CASE REPORT

APOCRINE HIDROCYSTOMA MIMICKING BREAST LESION IN A YOUNG MALE

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ABSTRACT: Here we report a case of an isolated apocrine hidrocystoma in a 16 year old male who presented as a swelling in the right breast. Due to its sub areolar location, a lesion of mammary origin was suspected. Clinically and sonographically the cystic nature of the swelling was confirmed & a tentative clinical diagnosis of lymphangioma of the right breast offered. A surgical excision of the same was done. The specimen was sent for the histopathological examination.

KEY WORDS: Apocrine hidrocystoma, male breast, lymphangioma.

MeSH Terms: Hidrocystoma, apocrine, breast cyst, lymphangioma, excision.

INTRODUCTION: Apocrine hidrocystoma is an uncommon cystic lesion and is most often solitary. They are benign cystic proliferations of the apocrine glands. Despite its apocrine derivation it is rare at sites rich in normal apocrine glands. It is usually found on the head and neck, commonly affecting the cheek and the eye lid. The cyst shows an equal sex incidence and arises most often in the middle aged¹.

CASE REPORT: A male patient aged 16 years presented with a swelling in the right breast since a few years. Patient was apparently asymptomatic at birth and the swelling appeared in his childhood and gradually increased to the present size. There is no history of trauma, discharge per nipple, usage of medication or any addictions. There is no similar history in his family.

EXAMINATION: Inspection revealed a 5x5 cm single swelling in the right breast beneath the nipple and areola. Nipple and areola were normal. No discharge per nipple or nipple retraction. On palpation the swelling was oval, cystic with well-defined margins. No local rise in temperature or tenderness noted. Fluctuation and transillumination tests were positive, further confirming the cystic nature of the swelling clinically. Swelling was mobile over the underlying muscles and fascia. Skin over the swelling was not pinchable. Axillary lymph nodes were not palpable and physical examination of the left breast was unremarkable. Gynecomastia was not appreciated in either breast. Other general examination was not contributory.

A clinical diagnosis of lymphangioma of the right breast was made.

INVESTIGATIONS: Routine blood and urine examinations were within normal limits. Random blood glucose was 100mg/dl. Serum urea was 20mg/dl and serum creatinine was 1.0mg/dl. Serum electrolytes showed a Na⁺ of 145meq/L and a K⁺ of 3.9meq/L. The patient was non-reactive for HIV and HbsAg.

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Ultrasound examination of the right breast mass revealed a hypoechoic lesion of size 2.5 x 0.8cms noted in the lower inner quadrant of the right breast.

SURGERY: Excision of cyst of right breast was done under general anesthesia. Sub areolar incision was made and the cyst measuring 5x 5 cms. excised along with its wall. Intra operatively cyst yielded 5ml of straw coloured fluid. Specimen was put in formalin and was sent for Histopathological examination. The specimen was fixed and processed routinely, H & E stained sections were studied.

HISTOPATHOLOGY: Microscopy revealed fibro adipose tissue, few congested blood vessels and a cystic lesion lined by single layer of tall columnar epithelium, at places showing pseudo stratification. Focally the lining is thrown into structures that resemble papillary projections without any fibro vascular core. Individual cells have abundant eosinophilic cytoplasm and basally placed nuclei, apocrine snouts noted at places. Focal areas revealed cyst macrophages and hemorrhage. The swelling being sub areolar in location, we had performed immunohistochemical markers like ER (Estrogen Receptor) and mammaglobin (ER- Monoclonal Rabbit, Clone- EP 1, mammaglobin-Clone 304-1A5, North America by DAKO were used) to rule out mammary origin. The apocrine cells showed no immunoreactivity for both the markers.

A final diagnosis of Apocrine hidrocystoma was made.

DISCUSSION: Apocrine cystadenoma/hidrocystoma is a spectrum of lesions ranging from fluid filled cysts with simple apocrine lining to multi lobular cysts that contain apocrine lined papillary structures². Though the origin of apocrine hidrocystoma is not clearly known, they are presumed to be adenomatous cystic proliferations of the apocrine glands³.

Clinically the lesions are usually discovered on the face and the head of older adults of either sex. Other sites such as trunk and genital region may be affected. Most often they are solitary, skin colored or bluish black and they typically measure less than 2 cm in diameter. Sometimes, multiple lesions occur^{2,4,5}.

In the present case the patient was a young male from a rural background that had the swelling for many years before he came to the hospital, indicating that the pathology had started in his childhood.

Moreover, the case becomes interesting as the patient presented with a right breast swelling. In such cases high degree of clinical suspicion is towards ruling out male breast diseases⁶. Grossly Apocrine hidrocystomas are uni or multi lobular cystic structures that contain a clear brownish fluid.

Histologically the cyst lining consists of a layer of high columnar cells with abundant granular eosinophilic cytoplasm and a round eccentric basally located nucleus⁷. Decapitation secretion is often present. Papillary structures, if present are covered by apocrine epithelium. In some areas the lining may be simple cuboidal. The cells often contain PAS positive, diastase resistant granules which are probably lipofuscin. Myoepithelial cells may be identified beneath the epithelial cells in some cases. The differential diagnosis includes eccrine hidrocystoma, cutaneous ciliated cyst etc. In this case because of the location of the lesion, a differential diagnosis of apocrine cyst of the male breast was also considered and immunological markers like ER and Mammaglobin were done to rule out the same.

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CONCLUSION: In the present case since the clinical presentation of the patient was a breast swelling, it becomes important to rule out any breast pathology both clinically and histologically as the latter is hormone dependent and requires follow up. Similarly whenever there is a breast swelling, non breast pathology should also be thought of.

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Image 1: Specimen showing a single cyst m/s 4.5x3.5 cms; inset shows Right breast swelling.

Image 2: H & E – tall columnar epithelium with abundant cytoplasm & apocrine snouts

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Image 3: X 40 Apocrine cells negative for ER.

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