

MRI Appearance Of Ectopic Axillary Breast Tissue During Lactational Period

Ektopik Aksiller Meme Dokusunun Laktasyonel Dönemde MRG ile Değerlendirilmesi

Alper Dilli, İdil Güneş Tatar, Volkan Kızılgöz, Elif Rayegan Koç, Baki Hekimoğlu

Diskapi Yıldırım Beyazıt Training and Research Hospital, Radiology Department, ANKARA

Supernumerary nipples or breasts are found in 1-5% of the population. A 31-year-old woman presented with an axillary lump which had tenderness during postpartum period. On routine MRI sequences signal intensities similar to normal breast parenchyma but discontinuous with it were demonstrated. It is important to differentiate benign from malignant axillary masses to avoid unnecessary intervention. MRI has been reported to be a valuable tool for the diagnosis of accessory breast tissue especially in the peripubertal-pubertal girls and young patients.

Key Words: *MRI, ectopic breast tissue, lactational period*

Popülasyonun %1-5'inde aksesuar meme dokusuna rastlanmaktadır. Otuzbir yaşında bir kadın hasta postpartum dönemde ağırlı aksiller kitle ile başvurdu. Rutin MRG sekanslarında aksillada normal meme parankim dokusu ile benzer özellik gösteren ancak ayrı olarak izlenen sinyal değişiklikleri belirlendi. Aksiller kitlelerde benign durumların malign lezyonlardan ayrılması gereksiz girişimlerden kaçınılması açısından önem taşımaktadır. MRG özellikle peripubertal-pubertal kız çocuklarında ve genç hastalarda aksesuar meme dokusu tanısında değerli bir modalite olarak bildirilmektedir.

Anahtar Sözcükler: *MRG, ektopik meme dokusu, laktasyon dönemi.*

In 1-5% of women and men supernumerary nipples (polithelia) and less frequently supernumerary breasts (polymastia, accessory breast) are found. Accessory breast tissue is most commonly found in axilla (1). It may be asymptomatic or present with pain and cosmetic problems. Symptoms often increase in puberty, pregnancy and lactation in response to hormonal stimulation

Case Report

A 31-year-old woman presented with a lump in the left axilla originally noticed 15 years ago. During her pregnancy tenderness occurred in this mass. There was no sign of nipple on the skin. Her mother had died of breast cancer nine years ago. After delivering her baby, she noticed swelling from this lump. With the presumptive diagnosis of lymphadenopathy she underwent

ultrasound examination. An echogenic area with the same appearance of normal breast tissue was demonstrated and accessory breast tissue was diagnosed. Since the patient had a family history of breast cancer, MRI at 1.5 T (Philips, Achieva, The Netherlands), without any intravenous contrast medium injection, was performed. MRI showed a poorly demarcated subcutaneous mass in the left axilla discontinuous with the breast. On T1 and T2-weighted images signal intensities similar to normal breast parenchyma were demonstrated but the mass was separate from the normal breast tissue (Figure 1-3). The dilated ductal structures were obvious on T2-weighted images. MRI appearance of the mass was diagnostic for accessory breast and a pathological condition was not observed.

Received : 10.04.2012 • Accepted: 10.02.2014

Corresponding Author

Dr. İdil Güneş Tatar
Irfan Bastug Street, Ankara, Turkey
Phone : 596 26 16
E-mail Adress: idilttr@yahoo.com
Diskapi Yıldırım Beyazıt Research Hospital, Department of Radiology

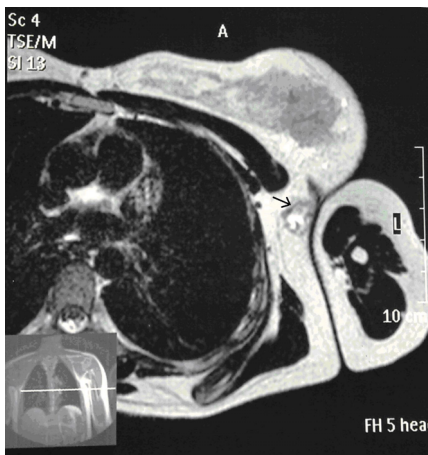


Figure 1. Axial T2-weighted image demonstrates a left axillary mass (arrow) isointense to normal breast parenchyma. Dilated ductal structures are seen inside the mass

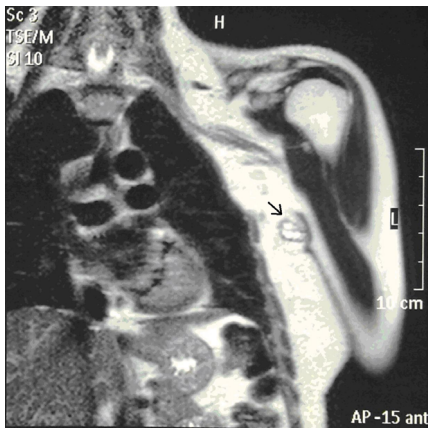


Figure 2. Coronal T2-weighted HASTE image shows an axillary mass (arrow) isointense to breast parenchyma and the dilated ductal structures inside.

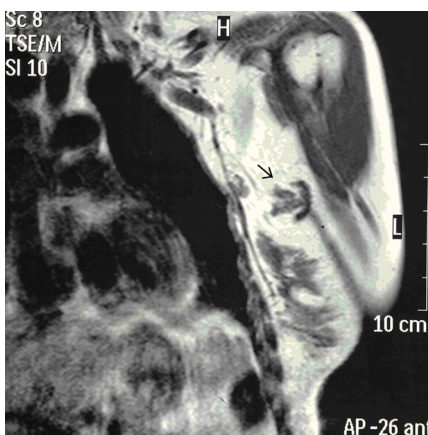


Figure 3. Coronal T1-weighted image shows a mass in the left axilla (arrow) which is isointense to normal breast parenchyma

Discussion

During embryogenesis the galactic band extends from the axillae to the groins. Breast tissue continues to form only in the pectoral region. Failure of regression of the remainder of this galactic band gives rise to ectopic breast tissue. Although they can be located anywhere along the embryonic milk line extending from the axilla to the inguinal line, 60-70% of the accessory breast tissue occur in axilla (2). Since an overlying accessory areola or nipple is usually missing clinical diagnosis of the malignant conditions are often delayed.

Accessory breast tissue should be differentiated from 'axillary tail of Spence' which is defined as the extension of the breast tissue to the axilla.

Ectopic breast tissue is subject to the same physiological and pathological changes as in the eutopic breast tissue, including lactational changes, benign and malignant conditions. The most common pathology of the accessory breast is cancer followed by mastopathy and fibroadenoma (3). Cancer of the accessory breast tissue has been reported to be 0.3-0.6% of all breast cancers, occurring in axilla in 70-80% of the cases. The criteria of diagnosis are the discontinuity with the normal breast tissue, existence of normal breast tissue around the carcinoma, absence of metastatic carcinoma and absence of sudoriparous carcinoma (4).

When a female patient is diagnosed with a mass in axilla, first of all metastatic lymphadenopathy from breast cancer should be excluded. Lymph node involvement of lymphoma, and granulomatous

diseases (tuberculosis and sarcoidosis) should be ruled out. For the axillary masses lipoma, sebaceous cyst, hidradenitis, vascular malformations such as cavernous hemangioma and venous malformation, lymphangioma are also in the differential diagnosis (5).

In the differential diagnosis of the masses in the localization of the embryonic galactic band, especially in the axilla, ectopic breast tissue and its pathologies must be considered. If the patient is in the lactational period galactocele should also be kept in mind (6). Other conditions such as renal anomalies, urogenital defects, vertebral anomalies, pyloric stenosis, congenital cytogenetic syndrome, urologic malignancies have been associated with accessory breasts (7, 8).

Conclusion

It is crucial to differentiate benign from malignant axillary masses to avoid unnecessary intervention. MRI has been reported to be a valuable tool for the diagnosis of accessory breast tissue in the peripubertal-pubertal girls (9). In this age group and in any patient with dense breast parachyme mammography has a low sensitivity in addition to its radiation load. MRI is a useful diagnostic method, which does not require ionizing radiation, to evaluate accessory breast tissue especially in young patients, particularly if they are lactating or have a family history of breast cancer.

REFERENCES

1. Dixon JM, Mansel RE. ABC of breast diseases. Congenital problems and aberrations of normal breast development and involution. *BMJ* 1994; 309:797-800.
2. Burdick A, Thomas KA, Welsh E, Powell J, Elgart GW. Axillary polmastia. *J Am Acad Dermatol* 2003; 49:1154-1156.
3. Smith GMR, Greening WP. Carcinoma of aberrant breast tissue. *Br J Surg* 1972; 59:89-90.
4. Azuma T, Yamamoto K, Kobayashi T, Nakano H. Accessory breast cancer: A case report of carcinoma originating from aberrant breast tissue in the axillar region. *Breast Cancer* 1997; 4:49-52.
5. Bertschinger K, Caduff R, Kubik-Huch RA. Benign intramammary and axillary lesions mimicking malignancy. *Eur Radiol* 2000; 10:1029-1030.
6. Whang IY, Lee JH, Kim KT. Galactocele as a changing axillary lump in a pregnant woman. *Arch Gynecol Obstet* 2007; 276:379-382.
7. Mehes K. Association of supernumerary nipples with other anomalies. *J Pediatr* 1979; 94:274-275.
8. Mehes K, Szule E, Torzsok F, Meggyessy V. Supernumerary nipples and urologic malignancies. *Cancer Genet Cytogenet* 1987; 24:185-188.
9. Laor T, Collins MH, Emery KH, et al. MRI appearance of accessory breast tissue: a diagnostic consideration for an axillary mass in a peripubertal or pubertal Girl. *Am J Roentgenol* 2004;183:1779-1781.

