

Introduction

- **Clear Cell Hidradenoma** is a rare **benign sweat gland neoplasm of eccrine origin** that usually presents as solitary freely mobile firm dermal nodule on head and neck in adults.
- Clinically, it may mimic dermatofibroma, adnexal neoplasms and chronic infections.
- Histopathologically both solid and cystic portions are present with characteristic **clear cells** containing large amount of glycogen.

Patient details

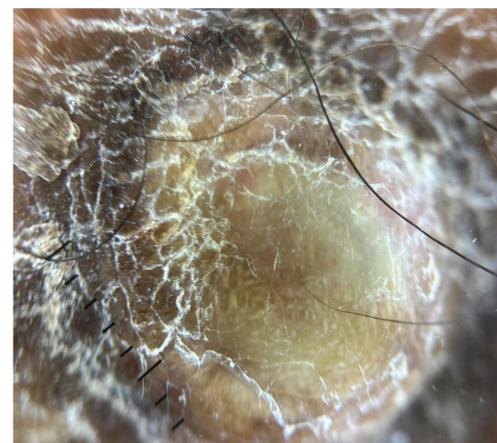
- A 52-year-old male presented with an asymptomatic hyperpigmented raised lesion over posterior part of right leg for 7 years with a new adjacent nodule appearing 5 months ago.
- No history of pain, discharge, trauma or similar lesions elsewhere.
- Examination revealed a well-defined hyperpigmented plaque measuring 4 × 2.5 cm with firm, non-tender nodules studded over its surface.



Baseline image



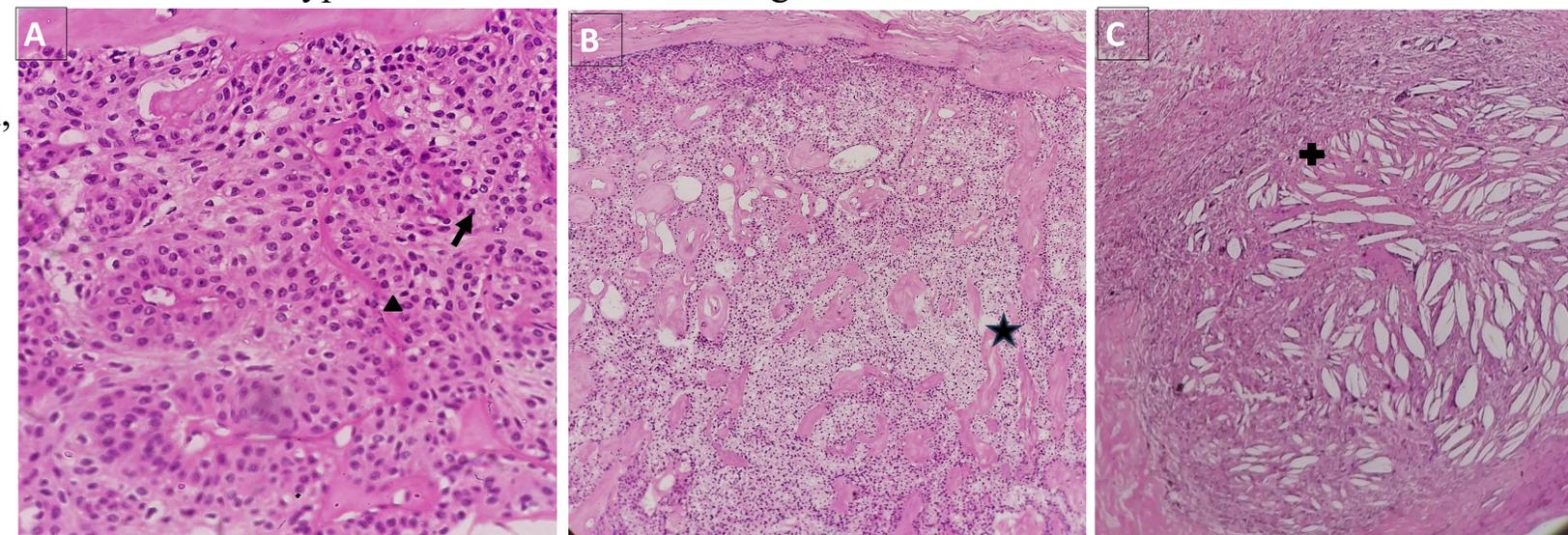
2 months later



Dermoscopic image

Investigations

- Initial punch biopsy showed increased dermal mucin, hemosiderin-laden macrophages, chronic inflammation without granulomas or infective profiles, rendering it inconclusive.
- **Subsequent excisional biopsy** demonstrated well-defined non-encapsulated lobulated dermal neoplasm without epidermal connection composed of **basophilic polygonal cells and glycogen-rich clear cells** arranged around tubular lumina and cystic spaces.
- Hyalinised stroma, vascular channels, eosinophilic **cystic contents, cholesterol clefts**, mild perivascular lympho-histiocytic infiltrates and hemosiderin-laden macrophages were noted.
- Absence of atypia or mitoses and clear margins confirmed **Clear Cell Hidradenoma**.



(A,B,C-H&E X40-200) Histopathology images showing well defined dermal neoplasm with basophilic polygonal cells (Black arrowhead) and glycogen rich clear cells (Black arrow), hyalinised stroma (Black star) with eosinophilic cystic contents and cholesterol clefts (Black plus sign)

Discussion

- Clear cell hidradenoma is a rare benign adnexal tumor that predominantly occurs on head and neck; **lower limb involvement is uncommon** and leads to diagnostic difficulty.
- It may mimic fibrohistiocytic tumors, soft tissue neoplasms, and chronic infective conditions clinically, particularly when lesions are long-standing and pigmented.
- Excisional biopsy reveals **dual cell population** (basophilic and glycogen-rich clear cells), **cholesterol clefts**, cystic spaces, and **hyalinized stroma**, aiding definitive diagnosis.

Conclusion

This case highlights the diagnostic challenge of **hidradenoma at atypical sites**, especially when it clinically resembles infectious or fibrohistiocytic conditions.

Excisional biopsy with adequate sampling ensures early identification and prevents unnecessary antibiotics or misdiagnosis of soft tissue tumors in atypical chronic lower limb nodules.

Reference