Acquired Perforating Osteoma Cutis

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Citation

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Abstract

A case of acquired perforating osteoma cutis occurring on the finger of a 43-year-old man is reported. English literature on the topic is briefly reviewed.

SOURCE OF SUPPORT

None

INTRODUCTION

Cutaneous ossification (osteoma cutis) is a rare lesion that may be primary or secondary to either inflammatory or neoplastic processes. It is classified as primary when it occurs in the absence of a demonstrable preexisting condition. Secondary lesions have been commonly reported occurring in old acne scar, pilomatricoma, basal cell carcinoma, and melanocytic nevi.

CASE REPORT

A 43-year-old man presented with a 1-year history of asymptomatic wart-like lesion on the left third finger. There was no history of trauma. Gentle paring of the lesion revealed a translucent core. A small amount of clear exudate came out of the lesion after the surface was pared.

On microscopic examination, the punch biopsy of the skin lesion showed a perforation of the epidermis with underlying dermis showing a well circumscribed bony nodule (Figures 1 & 2)

Figure 1

Figure 1: Acquired Perforating Osteoma Cutis, Low magnification (4x)

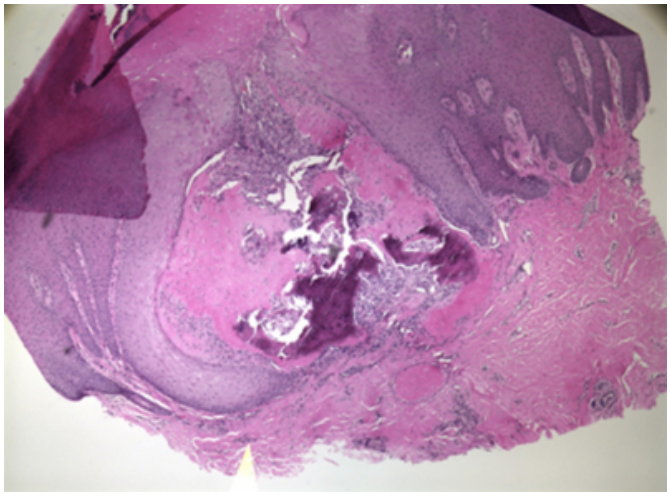
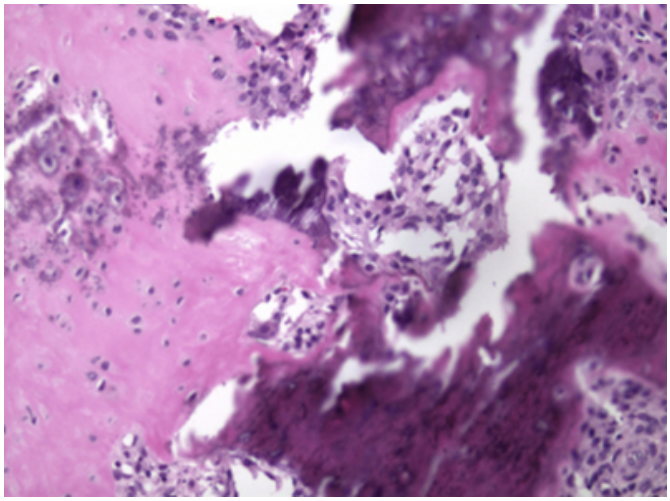


Figure 2

Figure 2: Acquired Perforating Osteoma Cutis, Higher magnification (20 x)



COMMENT

Osteoma cutis is a rare benign lesion of the dermis that may be seen at any age in either sex. Lesions are occasionally multiple. Strictly defined, osteoma cutis refers to the presence of bone within the skin in the absence of a preexisting or associated lesion, as opposed to secondary types of cutaneous ossification that occurs by metaplastic change due to inflammatory, traumatic, or neoplastic processes.

Osteoma cutis could be divided into several groups : (a) Albright hereditary osteodystrophy, which includes most patients with pseudohypoparathyroidism and pseudopseudohypoparathyroidism, is due to an autosomal dominant defect in the alpha subunit of intracellular guanyl nucleotide-binding protein (G protein), (b) widespread osteoma since birth or early life, (c) single, large plaquelike osteomas present since birth either in the skin of the scalp or an extremity, (d) single small osteomas arising in later life in various locations, (e) multiple miliary osteomas of the face ([1]).

Histologically, the osteomas are composed of well-formed bony spicules with prominent cement lines and calcification. They may demonstrate osteoblasts, osteoclasts, and osteocytes and occasionally may even demonstrate bone marrow elements.

Perforating osteoma cutis is a very rare entity but has been previously reported ([2], [3]). Grandhe reported a case of plate-like primary osteoma cutis in a 50-year old man showing epidermal perforation and white chalky discharge ([2]). Perforation and epidermal elimination of bony material was reported in another 58-year-old man with scleroderma who developed plate-like osteoma cutis ([3]). Perforation of the epidermis appears to be due to pressure effect from the underlying dermal bony nodule. Acquired osteoma cutis may occur after trauma, long-standing acne vulgaris or chronic inflammation. Bone arises in skin and soft tissues through mesenchymal (membranous) ossification without cartilage precursors or models (enchondral ossification, as in the skeletal system). The exact histogenesis of bone formation is not well understood. Probably the dermal fibroblasts undergo osteoblastic metaplasia. Our patient may have acquired the lesion secondary to trauma to the finger.

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