



Chondro-osseous Type Metaplastic Carcinoma of Breast

Memenin Kondroosseöz Tipte Metaplastik Karsinomu

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DEAR EDITOR,

We read the article 'A Pathologists Purview of Breast Calcifications' by Sankaye with great interest¹. The author evaluated benign and malignant calcifications of breast with radiological and pathological findings. Metaplastic carcinomas of the breast are high grade uncommon tumors including mixed epithelial and sarcomatoid components². To our knowledge, a few reports and studies have been reported including the imaging findings of metaplastic carcinoma^{2,3,4,5}. However, a few reports including osseous or chondromatous metaplasia have been reported^{3,4}.

We wish to report one case of grade 3 metaplastic carcinoma including chondro-osseous type mesenchymal components and invasive ductal carcinoma areas in a 75 year old woman. The mammography showed coarse and dense coalescing calcifications which can be easily misdiagnosed as calcifying fibroadenoma.

A 75 year old female was admitted to our department with a palpable mass in her right breast two years ago. We performed bilateral mammography. On mammography she had large, irregular, partially circumscribed mass with dense coalescent calcifications in left lower inner quadrant (figures 1A and 1B). The margins of the lesion were partially obscured.

The differential diagnosis is calcifying fibroadenoma, primary sarcomas of the breast and invasive ductal carcinoma without metaplasia. Then, we performed ultrasound-guided core biopsy. The final diagnosis was grade 3 metaplastic carcinoma including chondro-osseous type mesenchymal components and invasive ductal carcinoma. She went segmental mastectomy. Patient was alive without any recurrence or metastases.

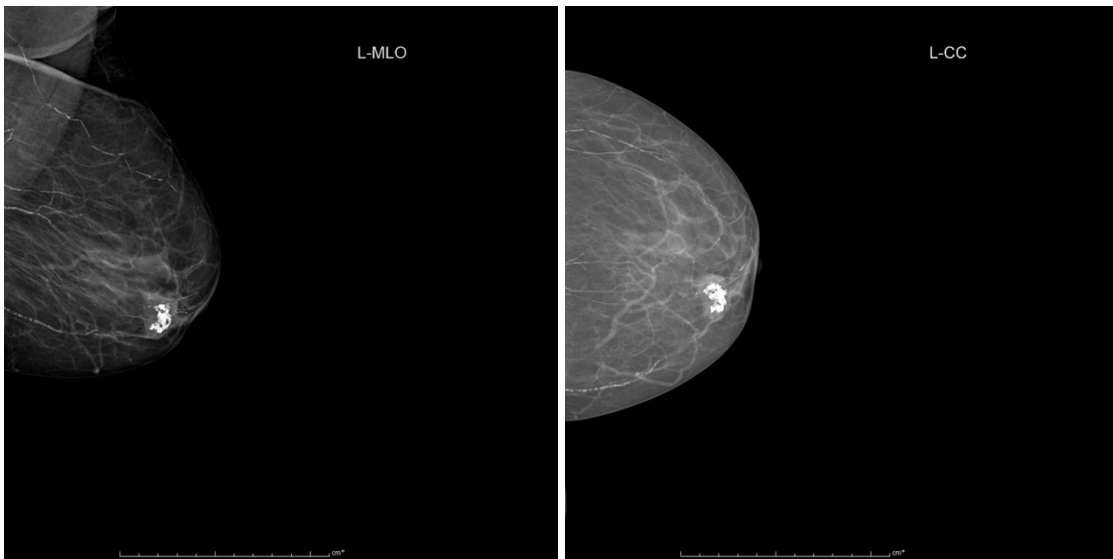
Metaplastic changes in breast carcinomas are very rare in occurring less than 5% of breast carcinomas⁶. Microcalcifications or dense calcifying nidus within the mass has been previously reported in chondroid or osseous metaplasia of the breast carcinomas^{5,7}. The differential diagnosis of the chondro-osseous type metaplastic breast carcinomas are calcifying fibroadenoma, primary sarcomas of the breast and invasive ductal carcinoma without metaplasia.

Fibroadenoma is the most challenging diagnosis in this case. It typically shows "popcorn" shaped, dense large calcifications on mammography. It can also be seen as pure calcification. This case can be misinterpreted easily as a fibroadenoma and follow-up may be recommended rather than biopsy. Coalescing pattern of the dense calcifications and partially obscured margins of the mass may help us to differentiate it from fibroadenomas.

The patterns of calcifications in the primary invasive ductal carcinoma are fine, linear branching or pleomorphic morphology in contrast to coarse calcifications in our case. It has been shown that calcifications are more frequently seen in metaplastic carcinomas than invasive ductal carcinoma⁸. The calcifications of the metaplastic carcinomas can not only be in pleomorphic, heterogeneous, linear pattern but also they can be in coarse or amorphous morphology similar to our

case⁸. Primary sarcomas of the breast are very rare and calcifications are less frequently⁹.

As a result, chondro-osseous type metaplastic carcinomas can be easily misinterpreted as a fibroadenoma. Coalescing pattern of the dense calcifications and partially obscured margins of the mass may help us to differentiate it from fibroadenomas.



Figures 1A, 1B: Mediolateral oblique and craniocaudal mammograms of the left breast show a partially obscured and circumscribed mass including dense, coarse coalescing calcifications in lower inner quadrant.

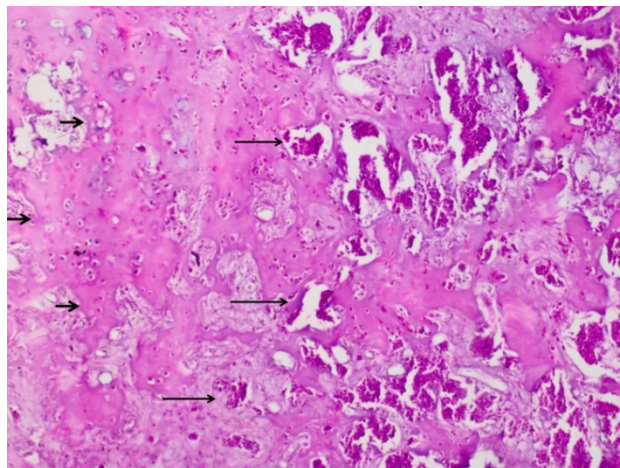


Figure 2. Metaplastic carcinoma, chondro-osseous type; invasive ductal carcinoma (long arrows), and osteoid – chondroid differentiation (short arrows) in metaplastic carcinoma (Hematoxylin and eosin x100).

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