

## CASE REPORT

### Nodular hidradenoma presenting as solitary scalp nodule

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#### ABSTRACT

Nodular hidradenoma is a benign neoplasm of eccrine sweat glands ductal origin. It usually presents as slowly enlarging, solitary, freely movable, solid or cystic swelling. It occurs in 20- 50 years age group with a female preponderance. We herein report a case of nodular hidradenoma in a 64 year old female patient who presented with an asymptomatic, solitary, shiny, telangectatic swelling in the frontal area of the scalp.

#### INTRODUCTION

Nodular Hidradenoma also known as solid-cystic or clear cell Hidradenoma or acrospiroma is a benign adnexal tumor that arises from the distal excretory duct of eccrine sweat glands.<sup>1</sup> It usually presents as slowly enlarging, solitary, freely movable nodule, solid or cystic, measuring on an average 0.5-2cm in diameter, but may reach 6.0cm or more.<sup>2</sup> The lesion can occur anywhere on the body e.g axilla, face, arms, thighs, trunk, scalp and pubic region but the most common site is head. Most commonly it is seen in the age group of 20-50 years and is rare in children It occurs in women twice as commonly as in men.<sup>2,3</sup>

#### CASE REPORT

A 64-year-old woman presented with a 3-year history of an asymptomatic, reddish-brown, raised lesion over the scalp of gradual onset and slowly progressive course. Her general health was preserved and she had no significant past or medical history.

Clinical Examination revealed a solitary, non-tender, round, firm, reddish, telangectatic 3x3cm sized nodulo-plaque lesion with over the frontal

region of the scalp with superficial ulceration and exudation (Fig. 1). It had a well-defined, regular and raised margins and was free from underlying structures. There was no regional lymphadenopathy; general physical and systemic examination was normal. A clinical possibility basal cell carcinoma was considered. Routine laboratory investigation (complete blood picture, hepatic profile, renal profile, lipid profile, blood sugar and urine analysis) revealed no abnormal findings.

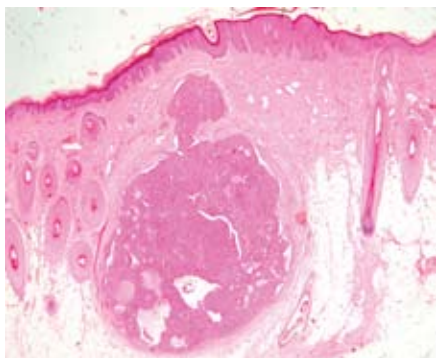
A wide local excision of the tumor was performed for removal of the lesion and microscopic examination. Histopathologic examination revealed a



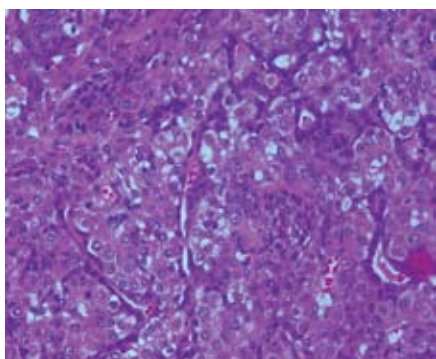
**Fig. 1** Solitary reddish-brown mass on the scalp, with superficial ulceration.

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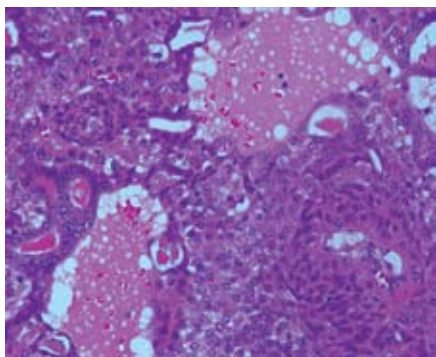
well circumscribed tumor in the dermis composed of variably sized tubular lumina and cystic spaces. In addition the tumor had numerous polyhedral and clear cells without nuclear atypia or mitotic figures and vascular invasion (Fig. 2 A,B,C) consistent with the diagnosis of Nodular hidradenoma. Surgical excision was carried out with adequate tumor free margins, confirmed on histopathology. No recurrence has been observed over one year of follow up.



**Fig. 2A** Dermal lobular masses surrounded by connective tissue stroma.



**Fig. 2B** Two types of cells, clear and dark cells.



**Fig. 2C** Cystic spaces containing homogenous eosinophilic material.

## DISCUSSION

Nodular hidradenomas are usually seen in third to fifth decade of life and are twice more common in females.<sup>2</sup> Clinically the tumor appears as asymptomatic, usually solitary, 0.5 to 6 cm sized, skin colored intradermal nodule, slightly elevated above the surrounding skin.<sup>1,2</sup> Occasionally brown, blue or red discoloration and surface erosions or ulceration may be observed. It is a slow growing tumour and rapid growth may represent trauma, hemorrhage or a malignant change.<sup>2-5</sup> Clinical differential diagnosis includes basal cell and squamous cell carcinoma, melanoma, metastatic tumor, dermatofibroma, pyogenic granulomas, hemangioma, leiomyoma and other cutaneous adnexal tumors.<sup>1,2</sup> Differentiation depends upon biopsy and immunohistochemical staining.<sup>2</sup> Histopathology shows both solid and cystic components in varying proportions. The tumor has tubular lumina lined by cuboidal or columnar cells and variably sized cystic spaces. The solid portions contain two types of cells: polyhedral cells with basophilic cytoplasm and glycogen containing pale or clear cells with a clear cytoplasm and a round nucleus.<sup>1</sup> Criteria for assessing malignancy include overt nuclear atypia, readily observed mitotic figures, infiltrative patterns, lymphatic or perineural invasion and areas of necrosis. Nodular hidradenoma is labeled as atypical when there is no evidence of invasive features but it has a high mitotic rate or nuclear atypia. The exact frequency of atypical Nodular hidradenoma and their risk of transformation into malignant tumors is not known. However, mitotic activity and cellular pleomorphism may not be accurate predictors of clinical behavior. Malignant CCH usually arise de novo and malignant transformation of benign nodular hidradenoma has rarely been reported.<sup>3</sup> Biddlestone *et al*

have described a young girl with progression of a histologically benign hidradenoma to a malignant sweat gland carcinoma with metastasis over a period of 11 years.<sup>3</sup> However, mitotic activity and cellular pleomorphism may not be accurate predictors of clinical behavior.<sup>2</sup> Clinically benign nodular hidradenoma with focal nuclear pleomorphism and increased mitotic activity have been reported, while tumors with aggressive clinical behavior and metastasis may have deceptively benign histological appearance.<sup>3-5</sup>

In the reported case, potential for aggressive behavior was suggested by the clinical findings of an ulceration. However there were no features of nuclear atypia or angiolymphatic invasion and thus the lesion was histologically benign. It was labelled as a benign nodular hidradenoma. Our case thus showed an aggressive clinical behavior may not always parallel the histologic features. Treatment of benign, atypical and malignant

nodular hidradenoma is surgical excision with adequate margins to minimize the risk of recurrence followed by histologic confirmation of adequacy of excision.<sup>2,3</sup>

## REFERENCES

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