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A clinical study on synchronous relation between ductal CA in situ and invasive ductal carcinoma of breast

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Abstract
Introduction: We have lot of studies regarding Ductal Carcinoma in Situ (DCIS) succeeding into Invasive Ductal Carcinoma (IDC) of the breast. Still, there is hardly any study on the coexistence of both and its clinical significance. The aim of this study is to evaluate the clinical and pathological parameters of synchronous DCIS and IDC to estimate the prognostic factors.
Materials and Methods: Total 42 patients with a final diagnosis of synchronous DCIS and IDC diagnosed in 20015-18 were included in the study. Statistical analysis was done using SPSS software utilizing the appropriate analytical methods.
Results: Majority of the patients in this study group presented with early breast cancer (64.3%).48% were Her2 subtype and 31% were triple negative. Grade 3 lesions were more common (57%). 81% of the IDC associated histology was Not Otherwise Specified (NOS) type. Recurrence was common in node positive disease (59.5%), those with lymphovascular emboli (59.5%) and perinodal spread (76%) on histopathological examination.
Conclusion: Synchronous DCIS and IDC disease being appears to have a destructive nature compared to the course of IDC alone being. Prognostic factors linking to IDC appears to associate well with recurrence than that of the prognostic factors of DCIS module in such synchronous setting.

Keywords: Synchronous, Ductal Carcinoma in Situ, Invasive Duct Carcinoma Breast

Introduction
There are fewer studies on the synchronous existence of Ductal Carcinoma in Situ (DCIS) and Invasive Ductal Carcinoma (IDC) and its clinical significance in the literature [1, 2, 3]. it is mystery if there is any relation on the disease process and prognosis when IDC is accompanied by DCIS. Also, it is still under research that the DCIS associated pathological prognostic factors have the same prognostic implications in the synchronous being too. Hence, this study was done to identify the clinical magnitude of the presence of DCIS in patients with IDC. The objective is to study the clinical application of the coexistence of DCIS and IDC in breast cancer patients.

Material and methods
48 patients with a synchronous existence of DCIS and IDC out of the total 467 patients with final histopathological diagnosis of ductal carcinoma of breast diagnosed since 2015-18 were incorporated in the study. Six were excluded due to unavailable data (Figure 1).
Subsequent surgery, all the patients received adjuvant chemotherapy. Adjuvant radiotherapy was instituted based on the tumour "T" and "N" status on the final histopathology. Hormonal therapy was incorporate as per the hormonal status of the patients. Statistical analysis was performed by utilizing the SPSS software.

Results
Mean age of the study population was 45.5 years (range is 35-66 years).23 out of 42 patients (55%) were postmenopausal and were right-sided tumours. 50% of them presented with lump as a main complaint (21 patients) with other complaints being nipple discharge (9.5%), nipple erosion (9.5%). Six patients (14.3%) presented with mastectomy done elsewhere for DCIS and 2 presented following modified radical mastectomy (4.8%). Duration of symptoms ranged from 1 month to 18 months.

The most common subtype of IDC was NOS (not otherwise specified) type (81%). High-grade (grade 3) lesion was seen in 24 cases (57.11%). Grade 2 lesions were present in 12 (28.6%) and grade 1 in 6 patients (14.3%). All the patients had negative margins for IDC. Desmoplastic reaction was observed in twelve patients (28.6%). Mild, moderate and severe lymphocytic response were seen in 15 (35.7%), 13 (31%) and 14 (33.3%) patients, respectively.

27 patients (64.3%) presented with T2 disease, 14 (33.3%) with T3 and 1 (2.4%) with T4a disease. Twenty four patients (57.1%) had N1 disease, 7 (16.6%) had N2 disease and 4 (9.5%) had N3 disease. Hence, majority of them were early breast cancers accounting for 27 patients (64.3%). Only 4 patients underwent breast conservation surgery with rest undergoing modified radical mastectomy/completion surgery following lumpectomy or mastectomy.

HER2/neu subtype was predominant and was seen in 21 patients (47.6%) followed by basal (31%) and luminal A/B (21.4%) (TABLE1).

Diffuse type DCIS was present in 15 patients (35.7%). High-grade DCIS was present in 62% with 23.8% intermediate grade and 14.2% low grade. Solid subtype was the most common accounting for 40.5%, i.e. in 17 patients followed by mixed (14.3%) and other types such as cribriform, papillary constituting the remaining. Necrosis was observed in 15 patients (35.7%). In 17 patients (40.5%), adjacent parenchyma had fibrocystic changes. On a median follow up of 3.3 years, 66.6% (28/42) developed recurrence (TABLE 2) with majority being visceral metastases.

Recurrence was more common in patients with node positive disease (0/17 vs. 15/25-p<0.0001), lymphovascular emboli (6/15 vs. 22/27- p=0.025) and perinodal spread (2/13 vs. 21/29-p=0.0008) on the histopathological examination. However, prognostic factors of DCIS such as histological subtype, grade of the DCIS, necrosis did not correlate with recurrence.

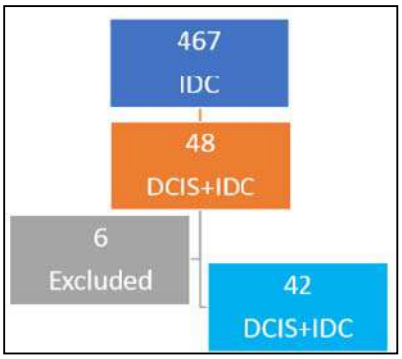

Fig 1

Table 1: Clinicopathological Parameters

Dcis (Diffuse/Focal)	35.70%	64.30%	
Grad e (1,2,3)	14%	29%	57%
Her2neu,Basal,Luminal A/B	47.60%	31%	21.4.%
Stage (Early, locally advanced)	64.30%	35.70%	

Table 2: Disease Events on Follow Up

Visceral Mets	34%
Bone Mets	25%
Only Nodal Recurrence	07%
No Recurrence	34%

Discussion

Our study is supported by the study of Shinn Young Kim *et al.* in the genomic study where they have find that synchronous IDC and DCIS is more destructive than the DCIS counterparts and behave more like IDC. Coexisting lesions of DCIS and IDC are mostly early breast cancers to present with as observed by Dieterich M *et al.* and Wong H *et al.* in their studies. However, unlike in the study done by Wong H *et al.* group where the presence of DCIS predicted a less aggressive nature, our study demonstrates that this subset is highly aggressive as depicted by the high grade of the tumour, increased incidence of LVE, perinodal spread and increased rate of recurrence. As predicted by Kim *et al*, grade of DCIS in synchronous IDC-DCIS doesn't predict recurrence [4]. High-grade lesions were equally distributed in both recurrent and non-recurrent groups. However, high-grade lesions parse were very high in our study, which can be responsible for high rates of recurrence in the current study despite of the lesions being in early stage and the difference not being made out in our study could be because of the less number. Majority of them are of HER2/neu subtype with aggressive nature as described in the subtype population of a study done by Pape Zambeto *et al.* [5], which again correlates with the increased incidence of visceral metastases over bone metastases on follow up. The poor histopathological factors that correlate with recurrence are positive nodal disease, presence of lymphovascular emboli and perinodal spread, which correlate well with the observations made in the literature [6]. However; other histological prognostic factors for isolated DCIS such as necrosis, lymphocytic response, desmoplasia, diffuse or focal type do not correlate with recurrence in our study (p value statistically not significant).

Conclusion

Synchronous appearance of DCIS and IDC disease has an aggressive nature compared to the course of IDC alone being. Prospective study with more number of patients with a long follow up would further explain to the relevance of this unique disease being. Analytical factors relating to IDC show to correlate well with recurrence than that of the prognostic factors of DCIS part in such synchronicity.

References

1. Dieterich M, Hartwig F, Stubert J. *et al.* Accompanying DCIS in breast cancer patients with invasive ductal carcinoma is predictive of improved local recurrence-free survival. The Breast. 2014; 23(4):346-351.
2. Wong H, Lau S, Leung R, *et al.* Coexisting ductal carcinoma in situ independently predicts lower tumour aggressiveness in node-positive luminal breast cancer. Med Oncol. 2012; 29(3):1536-1542.
3. Kim SY, Jung SH, Kim MS. *et al.* Genomic differences between pure ductal carcinoma in situ and synchronous ductal carcinoma in situ with invasive breast cancer. Oncotarget. 2015; 6(10):7597-7607.
4. Kim JY, Han W, Moon HG, *et al.* Grade of ductal carcinoma in situ accompanying infiltrating ductal carcinoma as an independent prognostic factor. Clin Breast Cancer. 2013; 13(5):385-391.
5. Pape-Zambito D, Jiang Z, Wu H, *et al*. Identifying a highly-aggressive DCIS subgroup by studying intra-individual DCIS heterogeneity among invasive breast cancer patients. PLoS One. 2014; 9(6):e100488.
6. Crombie N, Rampaul RS, Pinder SE, *et al*. Extent of ductal carcinoma in situ within and surrounding invasive primary

breast carcinoma. Br J Surg. 2001; 88(10):1324-1329.