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## **BREAST NODULAR HIDRADENOMA, A DIFFERENTIAL DIAGNOSIS OF BREAST CANCER.**

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### **Abstract:**

Nodular hidradenoma or clear cell hidradenoma is a rare skin adnexal tumor arising from eccrine sweat glands. Skin adnexal tumors situated in breast parenchyma are very rare and is one of differential diagnosis of breast masses. We report a case of 60 years old female with a left breast lump and bloody nipple discharge being suspected as a malignant breast mass. A final diagnosis of nodular hidradenoma breast was made after excision biopsy and immunohistochemistry study. A patient is a diagnosed case of carcinoma endometrium and underwent panhysterectomy in 2007. Postoperative histopathology revealed well-differentiated endometrial adenocarcinoma without invasion of the myometrium. She received postoperative radiation therapy and intravaginal brachytherapy in 2008 and is on regular follow-up since then.

## **INTRODUCTION**

Nodular Hidradenoma (NH) is a skin adnexal tumor arising from eccrine sweat glands. It is still a very rare benign skin adnexal lesion. It is also known as eccrine acrospiroma, clear cell hidradenoma, and solid cystic hidradenoma.<sup>1</sup> Common locations include the face, upper extremities, axilla, trunk, thigh, scalp and pubic region. Rarely has it been reported in the breast with slight more preponderance in women than in men. NH in the breast is arising commonly in the nipple and subareolar region but few case reports have also been seen in the deeper breast. Mostly it presents as slow-growing painless breast lump although there are reported cases of pain, nipple discharge and ulceration of

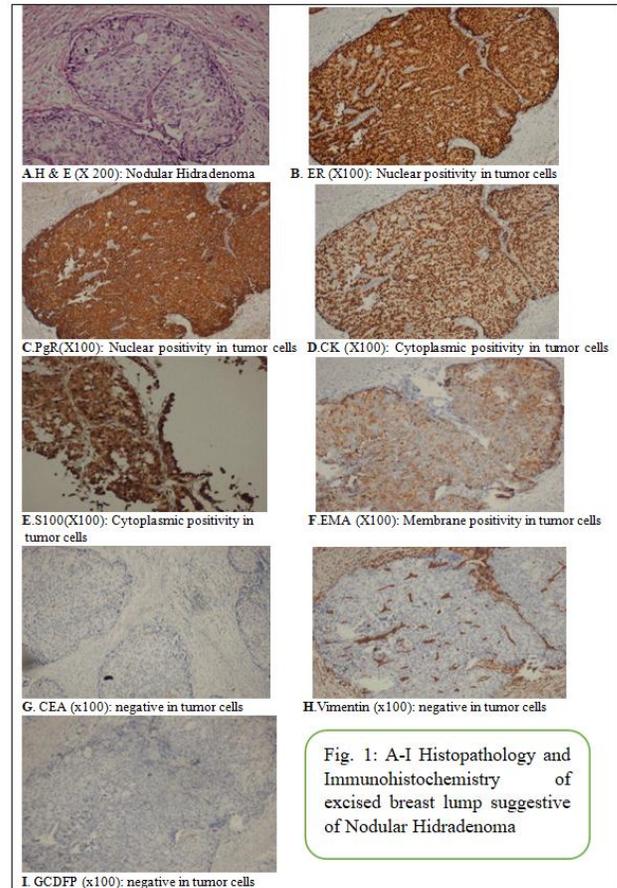
overlying skin. Failure to identify its cytomorphologic features and rarity of this tumor may lead to misdiagnosis on fine needle aspiration (FNA) cytology.<sup>2,3</sup>

## **CASE REPORT**

A sixty years old female presented with a complaint of bloody discharge from nipple for 3-4 days in our outpatient department. There was no history of preceding trauma, fever or retraction. She also recognized a lump in the breast after a complaint of bloody discharge from the nipple. She was on regular yearly follow up for her old diagnosis and treatment of carcinoma endometrium. She presented before her due date of follow up for her previous treatment. She was diagnosed as carcinoma endometrium in 2007 for

which she underwent panhysterectomy. Pelvic lymph node dissection was not done. Pathological examination was positive for moderately differentiated endometrial adenocarcinoma. She was staged in 1A based in AJCC 6/7 edition. She received 52 Gray by external beam radiation on telecobalt in five weeks by two pelvic fields and intracavitary irradiation (four applications of 750 cGy each prescribed at vaginal mucosa).

Clinical examination revealed a 3×3 cm left breast lump in the lower quadrant. The lump was hard in consistency and there was bloody discharge on nipple compression. No clinical abnormality detected in the right breast and bilateral axilla. Mammosonography revealed neoplastic lesion in the left breast with BIRADSGRADE IV. Fine needle aspiration cytology (FNAC) of mass came positive for duct papilloma. Excision was planned based on imaging and FNAC finding. Excisional biopsy of a mass in left breast suggested nodular hidradenoma of the breast as a histopathological diagnosis. On immunohistochemistry (IHC) confirmation, estrogen receptor (ER) and progesterone receptor (PR) showed strong nuclear positivity in 100% of tumor cells. Pancytokeratin showed diffuse cytoplasmic positivity in 100% tumor cells. S-100 stains diffusely in eighty percent of tumor cells cytoplasm. EMA membranous positivity exhibited in 50% tumor cells. CEA, GCDFP-15, Vimentin were negative in tumor cells. Histopathology and IHC study were consistent with nodular hidradenoma of the breast (Fig. 1).



## DISCUSSION

Benign tumors of the epidermal appendages frequently a reason for frustration for patient and doctor because of the uncertainty of the nature of the lesion. Recognition and definitive management is usually straightforward with appropriate attention to the history and to the lesion. Knowledge of these benign epidermal appendage lesions can minimize time loss and expense and help to avoid unnecessary scars. Nodular hidradenoma is a rare tumor of skin which arises from distal excretory ducts of eccrine glands and it is also known as eccrine acrospiroma, clear cell hidradenoma and solid-cystic hidradenoma. Common sites are the face, axilla, trunk, thigh, scalp, upper extremity and pubic region. Nodular hidradenoma of the breast is very rare and only a few cases have been reported in the literature. It occurs in the nipple and sub-areolar region in more than 50% of cases. It may originate from skin adnexal glands or mammary ducts. It mainly present as slow

growing solitary nodular swelling of 0.5-2cm size, rarely may grow larger. It is adherent to the skin which sometimes becomes ulcerated and may lead to a discharge of serous material. Most of the cases are female from four to 8th decade of their life. Usual clinical presentation is a painless lump in the breast, occasionally associated with pain or nipple discharge. Usually, NH is difficult to diagnose cytologically and in most studies, cytological diagnosis was either inconclusive or misdiagnosed as breast tumor.<sup>2-5</sup> NH is difficult to diagnose cytologically, in order to confirm diagnoses of NH true-cut or excision biopsy is required. The mainstay of treatment is local excision of the mass. It recurs very rarely in case of inadequate excision. Malignant transformation of NH is observed in 5% of cases. However, neither clinical behavior nor histological features can predict malignant change.<sup>6</sup> In the present case,

first clinical and radiological diagnosis favored carcinoma of the breast but FNAC revealed ductal papilloma. Final diagnosis established after excision of mass and histological examination with IHC confirmation. There are reports in the literature of hidradenoma being misdiagnosed as breast carcinoma both clinically and pathologically.

Although being a very rare disease but clinical features mimicking carcinoma of the breast, physicians and surgeon must be aware of this rare disease so that timely diagnosis and appropriate intervention can be done since Nodular Hidradenoma is a curable tumor. Removal with safety margins is recommended given its possible recurrence in inadequate dissection and low rate of the malignant transformation.<sup>7-9</sup> This report also emphasizes the benefit of complete local excision to prevent recurrence of the tumor.

#### Conflict of interest

The author does not have any disclosure interest

## REFERENCES

1. David E. Tumors of the epidermal appendages. In Elder D, Elentisas R, Ragsdale BD B. *Lever's Histopathology of the Skin*. Philadelphia: Lippincott Raven Publishers; 1997.
2. Mote DG, Ramamurti T, Naveen Babu B. Nodular hidradenoma of the breast: A case report with literature review. *Indian J Surg* 2009;71:43-5.
3. Kim Yo, Jean CW, Chang HK. Fine needle aspiration cytology of eccrine acrospiroma of the breast. A report of a case misdiagnosed as ductal carcinoma. *Korean J Cytopathol* 2005;16:31-5.
4. Ohi Y, Umekita Y, Rai Y, et al. Clear cell hidradenoma of the breast: a case report with review of the literature. *Breast Cancer* 2007;14:307-11.
5. Dhingra KK, Mandal S, Khurana N. An unusual case of nodular hidradenoma of breast. *Iran J Pathol* 2007;2:80-2.
6. Girish G, Gopashetty M, Stewart R. Recurrent clear cell hidradenoma of the breast: a case report. Available from: <http://ispub.com/IJS/10/1/9804>.
7. Grampurohit VU, Dinesh US, Rao R. Nodular hidradenoma of male breast: cytohistological correlation. *J Cytol* 2011;28: 235-7.
8. Volmer KE, Cummings TJ, Wang WH, et al. Clear cell hidradenoma: a mimic of metastatic clear cell tumors. *Arch Pathol Lab Med* 2004;129:e113-6.
9. Galadari E, Mehregan AH, Lee KC. Malignant transformation of eccrine tumors. *J CutanPathol* 1987;14:15-22.

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