

Tuberculous Axillary Lymphadenitis Coexistence in Patient with Invasive Ductal Carcinoma of the Breast: A Case Report

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Abstract Axillary lymph node enlargement in breast cancer patients is not always metastatic disease. This is a reported case of a patient who had ipsilateral tuberculous axillary lymphadenitis coexistence with an invasive ductal carcinoma in the upper inner quadrant of the right breast. Accurate diagnosis has helped in down staging the carcinoma of the breast and also in identifying curable disease.

Most common manifestation of Mycobacterium Tuberculosis infection is pulmonary infection. Other manifestations of tuberculosis and coexisting infection with other diseases can also be found¹. In 1974, Kaplan, et al, reported coexisting tuberculosis infection and cancer. He reviewed 58,245 patients with cancer and identified 201 cases of coexisting tuberculosis. Highest prevalence was seen in patients with Hodgkin's disease (96/10,000 cases) followed by lung cancer (92/10,000), lymphosarcoma (88/10,000) and reticulum cell sarcoma (78/10,000). Among 14,742 cases of breast cancer reviewed, only 28 had coexisting tuberculosis in the breast². Coexistence of breast cancer and tuberculous lymphadenitis is rare. We reported here a case of invasive ductal carcinoma of the breast coexisting with tuberculous axillary lymphadenitis without primary mammary or pulmonary tuberculosis.

CASE PRESENTATION

A 46-year-old female presented at Bamrasnaradura Institute with a breast lump of 3-month duration. Physical examination revealed a 4 × 3 cm ill-defined hard mass in the upper inner quadrant of the right breast. There were no palpable lymph nodes in the right axilla. Contralateral breast and axilla were normal. There was no supraclavicular node enlargement. Fine needle aspiration cytology was unsatisfactory. Wide excisional biopsy, 4.5 × 3 × 3 cm in size, was performed. The pathological examination revealed an invasive ductal carcinoma of the breast without

angio-lymphatic invasion. The margins were not free. Patient was informed of the results and consented for radical operation. Biochemical parameters and chest roentgenogram were normal and metastatic work-up was negative.

One week later patient had right modified radical mastectomy. Histopathology of the resected specimen revealed residual invasive ductal carcinoma around previously excised cavity (Figure 1-3). Deep resection

lines were free of tumor and without angio-lymphatic invasion. All lymph nodes were free of metastatic tumor. Two of the ipsilateral axillary lymph nodes revealed small granulomatous nodules with area of caseous necrosis (Figure 4) with Langhan's giant cells (Figure 5); no acid-fast bacilli (AFB) could be demonstrated in the granuloma. Postoperatively, patient received short course of anti-tuberculosis regimen and was referred to the National Cancer Center for adjuvant chemotherapy.



Fig. 1 Gross specimen of the right breast

DISCUSSION

Coexisting tuberculous infection and cancer has been reported in most organs. Breast is one of the organs which have been reported to have coexisting tuberculous infection and cancer³⁻⁶. Tuberculous lymphadenitis and metastatic breast cancer can be found in the same axillary lymph nodes⁷⁻¹⁰. The explanation of this finding could be due to activation of a silent infection of *Mycobacterium tuberculosis* by immuno-suppression in cancer patients or it could be a concurrent acquired infection. There are still some unexplained relationship of these two diseases which need further studies.

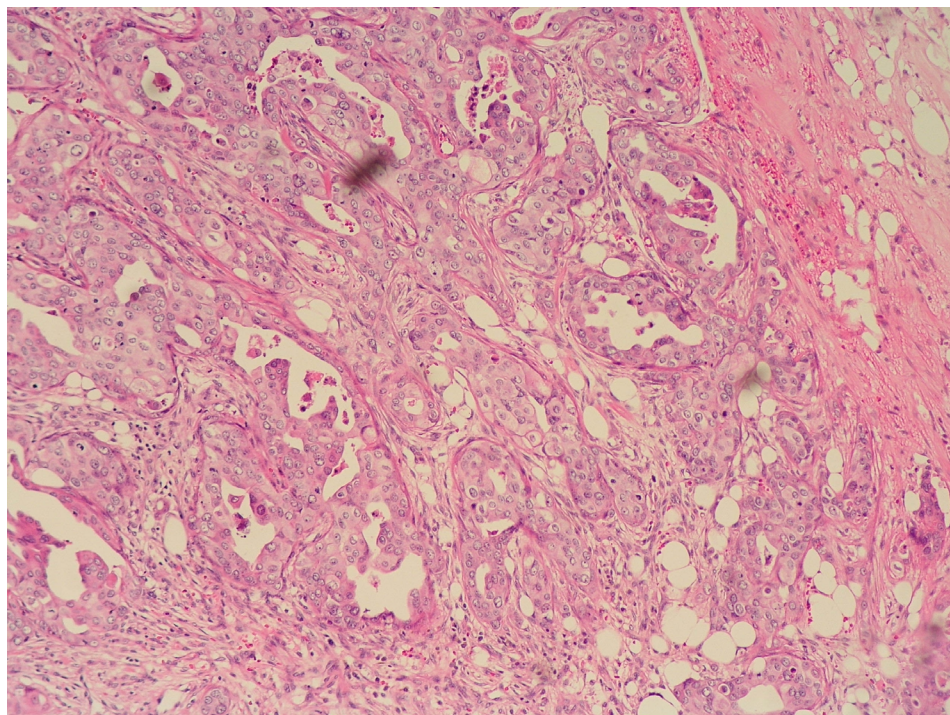


Fig. 2 Histological picture of the specimen, revealing invasive ductal carcinoma of the breast.

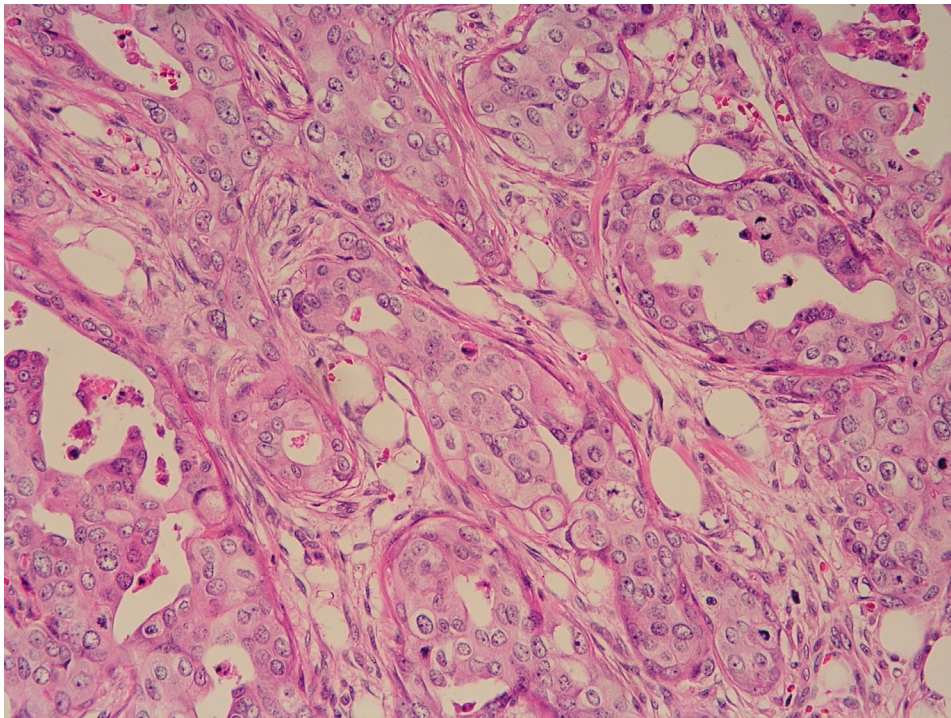


Fig. 3 Histological picture of specimen, revealing invasive ductal carcinoma of the breast, higher magnification.

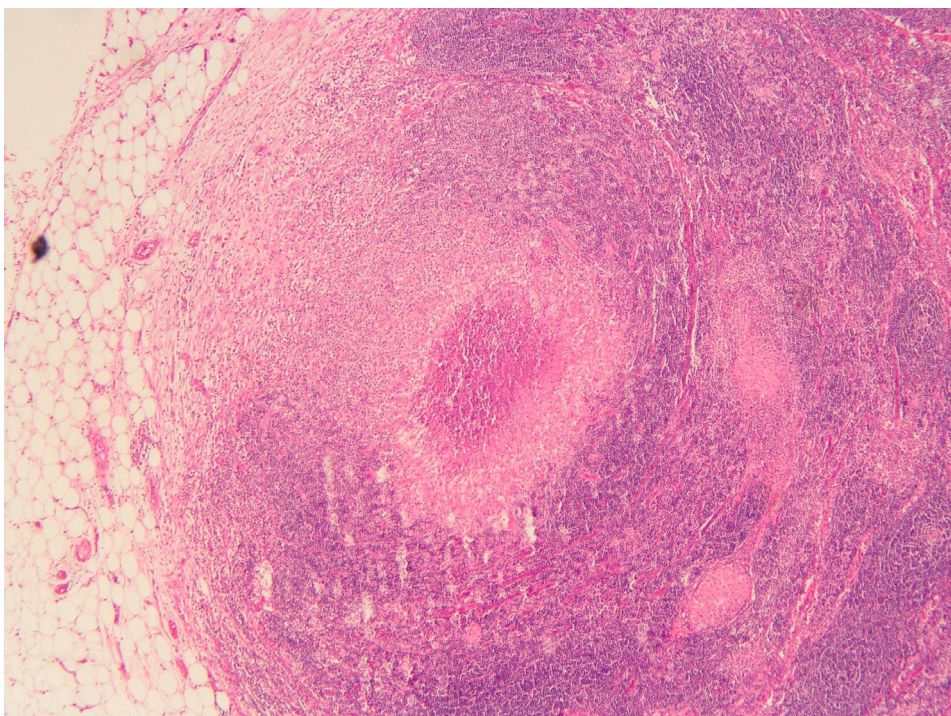


Fig. 4 Histological picture of axillary lymph node, revealing small granulomatous nodule with area of caseous necrosis.

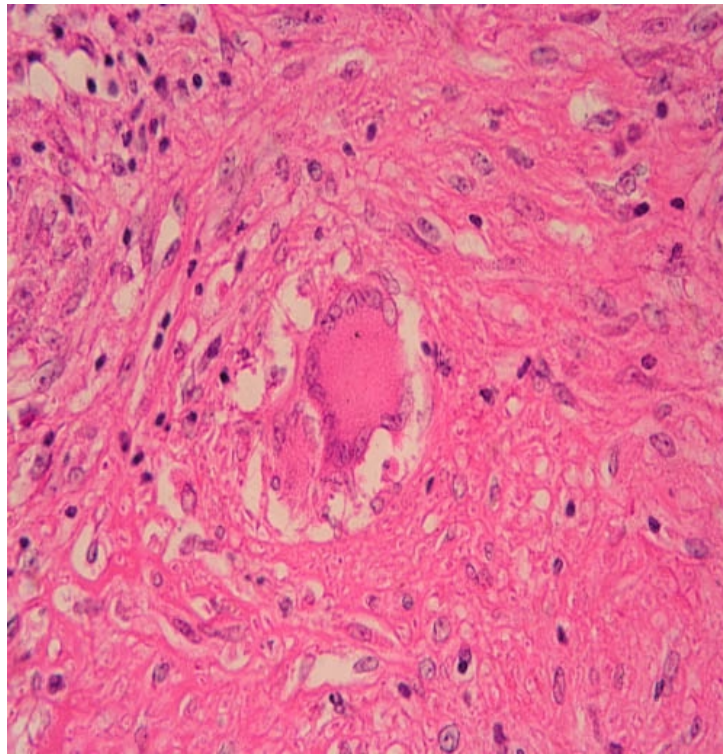


Fig. 5 Histological picture of axillary lymph node, revealing granulomatous nodule with Langhan's giant cell.

CONCLUSIONS

Axillary lymph node enlargement in breast cancer patient is not always caused by metastatic tumor of the breast even in the ipsilateral axillary nodes. This case report is an example of tuberculous axillary lymphadenitis coexisting with invasive ductal carcinoma of the breast. Accurate diagnosis has helped in down staging carcinoma of the breast and also in identifying curable disease.

REFERENCES

- Balasubramanian SP, Rao MP, Jayaram S, Bose SM. Coexisting mammary tuberculosis and malignant disease. *Can J Surg* 2001; 44: 224-5.
- Kaplan MH, Armstrong D, Rosen P. Tuberculosis complicating neoplastic disease: a review of 201 cases. *Cancer* 1974; 33: 850-8.
- Babu ED, Tariq N, Aref FA, Vashisht R. Axillary gland involvement in breast carcinoma is not always metastatic: a case report. *Int Surg* 2004; 89: 150-1.
- Fujii T, Kimura M, Yanagita Y, Koida T, Kuwano H. Tuberculosis of axillary lymph nodes with primary breast cancer. *Breast Cancer* 2003; 10: 175-8.
- Robinson AJ, Horne CA, Weaver A. Coexistence of axillary tuberculous lymphadenitis with lymph node metastases from a breast carcinoma. *Clin Oncol (R Coll Radiol)* 2001; 13: 144.
- Warthin AS. The coexistence of tuberculosis and carcinoma of the mammary gland. *Am J Med Sci* 1899; 118: 25.
- Pandey M, Abraham EK, K C, Rajan B. Tuberculosis and metastatic carcinoma coexistence in axillary lymph node: a case report. *World J Surg Oncol* 2003; 1: 3.
- Miller RE, Solomen PF, West JP. The coexistence of carcinoma and tuberculosis of the breast and axillary lymph nodes. *Am J Surg* 1971; 121: 338-40.
- Grege A, Kienle J. Association of tuberculosis with carcinoma of the breast. *Radiology* 1969; 93: 1107-8.
- Das DK, Mohil RS, Kashyap V, Khan IV, Mandal AK, Gulati SM. Colloid carcinoma of the breast with concomitant metastasis and a tubercular lesion in the axillary lymph nodes: a case report. *Acta Cytol* 1992; 36: 399-403.