

A Case Report of Duodenogastric Metastasis from Breast Cancer

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Abstract

We present the case of an 82 year old woman who was diagnosed with breast cancer in 2011 and who underwent surgery and adjuvant treatment with tamoxifen. In 2015 she was hospitalized for an upper intestinal obstruction. Involvement of a tumor was ruled out, but video-assisted thoracoscopy showed the presence of pleural effusion and pleural lesions corresponding to metastases. Hormone therapy was initiated, and the patient responded adequately. One year later, a gastroduodenoscopy showed edema and erythema of the duodenal bulb. The biopsy corroborated metastasis from breast cancer.

Keywords

Breast cancer; intestinal obstruction; metastasis; fulvestrant; anastrozole.

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INTRODUCTION

Breast cancer is the most frequently diagnosed cancer in the world and the leading cause of cancer death in women. In the United States, it is estimated that 230,000 new cases are diagnosed each year and that it is the cause of death of 40,000 people per year. (1) In Colombia, it is estimated that there are more than 5,000 new cases of breast cancer each year, with an incidence rate between 26.4 and 35.7/100 000 inhabitants. (2)

The expression of hormone receptors and human epidermal growth factor receptor (HER2) allow classification of breast cancer: 80% of cases test positive for hormone receptors, 23% have overexpression of HER2, and 13% are triple negative breast cancer. (3) The most frequent sites of metastasis in breast cancer are bones, liver and lungs. The frequency of reports gastric metastasis is less than 1%. (4) Given the increasing incidence of breast cancer, as well as the longer survival of patients, it is important that all specialists recognize the many facets of this disease.

CASE DESCRIPTION

An 82-year-old woman from Medellín was diagnosed with stage IIA (pT2pN0M0G2) breast cancer in 2011. She tested positive for hormone receptor and negative for HER2. Metastases were ruled out. Her only important antecedent was supraventricular tachycardia treated with β -blockers. She had undergone modified radical mastectomy with hormonal maintenance and adjuvant tamoxifen with oncology check-ups.

In September 2015, she was hospitalized for upper intestinal obstruction, underwent upper gastrointestinal endoscopy. Due to duodenal stricture, she also was examined with magnetic resonance cholangiopancreatography (MRCP). Dilatation of the gastric chamber without lesions suggestive of a mass was found, but gastroduodenal biopsies were negative for malignancy. During hospitalization, she presented bronchial aspiration that required management in the intensive care unit (ICU), but her good clinical evolution was good. A chest X-ray showed pleural effusion,

which led to videothoracoscopy which found pleural nodular lesions. Biopsies showed compromise due to metastatic breast carcinoma. Immunohistochemistry testing was 100% positive for estrogen receptors, and 10% positive for progesterone receptors and focal mammoglobin.

In December 2015, a clinical oncologist outside of the institution evaluated the patient and initiated endocrine therapy combined with fulvestrant and anastrozole based on the evidence presented in the SWOG 0226 study which showed better response rates and longer progression time than treatment with anastrozole alone. (5)

The patient tolerated treatment well, and had significant weight gain. In May 2016, lacking sufficient reason to continue with dual blockade, anastrozole was discontinued and fulvestrant monotherapy was continued without adverse effects. In June 2016, six months after starting treatment, a CT scan of the thorax and abdomen found complete response.

In August 2016, the gastroenterologist performed upper digestive endoscopy which showed edema and bulbous erythema. The biopsy showed the presence of atypical cells, and the immunohistochemical study was positive for markers CK7 and GATA 3 while testing for estrogen receptors was positive (50%) while testing for progesterone receptors was negative, thus corroborating breast carcinoma.

In this scenario, our diagnosis was gastrointestinal compromise due to breast cancer which corresponds to the initial symptom of relapse in September 2015, despite the fact that there was no evidence of tumor involvement in gastroduodenal biopsies at that time. Her current condition indicates no progression, and the patient continues to be asymptomatic as demonstrated by imaging studies.

DISCUSSION

There are only two studies of dual hormonal blockade with fulvestrant plus aromatase inhibitor, and their results are contradictory. The SWOG 0226 phase II study found a 15-month progression-free survival and overall survival of 47 months with combination therapy but a 13.5 months progression-free survival period and overall survival of 41.3 months with monotherapy. (5) In contrast, phase II of the FACT study (fulvestrant plus anastrozole versus anastrozole) showed combination therapy provided no better results than did monotherapy. (6)

On the other hand, the Phase II FIRST study, which compared first-line treatment of metastatic disease using fulvestrant with treatment using anastrozole, showed that fulvestrant treatment provided longer progression-free survival (23 versus 13 months) and longer overall survival (54 vs. 48 months). The study endorsed it as an effective first-line treatment. (7)

Metastatic breast cancer presents in different forms of dissemination and systemic involvement depending on whether it is histological and molecular subtype (luminal A, B or HER2 enriched). Metastasis to the gastrointestinal tract is rare. Ambroggi et al. described 5 patients with gastrointestinal compromise due to breast cancer and made a systematic review of the literature that included the period from 1943 to 2012. They found only 265 cases reported during the entire period. (8) The management of metastatic breast cancer does not change according to the region involved. The median survival time in these cases varies from three to ten years depending on the molecular control and sensitivity of each patient.

The case presented illustrates duodenal and gastric involvement due to luminal breast cancer. It raised the problem of differential diagnosis in patients with metastatic breast disease and gastrointestinal symptoms. Although this study presents only one patient, it is likely that fulvestrant and anastrozole therapy is responsible for the good clinical response.

Conflicts of Interest

This study received no external funding, and the authors declare that they have no conflicts of interest.

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