



Editorial

A rare borderline neoplastic lesion of breast, a mimicker and precursor of carcinoma

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A less than 0.1% of breast lesions can show an ill-defined mass on mammogram in females aged between 30-90 years mimicking carcinoma.^{1,2} Even on histological examination the lesion can show haphazardly arranged small glands lined only by epithelial cells lacking myoepithelial cells. One must be very cautious and be aware of an entity which some consider as benign and others as borderline. The entity which lacks myoepithelial layer and can infiltrate into surrounding adipose tissue of breast is Microglandular adenosis.^{1,3} An interesting fact is that these lesions will be negative for estrogen, progesterone and HER2 but the epithelial cells lining the ducts show strong positivity for S-100.^{4,5} The molecular studies show that acquisition of P53 mutation in microglandular adenosis can lead to triple negative breast carcinoma due to increased genetic instability.⁶ The microglandular adenosis can transform to atypical microglandular adenosis and later progress to triple negative carcinoma.⁷ The diagnosis of atypical microglandular hyperplasia is made on histology. The presence of architectural complexity and cytologic atypia, in the form of irregular, closely packed or fused glands with cribriform areas. Sometimes glands with multilayered epithelium with mitoses, and apoptosis may also be seen. The immunohistochemical staining for S-100 will be retained. The diagnosis of microglandular adenosis with associated invasive carcinoma is made on the basis of

infiltrative growth and dense desmoplastic response with severe cytologic atypia. The benign areas of the tumor will show strong positivity for S-100 whereas invasive areas will have patchy positivity for S-100 immunohistochemical stain.^{1,8} Both benign and malignant tumors of breast can be the differential diagnosis of microglandular adenosis.

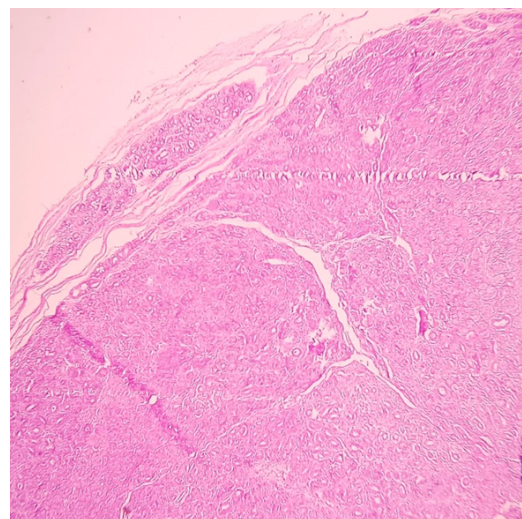


Figure 1: Showing tumor composed of uniform small ducts filled with eosinophilic secretions and lined only by epithelial cells

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The microglandular adenosis should be differentiated from sclerosing adenosis. The typical feature of

microglandular adenosis is small ducts filled with eosinophilic secretions which are periodic acid–Schiff stain with or without diastase. The immunohistochemical stain for S-100 helps in differentiating microglandular adenosis from tubular carcinoma, invasive ductal carcinoma.

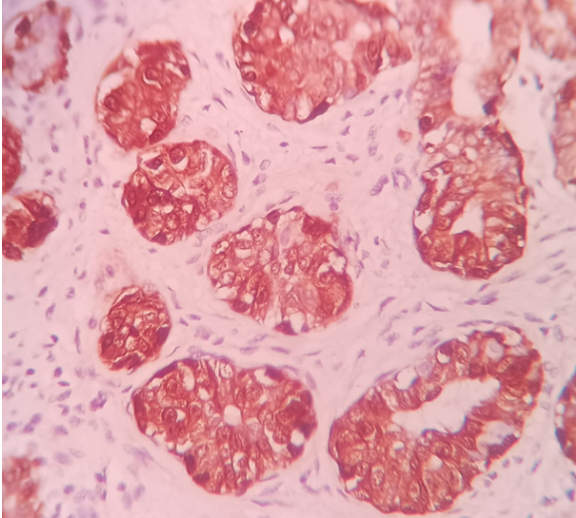


Figure 2: Showing diffuse strong nuclear and cytoplasmic positivity for S-100 in epithelial cells lining the ducts

I conclude that any breast lesion with haphazardly arranged small ducts lined by single layer of epithelium filled with secretions and infiltrating the adipose tissue do not lead to the diagnosis of malignant tumor in breast. The immunohistochemical stain should include S-100 along with Estrogen (ER), Progesterone (PR) and HER2. The

strong diffuse positivity for S-100 and negative ER, PR and HER2 is seen in microglandular adenosis.

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