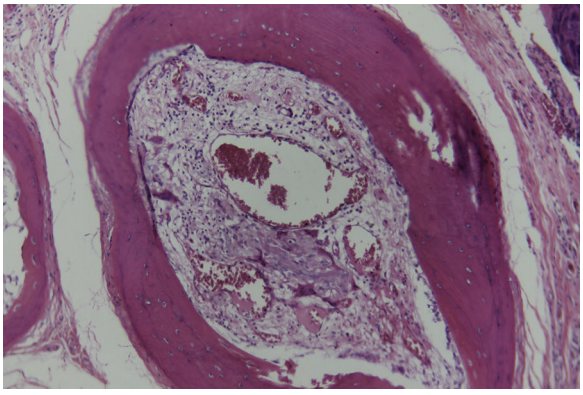

Figure 3 Spicule with megakaryocytes and white and red blood cell precursors in the yellow bone marrow. Hematoxylin-eosin, original magnification ×10.

There is no established management for osteonevus of Nanta, and histologically, the lesion is benign. Culver and Burgdorf,[10] however, did report a case of malignant melanoma arising in an osteonevus of Nanta, leading some authors to advise monitoring of patients.

We have presented the case of a patient with a nevus and histologic features consistent with osteonevus of Nanta. The lesion was fully excised and the patient is being monitored. No signs of recurrence have been observed.

Conflicts of Interest

The authors declare that they have no conflicts of interest.

Acknowledgments

We would like to thank Dr. Gabriela Santacruz, Head of the Dermatology Department at Hospital San Francisco de Quito, and the patient for giving us his written consent to publish the photographs that appear in this article.

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Contact Dermatitis Due to Black Pepper Extract Used to Treat Vitiligo☆

Eccema de contacto por extracto de pimienta negra como tratamiento de vitíligo

To the Editor:

Vitiligo is a disease with an estimated worldwide prevalence of between 0.06% and 2.28%.[1] Very often, the appearance of characteristic achromic lesions has a marked psychological effect, to the extent that patients end up trying various treatments with the aim of repigmenting the lesions.[2,3] A new class I topical health care product—Pigmerise 20% in Fitalite—was recently marketed for the treatment of vitiligo.

We report 3 clinical cases of patients with vitiligo and allergic contact dermatitis to this new product. The patients (2 women, 1 man; age, 37-51 years) had had vitiligo for several years and had received topical treatment with corticosteroids, tacrolimus 0.1%, and/or narrowband UV-B therapy. They all experienced a local eczematous reaction at the site of application between 3 weeks and 2 months after first use. The use test with the commercial product yielded a positive result in all 3 cases. The patients subsequently underwent patch testing with the standard series of the Spanish Contact Dermatitis and Skin Allergy Research Group (GEIDAC) and with the 2 components of the product: the active ingredient, Pigmerise, diluted to 1% and 0.4% in white petrolatum; and its vehicle, the hydrophilic gel cream Fitalite. Both components were supplied by the company sales representative. In all 3 cases, the results were positive at 48 hours and at 96 hours with the black pepper extract at both concentrations (Pigmerise, 0.4% and 1%) and negative with Fitalite (Fig. 1). Test results were positive for 2 of the patients with the Spanish standard series, albeit without present relevance (Table 1). Furthermore, patient 2 experienced a reactivation phenomenon during the patch tests, with the appearance of eczematous plaques on the antecubital skinfolds and axilla, where the product had been applied. Patch testing with 25 healthy controls yielded negative results.

The use of plant-derived products for both cosmetic and medicinal purposes has increased considerably in recent years. Evidence from clinical trials on the safety and efficacy profile of these products before marketing is generally lacking. The use of plant-derived products is not free of risks, and topical application can cause various types of local reaction, the main ones being irritant contact dermatitis, allergic contact dermatitis, contact urticaria, photoaggravated eczema, and phototoxic reactions.[4] The recently marketed Pigmerise 20% in Fitalite for treatment of vitiligo contains an active ingredient composed of a natural phytocomplex of liquid oleoresin derived from black pepper extract (*Piper nigrum L* or piperine). This is formulated at 20% in a hydrophilic gel cream with high concentrations of triglycerides of linoleic and oleic acid known as Fitalite. The compound is thought to act by activating proliferation of melanocytes, as previously shown in vitro.[5] However, we were unable to find articles or other publications with safety and efficacy data for this product: since it is marketed as a class I product, pharmacovigilance studies are not necessary.

The literature to date does not contain published cases of allergic contact dermatitis caused by black pepper extract

Figure 1 Results of Allergic Contact Tests for Patients 1 and 3 at 96 h for Pigmerise 0.4 and 1%.

☆ Please cite this article as: García-Zamora E, Fuente EGdl, Miñano-Medrano R, Gutiérrez-Pascual M, López-Estebaranz JL. Eccema de contacto por extracto de pimienta negra como tratamiento de vitíligo. Actas Dermosifiliogr. 2019;110:331–332.