

## Case Report

## Breast Carcinoma and Tuberculosis in Axillary Lymph Nodes: A Case Report

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**Abstract:** The coexistence of tuberculosis with axillary lymph node metastases in breast carcinoma is rare. Axillary lymph node metastasis is the most important factor in the staging of breast carcinoma, this can mimic or complicate the staging of a malignant disease. Dual organ pathology can lead to interpretation difficulties and inappropriate treatment of tuberculosis as well as breast carcinoma. We report an observation of infiltrating carcinoma of the non-specific type of the breast in woman aged 39, where tuberculosis was found in the axillary lymph nodes in addition to metastases. The possible and simultaneous occurrence of breast carcinoma and tuberculosis should be mentioned in order to avoid difficulties of interpretation and allow adequate management of axillary tuberculous lymphadenitis and breast carcinoma.

**Keywords:** Breast cancer, Tuberculosis, Tuberculous lymphadenitis.

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### INTRODUCTION

The coexistence of tuberculosis with lymph node metastases during mammary carcinoma is rare (Elidrissi M *et al.*, 2016).

Lymph node involvement in breast carcinoma is an important factor in disease staging (Bromberg *et al.*, 2015; Zouhal A *et al.*, 2000).

The association of a breast carcinoma with tuberculosis can lead to difficulties in interpretation and inappropriate management of tuberculosis as well as of the breast tumor.

We report the very uncommon case of non-specific invasive carcinoma of the breast in a 39-years-old woman, where axillary tuberculous lymphadenitis was associated with lymph node metastases of carcinoma without primary breast tuberculosis.

### CASE REPORT

A 39-years-old female, teacher with no particular history, came to our consultation following the discovery of a mass in her right breast.

Physical examination revealed a 40 mm mass in the upper outer quadrant of the right breast, of hard consistency and non-adherent to the deep tissues with

mobile axillary adenopathies (1cm), no other mass was palpable.

A first evaluation by mammography and complementary ultrasound, described an irregular mass in the upper outer quadrant, measuring 39 x 24 x 15 mm and irregular spiculated mass with associated pleomorphic calcifications. This lesion was assigned a Breast Imaging Reporting and Data System (BIRADS) score of 5.

A micro-biopsy was performed, showing a non-specific infiltrating ductal carcinoma grade II with a luminal B immune phenotype (HR+, HER2+, Ki67 at 35%).

Enhanced thoraco-abdomino-pelvic computed tomography and bone scan were negative for metastatic disease.

At the end of her explorations, the patient was initially classified according to the international TNM classification, (CT2N1M0).

After a multidisciplinary consultation meeting, neo-adjuvant chemotherapy was instituted and after 8 cures, a reassessment was made, where a partial rethink was recorded, estimating a 40% reduction in the initial size with persistence of sub centimetric adenopathies.

After a second consultation meeting, it was decided to undertake the patient in the operating room and to perform a total mastectomy with axillary dissection, the postoperative course was simple and discharge was made on the second day.

Anatomopathological examination revealed a solid white mass with infiltrating edges measuring 2.0 x 1.0 x 0.7 cm in the midline of the upper quadrant. The rest of the parenchyma was unremarkable. Numerous lymph nodes were identified.

Histologically, a nonspecific infiltrating ductal carcinoma was observed.

Of 21 lymph nodes analyzed, carcinoma metastases were found in seven (7) of them. Granulomatous lymphadenitis with positive Ziehl Neelsen staining was observed in five (5) lymph nodes.

The case was again presented to a multidisciplinary committee accompanied by the tuberculosis and respiratory diseases control service (TRDCS) with territorial jurisdiction. The agreed conclusion was to start a three-month treatment of antituberculous drugs consisting of rifampicin, isoniazid and ethambutol; followed by a three-month maintenance phase after the patient's consent and in accordance with the recommendations of the Algerian tuberculosis control plan.

The main risk to assess is liver toxicity, as well as the risk of aggravation of tuberculosis secondary to immunosuppression induced by chemotherapy.

The patient was followed in consultation every 3 months and today after 2 years the patient does not present any recurrence.

## DISCUSSION

Tuberculosis is an endemic disease in Algeria, tuberculous lymphadenopathy is the most common form of extrapulmonary tuberculosis, but primary axillary tuberculous adenitis is extremely rare in adults.

The synchronous onset of breast cancer and axillary tuberculosis is an important, albeit rare, event that can confuse and complicate the diagnosis, staging, and treatment of disease (Warthin A.S, 1899).

Establishing a diagnosis of mammary and/or axillary tuberculosis in patients with breast tumor during the preoperative period has certain advantages (Akbulut S *et al.*, 2011).

- Avoiding some possible complications secondary to tuberculosis, including sinus fistula or chronic wound infections.
- Axillary dissection can be performed easily.

- over-staging of lymph nodes is prevented when staging the disease, considering that palpable lymph nodes in the axilla are secondary to tuberculosis.

The coexistence of breast cancer and tuberculosis poses a dual problem, diagnostic and therapeutic, and requires the total cooperation of the patient (Bouhout T *et al.*, 2017).

There is no clear consensus on the timing of administration of antituberculous drugs or on the duration or even the association with chemotherapy (Tritar-Cherif F *et al.*, 2014).

Alzaraa recommend the realization of a mastectomy in the event of operable breast cancer followed by an antituberculous treatment of 18 months (Alzaraa A *et al.*, 2008). However, Broughton *et al.*, recommend chemotherapy after 4 weeks of TB treatment due to the immunosuppressive effects of chemotherapy (Broughton A *et al.*, 2008).

In our case where tuberculosis is diagnosed post-operatively, anti-tuberculosis treatment is essential and the anti-tuberculosis protocol adopted by our team was based on the recommendations of the tuberculosis control program where a three-month attack phase of rifampicin, isoniazid and ethambutol and followed by a second maintenance phase of three months.

Noted that some authors recommend a supplement of chemotherapy added to the treatment once healing is complete (Broughton A *et al.*, 2008). This was not the case with our patient.

## CONCLUSION

If breast cancer remains the most common cancer, its incidence continues to increase in Algeria and tuberculosis remains endemic, the possible and simultaneous occurrence of breast carcinoma and tuberculosis should be mentioned or even retained in certain cases, in order to avoid many problems of interpretation during the management of these forms associating axillary tuberculous lymphadenitis with breast carcinoma.

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## REFERENCES

1. Moustarhfir Elidrissi, A., Benjelloun, H., Zaghba, N., & Yassine, N. (2016). *Peripheral Lymph Node Tuberculosis*. Elsevier Masson SAS, Casablanca.
2. Bromberg, S. E., & Amaral, P. G. T. D. (2015). Tuberculosis axillary lymph node coexistent breast cancer in adjuvant treatment: case report. *Einstein (Sao Paulo)*, 13, 423-425.

3. Zouhal, A., Outifa, M., Filali, A., El Amrani, N., Bensaid, F., Fehri, S., & Alaoui, M. T. (2000). Pseudoneoplastic Tumors of the Breast: Breast Tuberculosis about 2 Cases. *Maghreb Medicine*, 82, 1-14.
4. Warthin, A. S. (1899). The Coexistence of Tuberculosis and Carcinoma of the Mammary Gland. *The American Journal of the Medical Sciences*, 118, 25.
5. Akbulut, S., Sogutcu, N., & Yagmur, Y. (2011). Coexistence of breast cancer and tuberculosis in axillary lymph nodes: a case report and literature review. *Breast cancer research and treatment*, 130(3), 1037–1042.
6. Bouhout, T., Serji, B., Egyir, E. U., Elamri, B., Bouhout, I., & Soufi, M. (2017). Breast Tuberculosis: A Case Report. *Pan African Medical Journal*, 28(183).
7. Tritar-Cherif, F., & Daghfous, H. (2014). Management of Lymph Node Tuberculosis. *Medical Tunisia, Flight*, 92(1).
8. Alzaraa, A., & Dalal, N. (2008). Coexistence of carcinoma and tuberculosis in one breast. *World Journal of Surgical Oncology*, 6(1), 1-4.
9. Wani, B. N., & Jajoo, S. N. (2008). Ipsilateral axillary tubercular lymphadenopathy, contralateral osseous tuberculosis in a case of ductal carcinoma of breast. *Indian journal of cancer*, 45(4), 182-184.
10. Broughton, A., Galant, C., & Hainaut, P. (2008). Simultaneous occurrence of metastatic breast cancer, Hodgkin's disease and tuberculous lymphadenitis in homolateral axillary lymph nodes—a case report. *Acta Clinica Belgica*, 63(6), 391-393.

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