CASE REPORT

Nodular hidradenoma of axilla mimicking papillary breast neoplasm — A case report

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Abstract

Nodular hidradenoma is a benign rare skin tumour arising from the eccrine type of sweat glands. It is usually found on the trunk, extremities and head, however can occur anywhere in the body. It is a slow growing tumour, usually painless. The patient presents with a palpable lump of variable size. Lesions occurring in the axilla or breast may be confused with primary breast cancer or a papillary neoplasm. Imaging workup includes an ultrasound which may be supplemented with mammography or magnetic resonance imaging depending on the location. We describe the ultrasound findings of nodular hidradenoma of the axilla in a 33 year old woman. A papillary neoplasm was suspected on ultrasound and biopsy was advised for further evaluation. The patient underwent excisional biopsy due to superficial location of the lesion and palpability. The histopathological findings were compatible with nodular hiradenoma.

Keywords: Hidradenoma, Nodular, Sweat gland, Tumour, Ultrasound.

Introduction

Nodular hidradenoma, also known as clear cell hidradenoma or acrospiroma is a benign rare skin tumour arising from the eccrine type of sweat glands.[1,2] They can arise anywhere in the body but usually involve the trunk, extremities and head.[2,3] It usually presents as a slow growing, solitary palpable nodule. The size ranges from few millimetres to several centimeters. They are more common in the fourth to fifth decade of life with female preponderance.[3,4] Lesions occurring in the axilla or breast may be confused with primary breast cancer or a papillary neoplasm on clinical as well as imaging findings. Preoperative diagnosis is usually difficult. Definite diagnosis is achieved by excisional biopsy.

This was the first case encountered in our imaging practice and the reason for reporting this case is to familiarize the health care professionals with its clinical features, imaging appearances and treatment strategy.

Case Report

A 30 year-old woman presented in February 2013 with a painless solitary, palpable mass in the right axilla for few months. Upon physical examination, a 2-cm, soft mobile mass was identified in the right axilla with no overlying skin changes. The patient was referred for ultrasound examination which was performed with a 12-MHz linear probe (Xario, Toshiba Medical Systems, Japan). It revealed a well-circumscribed cystic lesion in the dermis and subcutaneous fat measuring 20.1 x 12.5 mm. It showed few papillary solid projections along the wall, the largest papillary projection measured 7.5 x 5.2 mm. (Figure-1 A). Vascularity was noted at their base on colour and power Doppler examination (Figure-1B and Figure-1C). No hyperechoic foci were seen to suggest calcification or haemorrhage. Sonographically this was similar to an intracystic papilloma of the breast but the

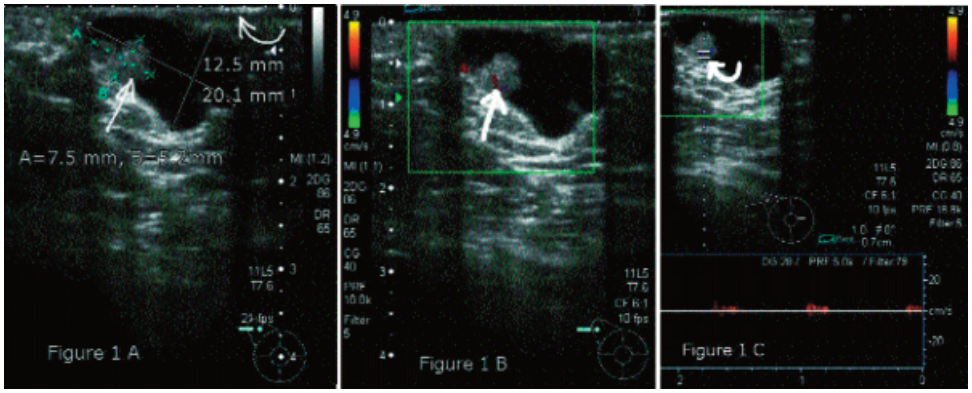

Figure-1: Ultrasound of right axilla at the site of palpable nodule shows (A) Well circumscribed cystic lesion measuring 20.1 x 12.5 mm showing a solid mural nodule (thin white straight arrow) measuring 7.5 x5.2 mm just beneath the skin (skin marked by short curved thin white arrow). (B) Colour Doppler ultrasound shows vascular flow at its base (straight thick white arrow). (C) Power Doppler of the solid nodule (curved white thick arrow) shows arterial flow.

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location was atypical. It was reported as BI-RADS (Breast Imaging Reporting and Data System) category 4 lesion. An excisional biopsy was recommended due to the superficial location and palpability of the mass. The lesion was completely excised.

The specimen on gross examination showed a fibro fatty tissue covered by skin ellipse. A raised area was identified on the skin surface. However, no skin ulceration was seen.

Histopathology revealed skin covered tissue exhibiting unremarkable epidermis. The dermis showed a well circumscribed cystic lesion arranged in lobules, comprising of clear cells and basophilic cells. In between the cells microcystic spaces were seen which were filled with protenacious material. There was no evidence of atypical mitosis or nuclear atypia. The histological features were compatible with nodular hidadenoma.

Discussion

Nodular hidradenoma is an uncommon benign sweat gland tumour. It has several synonyms including clear cell hidradenoma, eccrine acrospiroma and solid cystic hidradenoma. There are three types of sweat glands in the body: eccrine, apocrine and mixed. Nodular hidradenoma is typically known to originate from eccrine glands.[1,2] It usually occurs in fourth to fifth decade of life and women are affected twice more commonly than men.[3,4] It can occur in any part of the body e.g. face, arms, axilla, breast, thighs, trunk, scalp or pubic region and is the commonest eccrine tumour.[5] The lesion usually presents as a single slow growing painless lump of variable duration measuring 0.5 cm to several centimeters.[6] It is located in the dermis and subcutaneous fat.[1] Underlying muscle and epidermis is spared but occasionally there may be overlying skin discoloration or ulceration.[6,7]

On ultrasound, the most commonly reported appearance is a well defined predominantly cystic mass with a solid component or a mural nodule[2,8,9] showing vascularity which is similar to our case. The cystic portion may have complex appearances in the presence of haemorrhage. Haemorrhage may also cause sudden increase in size of the lump. Occasionally it may be seen as a solid well defined hypoechoic vascular lesion.[1] The vascular flow is usually arterial with low resistance, however venous flow has also been reported.[8]

Mammogram can be performed as a workup for lesions that are in the breast or axilla. The mammographic findings are nonspecific. The lesions appear as high density well defined masses on mammogram.[8] Mammogram was not performed in our case as the patient was only 30 years old and the lesion was evaluated by ultrasound only.

Several reports have described MRI appearance of nodular hidradenoma occurring in various parts of the body.[1] On MRI they are seen as well circumscribed solid or cystic subcutaneous lesions usually intermediate to low signal on T1 weighted images and intermediate to high signal on T2 weighted images with enhancement of solid portion on intravenous contrast administration. Fluid levels have also been reported as a characteristic feature on MRI in lesions which have haemorrhage.[10]

Primary breast cancer and papillary neoplasm of the breast need to be considered in the differential diagnosis if the lesion arises in the breast or axillary tail region. As preoperative definite diagnosis is not possible, excision is recommended rather than biopsy because of superficial location of these lesions. Our case also underwent complete excision and the diagnosis was made on excised specimen. The lesion needs to be excised with clear margins to avoid recurrence.[3]

Haemangioma, vascular leiomyoma, lymphoma or metastasis should be considered in the differential if the lesion is located elsewhere.[1,7]

Malignant transformation can occur in long standing cases although uncommon, the frequency is 6%-7%.[4,11] The prognosis is poor with 5 year survival being less than 30%. Malignant hidradenocarcinoma usually arises de novo.[4,7]

Conclusion

Nodular hidradenoma, although rare, should be considered in the differential diagnosis of a superficially located, well circumscribed, cystic or solid lesion with vascularity on ultrasound.

As this case is being reported in retrospect patient consent was not obtained, however exemption for ethical approval was obtained for this case from the institute's Ethical Review Committee.

Disclaimer: None to declare.

Conflict of Interest: None.

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