

**Nodular Hidradenocarcinoma: A rare case report with review of literature**

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**Abstract**

Nodular Hidradenocarcinoma is an extremely rare aggressive sweat gland tumor. The diagnosis is based on histopathological findings and tendency for recurrence. Herein, we present one such case in a 68 year women with a recurrent single nodular perianal swelling since 2 months. Histopathology of the lesion showed nodule with ulcerated epithelium and infiltrating the underlying tissue composed of malignant sweat gland cells with areas of necrosis and hemorrhage. Therefore, final diagnosis of nodular hidradenocarcinoma was given.

**Keywords:** Nodular Hidradenocarcinoma, Sweat gland tumor, Skin Adnexal tumor

**Introduction**

Nodular hidradenocarcinoma is a tumor originating from eccrine sweat glands, having an incidence of <001%. Nodular hidradenocarcinoma was first reported as clear-cell eccrine carcinoma by Keasby and Hadley in 1954.<sup>1</sup> So far less than 80 cases have been reported in the literature.<sup>2</sup> It is a diagnostic challenge to differentiating it

from its benign counterparts due to its similar histopathological features. Nodular hidradenocarcinoma is known for its uncontrollable local recurrence and their tendency to metastasize. We report this case to you because of its rarity.

**Case Report**

A 68 year old female presented to the surgical department with complaints of perianal swelling since 2 months. The swelling was gradually increasing in size. There was no associated pain or fever. History of a similar complaint in the past 4 years back which was excised surgically, the report of which was not available. On examination, there was a firm, fixed, tender mass palpable on the left perianal region. It measured 3 x 3cm in size.

She underwent excision biopsy of the perianal swelling.

**USG swelling:** Findings suggestive of infective etiology. Gross (Figure 1): Specimen consists of a single nodular tissue bit measuring 2 x 1.5 x 1.5cm.

**External surface:** Congested, skin covered with an ulceration measuring 0.2 x 0.1cm.

**Cut surface:** Solid, firm, grey-white nodule measuring 1cm in diameter.

All tissue processed.



Fig 1: Excised lesion on gross

Histopathological evaluation revealed an ulcerated epidermis (figure 2) showing focal acanthosis with elongation of rete ridges with the dermis showing well circumscribed, unencapsulated tumor composed of cells arranged in lobules separated by hyalinised fibrovascular septae with tubules and cystic spaces. (figure 3)

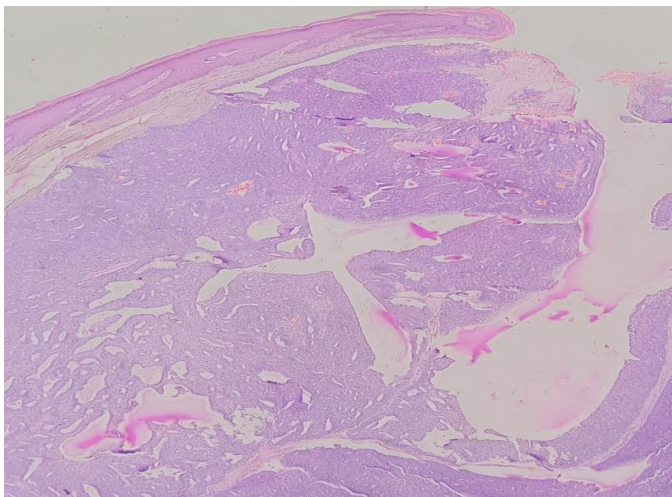


Fig 2: 4x Showing ulcerated epidermis

The tumor cells are involving the epidermis causing ulceration.

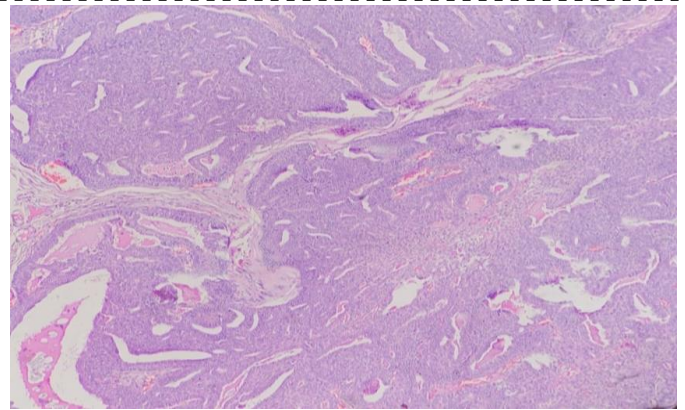


Fig 3: 10x Lobular arrangement of tumor cells

The individual tumor cells are predominantly uniform with minimal atypical, round to oval vesicular nuclei, fine chromatin and moderate cytoplasm.

Minimal infiltration to the surrounding stroma is seen.

Peripheral palisading is seen at places.

Areas of necrosis and hemorrhage noted. Mitosis 2-3/hpf.

Atypical mitosis noted. (Figure 4)

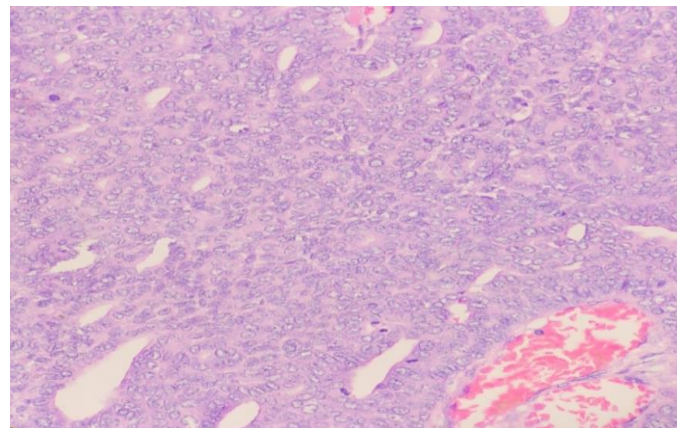


Fig 4: 40x High mitotic activity

### Discussion

Diagnosis of adnexal tumors is difficult because one lesion can mimic histologic features of two or more adnexal lesions. Adnexal tumors mostly are benign, therefore local complete surgical excision is curative. A malignant counterpart of almost each of these tumors is rare, locally aggressive, and has a potential for nodal involvement and distant metastasis and thus has poor clinical outcome.

Nodular Hidradenocarcinoma is a malignant sweat gland tumor. Usually presents in fifth to seventh decade of life. It has no sexual and racial preference. The tumor is known to have a high local recurrence rate (50%).

The first case of hidradenocarcinoma was reported in 1954 by Keasbey and Hadley.<sup>1</sup>

Hidradenoma amounts for 6% of malignant eccrine tumor.<sup>3</sup>

Clinically it presents as solitary asymptomatic, slow growing nodular skin lesion measuring approximately 1 to 5cm.<sup>4</sup>

On gross pathology, hidradenocarcinomas are well-circumscribed nodules on the superficial skin.<sup>4</sup>

The morphological features supporting the diagnosis are - nodular pattern, presence of two cell types and degenerating cells forming cyst like structures which were all seen in first case resection section.<sup>4</sup>

It is said that a lesion may be classified as malignant hidradenocarcinoma if three or more of the following features are met loss of circumscription, infiltrative growth pattern, deep extension, necrosis, perineural and lymphovascular invasion, nuclear pleomorphism and 4 or more mitoses per 10 high power fields.<sup>4</sup>

Literature has reported a five year disease free survival rate of less than 30%, suggesting a poor prognosis.<sup>5</sup>

### **Conclusion**

Even though rare, nodular hidradenocarcinoma should be kept in the differential diagnosis of malignant skin tumors.

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