

# Fibroadenoma of axillary ectopic breast tissue: A rare clinical entity

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## ABSTRACT

Supernumerary breast or polymastia is a well-documented anomaly of the breast and commonly presents along the embryonic milk line extending between the axilla and groin. Reported incidence of accessory breast is 0.4-6% in females. During 2 years period, we encountered only two cases out of twenty cases of axillary lumps. We present one case of fibroadenoma in ectopic breast tissue (EBT) in axilla. Ectopic breast denotes breast tissue at more than two pectoral regions, which is mostly benign but at times can be malignant. EBT is at a greater risk of malignancy. Fibroadenoma of ectopic axillary breast tissue (EBT) is quiet rare, but should always be kept in mind for differential diagnosis of an axillary mass.

**Key words:** Axilla, fibroadenoma, supernumerary breast

## INTRODUCTION

Ectopic breast tissue (EBT), polymastia or supernumerary and accessory breast are proper synonymous words used for breast tissue at more than two places with or without nipple. Milk line extends from axilla to the groin and EBT can occur anywhere along this primitive line. It may occur unilaterally or bilaterally.<sup>[1]</sup> Approximately 67% of accessory breast tissue occurs in the thoracic or abdominal portions of the milk line often just below the inframammary crease and only 20% of accessory breast tissue occur in axilla. The remaining (13%) locations include anywhere along the milk line. Reported incidence of accessory breast is 0.4-6% in females. Cases of polymastia have also been reported on other sites such as the face, vulva and perineum. It is still rarer in male, found in 50% in comparison to females. EBT can harbor all the pathological disease as in normal breast tissue, though incidence remains low. Fibroadenoma is a common benign disease of normal breast issue. Its

occurrence in accessory breast tissue is very rare and only few cases have been reported in the literature. The clinical significances of these anomalies include their association with other congenital anomalies of the urinary and cardiovascular systems.<sup>[2]</sup> During January 2011 to December 2012, we encountered thirty cases of lump in axilla. Only two cases were with accessory breast tissue and one case was with fibroadenoma in left side EBT. Owing to its rarity as a seat of origin in ectopic breast, we are reporting this case of uncommon occurrence.

## CASE REPORT

The present case report is about a 23-year-old female presented with bilateral subcutaneous axillary masses for the last 7 years, with discomfort in both axillary masses more so during menstrual period. On examination, both swellings were firm and slightly tender, measuring 5 cm × 3 cm and of 4 cm × 2.5 cm in right and left axillae respectively [Figure 1]. On left side a small, tender, well defined nodule of about 1 cm, was palpable. Mammograms of both pectoral breasts were normal. Ultrasonography of both urogenital and cardiovascular system was normal. Both axillary breasts were excised under general anesthesia and histopathological report revealed a well-defined, capsulated intracanalicular fibroadenoma in left accessory breast tissue [Figure 2].

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**Figure 1:** Patient photo showing ectopic breast tissue in right axilla

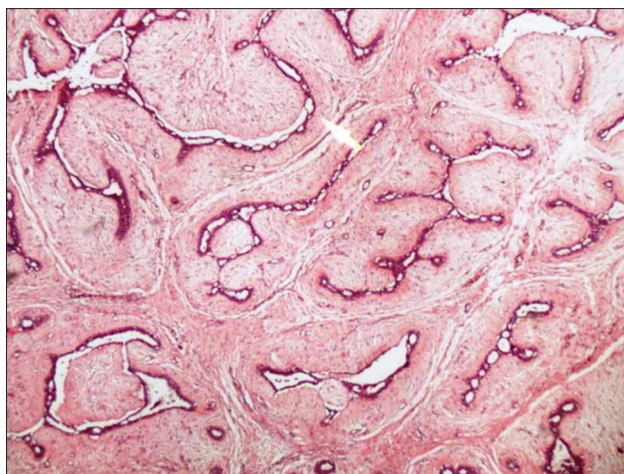
## DISCUSSION

During the 5<sup>th</sup> or 6<sup>th</sup> week of embryogenesis, mammary ridges develop by thickening of ectoderm, which runs from axilla to groin. Except for the two segments in pectoral region, which develop into normal breasts, remainder involutes, however, a failure to do so leads to ectopic breast in about 0.4-6% women.<sup>[2]</sup> The second hypothesis is that it develops from the modified apocrine sweat glands.<sup>[3]</sup> Approximately 6% are familial and rest are sporadic. The familial cases represent an autosomal dominant trait with variable penetrance.<sup>[4,5]</sup>

Supernumerary nipple can be present at birth, but ectopic breast develop only after hormonal stimulation usually during the puberty, pregnancy or lactation.<sup>[6]</sup> Although it appears on milk line yet rarely can appear on atypical locations like face, vulva, perineum, posterior neck, thigh, shoulder and upper extremities.<sup>[7]</sup> EBT, especially when found in axilla is located in the subcutaneous tissue and deep dermis of skin, where it often mingles with normal skin appendages gland. For the pathologist, it may be difficult to distinguish between tumors of skin appendages gland origin and mammary origin.<sup>[8]</sup> Masses in axilla like EBT may pose a diagnostic challenge and should be differentiated from lipoma, hidradenitis, follicular cyst or enlarged lymph node, hamartoma or phyllodes etc.<sup>[9-12]</sup>

If axillary accessory breast tissue is connected with outer part of normal thoracic breast tissue then it is called can the axillary tail of Spence. Hence accessory axillary tissue should be isolated tissue in axilla as in our case. In our case, the fibroadenoma was present in the left EBT rather than in any extension of breast tissue into the axilla.<sup>[8]</sup>

EBT is as prone to pathological and physiological changes as normal breast. Fibroadenoma is a common benign disease



**Figure 2:** Histopathology slide showing fibroadenoma in left ectopic breast tissue

of normal breast tissue. Its occurrence in accessory breast tissue is very rare and only few cases have been reported in literature.<sup>[1,2,8,13]</sup> Fibroadenoma of the breast is a benign tumor composed of two elements: Epithelium and stroma. It is nodular and encapsulated, included in breast. The epithelial proliferation appears in a single terminal ductal unit and describes duct-like spaces surrounded by a fibroblastic stroma. Depending on the proportion and the relationship between these two components, there are two main histological features: Intracanalicular and pericanalicular. Often, both types are found in the same tumor. (a) Intracanalicular fibroadenoma: Stromal proliferation predominates and compresses the ducts, which are irregular, reduced to slits. (b) Pericanalicular fibroadenoma: Fibrous stroma proliferates around the ductal spaces and hence that they remain round or oval, on cross section. The basement membrane is intact. Our case is intracanalicular type.

EBT 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.<sup>[14,15]</sup> Malignancy of EBT without nipple poses diagnostic delay the diagnosis, resulting in earlier and frequent metastasis with poor prognosis.

Radiological non-invasive procedures are of great help but fine needle aspiration or core biopsy is mandatory for appropriate surgical decision. Excision is done for cosmetic, psychological and therapeutic reasons. Even liposuction has been tried with good results.

## CONCLUSION

Based on the above case it can be concluded that accessory breast in axilla may pose to be a diagnostic dilemma as it may harbor both benign and malignant diseases as in

normal breast Though, fibroadenoma in normal breast is quiet frequent but infrequent in EBT and should be kept in the differential diagnosis of axillary swelling. Excision is the only treatment of choice for symptomatic EBT.

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