# ACCESSORY BREAST TISSUE WITH COEXISTENT ADNEXAL TUMOR **IN MALE – RARE CASE**

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#### ABSTRACT

Accessory breast tissue occurs due to failure of resolution of embryonic mammary ridges present from axilla to groin bilaterally. It may be functional or non-functional. This condition is more commonly seen in L.N. Medical College & Research Centre, the females and very few cases have been reported in males. Development of ectopic breast tissue is dependent on hormonal stimulation similar to normal breast. It remains asymptomatic usually and increases in size after a hormonal stimulation at the time or after puberty. Majority of the occurrences are completely benign, but this condition also has the potential to convert into a malignant lesion. Apocrine

hidrocystoma is regarded as cystic retention and adenomatous proliferation of apocrine sweat glands. It commonly occurs on the head & neck, but can infrequently be present in other locations like axilla, vulva, penis. This is the report of case of apocrine hidrocystoma with accessory breast tissue in a 30 year old male presented with left axillary swelling. Cytomorphological assessment revealed benign epithelial lesion and a diagnosis was established only after a histopathological examination. It emphasises the role of histopathology in diagnosis of axillary breast lesions.

KEYWORDS: Accessory breast, Ectopic breast, Apocrine hidrocystoma.

#### **INTRODUCTION**

Remnant Breast tissue that persist from normal embryologic development of mammary ridge present as accessory breast tissue usually along the milk line (1). It comprises of any one or all components of breast tissue like nipple, areola or glandular and stromal element which may or may not be functional & hormone dependent (2). Ectopic breast tissue also undergo physiological changes and increases in their size after hormonal stimulation. Benign or malignant breast diseases can develop in this lesions (3). Ectopic breast tissue (EBT) may or may not have overlying nipple and areola thus known as supernumerary breast (SB) or aberrant breast tissue (ABT) respectively. The condition is rare in males as compared to females, with an overall prevalence of 0.4-6% in females and 1-3% in males, with Japanese patients having high incidence of lesion (4). Majorly, accessory breast tissue in axilla are clinically misdiagnosed as lipoma or lymphadenopathy. All the breast pathologies are inclined to develop in the aberrant breast tissue so exact and early diagnosis of these conditions is important (5). Fine needle aspiration cytology acts as an important diagnostic tool to assess etiology of axillary lump and helps to distinguish between benign and malignant

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lesion in an unsuspected case of ectopic breast tissue (6). Apocrine hidrocystoma is a benign adenomatous cystic proliferation derived from aporcine glands & occurs as solitary lesions. Apocrine gland rich areas are groin, axilla, ano-genital region, evelids (Molar's gland) and ears (Ceruminous gland), but apocrine hidrocystoma is commonly seen on the head and neck area and rarely present on other locations like axilla, vulva, penis (7-8). Here we discuss an occurance of accessory breast tissue with coexistent benign adnexal tumor, apocrine hidrocystoma in a male left axilla.

#### **CASE REPORT**

A30-year male, presented in dermatology clinic of L. N. Medical college & J.K. Hospital, with swelling in the left axilla since one year back. Initially the swelling was small, and gradually increased to the present size which was approximately the size of a lemon. The swelling was non-tender but patient was bothered about the increased size, which compelled him to visit the hospital. The patient has had no associated symptoms of hormonal imbalance or weight loss. He had no history of breast cancer in the family or history of any other chronic illness. On physicalexamination, swelling was approximately 3x2 cm in size, well defined, soft and non-tender, with no scar marks or any

discharging sinus, not adherent with the over lying skin or underlying structures. It was not associated with any other symptoms.(Fig. 1) On the basis of clinical examination, a primary diagnosis of axillary lipoma was made. Ultrasonography was suggestive of hyperplasia of fibro fatty tissue or an ectopic breast tissue. Fine needle aspiration cytology of axillary lump was performed and it yielded a blood mixed aspirate. Pauci-cellular smears showed few tight clusters of epithelial cells having round to oval nucleus with scant cytoplasm on a hemorrhagic background.(Fig. 2-3) On the basis of cytomorphological findings, an impression of a benign epithelial lesion with possible differential diagnosis of benign adnexal tumor or ectopic breast tissue was given. Excision of swelling was done under general anesthesia and we received specimen for histopathological confirmation. Grossly, it was a single, partially skin covered, grey yellow to grey brown in color, soft in consistency, measuring 3x2x2 cm specimen. The cut surface showed firm whitish areas with fatty yellowish tissue. (Fig. 4) The tissue was processed, slides were prepared and stained with H&E. Microscopic examination showed round to oval and few dilated ducts and acini lined by cuboidal to low columnar epithelial cells with adjacent fibro-fatty tissue. (Fig. 5-6) At places, multiple conglomerated variable sized cystic spaces were present in the same section, lined by double layer of epithelial cells. The lining epithelium showed apocrine changes.(Fig. 7,8)An overlying unremarkable epidermis and pilosebaceous unit was identified. No atypia or malignancy was seen in the sections. A histopathological diagnosis of Apocrine Hidrocystoma with AccessoryBreast Tissue-LeftAxilla was made.



Fig. 2: Giemsa Stained Smears (40x)- Show Tight Clusters Of Epithelial Cells Against A Haemorrhagic Background



Fig. 1: Left Axillary Swelling (3x2 cm)



Fig. 3: Giemsa Stained Smear (100x)- Epithelial Cells Having Round To Oval Nucleus With Scant Cytoplasm



Fig. 4: Gross, Skin Covered Grey Yellow To Grey Whitish Areas



Fig. 5: H&E Stain(100X), Round To Oval Ducts With Adjacent Fibro-fatty Tissue



Fig. 6: H&E Stain(100X), Dilated Ducts And Acini With Adiacont Fibro fatty Tissue



Fig. 7: H&E Stain(40X), Multiple Conglomerated Cystic Spaces



Fig. 8: H&E Stain(400X), Cystic Spaces Lined By Two Layered Epithelial Cells And Show Apocrine changes

# DISCUSSION

Accessory breast tissue is a term synonymous with ectopic breast tissue, supernumerary breasts, aberrant breast, polymastia (9). Normal breast starts developing along the milk line in the fourth week, which initiates as mammary ridges. Mammary ridges present on the ventral surface of the embryo, which is a paired ectodermal thickenings, extending from the axilla towards the midline and then to the medial thigh. Mammary glands develop on the anterior thorax at the level of the fourth intercostal surface. Normally the mammary ridges regress completely except where the mammary gland will later develop (10). The condition in which the mammary ridges fail to involute completely is termed Supernumerary Breast tissue (11). Approximately 67% of EBT occurs along the abdominal and thoracic portions of the milk line, with

another 20% occurrence in the axilla, and 13% can occur anywhere along the milk line (12). Few cases of ectopic beast tissue located outside the milk line such as the face, posterior thigh, perineum, obturator muscle and midline of shoulder. Their development can be explained by two hypotheses. Either it can represent a migratory arrest of breast primordium during chest wall development or this occurrence can be attributed to its development from the modified apocrine sweat glands (13-15). EBT may occur unilaterally or bilaterally, and may be functional or non-functional. The ratio of men to women is 1:5 with rarity in males. Krishna and Dayal (2016) reported 22 cases of ABT, among which only one case was reported in male and remaining 21 were in females. Majority of patients remain asymptomatic with only visible swelling. They may be symptomatic when hormonally stimulated. Kajava (1915) classified supernumerary breast tissue from class I to class VIII, which is still in use today. (16) In our case, only glandular tissue was present in axillary swelling, so it was classified as ABT of class IV. When axillary swelling is the clinical presentation then lipoma, lymphadenopathy, suppurative hidradenitis, sebaceous cyst, vascular lesions, metastasis in lymph nodes, axillary tail of Spence, neoplastic lesions and adnexal lesions should be considered as a differential diagnosis.(17, 18)Early diagnosis of EBT is important because there is a risk of developing benign or malignant tumors that can develop in a normal breast. Malignancy in ectopic breast is rare, that occur in 0.3-0.6% of all cases of breast cancers. (1)FNAC acts as an important diagnostic tool to know the etiology of axillary swelling, especially in case of hormonally stimulated responsive lesion with proliferative or fibrocystic changes. In our case, FNAC demonstrated a sheet of benign epithelial cells, making our possible differentials as an accessory breast tissue or a benign adnexal lesion. Diagnosis is confirmed by the histological findings comprising of the islands of ductal system along with fibro-fatty tissue. Asymptomatic cases do not require any treatment and should be monitored for any pathological changes. Surgical excision is used as the treatment for symptomatic cases.(19)

Hidrocystomas are rare cystic lesion that form benign tumor of apocrine sweat glands & usually occurr as solitary lesions, commonly on the head and neck, and can be present in other locations like axilla, vulva , penis but not frequently.(6,7)Anzai et al studied 167 cases of apocrine hidrocystoma, out of which only 7 cases have been found in axilla. These are histologically identified as unilocular or multilocular dermal cysts, lined with cuboidal or high-columnar apocrine secretory cells with decapitation secretion, resting on a layer of elongated myo-epithelial cells.(20) Treatment of this benign tumor is surgical excision.

### CONCLUSION

Accessory breast tissue with coexistence of adenexal neoplasm, apocrine hidrocystoma is a rare finding, especially in males. These should be considered as one important possibilities along with other common differentials when dealing with axillary swellings. EBT has the potential to develop into a malignancy, so it requires careful investigations. FNAC plays an important role in its diagnosis, being a simple, costeffective, rapid method and also causes less discomfort to the patient. Early diagnosis of accessory breast tissue or any adenexal tumors with proper surgical treatment and histopathological examination, are a gold standard that should lead to good outcomes and optimal level of patient satisfaction.

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