

**Case Report**

## **BILATERAL AXILLARY ACCESSORY BREAST TISSUE IN A MALE- A CASE REPORT**

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### **ABSTRACT**

Accessory breast tissue (ABT) is more frequent in females compared to male counterparts, commonest presentation being unilateral axillary mass. Presence of bilateral accessory breast tissue in male is a rare occurrence and it is noteworthy due to its need for close follow-ups. We report a case of bilateral axillary accessory breast in a 25 year old male with no other complaints. The importance of fine needle aspirate as diagnostic tool in an unsuspected case of ectopic breast tissue without nipple areola is emphasised here.

**Keywords:** *Accessory Breast Tissue, Axilla, Fine Needle Aspiration*

### **INTRODUCTION**

Accessory breast tissue (ABT) is the presence of a nipple, areola or glandular tissue in addition to the normal pair of breasts (Guray and Sahin, 2006). It is metonym with polymastia, supernumerary or ectopic breast tissue. ABT is more frequently seen along the milk line, axilla being the commonest location. However, an anatomic location outside the milk line should not preclude a diagnosis of ectopic breast tissue, as there are many well-documented, unusual sites of such tissue, including the knee, lateral thigh, buttock, face, ear, and neck (Guray, Sahin, 2006). It may occur unilaterally or bilaterally. Its incidence in female (0.4-6%) seems to outnumber its male counterpart (1-3%) (Sahu *et al.*, 2007). There is a drift in the occurrence of ABT among the Asian population especially Japanese than Caucasian (Neki *et al.*, 2014). The components of ABT may include nipple, areola, and/ or glandular tissue. When nipple-areolar complex is absent, the presence of ABT is difficult to identify. Its development is hormone dependent, similar to normal breast tissue. The functionality of ABT determines its response to physiological hormonal stimulus. Ectopic breast tissue usually arises sporadically; however, a hereditary predisposition has also been reported (Nirmala *et al.*, 2010).

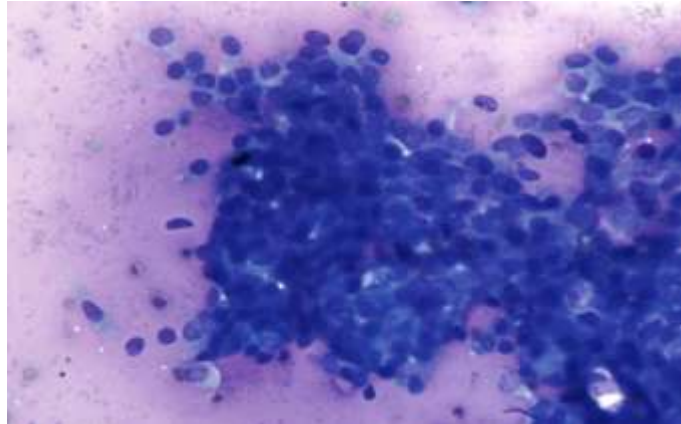
### **CASE**

A 25-year-old male presented to surgery out patient department of GTB hospital with history of bilateral axillary swellings for past 5 months. Swelling was gradually increasing in size and was associated with mild pain. A clinical diagnosis of bilateral axillary lymphadenopathy was offered. Examination of both axillary regions revealed a mildly tender, soft and mobile swelling measuring 1.5 X 1.5cms and 2 X 2cms on left and right sides respectively. The swelling was placed in the subcutaneous plane. Fine needle aspiration was attempted from both sides using 23 gauge needle attached to 10 ml syringe. FNA from left side yielded fluid mixed aspirate with few fragments of tissue, while from right side it was predominantly blood mixed aspirate. Two air dried May Grunwald Giemsa (MGG) stained and 1 alcohol fixed papaniculou stained smears were made from both sides.

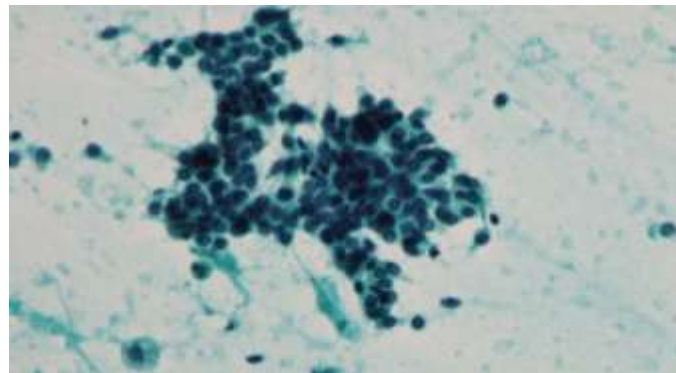
Fine needle aspirate from both left and right axillary swellings were cellular with uniform monolayered sheets of benign ductal epithelial cells along with few darkly staining myoepithelial cells in a fluid background (Fig 1, 2). Cytomorphological features were consistent with benign breast tissue in accessory location. Since the swelling was recent in onset (past two months only) gynecomastia was suspected and the patient was reexamined. However his bilateral breasts were not enlarged. They were normal looking with no other complaints. To find out cause of gynecomastia in accessory breast a detailed history and clinical examination was done. He was not taking any drugs that could induce gynecomastia. The patient

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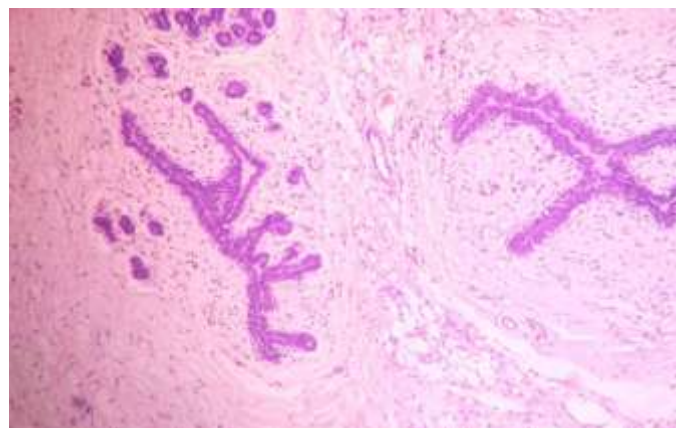
was moderately built with no physical abnormalities. Testicular examination was within normal limits. His routine hematological and biochemical investigations including liver function test and kidney function test were within normal limits. After ruling out the causes for gynecomastia a diagnosis of accessory breast tissue, bilateral axilla was offered. Excision was suggested in view of the size and site of the lesion and its risk of malignancy. Subsequently we received excision specimen from both sides which confirmed the diagnosis of bilateral ABT (Fig 3).



**Figure 1: Benign ductal epithelial cells along with few myoepithelial cells- May Grunwald Giemsa stain X400**



**Figure 2: Benign ductal epithelial cells along with few myoepithelial cells- papanicolou stain X400**



**Figure 3: Ducts lined by epithelial and myoepithelial cells in a myxoid stroma – Hematoxylin and eosin stain X400**

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### DISCUSSION

Accessory or ectopic glandular tissue, is residual breast tissue persisting from embryologic development. It may remain in attenuated forms until it is hormonally stimulated. During the early weeks of embryonic development, the mammary milk lines, which represent two ectodermal thickenings along the sides of the embryo, extend from the axillary region to the groin. In normal development, most of the embryologic mammary ridges resolve, except for two segments in the pectoral region, which later become the breast (Nirmala *et al.*, 2010). A failure of any portion of the mammary ridge to involute may lead to ectopic breast tissue with (polythelia) or without (polymastia) a nipple/areolar complex (Guray, Sahin, 2006). Similar to our reported case, the incidence of ectopic breast tissue is more frequent in the axillary region along the milk line where they may present as axillary fullness. However, aberrant breast tissue has also been reported in areas outside the milk line region, such as the perineum, face and vulva. The occurrence of ectopic breast is believed to be due to failure of regression and development of milk line after normal development of the breast in the pectoral area.

Accessory breast has been classified by Kajava as follows: Class I consist of a complete breast with nipple, areola, and glandular tissue. Class II consists of nipple and glandular tissue but no areola. Class III consists of areola and glandular tissue but no nipple. Class IV consists of glandular tissue only. Class V consists of nipple and areola but no glandular tissue (pseudo mamma). Class VI consists of a nipple only (polythelia). Class VII consists of an areola only (polythelia areolaris). Class VIII consists of a patch of hair only (polythelia pilosa) (Kajava, 1915). In the present case, only glandular tissue was found in the axilla and was accordingly classified as class IV type of ABT. Copeland and Geschicter proposed a more convenient classification: they referred to persistent or atrophic glandular tissue with a nipple or areola as supernumerary breast, and mammary tissue alone without a nipple or areolar complex as aberrant breast (Copeland and Geschickter, 1950). In fact, it is difficult to differentiate between supernumerary breast and aberrant breast clinically, and both of these categories are thus defined collectively as “accessory breast”.

Detection of bilateral axillary swelling in male leads to clinical differential diagnoses which include inflammatory lymphadenopathy, neurofibroma, lipoma, lymphoma, and hidradenitis suppurativa. Pathological changes such as mastitis, fibroadenoma, cystosarcoma, carcinoma, and duct hyperplasia have been reported in such ABT (Nihon-Yanagi *et al.*, 2011). Though their incidence is less, bilateral accessory axillary breast tissue in male should be included in the differentials. Fine-needle aspiration can be a very valuable tool in evaluating these masses. Alternative options for diagnosing accessory breast tissue being ultrasonography. Mammography & sonographic findings include mass like density which is identical to that of the normal breast parenchyma in the axilla. However in our case since FNA was diagnostic ultrasound was not attempted.

No treatment is required in the vast majority of asymptomatic cases (Down *et al.*, 2003) Accessory breast tissue should also be monitored for pathologic changes such as malignancy, fibroadenoma, mastitis and fibrocystic changes and therefore undergo the same screening as normal breast tissue (Nihon-Yanagi *et al.*, 2011). The treatment of choice for symptomatic accessory axillary breast tissue is surgical excision or liposuction as removal of the tissue will relieve physical discomfort or mechanical discomfort in the case of large volume accessory tissue (Down *et al.*, 2003). The ectopic breast tissue has been found to have a higher propensity to develop malignancy and occurs at an earlier age (Sun *et al.*, 2012)

### CONCLUSION

Aberrant breast tissue although not a frequent finding in male, may become first evident only during puberty. Thus it may prove to be a diagnostic dilemma and this entity must be kept in mind while dealing with swellings in the axillary region. The need for careful investigation of ABT should be emphasized; FNAC will remain as an important tool in preventing unnecessary surgery in such cases. FNAC has an advantage of being an immediate and excellent method for on-site examination of such cases. Since the

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majority of patients with such complaints have benign disease, they benefit from rapid diagnosis and discharge from the clinic.

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