Dermatology Practical & Conceptual

Eruptive Clear Cell Acanthomas with Atypical Dermoscopic Features

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Key words: Clear Cell Acanthoma, Eruptive, Atypical Dermoscopic Features, Dermoscopy, Clinical Observations

Citation: Ambrosio L, Di Guardo A, Roberti V, Ascione A, Conforti C, Pellacani G. Eruptive Clear Cell Acanthomas With Atypical Dermoscopic Features. *Dermatol Pract Concept*. 2025;15(4):5595. DOI: https://doi.org/10.5826/dpc.1504a5595

Accepted: June 29, 2025; **Published:** October 2025

Funding: None.

Competing Interests: None.

Authorship: All authors have contributed significantly to this publication.

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Introduction

Clear cell acanthoma (CCA) is a rare, benign epidermal tumor first described in 1962 by Degos et al. [1]. It is characterized by glycogen-containing epithelial cells and presents as dome-shaped, reddish papules or papule-nodules [2]. A rare eruptive form, with the presence of more than 30 lesions, has been described [3]. We report a case of eruptive clear cell acanthomas (ECCA) in a patient with a family history of multiple CCAs.

Case Presentation

A 67-year-old male presented to our dermatology clinic with multiple asymptomatic skin lesions of varying morphology with a gradual appearance over the preceding several years. His family history revealed that his brother had multiple CCAs excised years earlier. Clinical examination identified over 50 well-demarcated, bright red-to-brown papules and nodules, ranging from 2 to 10 mm, located primarily on the lower extremities and trunk. Some lesions exhibited a collarette of peripheral scaling. Dermoscopy of the suspected CCAs revealed dotted and globular vascular structures arranged in a "pearl necklace pattern," while others exhibited "wafer-like" crusty scales. Some lesions also exhibited non-specific features such as pink areas with irregularly distributed vessels (comma-shaped, linear irregular, or glomerular) accompanied by white-yellow scales (Figure 1). An incisional biopsy of three suspected lesions was performed. Histopathological examination revealed marked acanthosis composed of glycogen-rich clear cells (Figure 2). The papillary dermis displayed tortuous, ectatic vessels surrounded by a moderate lymphohistiocytic infiltrate. These findings, together with the patient's history and clinical presentation,

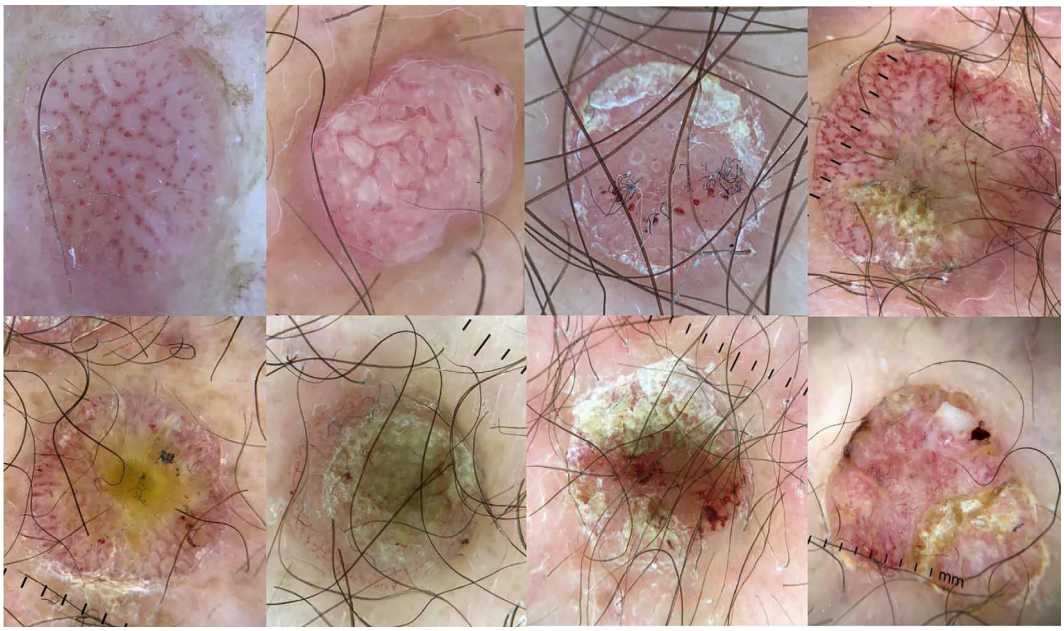

Figure 1. Dermoscopy on polarized mode of eight lesions suspected of being clear cell acanthomas. Some lesions exhibit the classic "pearl necklace" appearance, others display scaling and hyperkeratosis, while some show a pinkish coloration with dotted vessels.

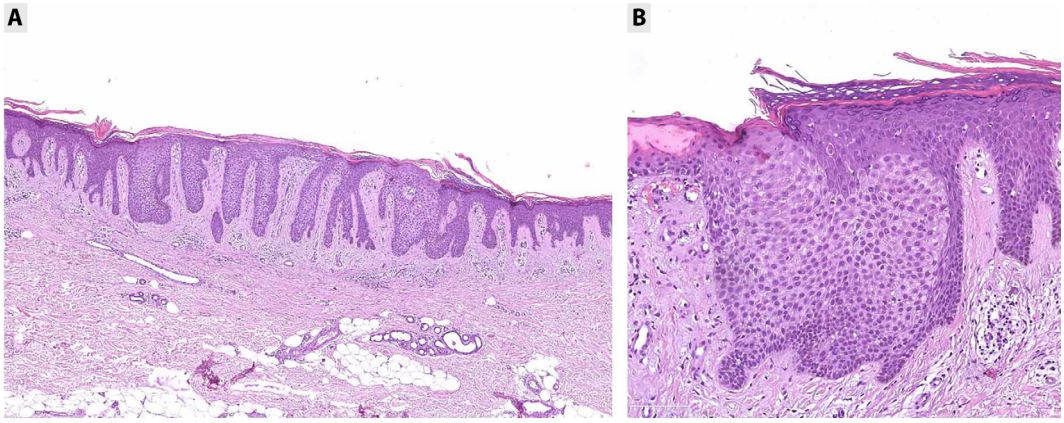

Figure 2. Histology shows the typical features of a clear cell acanthoma. The lesion is characterized by acanthosis, cells with clear cytoplasm, and by abrupt transition with the nearby normal epidermis. (A: H&E, original magnification 1.25x; B: H&E, original magnification 20x).

confirmed the diagnosis of ECCAs. Given the patient's extensive lesions and reluctance to undergo comprehensive treatment, only lesions with suspicious dermoscopic features were excised, and regular follow-up was arranged.

Conclusion

This case underscores the importance of dermoscopy in distinguishing CCAs from mimickers like basal cell carcinomas or squamous cell carcinomas. The characteristic "pearl necklace" vascular pattern and keratotic scales serve as helpful diagnostic clues, particularly in atypical or eruptive cases. Dermoscopy also aids in identifying lesions that warrant biopsy or excision, as in this case, where only lesions with suspicious dermoscopic features were surgically removed. Additionally, this report highlights a rare familial occurrence of ECCAs characterized by the appearance of multiple lesions in both the patient and his brother. Eruptive CCAs are an uncommon clinical variant, with more than 30 lesions often appearing progressively over time [4]. Additionally, this familial occurrence of ECCA raises questions about genetic predisposition or shared environmental triggers. While the exact pathogenesis of CCAs remains unclear, hypotheses include metabolic enzyme defects, localized inflammatory

responses, and epidermal glycogen accumulation [3-5]. Future research exploring genetic pathways and inflammatory markers may further clarify the mechanisms underlying familial and eruptive variants of CCA.

Ethical Approval: The study was a retrospective evaluation conducted in accordance with the principles of the Declaration of Helsinki and the International Council for Harmonization and Good Clinical Practice guidelines. Written informed consent was obtained from the patient to publish this paper.

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