Osteoma cutis: rare painful tumor in atypical location*

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Abstract: Osteoma cutis or cutaneous ossification is a rare entity characterized by the formation of bone in the skin. We present an isolated primary osteoma cutis located on the palm, an atypical location.
Kewbords: Bone and bones; Dermis; Hand; Osteoma

INTRODUCTION

Osteoma cutis is a rare disease characterized by the presence of bone in the skin, whose etiology remains unknown. The first case of osteoma cutis was described in 1858 by Wilckets. It is classified in primary and secondary osteoma cutis. In this study, we present a 30-year-old healthy man who has had a painful lesion on his palm for one year, which was histologically confirmed as primary osteoma cutis. This is an atypical location that, to the best of our knowledge, has not been described in literature. Repeated microtrauma due to the patient's professional activities has most likely contributed to its origin in this case.

CASE REPORT

A 30–year-old man requested a medical evaluation of a painful lesion that had been present on his right palm for one year. He worked as a mechanic. The patient had no history of medical problems or skin lesions. He denied any previous injuries, trauma, or inflammation in the affected area, and presented no history of familiar hereditary illness.

Physical examination revealed a 0.5cm round ulcerated tumor on the right palm (Figure 1). The lesion was indurated and painful. A 4 mm punch biopsy specimen from the lesion was obtained and stained with hematoxylin and eosin (Figure 2), which showed fragments of mature bone in the upper dermis. Due to the absence of any preexisting lesion, the final diagnosis was primary osteoma cutis. The tumor was surgically removed.

A complete laboratory evaluation showed a calcium serum, parathyroid hormone, and renal function within the normal concentrations.

DISCUSSION

Osteoma cutis or cutaneous ossification is a rare entity that is characterized by the formation of bone in the skin. The etiology remains unknown.[1-3] It is classified in primary osteoma cutis, when it arises *de novo*, without previous injury, tumor, or inflammatory lesion on the skin, and in secondary osteoma cutis, when there is a pre-existing lesion, which is more frequent.[1-7] Primary osteoma cutis has different subtypes: multiple miliary osteoma of the face,

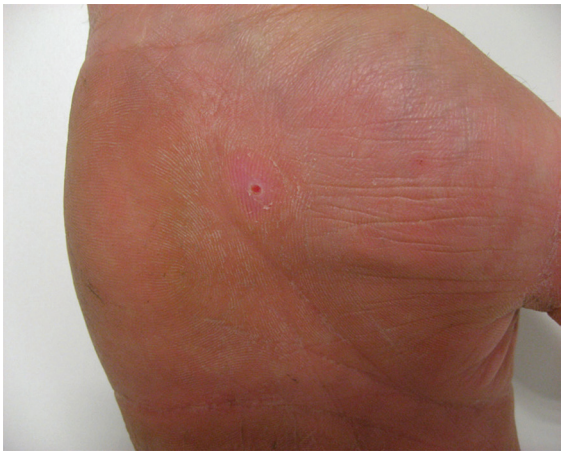

Figure 1: Isolated and ulcerated tumor

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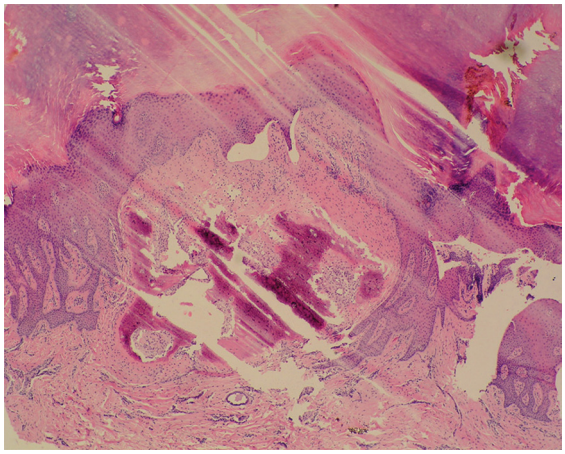

Figure 2: Skin biopsy. This case shows osseous nodules on dermis composed of lamellar bone with osteocytes and epidermis with marked hyperkeratosis (Hematoxylin & eosin stains - X40)

isolated osteoma, widespread osteoma, congenital plaque-like osteoma, as well as osteoma cutis, associated with some syndromes with metabolic dysfunction, such as Albright´s hereditary osteodystrophy, osseous progressive heteroplasia, or fibrodysplasia of progressive ossification.[3,4,6-8]

Isolated osteoma cutis is described as a painful and indurated dermal or subcutaneous nodule that usually appears on the face, scalp, buttocks, and back, as well as in rare locations like heels, fingers, or the dorsal aspect of the hand.[3,4,5,9,10] Its size can vary, and it may be flat or protruding from the skin.[3]

The final diagnosis is made histologically where calcified lamellar structures and characteristic Haversian systems are demonstrated.[3] Treatment of osteoma cutis is variable, but surgical treatment is the best choice.[1-6] A combination of topical treatment with retinoic acid and surgical procedures has also been described.[4]

This study therefore presents a case of isolated primary osteoma cutis on the palm, a rare entity in an atypical location that, to the best of our knowledge, has not been described so far. In this case, we cannot rule out that repeated microtrauma on the palm, due to the professional activities of the patient, may well have been the origin of this tumor. ❑

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