

## CASE REPORT

## Axillary fibroadenoma mimicking lymphadenopathy – a cytological diagnosis

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## ABSTRACT

Polymastia is a term that is used to describe the presence of more than two breasts in human beings. It is synonymous with supernumerary or accessory breast tissue. The axilla is the most common location for ectopic breast. Fibroadenoma, though commonly occurs in breast, it is rare in ectopic breast tissue. We report a case of fibroadenoma in axillary accessory breast tissue in a 25 years old nulliparous lady with a clinical diagnosis of axillary lymphadenopathy. Which was diagnosed as fibroadenoma on FNAC.

**Keywords:** Axilla, breast, ectopic, fibroadenoma

## INTRODUCTION

Polymastia is a term that is used to describe the presence of more than two breasts in human beings. It is synonymous with supernumerary or accessory breast tissue. The axilla is the most common location for ectopic breast accounting for approximately 60 to 70% of accessory breast tissue.<sup>1</sup> Supernumerary breast tissue is well documented in literature.<sup>2,3</sup> They usually develop along the embryonic milk line between the axilla and inguinal region.<sup>4,5</sup> Their incidence from the literature ranges between 1-6%<sup>6</sup> and it is believed to be due to failure of regression of milk line after normal development of breast in the pectoral area,<sup>7</sup> though its embryonic association with the apocrine sweat glands cannot be ruled out.<sup>8</sup> The diagnosis of ectopic breast tissue [EBT] is important because this tissue is also subject to the same alterations and diseases, whether benign or malignant, which affect naturally positioned breasts.<sup>9</sup> Extra – mammary fibroadenoma, however, is rare. It has been seen in such unusual locations as the axilla, eyelid and arm.<sup>2</sup> Rarity and the mistaken diagnosis of this case is the reason to report this case.

## CASE REPORT

**History:** A 25 years old nulliparous lady presented with the history of left axillary swelling about 6 months duration. The lump was not painful and had not increased significantly in size since first noticed. She had no other specific

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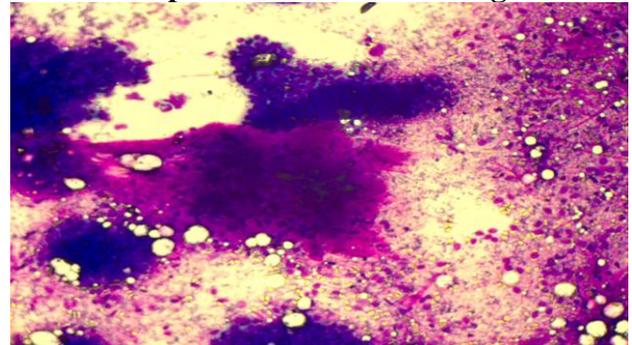
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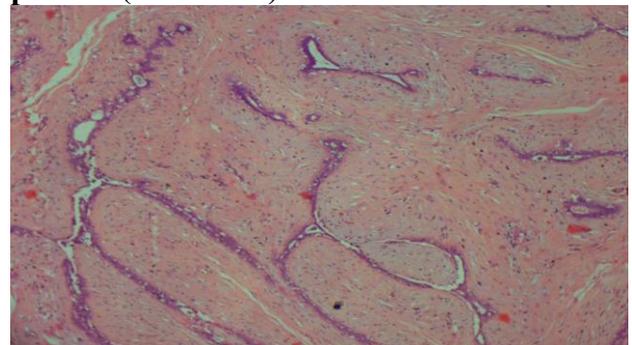
size since first noticed. She had no other specific complaints.

**Examination:** On physical examination there was a solitary, firm, freely mobile and non-tender swelling measuring around 1x1cm in size. Overlying skin was normal. Examination of both breasts and right axilla were unremarkable. A clinical diagnosis of right axillary lymphadenopathy was made.

**Figure 1: Bimodal branching pattern, stroma and bare bipolar nuclei in the background**



**Fig 2. Intracanalicular and pericanalicular pattern (H&E 10x)**



**Investigation:** FNAC was carried out for the swelling. Smears examined were cellular and showed ductal epithelial cells arranged in varying sized elongated branching sheets and stag horn pattern. The background had numerous

single bare bipolar nuclei . Stromal fragments also identified ( fig. 1 ) . A cytological diagnosis of fibroadenoma in the axillary accessory breast was made . Later the patient underwent excision biopsy and the specimen was sent for histopathological examination. Sections studied show both intracanalicular and pericanalicular patterns (fig. 2). Final diagnosis of fibroadenoma was made.

#### **DISCUSSION**

Supernumerary breast is a common congenital anomaly of the breast usually confined to the area of the embryonic milk line. The milk line developmentally arises as an ectodermic thickening between the upper limb and lower limb buds during the 6th week of gestation.<sup>4,5</sup> It gives rise to normal breast in the pectoral region and the rest of it will soon regress. Two hypotheses have been claimed on the embryogenesis of the supernumerary breast. One attributes the anomaly to the failure of regression and displacement of the milk line,<sup>7</sup> while the 2nd believes it develops from the modified apocrine sweat glands.<sup>8</sup> Most instances of ectopic breast tissue occur along the milk line in the axilla, though they have been reported in areas other than the milk line region like the face, perineum and vulva.<sup>10</sup> Supernumerary breast tissue is well documented in the medical literature, and polymastia is one of its most common presentations. However, reports of benign and malignant tumours in supernumerary breasts are rare.<sup>11</sup> As compared to pectoral breast tissue, EBT demonstrates the same hormonal effects and is at risk of developing breast diseases. During menses or pregnancy, hormonal stimulation may cause enlargement and discomfort. EBT can undergo lactational changes during pregnancy, and in the presence of a nipple- areolar complex, it can give rise to lactational secretion.<sup>12</sup> The clinical significance of the supernumerary breast, apart from cosmetic and psychological impacts, falls into their susceptibility to same physiological and pathological changes affecting normal breast, such as, inflammation, fibrosis, cystic and malignant changes.<sup>13,14,15</sup> Another important significance of the supernumerary breast and polythelia is their association with congenital anomalies of the urogenital system, an issue with

many controversial ideas.<sup>16</sup> Usually carcinoma arising from the ectopic breast presents late with poorer prognosis due to delay in the diagnosis. This delay happens due to a broad differential diagnosis for an axillary lesion, including lipoma, sebaceous cyst, vascular lesions, suppurative hidradenitis, cat scratch disease, secondaries in lymph nodes, tuberculosis, axillary tail of Spence, or even a torn muscle belly and malignancies.<sup>17</sup>

#### **CONCLUSION**

Ectopic breast is common in masses in axilla and malignant and benign tumours may develop from this lesion. One of the benign lesion is fibroadenoma, but its location in axilla is rare. Any swelling in axillary region should be evaluated properly and subjected to FNAC. It is a valuable tool in the diagnosis and fibroadenoma should be taken into consideration in the differential diagnosis of axillary swelling.

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