

## Research Article

# The Pattern of Invasive Lobular Carcinoma in the Patients Diagnosed with Breast Cancer from Balochistan

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## Introduction

Breast cancer is mostly commonly diagnosed cancer among women worldwide [1] and a diverse disease classified into various clinical types and subtypes based on histological, biological and pathological features, clinical appearance and behavior of the disease [2,3].

Invasive Lobular Carcinoma (ILC) also referred as infiltrating lobular carcinoma affecting the milk producing glands the lobules of the breast tissue with the capacity of metastasizing to the other parts of the body. It is the second most common type of breast cancer after Invasive Ductal Carcinoma (IDC) accounting for 5-15% of all the breast cancer cases [4-14]. The cases of ILC are considered to be diagnosed comparatively with a lower grade, with almost good prognosis, estrogen receptors positive but almost found infiltrating [15-17]. ILCs cannot easily be palpated and captured mammographically with a diverse pattern of metastasis [18,19]. ILCs are classified as pleomorphic, classic, signet ring cells alveolar, tubule-lobular and solid subtypes [20]. Variations in the characteristics are associated with the patients' population and different diagnostic methods [7,8,21].

Present study was performed [2012-2104] on 171 breast cancer patients, >95% patients were diagnosed with IDC (Invasive Ductal Carcinoma) and 2.96% patients diagnosed with ILC. Our objective in current study was to investigate the occurrence and diverse pattern of ILC in the region.

## Materials and Methods

Current study was performed on 171 breast cancer patients from different areas of Balochistan registered in CENAR (Center for Nuclear Medicine and Radiotherapy), Quetta for treatment. After agreement with the patients taking part in the study as volunteers a written consent was obtained from all the patients.

## Abstract

Invasive lobular carcinoma is the second most common type of breast cancer accounting about 5-15% of all the breast cancer cases. Present study was performed on 171 breast cancer patients from Balochistan registered in CENAR (Center for Nuclear Medicine and Radiotherapy), Quetta. Written consent was obtained from the patients. The history of the disease was taken from the patients and the patients' enrolment files were retrieved. Out of 171 patients 5 (2.96%) were diagnosed with ILC with tumor grade II and stage of the cancer reported was III in all 5 patients affected with ILC.

ILC is the second most common type of breast cancer diagnosed with comparatively lower grade but almost reported infiltrating.

**Keywords:** Carcinoma; Lobular; Breast; Balochistan; Infiltrating; ILC

The patients were interviewed about the history of the disease; the questions asked to the patients were about the ethnicity, marital status, fertility, pregnancy history, occurrence/onset of the disease, age at the onset of the disease, date of diagnosis, Family history, dietary pattern and smoking history and exposure to X-rays before the onset of the disease.

The files of the patients were retrieved and the clinical/diagnosed reports were recorded from the files. Age and BMI (Body Mass Index) of the patients were also recorded.

## Results

Out of 171 breast cancer patients, 5 (2.96%) were diagnosed with Invasive lobular carcinoma, 162 patients (95.86%) diagnosed with Invasive Ductal Carcinoma, where as the other cases reported; were 2 male patients diagnosed with breast cancer (primary lymphoma of breast) and 2 patients were reported to be diagnosed with DCIS (Ductal Carcinoma in Situ). Ethnicity of the patients was; 2 patients were from Panjabi ethnic group and 1 from each pashtoon, Hazara and Sindhi ethnic groups diagnosed with ILC of breast. BMI of the patients were also recorded, 3 patients were reported overweight and 2 patients were with normal BMI. The mean age of the patients was 49.6 years diagnosed with invasive lobular carcinoma, whereas 3 patients were diagnosed with ILC at post-menopausal age and 2 were diagnosed at pre-menopausal age. Out of 5 cases of ILC, 3 patients were ERPR (Estrogen Receptor and Progesterone Receptor) positive. All the 5 cases of ILC were diagnosed with the tumor grade II and the stage of the cancer was reported III. Left breast tissue was affected in 3 patients and in two patients the right breast tissue was affected. Metastasis to the lymph nodes in all five case were high, the mean number of lymph nodes involved by tumor was 8.9. Dermis of the areola and nipple was involved in two breast cancer cases whereas in 1 of the two cases the pagetoid spread was also observed. Perinodal extension was reported in all the five cases.

## Discussion

Invasive lobular carcinoma is quite a diverse form of breast cancer affecting the milk producing glands (lobules) of the breast tissue [22]. The metastatic pattern of the ILC is almost similar to that of the IDC however it is considered to spread unusual site most commonly [23,24].

Present study was performed to figure out the diverse pattern and prevalence of the invasive lobular carcinoma. In current study we investigated the cases of invasive lobular carcinoma among the patients of the breast cancer from different areas of Balochistan registered in CENAR for chemo and radiotherapy. ILC accounts for 5-10% [25] of all the breast cancer cases preceded by IDC that comprised of 85-95% of the breast cancer cases. In current study we identified 171 breast cancer patients including 2 male patients affected with primary lymphoma of breast while the other patients included >95% patients affected with IDC whereas the cases of the ILC were 2.96% whereas in different studies conducted in different areas of Pakistan proposing the cases of ILC 7% [26] 2% [27] 2.98% [14]. Studies conducted globally suggest the cases of ILC 5-10% of all the breast cancer cases [25,28]. Incidences of ILC are most often reported to occur in postmenopausal age [13,29-32]. In present study out of five cases three patients diagnosed at postmenopausal age and the mean age of the all patients with ILC was 49.6. ILC cases are reported to be positive with estrogen and progesterone receptors positive and almost found infiltrating [15-17,33-35]. Current study revealed 3 cases with ERPR positive and lymph nodes invasion was found in all five cases with a mean no. 8.9 of lymph nodes invaded by tumor.

## Conclusion

ILC is the second most common type of breast cancer affecting the lobules of the breast tissue and a multicentric with diverse pattern of invasion.

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