



A rare finding of coexisting fibroadenoma and duct ectasia in axillary ectopic breast tissue

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ABSTRACT

Ectopic breast tissue (EBT) can present anywhere along the milk line from axilla to groin. It can harbor all the pathological conditions as that of the normal breast though incidence is very low. Fibroadenoma is rare in accessory breast and only a few cases have been reported in the literature. Here, we report a 30-year-old female presented with a firm and freely mobile right axillary lump measuring 6 cm × 4 cm. Fine-needle aspiration cytology revealed it as accessory breast tissue. However, the excision biopsy of the same showed fibroadenoma along with duct ectasia in EBT. This case has been reported due to its rarity and for consideration of fibroadenoma in differential diagnoses of axillary swellings.

KEY WORDS: Axilla, breast, fibroadenoma

INTRODUCTION

Polymastia or supernumerary or accessory breast are frequently used terms for ectopic breast tissue (EBT) which can present anywhere along the milk line, which extends from axilla to groin. The incidence of the accessory breast in females is about 0.4-6%, of which axilla is the most common location [1]. The supernumerary breast tissue is subject to the same alterations and diseases, whether benign or malignant, that affect normal breast tissue [2-4]. But, the incidence remains very low. The axillary accessory breast is at greater risk of developing cancer followed by inflammation and fibroadenoma [5]. Fibroadenoma, a common disease of normal breast is rare in accessory breast and only a few cases have been reported in the literature. Also, the simultaneous presence of fibroadenoma and duct ectasia in the accessory breast is even rarer. The exact incidence of which could not be found even after extensive literature search.

Because of rarity, we are prompted to report this co-existence of fibroadenoma and duct ectasia in the axillary accessory breast.

CASE REPORT

A 30-year-old multiparous, non-lactating female presented with the complaint of mass in the right axilla since 1-year which was gradually increasing in size and associated with pain and discomfort.

On examination, there was a firm, freely mobile, slightly tender, discrete swelling, palpable in right axillary region

which measured around 6 cm × 4 cm in size. The swelling was completely separate from right breast. Ultrasonography revealed the presence of fibro-glandular tissue at the site of complaint [Figure 1]. Both the breasts and other sided axilla were clinically normal. Ultrasonography of abdomen and pelvis was normal. Fine-needle aspiration (FNA) performed showed the presence of sheets of bimodal ductal epithelial cell population against a hemorrhagic background conforming to the diagnosis of accessory breast [Figure 2]. Excision biopsy was performed. Peroperatively it was found to be a subcutaneously located lesion.

On gross examination, the mass was fibrofatty, which on cut section revealed gray-white to yellow areas with small intervening cystic spaces [Figure 3]. Histopathological examination revealed a small well-defined, encapsulated intracanalicular type of fibroadenoma along with features of duct ectasia in surrounding right accessory breast tissue [Figure 4].

The patient was on routine clinical follow-up and was asymptomatic.

DISCUSSION

Mammary ridge develops during 5th or 6th week of embryogenesis and extends from axilla to groin. In normal development, most of the embryologic mammary ridges resolve, except for two segments in the pectoral region, which later become breasts. Failure of any portion of the mammary ridge to involute can lead to EBT with or without a nipple-areolar complex. As with

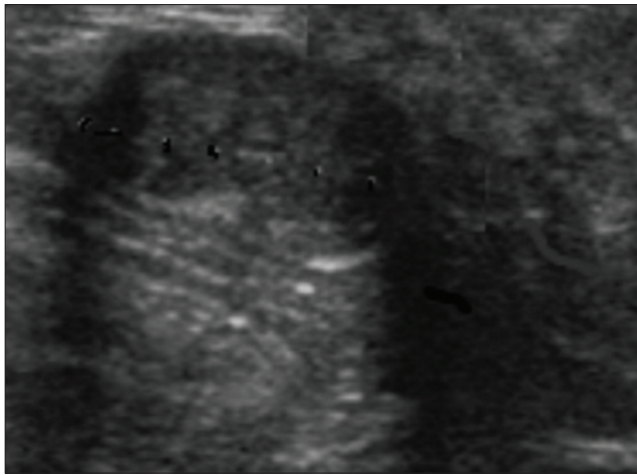


Figure 1: Ultrasonography showing presence of fibro-glandular tissue in the axillary mass

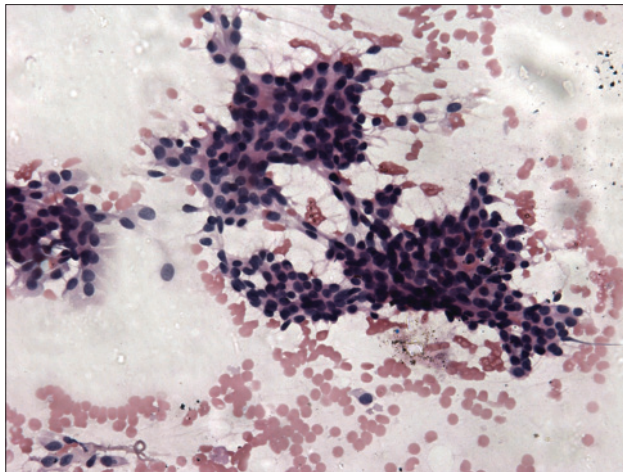


Figure 2: Fine-needle aspiration cytology smear revealing bimodal population of ductal epithelial cells (Papanicolau, $\times 100$)

normal breast tissue, it can be affected by the same alterations and diseases, whether benign or malignant.

Although it appears on milk line, yet rarely can appear on atypical locations such as face, vulva, perineum, posterior neck, thigh, shoulder, and upper extremities [6]. The presence of EBT at sites other than milk line is supported by two hypotheses; one is that it represents a migratory arrest of breast primordium during chest wall development and the other is that it develops from the modified apocrine sweat glands [7]. In most cases, accessory breasts are asymptomatic and cause nothing more than a visible distension which may resemble a tumor. Sometimes it could cause psychological disturbances in adolescence and it may give pain and discomfort especially during menstruation, pregnancy, and lactation [8]. Apart from the psychological and cosmetic impact, it develops the same pathological changes as the normally located breast tissue such as inflammation, fibrosis, fibroadenoma, cystosarcoma phyllodes, and carcinoma [8,9]. Fibroadenoma is a common benign disease of normal breast issue. Its occurrence in accessory breast tissue is very rare and only a few cases

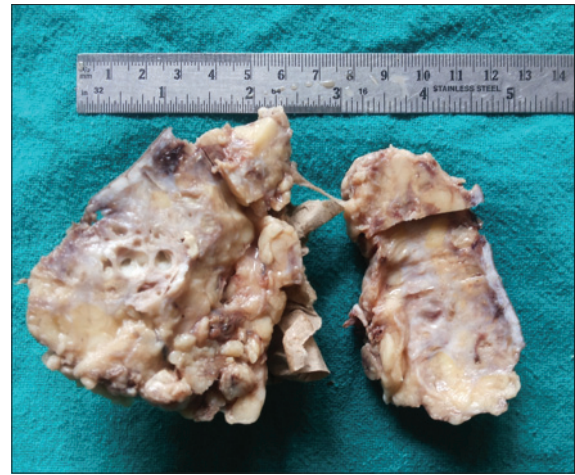


Figure 3: Gross photograph of the cut surface of axillary mass showing gray-white to yellow areas along with small cystic spaces

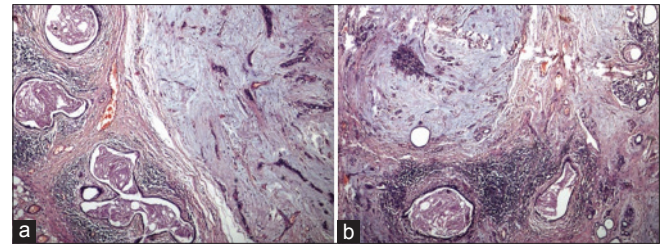


Figure 4: (a and b) Photomicrograph showing intracanalicular type of fibroadenoma coexisting with duct ectasia in surrounding axillary mass (H and E, $\times 40$)

have been reported in literature. It is a benign, nodular and encapsulated tumor composed of two elements: Epithelium and stroma [10].

Usually, carcinoma arising in the ectopic breast is rare with an incidence of about 0.3% and presents late with poorer prognosis due to delay in the diagnosis [5]. This delay occurs due to a broad differential diagnosis for an axillary lesion including lipoma, sebaceous cyst, vascular lesions, suppurative hidradenitis, cat scratch disease, lymphadenopathy, secondaries in lymph nodes, tuberculosis, axillary tail of Spence, or even a torn muscle belly and malignancies [11]. FNA cytology (FNAC) is an important initial investigation for differentiating these conditions and final confirmation can be done on histopathological examination of excised tissue.

Extramammary breast tissue may be associated with supernumerary kidneys, renal agenesis, renal malignancies and other congenital anomalies such as pyloric stenosis, epilepsy and cardiac abnormalities due to corresponding development of mammary tissue and the genitourinary system [4,8]. If the accessory breast is associated with any suspicion of pathology, then further investigation with FNAC, ultrasonogram, mammography, and biopsy should be done as for any other breast lesion. Excision is done for cosmetic, psychological and therapeutic reasons. Even liposuction has been tried with good results [10].

CONCLUSION

This case report emphasizes the importance of considering the ectopic breast and its associated pathology in the differential diagnosis of axillary mass and also stresses the importance of evaluating the patients to rule out renal anomalies or urological malignancies as it is an important association. FNAC is very valuable in diagnosing the lesion but surgical excision is the procedure of choice both for treatment as well as a final diagnosis as seen in our case.

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