

Squamous Cell Carcinoma In Situ Associated With Osteoma Cutis

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Citation

P Sharma, D Sarma. *Squamous Cell Carcinoma In Situ Associated With Osteoma Cutis*. The Internet Journal of Dermatology. 2005 Volume 4 Number 2.

Abstract

Cutaneous ossification is seen as primary event or secondary to a wide range of inflammatory, traumatic or neoplastic processes. We report a case of squamous cell carcinoma in situ with cutaneous ossification.

INTRODUCTION

Cutaneous ossification is seen as primary event or secondary to a wide range of inflammatory, traumatic or neoplastic processes. There are several syndromes associated with cutaneous ossification, such as Albright's osteodystrophy, fibrodysplasia ossificans progressiva, progressive osseous heteroplasia. Secondary ossification has been reported acne, basal cell carcinoma, melanocytic nevi (nevus of Nanta), and melanomas. Herin, we report a case of squamous cell carcinoma in situ with osteoma cutis.

CASE REPORT

A 73-year-old woman presented with a 0.4 cm lesion on the left cheek. The patient had history of basal cell carcinoma on face. A shave biopsy of the lesion was performed. It revealed squamous cell carcinoma in situ associated with a well circumscribed area of lamellar bone containing osteophytes located in upper dermis (Figures 1, 2, 3).

Figure 1

Figure 1: Low magnification shows squamous cell carcinoma in situ in the left part of the epidermis with osteoma cutis in the upper dermis.

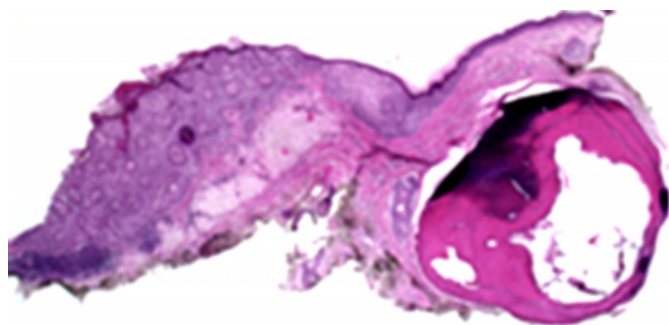


Figure 2

Figure 2: Higher magnification showing squamous cell carcinoma in situ with osteoma cutis

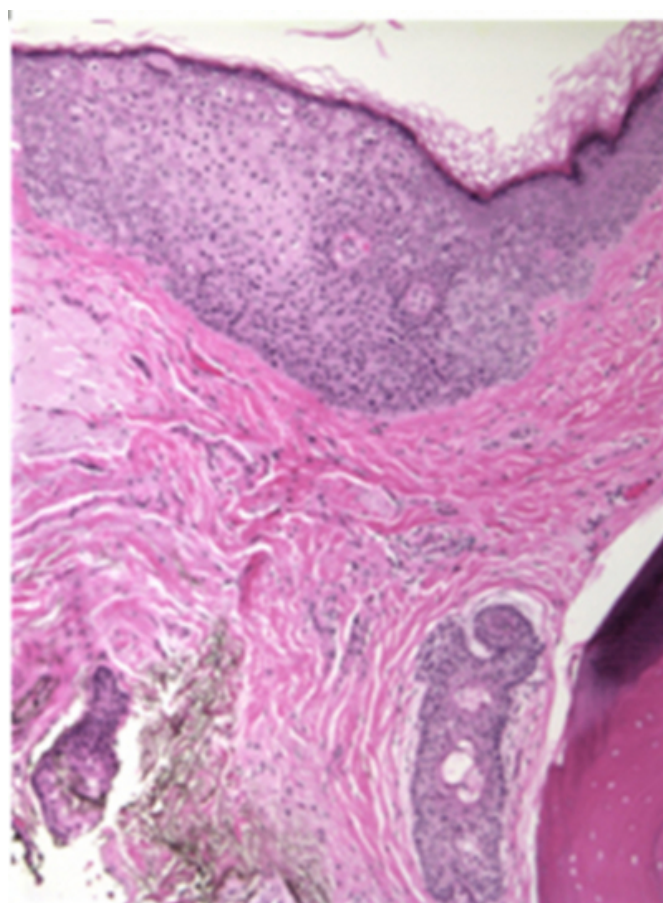
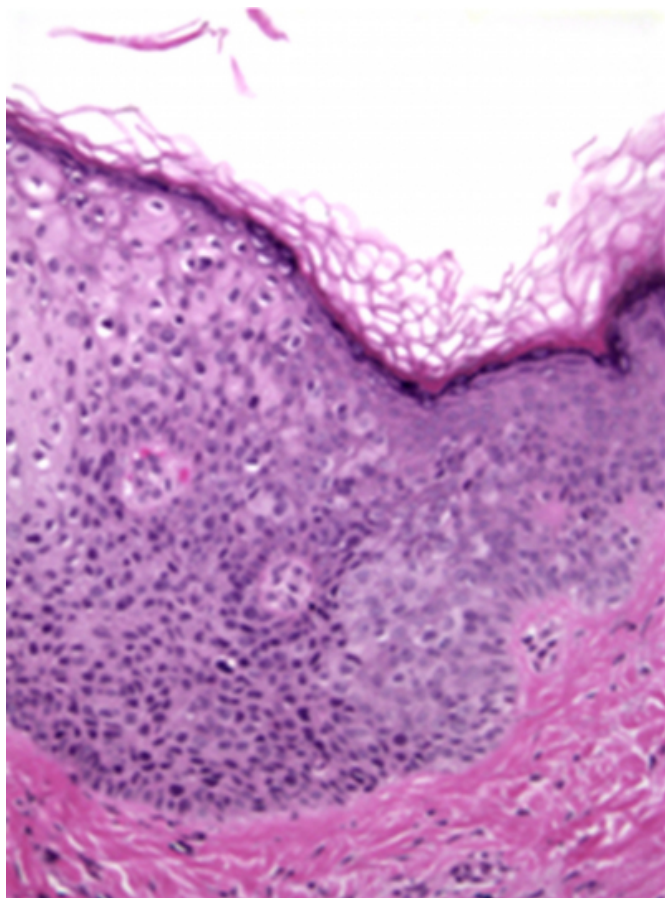


Figure 3

Figure 3: Higher magnification of squamous cell carcinoma in situ



DISCUSSION

Cutaneous osteoma is a rare disorder characterized by compact bone formation in the dermis and subcutaneous tissue. It is classified as primary or secondary forms according to the presence or absence of pre-existing cutaneous lesions. Frequency of approximately 1 per 1,000 specimens has been reported (^{1, 2}). The secondary cutaneous ossification is more common. It is mostly seen in adults 20-80 years of age and is more common in females. Primary heterotopic ossification beginning in childhood is quite rare but occurs in several well-described conditions, such as Albright hereditary osteodystrophy, fibrodysplasia ossificans progressiva, and progressive osseous heteroplasia (^{3,4,5}).

Foci of cutaneous ossification can be observed in a variety of skin neoplasms. It has been reported in basal cell carcinoma, malignant melanoma, pilomatrixoma, atypical fibroxanthoma, pyogenic granuloma and trichoepithelioma

(^{1, 6,7,8}). Conlin et al reported occurrence of osteoma cutis with squamous cell carcinoma in three cases (¹). Although it is has been reported in both benign and malignant tumors, association with benign neoplasm is more common. In addition, many conditions in which calcium deposition occurs (calcinosis cutis) are prone to ossification. It can be seen as a rare complication of acne vulgaris and in other non-neoplastic conditions such as nevi, epidermoid cyst, sebaceous hyperplasia, trauma and scar etc.

The pathogenesis of any type of ossification is a complex phenomenon and has not been completely clear. Osteogenic tumors directly deposit woven bone whereas tumors of cartilaginous origin can give rise to bone by enchondral ossification. The origin of bone forming cells in the skin is unclear. Cutaneous fibroblast and undifferentiated mesenchymal cells may have ability to differentiate into osteoblastic cells (^{9,10}).

Our finding of in situ carcinoma in the epidermis in close proximity to the dermal osteoma may be a mere coincidence or a collision tumor.

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