

Dermoscopic features of Clear Cell Acanthoma: A Case Report and Review of the Literature

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Abstract

Clear cell acanthoma is an uncommon type of benign epithelial tumor. Typically, it is a solitary lesion found on the lower limbs. It presents as a nodule or small plaque with slow and well-defined growth. Diagnosis used to be clinical and histopathological, but the advent of dermoscopy has led to an increase in diagnostic accuracy. We describe a case in which dermoscopy proved highly useful for diagnosis of the lesion.

Keywords: *Acanthoma; Dermoscopy; Diagnostic imaging; Diagnosis*

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Introduction

Clear-cell acanthoma (CCA), or Degos acanthoma, is a rare clinical entity first described by Degos and colleagues in 1962 [1]. Traditionally thought to be a form of benign epidermal neoplasia [2], CCA has also been suggested to be a form of non-specific reactive dermatosis ([3,4] or localised psoriasis, in view of changes in the dermal microvasculature and immunohistochemical findings [3-6]. On histopathology CCA is characterized by a well-demarcated area of psoriasiform epidermal hyperplasia with keratinocytes with pale-staining cytoplasm. Mild spongiosis, exocytosis of neutrophils and thinning of the suprapapillary plates may also be evident [7].

CCA typically arises on the lower extremities, with a peak age of incidence of 60 years and both sexes are equally affected [8]. In most cases CCA presents as a solitary, slow growing pink, red or brown papule or nodule that is moist, well-circumscribed and typically 3 mm - 2 cm in diameter. The surface may resemble a vascular lesion such as pyogenic granuloma. Occasionally patients present with multiple lesions [9]. CCA is commonly mistaken for basal cell carcinoma, irritated seborrhoeic keratosis, squamous cell carcinoma, amelanotic melanoma or even psoriasis [8].

Dermoscopic recognition of CCA may help to avoid unnecessary biopsies or surgical excision. There are few reports on the dermoscopic features of CCA and we report a new descriptive case of dermoscopy of CCA in order to delineate the key dermoscopic features of CCA.

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Case Report

A 75-year-old woman presented with a red and flaky papule 5-year-old at the cheek (Figure 1). The lesion intermittently bleeds, did not respond to topical corticosteroids or cryotherapy and increased size. Dermoscopy revealed red dots, globules and glomeruloid structures, are not linear, forming an incomplete vascular lattice pattern (Figure 2A and Figure 2B). A peripheral collarette of translucent scale was the only non-vascular feature of note.



Figure 1: Clinical image

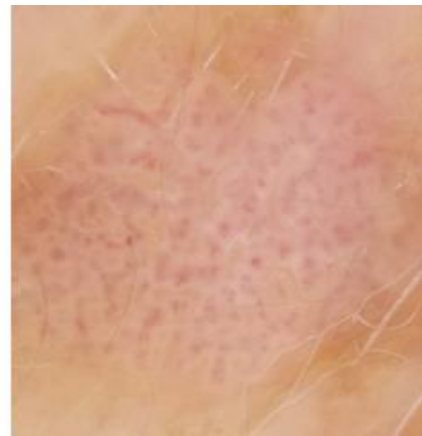


Figure 2: A) Dermoscopic images of the lesion with red pin-point and globular dots, some arranged in a linear or 'string-of-pearls' formation (long arrows) and B) A border of translucent scale (short arrows).

Discussion

Dermoscopy is a non-invasive, in vivo technique that relies on bright light-emitting diode illumination and magnification (usually $\times 10$) of skin lesions, exposing subsurface colours and structures that are not ordinarily visible to the naked eye. On dermoscopy CCA has a unique appearance, characterized by red dots, globules and, in some cases, glomeruloid vessels, at least some of which are arranged in linear or serpiginous patterns. These linear arrangements are reticular and strikingly symmetric when fully developed. In some cases the vascular reticular pattern is incomplete or partly developed, either representing a forme fruste or a compression artefact but still distinctly recognizable.

This vascular pattern is distinct from that of other lesions. Dotted or glomeruloid vessels can be a feature of inflammatory dermatoses, such as psoriasis, pityriasis lichenoides and discoid eczema [17-20]. However, in these conditions the red dots or glomeruloid vessels are uniformly distributed and do not coalesce to form linear or vascular reticular arrays [17-20]. Glomeruloid vessels can be seen on dermoscopy in Bowen's disease and red dots in dysplastic naevi, spitz naevi or melanomas

[17,20-22]. In these tumours the vessels may be regularly spaced, grouped or irregularly arranged but they do not form the characteristic vascular reticular pattern seen in clear cell acanthoma [17,20-22].

Other dermoscopic features of CCA include the variable presence of areas of haemorrhage, orange crusts and a peripheral collarette of translucent scales. The frequent presence of crystalline structures when CCA is observed using polarised dermoscopy was also noted, a finding that has not been previously described in the literature. The largest and most significant study assessing for crystalline structures included 11,225 lesions (both melanocytic and non-melanocytic), but no clear cell acanthoma [23].

Conclusion

Clear cell acanthoma has a distinctive dermoscopic appearance, characterized by a complete or incomplete vascular reticular pattern that helps in reaching a confident clinical diagnosis and minimizing the need for biopsy.

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