A CASE OF MIXED INFILTRATING (LOBULAR AND DUCTAL) BREAST CARCINOMA IN A PREVIOUSLY DIAGNOSED PATIENT OF UDH

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ABSTRACT

Introduction: Breast carcinoma has a heterogenous clinical and pathological presentation. Here is a female of 41 years, with a clear-cut, painless mass of the left breast for three years. Her radiology consisted of an USG which had an evidence of heterogeneously hypoechoic space occupying lesion in left breast with evidence of few ipsilateral, sub-centimetric, lymph nodes in left axilla (BIRADS ¾). Her tru-cut biopsy had earlier showed Usual Ductal Hyperplasia (UDH) but her excisional biopsy revealed 'Infiltrating Mixed (Lobular+Ductal) Carcinoma with Usual Ductal Hyperplasia'. Thus, a Modified Radical Mastectomy (MRM) was done under General Anesthesia and the specimen was sent to our histopathology laboratory which revealed Invasive Carcinoma with Mixed Lobular and Ductal features; Lymph nodes, left, axillary dissection: 17/17 positive. Nottingham Grade III (3+3+3=9). Discussion: Diagnosing cases of DCIS is not an issue but the problem arises in differentiating benign intraductal lesions from invasive carcinoma. Conclusion: To the best of our understanding, this is a rare presentation case where there is transformation from benign intraductal lesion into mixed invasive (ductal and lobular) carcinoma.

KEYWORDS: Breast carcinoma, UDH, Mixed, Infiltrating, Lobular, Ductal.

INTRODUCTION

Ductal hyperplasia is a proliferative condition that histologically is an increase in the cellularity of the underlying ductal epithelium. The resting epithelium is a monolayer of cuboidal to columnar epithelial cells with supporting myoepithelial cells, any increase in this two-layer configuration cellularity constitutes hyperplasia. That ductal hyperplasia which is not atypical is known as "usual," "regular" or "ordinary" (1).

Invasive ductal carcinoma, NOS includes a histologically different group of tumors that may express, some or more characteristics of the specific types of breast carcinoma and doesn't include the individual tumors [2]. Examples of this are invasive ductal carcinomas having limited foci consisting of tubular or medullary or papillary or mucinous differentiation. When in a needle core biopsy a mixed growth pattern is present, the diagnosis is descriptive, and the final classification is made using the excisional biopsy.

CASE REPORT

A 41year old presented to the surgery OPD and she had complaints of swelling in left breast for 3 years. On local examination, a swelling of size 6x4cm was noted which was firm with irregular surface. Nipple areola complex was normal. Her general as well as systemic examination were within due limits, and all her hematological as well as biochemical investigations were within due limits. Her radiology examination was done and the ultrasonography showed evidence of a hypoechoic heterogeneous space occupying lesion (SOL) of 2.8x2.6x1.4cm showing minimal internal vascularity noted in 2o' clock to 4o' clock position of left breast with evidence of few ipsilateral, sub-centimetric, lymph nodes in left axilla (BIRADS ¾). Her trucut biopsy showed Usual Ductal Hyperplasia and excisional biopsy revealed 'Infiltrating Mixed (Lobular+Ductal) Carcinoma-Left breast with Usual Ductal Hyperplasia. Thus, a Modified Radical Mastectomy was done under General Anesthesia and her specimen was sent to our histopathological laboratory at Era's Lucknow Medical College for further processing.

Gross examination

Received 2 labelled vials.

Vial 1- Labelled as MRM specimen (left breast), some part of Pectoralis major and level I, II lymph node.

The left MRM specimen comprising of Nipple Areola

Complex and axillary tail, partially covered with skin all together measuring 22x12x4cm at our histopathology department. The outer surface was seen to be gray-white to gray-brown and smooth with attached fat. The cut surface had a gray-white to gray-brown along with solid areas. Nipple Areola Complex separately measures 2.5x1.5cm. Skin separately measures 16.5x7cm. Tumor measures 9x7x3cm. Resection margin measures: Superior margin- 3cm, Base- 0.5cm, Medial margin- 4cm, Inferior margin- 2cm, Lateral margin- 9cm. Largest lymph node measures 2x1cm. Representative sections were taken from the specimen and then the histological tissue was processed and routine H&E staining was conducted. (Fig.1).

Vial 2- Level III lymph node

Nine lymph nodes identified grossly. Largest measured 2.2x1cm and smallest measuring 0.5x0.5cm. cut surface shows gray-white, solid areas with few gray brown hemorrhagic areas. Representative sections were taken from the specimen and then the tissue processing and routine H&E staining was conducted.

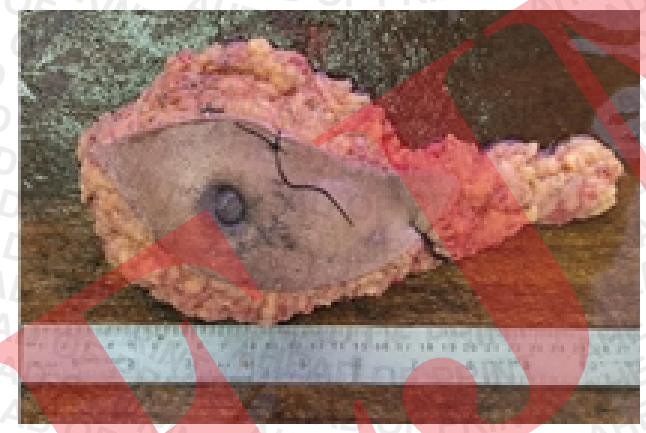

Fig. 1: Gross examination of MRM-Vial 1

Fig. 2: Cut surface of the Gross Specimen received

Fig. 3: Vial 2 Lymph nodes

Microscopy

Section from tissues reveled tumor cells which were arranged in single files, cords and scattered cells and these cells are dyscohesive, small, monomorphic having, round nuclei and scant cytoplasm.

Also seen were infiltrating nests and sheets of atypical cells at places forming tubules.

These atypical cells had large moderately pleomorphic hyperchromatic nuclei with prominent nuclei, increased nucleocytoplasmic ratio and amphophilic cytoplasm.

Few mitotic figures also seen with surrounding fibro-collagenous stroma showing infiltration with chronic inflammatory infiltrate which comprised of lymphocytes and plasma cells.

The microscopy also revealed areas of comedo necrosis and lympho-vascular invasion with few foci of hyperplasia of cohesive epithelial cells having uniform nucleus and moderate amount of eosinophilic cytoplasm.

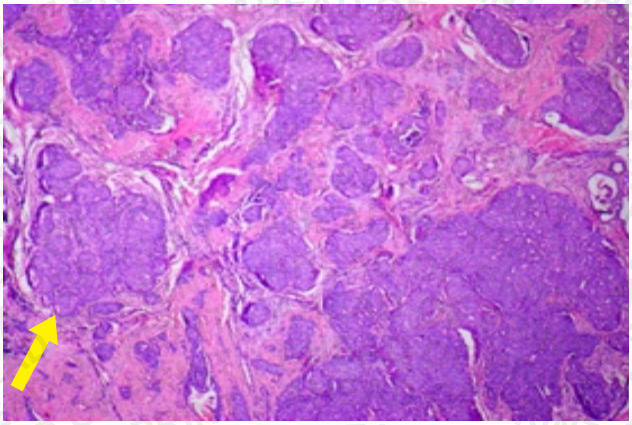

Fig. 4: Usual Ductal Hyperplasia H&E(40x)

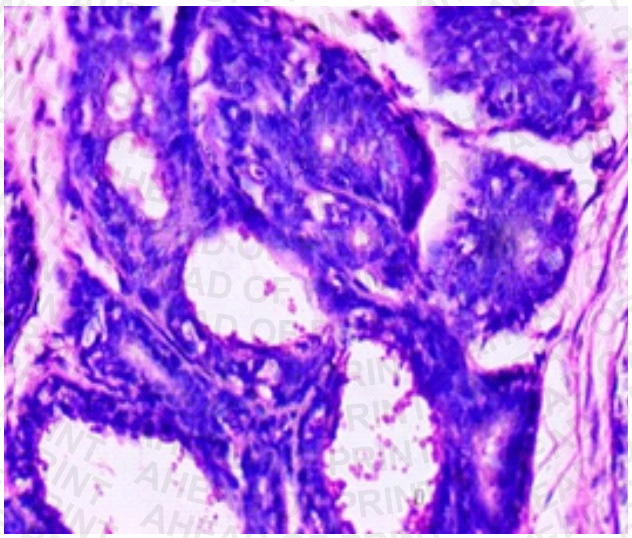

Fig. 5: Ductal Carcinoma Breast H&E (400x)

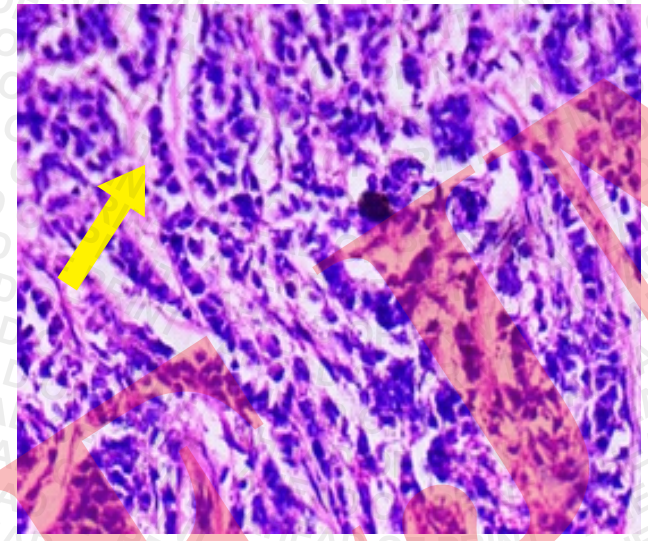

Fig. 6: Lobular Carcinoma Breast (100x)

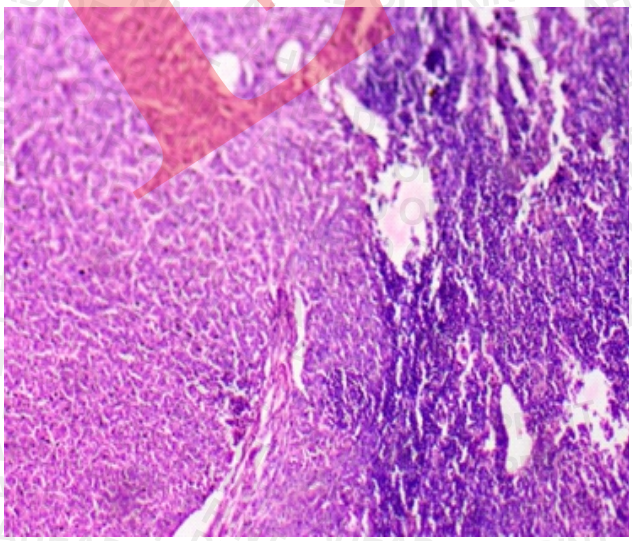

Fig. 7: Lymph Node Metastasis H&E (100x)

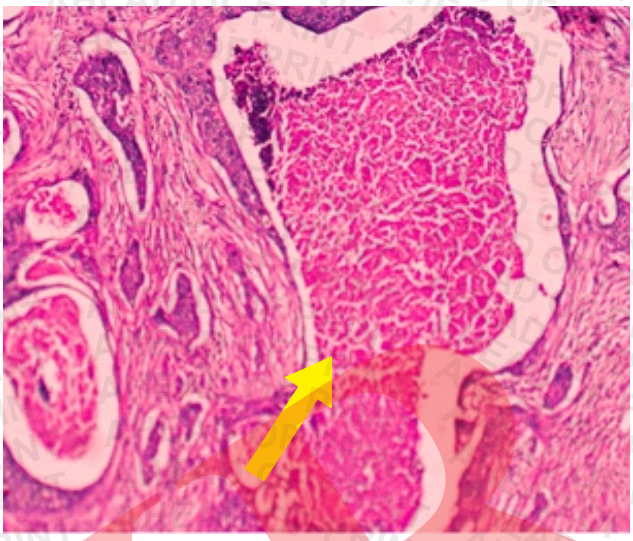

Fig. 8: Comedo Necerosis (10x) H&E

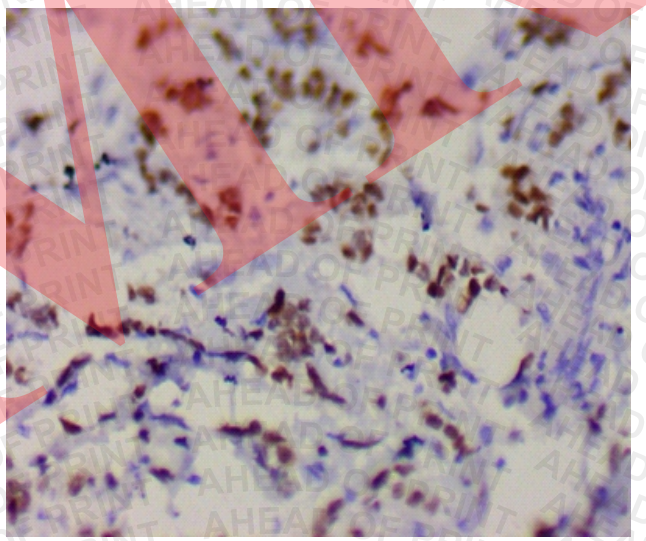

Fig. 9: ER Positive (400x)

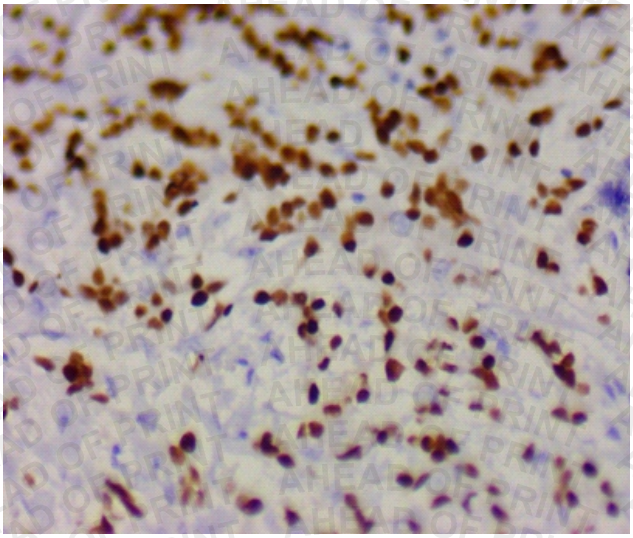

Fig. 10: PR Positive (400x)

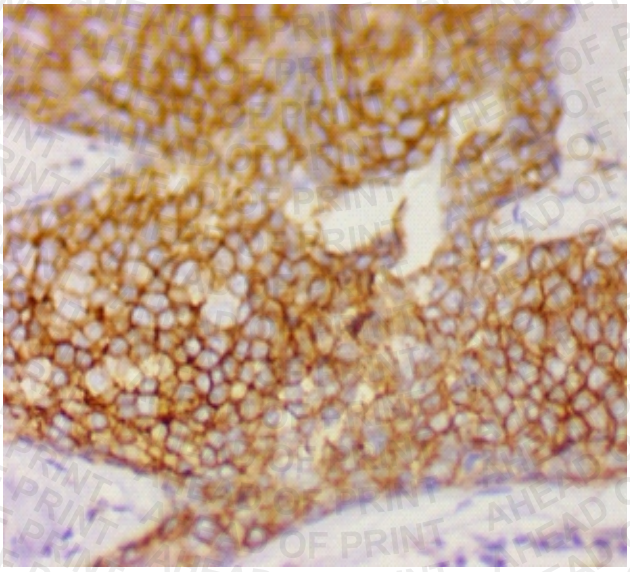

Fig. 11: HER2neu Positive (400x)

DISCUSSION

The WHO Working Group uses *the term Usual ductal hyperplasia* (UDH). The features which direct towards a benign lesion are- oval and normochromatic nuclei, scant or none mitotic activity, eosinophilic cytoplasm, with complete or incomplete apocrine metaplasia, along with the presence of foamy macrophages and absence of necrosis. The intercellular lumina of UDH are irregularity in size and shape (elongation rather than rounding), and location rather than regular in all of the three parameters that are seen in the cribriform pattern having ductal carcinoma in situ (DCIS), seen both at the lumen as well as the proliferating epithelial cells.

Breast atypical hyperplasia (AH), includes a proliferating disease of breast having atypia that may include Atypical Ductal Hyperplasia (ADH) along with Atypical Lobular Hyperplasia (ALH) of breast, and can be associated with an increased risk of development of carcinoma [3-5].

Breast tumours have two morphological distinct groups: tumors having characterstic growth patterns, and tumors having none of the special defining features [invasive carcinoma of no special type (IC-NST), or invasive ductal carcinoma (IDC) [6]. 3 to 5 % of these breast tumors can have both lobular along with ductal histology, and can be divided as mixed ductal–lobular carcinoma (MDL). This is said if the ductal morphology part is composed of at least 10% of the tumor cells and the lobular morphology part is composed of more than equal to fifty percent [6-7]. It was seen that ILC and mixed cancers had much more probability of having low-grade tumor, with estrogen-positivity, and with progesterone-positivity tumors and were diagnosed at later point of the disease in comparison with females with IDC [5]. When mixed tumors were compared with purely IDC, mixed tumours evidenced to have an association with low grade, ER positivity and lower frequency for the development of distant metastases. On comparing mixed tumors to pure ILC, mixed tumours have been shown to have an association with higher grade and positive LN metastasis and also for the development of regional metastasis [8].

CONCLUSION

Diagnosing cases of DCIS is not an issue but the problem arises in differentiating benign intraductal lesions from invasive carcinoma. As per our best understanding, this is a rare presentation case where there is transformation from benign intraductal lesion into mixed invasive (ductal and lobular) carcinoma.

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