

## Case Report

# Synchronous breast carcinoma (with Paget's disease) and renal cell carcinoma with tubercular axillary lymphadenitis: a rare presentation

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**Received:** 10 May 2021

**Revised:** 15 June 2021

**Accepted:** 17 June 2021

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## ABSTRACT

Synchronous malignancy are defined as two primary malignancy of two different organs occurring concurrently or within 6 months duration. Reports of synchronous breast carcinoma with RCC (renal cell carcinoma) are very limited. We presented here the first case of non-metastatic synchronous RCC with breast carcinoma and Paget's disease associated with tubercular axillary lymphadenitis in a 62 year old female for which she underwent right MRM and right partial nephrectomy. She received chemotherapy and anti-tubercular therapy post-surgery and currently on oral hormonal therapy. Follow up scans showed stable disease. There have been cases of breast cancer with TB lymphadenitis as well as of double synchronous malignancies involving breast carcinoma and RCC. Most of the multiple malignancies reported in literature are metastatic tumours or metachronous breast malignancy with RCC. A case of synchronous primary ca breast with pages disease coexisting with primary RCC along with tubercular lymphadenopathy is yet to be reported in literature. This might just be the first one.

**Keywords:** Synchronous malignancy, Dual malignancy, Synchronous breast carcinoma, RCC, Synchronous malignancy with TB, TB lymphadenitis with breast carcinoma

## INTRODUCTION

Currently there is no consensus on the definition of synchronous cancer. Among the proposed definitions are: two or more histologically distinct simultaneously detected malignancies; two or more histologically distinct malignancies diagnosed during the same hospital admission; two or more histologically distinct malignancies arising in the same site, following each other in sequence by less than 2 months; synchronous malignancy are defined as two primary malignancy of two different organs occurring concurrently or within 6 months duration.<sup>1</sup>

Reports of synchronous breast carcinoma with RCC are very limited.

We presented the rare case of non-metastatic synchronous RCC with breast carcinoma and Paget's disease associated with tubercular axillary lymphadenitis managed with complete resection of each primary followed by chemotherapy and hormonal therapy.

## CASE REPORT

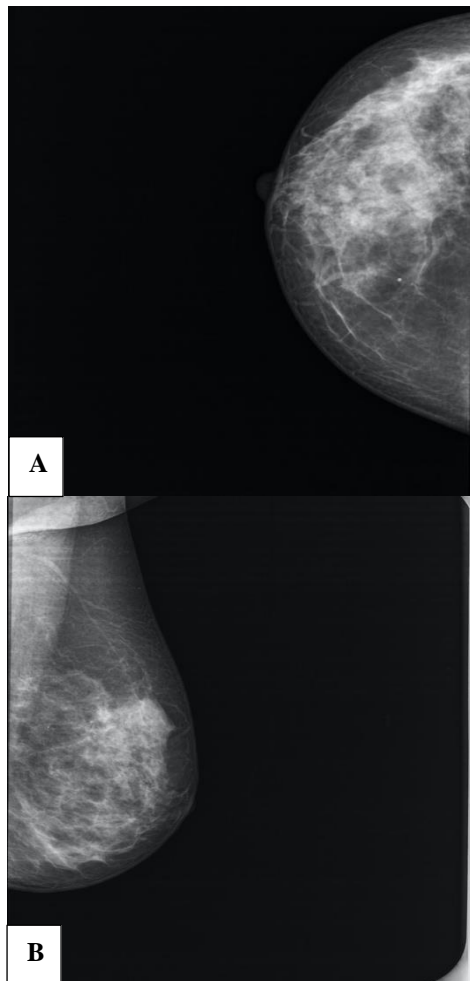
A 62 year old female who initially presented with right breast lump since 10 years with rapid increase in size

since 6 months along with eroded right nipple since one month.

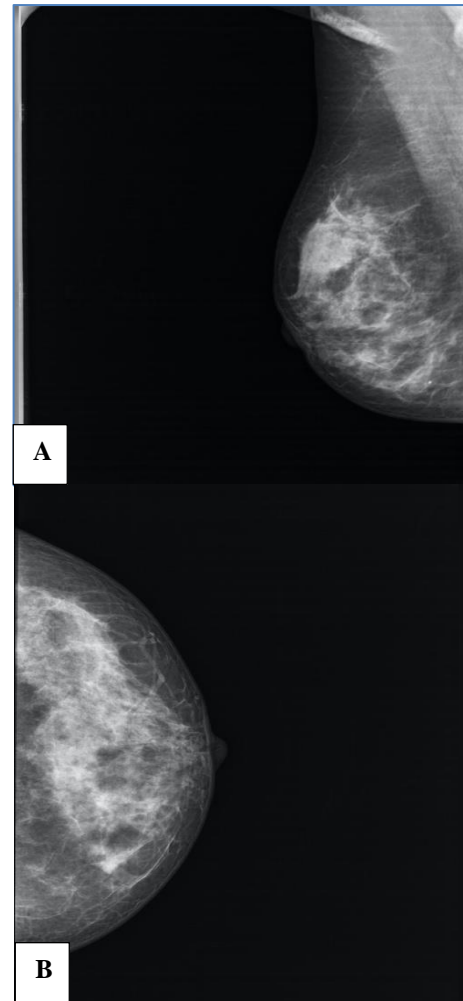
On examination 5×4 cm hard mass in right outer quadrant of breast with no axillary lymph node palpable. No organomegaly appreciated on per abdomen palpation.

On mammography, 45×34 mm mass with irregular speculated margin in outer central quadrant in retroareolar region of right breast with multiple foci of calcification. Associated with thickening of skin of nipple and areolar region with retraction of nipple, suggestive of Paget's disease of nipple, BIRADS category IV C. Few enlarged axillary lymph nodes largest measuring 14×9 mm with loss of fatty hilum with foci of calcification. Few reactive lymph nodes, largest measuring 12×5.5 mm in left axilla.

Core needle biopsy revealed invasive carcinoma of no special type, ER positive, PR positive HER2NEU negative. Patient underwent routine metastatic workup and was found to have a mass in inter polar region of mid and lower pole of right kidney of about 26×10 mm on ultrasonography of abdomen and pelvis.



**Figure 1 (A and B): Cranio-caudal view.**



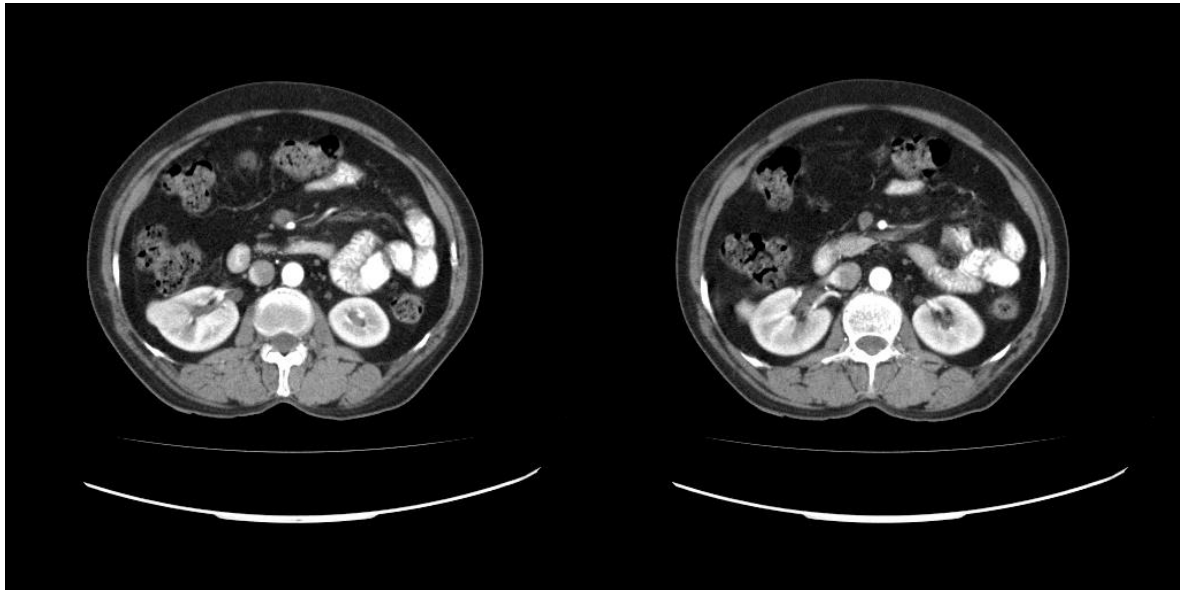
**Figure 2 (A and B): Mediolateral view.**

CECT abdomen shows right kidney heterogeneously enhancing 2.6×3.1 cm mass in inter polar region, s/o neoplastic etiology.

Mammography showing mass with irregular speculated margin in outer central quadrant in retroareolar region of right breast with multiple foci of calcification. Associated with thickening of skin of nipple and areolar region with retraction of nipple, suggestive of Paget's disease of nipple, BIRADS category IV C with Few enlarged axillary lymph nodes.

Patient underwent right partial nephrectomy. Intraoperative frozen section was done which confirmed primary RCC. Followed by right MRM with axillary lymph node dissection of level I, II, III in the same sitting.

Histopathology report confirmed RCC of right kidney and invasive carcinoma of right breast with Paget's disease of right nipple with tubercular axillary lymphadenitis (lymph nodes negative for malignancy).



**Figure 3: Computed tomography scan showing heterogeneously enhancing mass lesion in interpolar region of the right kidney.**

Patient received chemotherapy and anti-tubercular therapy post-surgical treatment.

Currently on oral hormonal therapy. Follow up scans show stable disease.

## DISCUSSION

Currently there is no consensus on the definition of synchronous cancer. Among the proposed definitions are: two or more histologically distinct simultaneously detected malignancies; two or more histologically distinct malignancies diagnosed during the same hospital admission; two or more histologically distinct malignancies arising in the same site, following each other in sequence by less than 2 months; synchronous malignancy are defined as two primary malignancy of two different organs occurring concurrently or within 6 months duration.<sup>1</sup>

In 2020, there were 2.3 million women diagnosed with breast cancer and 685 000 deaths globally.<sup>2</sup> As of the end of 2020, there were 7.8 million women alive who were diagnosed with breast cancer in the past 5 years, making it the world's most prevalent cancer.<sup>12</sup> Breast cancer arises in the lining cells (epithelium) of the ducts (85%) or lobules (15%) in the glandular tissue of the breast. Initially, the cancerous growth is confined to the duct or lobule (*in situ*) where it generally causes no symptoms and has minimal potential for spread (metastasis).<sup>2</sup>

RCC is the most common type of kidney cancer and accounts for 90% of all cancerous kidney tumors.<sup>3</sup> There are several types of RCC, but 75% of patients have a type

called clear cell.<sup>4</sup> In RCC, cancer cells develop in the lining of the kidney's tubes and grow into a mass, commonly called a tumor.

According to Akbulut et al, there are roughly 29 reported cases of the coexistence of breast cancer and TB in axillary lymph nodes for 1899 to 2011.<sup>4</sup>

The incidence of carcinoma breast in India is 25.8 per 1,00,000 women.<sup>5</sup> Out of which only 1-4% have ca breast with Paget's disease.<sup>6</sup>

The incidence of dual primary malignancy (any origin) is roughly 4-11%.<sup>7,9</sup>

According to Jiao et al there have been 8 reported cases of synchronous breast primary malignancy coexisting with RCC.<sup>10,18</sup>

Most of the multiple malignancies reported in literature are metastatic tumours or metachronous breast malignancy with RCC.

A case of synchronous primary ca breast with Paget's disease coexisting with primary renal cell carcinoma along with tubercular lymphadenopathy is yet to be reported in literature. This might just be the first one.

Treatment is based on excision of tumor with adequate tumor free margin and post-surgical chemotherapy and treatment of tuberculosis according to the NCCN and RNTCP guidelines.<sup>11,12</sup>

## CONCLUSION

There have been cases of breast cancer with TB lymphadenitis as well as of double synchronous malignancies involving breast carcinoma and renal cell carcinoma.

A case of synchronous primary ca breast with Paget's disease coexisting with primary renal cell carcinoma along with tubercular lymphadenopathy is yet to be reported in literature and this might just be the first one.

We strongly recommend keeping such possibility in mind and do a thorough evaluation of all aspects of disease and patient so that successful curative treatment can be given as much as possible.

*Funding: No funding sources*

*Conflict of interest: None declared*

*Ethical approval: Not required*

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**Cite this article as:** Ranganath S, Kasliwal NR, Shah AK, Maydeo RA. Synchronous breast carcinoma (with Paget's disease) and renal cell carcinoma with tubercular axillary lymphadenitis: a rare presentation. Int Surg J 2021;8:2234-7.