Unilateral accessory axillary breast tissue in a male patient

Clinical History:

A 36-year-old male patient presented with painless swelling in the left axilla. No associated signs of infection or systemic complaints. Examination revealed soft, mobile, non-tender swelling in the left axilla with no overlying cutaneous pigmentation. Clinically, lipoma was suspected and magnetic resonance imaging (MRI) of the axilla was advised.

Imaging Findings:

MRI revealed a lobulated soft tissue with signal characteristics similar to that of glandular tissue on all sequences. This tissue was not contiguous with ipsilateral breast tissue. Correlated ultrasound (US) confirmed the presence of fat admixed with breast glandular tissue in the left axilla. No obvious focal lesion or dominant mass was noted within the axilla. No size-significant or abnormal–looking lymph nodes were noted in the left axilla. Above findings supported the diagnosis of accessory axillary breast tissue.

Discussion:

Embryonic breast development which begins in the fourth to fifth week of gestation is identical in male and female embryos. It begins as thickened ectodermal ridges called milk streaks or galactic bands along the ventral surface which extend from the axilla towards the midline in the groin on either side [1, 2]. These bands then recede leaving mammary tissue at the fourth intercostal space on both sides. Incomplete regression gives rise to foci of accessory ectopic breast tissue along the milk line.

Accessory breasts also called as polymastia occurs in 0.4-6% of women and 1-3% of men. The accessory tissue may contain all three elements: parenchyma, nipple, areola or any combination of these. The accessory breast tissue most commonly (approximately 67 %) occurs in the thoracic or abdominal pathway of the milk line, more commonly just below the inframammary crease. The next common site for ectopic breast tissue is the axilla, which accounts for 20% cases. The remaining 13% of the aberrant sites include face, posterior neck, chest, buttock, vulva, hip, shoulder and lateral aspect of the thigh [3-6].

This aberrant breast tissue can be functional or non-functional and at risk for the same diseases ranging from...
benign processes like mastitis, fibroadenoma and ductal hyperplasia to malignant conditions such as breast cancer [7]. The incidence of breast cancer in ectopic breast tissue is 0.3% [8]. There is a higher incidence of lymphatic spread in ectopic axillary breast cancer as compared to tumours in the upper outer quadrant of the breast. This entity has a poor prognosis due to a higher incidence of nodal metastases and delayed diagnosis [9].

Imaging findings in accessory breast tissue include depiction of tissue with appearance similar to the glandular tissue on mammogram, ultrasound as well as MRI. However, this tissue should not be contiguous with the ipsilateral breast tissue which is otherwise referred to as axillary tail of Spence.

This finding, if asymptomatic, doesn’t warrant any treatment and cosmesis is the main reason for surgical consultation. Symptomatic tissue can be surgically excised with caution because of lack of adequate knowledge of lymphatic drainage of ectopic breast tissue, chances of injury to adjacent nerves and lymphoedema [4].

**Differential Diagnosis List:** Unilateral accessory axillary breast tissue in a male patient, Lipoma, Lymphadenopathy

**Final Diagnosis:** Unilateral accessory axillary breast tissue in a male patient

**References:**
Osborne MP (1996) Breast development and anatomy. Diseases of the breastII. Pages 1-14
Figure 1

Description: Yellow arrow indicates left axillary swelling with no overlying cutaneous changes.

Origin: "Department of Radiology and imaging, Medanta-The Medicity, Gurgaon, Haryana, India 2013."
Description: Axial T1W image reveals breast tissue in normal location (red arrow) and non-contiguous soft tissue with similar signal intensity in the left axilla (yellow arrow). Origin: "Department of Radiology and imaging, Medanta-The Medicity, Gurgaon, Haryana/ India 2013"
Description: Coronal T2W image depicts glandular tissue in the left axilla (yellow arrow)

Origin: "Department of Radiology and imaging, Medanta-The Medicity, Gurgaon, Haryana/ India 2013"
Description: Left axillary ultrasound reveals glandular tissue (yellow arrow) in the region of the palpable swelling. Origin: "Department of Radiology and imaging, Medanta-The Medicity, Gurgaon, Haryana/ India 2013"