



CLINICAL CASE

Primary Breast and Lung Cancer - Case Report

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Abstract

A case review of a Caucasian 35-year-old female patient with no family history, diagnosed with primary breast cancer, and later finding lesions on the right lung. After image exams on the lungs and research, what was expected to be a result of a metastasis, was in fact a primary adenocarcinoma.

Keywords

Breast cancer, Primary lung cancer, Invasive ductal carcinoma

Abbreviation

BI-RADS: Breast Imaging-Reporting and Data System; IDC: Invasive Ductal Carcinoma; MRI: Magnetic Resonance Imaging; HER2/neu: Human Epidermal Growth Factor Receptor 2; CT: Computerized Tomographic; CK7: Cytokeratin 7; TTF-1: Thyroid Transcription Factor-1; INCA: National Institute of Cancer

The first scan performed was an ultrasound; which reported no findings. The second, a mammogram, showed benign results (BI-RADS: Category 2). After these findings, an ultrasound was performed again. On this occasion, two suggestive solid nodules in the right breast were found, one in the lower outer quadrant and the other in the lower inner quadrant measuring 0.7 × 0.5 × 0.6 cm and 0.6 × 0.2 × 0.5 cm respectively (BI-RADS: Category 3).

The patient underwent a fine needle aspiration biopsy. Three nodules in the lower outer quadrant of the right breast were aspirated. The result of the biopsy was a diagnosis of invasive ductal carcinoma (IDC). An MRI of the breasts showed an extensive lesion in the lower outer quadrant of the right breast, extending to the midline, with signs of an intraductal extension to the areola.

After the conclusion of the examinations, surgery proved to be the only viable treatment: bilateral total mastectomy. Two intra-surgical examinations were performed. A biopsy confirmed the diagnosis of invasive micropapillary ductal carcinoma. Immunohistochemistry showed positive for the protein HER2/neu. After surgery, the patient underwent radiation therapy for 6 weeks, in conjunction with CT scans.

In total, all three CT scans showed a small solid ground glass nodule with small solid components, measuring approximately 0.9 cm in the upper segment of the lower lobe of the right lung.

The patient was referred for pulmonary segmentectomy, where they performed two tests. The first was a

Introduction

A diagnosis of lung Cancer in a patient that also has a concurrent or previous cancer of another origin, does not always mean metastasis. In the case of Breast Cancer it is expected that a neoplastic lesion found in the lungs to be the consequence of a metastasis extension.

Clinical Case

Female patient, 35, white, G1P1, retired due to disability after reporting mastalgia to the doctor. After conducting tests, she was diagnosed with primary breast cancer and later with primary lung cancer.

This patient has little family history of cancer. Only one relative, a parent had oral cancer.



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biopsy, that resulted in a diagnosis of atypical adenomatous hyperplasia. The second, an immunohistochemistry, where CK7 and TTF-1 antigens were diffusely positive, providing the diagnosis of primary lung adenocarcinoma.

The patient recovered well, post-surgery examinations did not report any relevant findings.

Discussion

Currently, breast cancer is still a leading cause of female mortality. According to INCA statistics, breast cancer Brazil has a mortality rate of 12.3 per 100,000 women [1]. It is very unusual to occur before 35 years of age and can come with or without breast pain.

According to the College of American Pathologists, invasive ductal carcinoma (IDC) is the most common invasive breast cancer, accounting for around 65 to 85% of cases, and is usually associated with women over 45 years. The IDC starts in the milk ducts and invades the surrounding breast tissue. If the case is not treated in time, the IDC can invade extra-mammary tissues, the blood or lymphatic system [2].

The IDC is characterized by a hard nodule with irregular borders, and the skin over the affected area can be retracted. In mammography the IDC usually appears as a mass with edges radiating from the edges and can sometimes appear as a soft lump or as calcifications in the tumor area [2].

There are studies now that show an increased risk of lung cancer among women receiving postoperative radiotherapy for breast cancer [3,4]. Therefore, nodules in the lung found in patients who underwent a mastectomy are not always the metastasis arising from breast cancer. The diagnosis of the biopsy is very important to define the treatment as well as the prognosis [5].

The primary lung adenocarcinoma with alveolar growth is a tumor in which the line of tumor cells of the alveolar walls seem to gradually replace the epithelium

of normal air spaces, preserving its basic architecture. It may appear as a solitary pulmonary nodule or as a diffuse process involving the entire lung [6].

Ethical Statement

The Editorial Board of Obstetrics and Gynaecology -Cases and Reviews

I declare that the article entitled Primary Breast and Lung Cancer - Case Report is original; which was not published in full and is not being submitted to another journal and it shall not, while under appreciation of this journal; that all authors agree with the final version of the work; Obstetrics and Gynaecology - Cases and Reviews is replaced copyright on the article, should it be published and accept the decisions of the journal editorial body, on the need for revisions or modifications, not fitting resources in case of initial refusal as a result of non-compliance with ethical principles or significant errors in methodology or after revision.

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