International Journal of Biomedical Research

ISSN: 0976-9633 (Online)
Journal DOI:10.7439/ijbr
CODEN:IJBRFA

Case Report

Synchronus Bilateral Breast Carcinoma (SBBC): A cytological diagnosis with review of literature

Anita Javalgi*, Surekha Arakeri and Swathi Arora

Department of Pathology, Shri B M Patil Medical College, Bijapur, India

***Correspondence Info:**
Dr. Anita Javalgi
Department of Pathology,
Shri B M Patil Medical College, Bijapur, India
E-mail: javalgianita@gmail.com

Abstract

Introduction: A second primary breast cancer in the opposite breast can be either synchronous or metachronous. Bilateral synchronous breast cancer is defined as both cancers diagnosed within 3 months and neither can originate with metastasis from another tumour.

Case Report: 40 year old female visited with complaint of mass in right breast and ulcer in left breast since 20 days with enlarged right axillary and left supraclavicular lymph nodes since last 2 months. Patient was referred for cytology of both lumps and lymphnodes. Cytological study of both lumps shown features of invasive duct carcinoma and lymph nodes shown metastatic deposits of carcinoma with similar morphological features as of breast lumps. Based on clinical presentation and cytological study case was diagnosed as synchronous invasive duct carcinoma.

Conclusion: Synchronous breast cancer has poor prognosis hence early cytological and mammography detection helps in prompt management and thus decreasing morbidity as well as mortality.

Keywords: synchronous/invasive duct carcinoma/cytological diagnosis.

1. Introduction

A second primary breast cancer in the opposite breast can be either synchronous or metachronous. The majority are metachronous. Bilateral synchronous breast cancer is defined as both cancers diagnosed within 3 months and neither can originate with metastasis from another tumour. Globally, increasing breast cancer incidence rates, improved prognosis, and growing life expectancy have resulted in increasing number of women at risk of developing a bilateral primary breast cancer.[1]

There are an estimated 2.2 million women living in the United States who have been diagnosed at some time with breast cancer.[1] Hence, optimal surveillance and clinical management of women who have had one or two primary breast cancers is a challenge. However, there are only limited data on incidence rates of synchronous and metachronous breast cancer, [2,3] results on temporal trends in incidence are conflicting,[4] and little is known about the prognostic outlook after treatment of a second primary cancer. [5,6]

2. Case Report

A 40 year old female visited with complaint of mass in right breast and ulcer in left breast since 20 days with right axillary swelling. Initially she noticed a mass in left breast 2 months back progressively increased, associated with pain and 20 days back it ulcerated with blood mixed pus discharge. Simultaneously she noticed a lump in right breast associated with pain. Also there is history of loss of appetite and weight loss since last 2 months. Family history revealed no history of breast carcinoma or other malignancies in family and relatives. No significant obstetrics history.

On examination right breast mass was hard in consistency, ill defined borders and non mobile, left breast was showing large ulcer measuring 6X6cm with ill defined margins, base showing pus and slough deposit with thin edges (Fig 1). Right axilla had a mass measuring 4x4cm, firm in consistency, mobile, also noted left supraclavicular lymphadenopathy which was 2x1.5cm in size and hard in consistency, immobile. Patient was referred for FNAC of swellings and radiological study.

Fig 1: Right Breast: lump noted, Left Breast: ulcerated lesion with indurations

Cytological study of both lumps shown features of invasive duct carcinoma (Fig2 &3) and lymph nodes shown metastatic deposits of carcinoma with similar morphological features as of breast lumps. Mammography revealed ACR Birads assessment category -5 which was highly suggestive of breast carcinoma (Fig 4).

Fig 2: Mammography showing malignancy

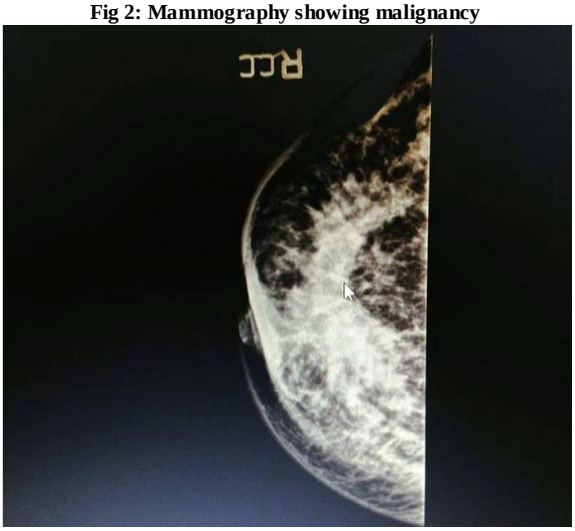


Fig 3: H&E 400X microphotograph showing ductal cells

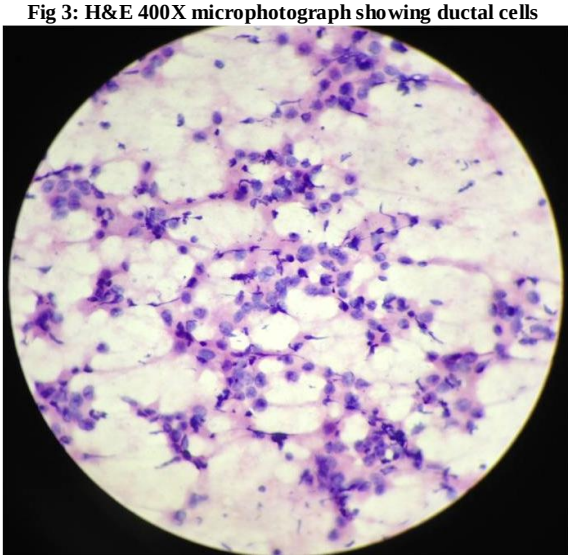
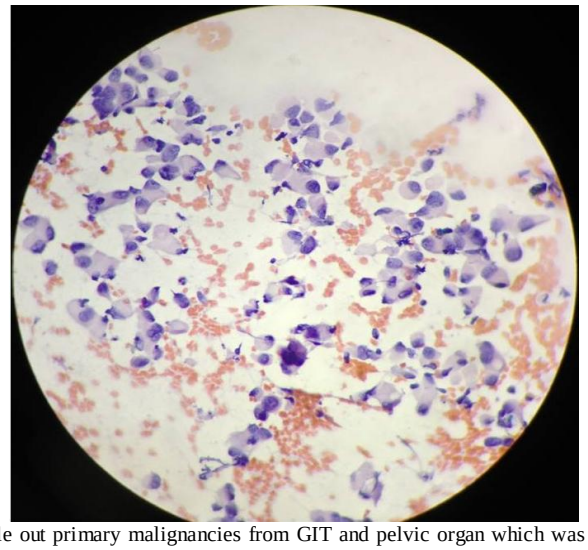


Fig 4: PAP stain 400X showing plasmacytoid cells



Ultrasonography was done to rule out primary malignancies from GIT and pelvic organ which was negative. Hence the case based on clinical presentation, radiological findings and cytological study was diagnosed as synchronous invasive duct carcinoma.

Tumor staging done as left breast T4c N2 M1 and right breast T4a N2 M1. On follow up patient was progressing badly as tumor was aggressive hence patient was placed in chemotherapy.

3. Discussion

Synchronous are tumors detected in each breast simultaneously (i.e. in the same period) or within 6 months, but the time interval ranges from 1 to 12 months. Metachronous tumors occur at different times.[1,2] It is reported that the incidence of synchronous bilateral cancer is approximately 1 %to 2 % and that of metachronus cancer is 5% to 6%.[2] Women with a strong family history of breast cancer, with multicentric tumor foci in one breast, and with in situ lobular carcinoma have a high incidence of bilateral breast cancer, synchronous or metachronous. The cancer can be invasive or non-invasive. Lower disease free survival and high rates of distant metastasis is a recognized feature of bilateral synchronous tumours, which therefore have a worse overall survival compared to unilateral tumours.[3,4]

One challenge in the field of bilateral breast cancer is whether the second tumor is a new primary or a metastasis from the first carcinoma. Morphological criteria, such as histological type, grading, presence of an in situ component, and steroid receptor status are the most commonly explored factors. The histological type of breast cancer is the same on both sides in 57% to 68%. In some reports a prevalence of lobular infiltrating breast carcinomas among bilateral cases is observed.[4]

The increased proportion of SBBC among cases classified as lower grade and without lymphatic/vascular invasion may reflect less biologically aggressive tumour activity which may predispose to a longer pre-clinical phase, allowing more time for a second lesion to arise[5]. International evidence of the prognostic significance of SBBC is not consistent, although most studies suggest that these cancers have either an equivalent or moderately poorer survival compared with unilateral cases. [5] Women diagnosed with unilateral cancer early in life and bilateral cancer within 5 years had a four times higher mortality rate than women with unilateral breast cancer. It is indeed notable that women with metachronous cancer diagnosed within 5 years after unilateral cancer have a higher mortality rate than women with synchronous bilateral cancer. [1,4,5]

These differences may be attributed to variations in sample size, age, follow-up, and treatment regimes. Studies also found that comparision of women with unilateral disease, the prognostic outlook among women with metachronous disease deteriorated over time concomitantly with the decreasing incidence. This novel finding suggests that adjuvant systemic treatment selectively prevents the occurrence of cancers with a favourable prognosis, allowing those with a more aggressive phenotype to surface clinically. Adjuvant chemotherapy is administered more often to premenopausal women, whereas antiestrogens have been the primary choice among older women. Thus, the much stronger increase in mortality over time among women with bilateral cancer younger than age 50 years compared with women with unilateral disease suggests that chemotherapy exerts a stronger selection pressure than adjuvant endocrine treatment. [6,7,8]

In present case patient was on chemotherapy and follow up later was not possible as patient was not traceable .

4. Conclusion

One challenge in the field of bilateral breast cancer is whether the second tumor is a new primary or a metastasis from the first carcinoma. Such work-up may entail that some preclinical bilateral cancers are detected early and classified as synchronous disease (perhaps in an earlier and more favorable stage) rather than diagnosed later as metachronous disease. Synchronous breast cancer has a poorer prognosis than metachronus or unilateral breast cancer.

References

1. Bassarova A.V., Torlakovic E., Sedloev T., Hristova S.L., Trifonov D.Y. and Nesland J.M., Simultaneous bilateral breast carcinoma: Histopathological characteristics and CD44/catenin-cadherin profile. *Histol Histopathol* 2005; 20: 791-799.
2. Panda SK, Mishra J, Dora RK, subudhi SK, Synchronus Bilateral Breast Carcinoma – A case Report. *Intern J innovative Stud Research* 2013; 2: 392-396.
3. Arthur Skarin An Unusual aspects of Breast Cancer. *Journal of Clinical Oncology*. 2001; 19: 2570-2574.
4. Mikael Hartman, Kamila Czene, Marie Reilly, Jan Adolfsson, Jonas Bergh, Hans-Olov Adami, et al Incidence and Prognosis of Synchronous and Metachronous Bilateral Breast Cancer. *J Clin Oncol* 2007; 25:4210-4216.
5. David Roder, Primali De Silva, Helen Zorbas, James Kollias, Peter Malycha, Chris Pyke, Ian Campbell, Fleur Webster. Survival From Synchronous Bilateral Breast Cancer: The Experience Of Surgeons Participating In The Breast Audit Of The Society Of Breast Surgeons Of Australia And New Zealand. *Asian Pacific J Cancer Prev*.2012; 13: 1413-1418.
6. Hartman M, czene K, Incidence and Prognosis of synchronous and metachronous bilateral Breast cancer . *J Clin Oncology* 2007;25: 4210-4216
7. Gollamudi SV, Gelman RS, Peiro G, et al: Breast-conserving therapy for stage I-II synchronous bilateral breast carcinoma. *Cancer* 1997; 79:1362-1369.
8. Chen Y, Thompson W, Semenciw R, Mao Y . Epidemiology of contralateral breast cancer. *Cancer Epidemiol Biomarkers Prev.*1999; 8: 855-61.