

ACCESSORY BREAST TISSUE IN THE AXILLA IN A PUERPERAL WOMAN- CASE STUDY

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Ectopic or accessory breast tissue (EBT) is an uncommon residual tissue that persists from normal embryonic development, found in 2-6% of the female population. EBT may occur anywhere along the embryonic mammary streak, but is most commonly located in the axillary region. EBT can consist of any or all components of the breast and may be functional or non-functional. The development of this tissue is hormone-dependent, similar to normal breast tissue. EBT presents as asymptomatic mass and may prove to be a diagnostic challenge in the absence of areola and nipple. The identification and distinction of EBT from other breast pathologies occurring in the area, both benign and malignant, is essential for proper management. In most of the cases, these lesions are asymptomatic and do not warrant any intervention unless they produce discomfort. In this report, we present a case of an ectopic breast tissue in the left axilla of a 24-year-old Asian Indian primipara patient. The importance of FNAC as diagnostic tool in suspected cases of polymastia without nipple/areola and the conservative approach through regular follow-up for management of proven benign ectopic breast tissue are highlighted. *Acta Medica Medianae 2010;49(4):45-48.*

Key words: ectopic breast tissue, axilla, FNAC, conservative management

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Introduction

"Polymastia" is a term that is used to describe the presence of more than two breasts with or without a nipple and areola in human beings. It is synonymous with supernumerary or ectopic breast tissue (EBT). Supernumerary breast tissue is seen mostly along the milk line; it may occur unilaterally or bilaterally and the most frequent sites are the axilla, chest wall and vulva (1-3). It may vary in its components of nipple, areola, and glandular tissue. However, an anatomic location outside the milk line should not preclude a diagnosis of ectopic breast tissue, because there are many well-documented, unusual sites of such tissue, including the knee, lateral thigh, buttock, face, ear, and neck (4). EBT is usually located near the breast, most commonly in the axilla. Accessory breast tissue is a common variant of EBT, with a reported incidence of 2 to 6% in women (5, 6). It is twice as common in female patients as in males. Accessory breast tissue and polymastia are more common among Asians, especially Japanese than

Caucasian (7). EBT can be seen during or before puberty, and is often noticed during pregnancy (8) and usually has a nipple and areola and a separate duct system from that of the normal breast. However, when the nipple-areolar complex is absent, the presence of the accessory breast tissue is difficult to identify. The ectopic breast tissue responds in the same way as normal breast tissue to physiological influences. Ectopic breast tissue may arise sporadically; however, a hereditary predisposition has also been reported (9).

Diagnosis of EBT is important because ectopic breast tissue is subject to all of the diseases that affects the breast such as mastitis, abscesses, milk fistula, cyclical mastalgia, fibroadenomas, fibrocystic disease, phyllodes tumors, Paget's disease as well as all varieties of breast cancer (10,11). The presence of ectopic breast masses may simulate recurrence and cause unnecessary anxiety to patients with known and treated breast cancer (12).

Herein, we report a case of an accessory breast tissue in the left axilla in a postpartum woman and its conservative management.

Case History

A 24-year-old Asian Indian primi-gravida with term pregnancy was presented with premature rupture of membranes. The patient delivered a male baby with emergency caesarean section because of oligohydromnios and associated foetal

distress. The immediate post-partum period was uneventful. On the third day post-partum, the patient complained of painful swelling in the left axilla. On physical examination, a firm, non-tender mobile mass of 3 x 2 cm size found in the left axillary region which was nonadherent to the underlying tissues and was completely isolated from the left breast (Figure 1). There was no associated skin change or discharge from the mass (Figure 2). Both breasts were clinically normal and there was no enlargement of axillary, cervical, supraclavicular lymph nodes. The patient had no significant medical problems, no past history or family history of cancer, and took no medications other than oral iron, calcium and folic acid supplementation. A provisional differential diagnosis of lymphadenopathy, sebaceous cyst, abscess, fibroadenoma, lipoma, hidradenitis, follicular cyst, accessory or breast tissue without nipple and areola was made.



Figure 1



Figure 2

The routine hematologic and biochemical parameters were within normal limits. Fine-needle aspiration (FNA) of the mass was performed. The aspirate, which was whitish in colour on cytological examination, revealed singly scattered apocrine cells with vacuolations along with sheets of ductal epithelial cells amidst red blood cells. The cytological features were consistent with accessory breast tissue. The patient was advised analgesics (Paracetamol® dose rate of 500 mg every 8 hour interval for 3 days) along with hot fomentation to relieve pain. The patient was advised for excision of the mass to prevent any further complications. The patient however, deferred the surgical treatment because the symptoms subsided and opted for regular follow-up. The patient reported back to the clinic after one month with no detectable swelling in the axillary region. The patient is currently undergoing follow-up and remains asymptomatic.

Discussion

Polymastia, the presence of accessory or ectopic glandular tissue, is the second most common form of supernumerary breast tissue, occurring in 2-6% of the normal female population (5,6,13). EBT may appear as anything from subcutaneous tissue similar in appearance to a small mole to that of a fully functioning breast (9).

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. 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 (1,5,14). 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 responsive to hormonal cycles of menstruation, pregnancy, or lactation (8,10,15). However, aberrant breast tissue has also been reported in areas outside the milk line region, such as the perineum, face and vulva (16,17,3). 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 (18), though its embryonic association with the apocrine sweat glands cannot be ruled out (19).

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) (20). In the present case, only glandular tissue was found in the axilla and was accordingly classified as class IV type of EBT.

Although EBT is present at birth, it stays dormant until puberty, pregnancy, or lactation and the presence of EBT is often noticed only during pregnancy or lactation due to hormonal stimulation (8,15). Symptoms in axillary breast tissue reportedly worsen with subsequent pregnancies, causing increased pain and local irritation, restriction of arm movement and anxiety (21). Most of the patients remain asymptomatic, although frequently a palpable axillary thickening can be observed during monthly premenstrual changes. As compared to pectoral breast tissue, EBT demonstrates the same hormonal effects and is at risk of developing breast diseases. EBT can undergo lactational changes during pregnancy, and in the presence of a nipple-areolar complex, it can give rise to lactational secretion (22). However, in the present case no lactational secretion was observed due to the absence of nipple in the partially developed glandular tissue. EBT is also known as aberrant breast tissue and is not functional because it does not have ductal communication with the skin (14).

In the present case, the diagnosis was not considered during antenatal examination probably because of absence of the nipple and the areola. In addition, the patient also never gave any history of presence of swelling during puberty or during antenatal period. The clinical differential diagnosis for a solitary axillary mass is very broad (23). In general, work-up is identical to that of any breast mass. Standard mammograms do not usually show ectopic breast tissue, because of its location. Ultrasonography can be of diagnostic help in some of the cases. However, mammogram and ultrasonography was not performed in this case considering the cost involved, size and asymptomatic nature of swelling. Fine-needle aspiration can be a very valuable tool in evaluating these masses (22); indeed, as mentioned earlier, FNA can prove that breast tissue exists, and may be able to distinguish it from other types of masses (e.g. lipomas) (2). In the present case, tissue biopsy was not performed since FNA could establish the diagnosis of EBT. The management of proven small-sized benign EBT is essentially conservative (1,21), though some authors

have advocated surgical removal to prevent any subsequent complications or for cosmesis (2). Excision is recommended prior to puberty or at any age when the condition is recognized and becomes of concern to the individual (22,24). The commonly reported complications after removal of accessory breast are incomplete removal of the accessory breast, poor scar, intercostobrachial nerve injury and lymph edema of arm (2, 24). Liposuction may be a feasible alternative in selected cases (21). However, in the present case, the patient reported back to clinic one month after delivery with no detectable swelling in the axillary region and subsequent close clinical follow-up showed no evidence of recurrence of EBT anywhere in the body. The patient was advised to undertake self-examination and to report any change in accessory breast tissue in future.

Conclusion

Although not a frequent finding, ectopic breast tissue may become evident in puerperal patients during lactation. EBT 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 EBT should be emphasized, because it may be affected by benign and malignant diseases. Fine needle aspiration and cytology can prove that breast tissue exists, and may be able to distinguish it from other types of masses (eg. lipomas). Sometimes, FNAC can provide both false positive and false negative results, especially in lactating woman. Among the puerperal patients with asymptomatic EBT, if conservative management is chosen, self-examination and periodic clinical evaluation is required, following negative cytological tests. We suggest that such patients should be informed that enlargement of the ectopic breast tissue is likely to recur, and perhaps, be worse with subsequent pregnancy. Any change or mass in EBT should be expeditiously evaluated.

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EKTOPIČNO TKIVO DOJKE U AKSILI KOD ŽENE U PUERPERIJUMU – PRIKAZ SLUČAJA

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Ektopično tkivo dojke (ETD) se javlja retko u obliku rezidualnog tkiva koje nastaje u toku normalnog embrionskog razvoja kod 2-6% ženske populacije. ETD može da se javi bilo gde duž embrionske mamarne linije, prvenstveno u aksilarnoj regiji. ETD može da se sastoji od pojedinačnih ili svih komponenti dojke i može biti funkcionalno ili nefunkcionalno. Razvoj ovog tkiva je uslovljen hormonima, a tkivo je slično normalnom tkivu dojke. ETD predstavlja asimptomatičnu masu i može biti veliki izazov u dijagnostici u odsustvu areole i bradavice. Identifikacija i razlikovanje ETD od ostalih patologija dojke u ovoj regiji, kako benignih tako i malignih, od suštinske je važnosti za određivanje adekvatnog tretmana. U većini slučajeva ove lezije su asimptomatične i ne zahtevaju nikavu intervenciju osim ako ne izazivaju tegobe. U ovom prikazu predstavljen je slučaj ektopičnog tkiva dojke u aksili kod dvadesetčetvorogodišnje Indijke koja je prvoročka. Značaj FNAC kao dijagnostičkog sredstva kod suspektnih slučajeva polimastije bez areole/bradavice i konzervativnog pristupa kroz redovne kontrole zbog lečenja potvrđenog benignog ektopičnog tkiva dojke su razjašnjeni. *Acta Medica Medianae* 2010;49(4):45-48.

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