Male Triple Negative Axillary Accessory Breast Cancer, a Case Report

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Case report

Keywords: male breast cancer, triple negative breast cancer, accessory breast cancer, case report

Posted Date: August 13th, 2021

DOI: https://doi.org/10.21203/rs.3.rs-786629/v1

Abstract

Background: Breast cancer is the most common malignancy among women worldwide. In men, cases of breast cancer are few and accounts for less than 1% of all cases of breast cancer. Majority of male breast cancer is hormone receptor-positive. The incidence of male axillary accessory breast cancer derived from axillary accessory breast is very low. Here we report a case of male triple negative axillary accessory breast cancer.

Case presentation: We present a case of a male triple negative axillary accessory breast cancer in a 67-year-old man that progressively increased in size through a period of 1 year. We performed right accessory breast resection and right axillary lymph nodes dissection. Postoperative pathological analysis revealed right accessory breast invasive ductal carcinoma with apocrine metaplasia. The tumor size was 3.5 * 3.3cm. In addition, 5 metastatic lymph nodes were seen in 27 axillary lymph nodes. Immunohistochemistry showed ER (-), PR (-), Ki-67 30%, HER2 (2 +), GATA-3 (+), GCDFP-15(+), and AR (+). Fish test obtained a negative result. The patient was treated with adjuvant chemotherapy and radiotherapy.

Conclusion: Male triple negative axillary accessory breast cancer is rare. Treatment of male triple negative axillary accessory breast cancer is similar to that of women patients. Most patients undergo surgery and adjuvant chemotherapy.

Background

Breast cancer is the most common malignancy among women worldwide (1). Compare to female breast cancer, the incidence of male breast cancer is low, accounting for less than 1% of all cases of breast cancer (2). Majority of male breast cancer cases are hormone receptor-positive (3, 4). It has been reported that only 0.2% − 1.2% of men have axillary accessory breast (5). Cases of male breast cancer occurring in axillary accessory breast are rare. Here, we report a case of male triple negative axillary accessory breast cancer.

Case Presentation

In November 2019, a 67-year old man presented to our Department of Breast Surgery, Hwa Mei Hospital, University of Chinese Academy of Sciences with one-year history of a right axillary mass which progressively increased in size. The patient did not report a history of benign breast disease or a history of cancer. Physical examination revealed a 3*2 cm mass in the right axillary. B-ultrasound examination showed a 31 * 17mm mass in the right axillary accessory breast with multiple enlarged lymph nodes. No mass was found in both sides of breast in Mammography and B-ultrasound tests. No obvious abnormality was found in liver B-ultrasound, Chest computed tomography and tests for tumor makers. On the basis of the aforementioned findings, the patient was diagnosed with axillary accessory tumor. Consequently, we performed right axillary accessory tumor resection on November 19, 2019.

Intraoperative pathological examination confirmed axillary invasive cancer. We suspected axillary lymph node metastasis and performed right accessory breast resection and right axillary lymph nodes dissection. Postoperative pathological analysis revealed right accessory breast invasive ductal carcinoma with apocrine metaplasia. The tumor size was 3.5 * 3.3cm. In addition, 5 metastatic lymph nodes were seen in 27 axillary lymph nodes. Immunohistochemistry showed ER (-), PR (-), Ki-67 30%, HER2 (2 +), GATA-3 (+), GCDFP-15(+), and AR (+). Fish test obtained a negative result. The patient was diagnosed with T2N2M0, IIIA stage male triple negative axillary accessory breast cancer. Thus, he was treated with epirubicin and cyclophosphamide (EC) (E: 90mg/m2, C: 600mg/m2) every three weeks for 4 cycles, followed by 4 cycles of docetaxel (100mg/m2) every three weeks. He was subsequently treated with adjuvant radiotherapy after adjuvant chemotherapy. Until now, no obvious signs of recurrence and metastasis have been observed during regular follow-ups.

Discussion And Conclusions

Given that majority of male axillary accessory breast degenerate, there are few cases of male axillary accessory breast (6). The incidence of male axillary accessory breast cancer is very low. For this reason, no large-scale prospective randomized clinical trials have been conducted to determine effective therapy for this condition (7). Currently, male axillary accessory breast cancer is treated similar to female breast cancer (8).

Operable male axillary accessory breast cancer is comprehensively treated with surgery (8). In general, mastectomy with sentinel lymph nodes biopsy is performed (8, 9). For patients suspected with axillary lymph node metastasis, axillary lymph nodes dissection can be performed directly instead of sentinel lymph node biopsy. Compelling evidence indicates that breast conserving surgery is safe and feasible for male breast cancer (10–12). However, in clinical practice, male breast cancer occurs near the nipple in most cases and majority of patients with male breast cancer do not have a strong need undergo a breast-conserving surgery. Most patients with male breast cancer receiving treatment in our department agreed to undergo breast resection. In the present case, with the clinical suspicion of axillary lymph nodes metastasis, the patient underwent accessory breast resection and axillary lymph node dissection.

The application of chemotherapy and radiotherapy in male patients with axillary accessory breast cancer is similar to that of female patients with breast cancer (8, 12). The prognosis of patients with male breast cancer is worse compared to female patients with breast cancer. In our clinical practice, most male patients with breast cancer are given chemotherapy containing anthracycline or paclitaxel. We often assess the prognosis of patients using oncotype DX and other gene prognostic models to decide the appropriate chemotherapy (13, 14). The adjuvant radiotherapy applied to male breast cancer is similar to that used for female patients with breast cancer. Adjuvant radiotherapy is recommended for patients with axillary lymph nodes metastasis or undergoing breast conserving surgery. Postoperative radiotherapy is also recommended for patients with tumors larger than 5cm. In our case, the patient was diagnosed with T2N2M0, IIIA stage male triple negative axillary accessory breast cancer. Ki-67 was 30%. He received 8 cycles of chemotherapy comprising anthracycline and paclitaxel. We recommended a high dosing of

chemotherapy for every 2 weeks but the patient refused due to poor tolerance. We adjusted the cycle of chemotherapy to every 3 weeks. With 5 out of 27 lymph nodes metastasis, the patient received adjuvant radiotherapy after chemotherapy.

Pathological examination confirmed invasive ductal carcinoma with apocrine metaplasia. Less than 90% of the cancer cells showed morphological and immunohistochemical characteristics of apocrine gland cells. Hence, the patient was diagnosed with invasive ductal carcinoma with apocrine metaplasia instead of apocrine carcinoma (15). The cancer was estrogen receptor negative and progesterone receptor negative, possibly due to the apocrine metaplasia, which is rare in male breast cancer. This is a rare case of male triple negative axillary accessory breast cancer.

Abbreviations

EC: epirubicin and cyclophosphamide

Declarations

Availability of data and material

All data analyzed was included in this published case report.

Acknowledgments

The authors thank members of their department for their assistance.

Authors' contributions

CL contributed to data collection, interpretation, literature search, figures drafting and manuscript drafting. BQ contributed to interpretation and critical review of the manuscript. Both authors approved the submitted version of the manuscript.

Ethics declarations

Ethics approval and consent to participate

Surgery with right accessory breast resection and right axillary lymph nodes dissection is standard treatment for early stage accessory breast cancer. Chemotherapy containing epirubicin, cyclophosphamide and docetaxel are standard treatments for triple negative breast cancer. Adjuvant radiotherapy was performed due to 5 out of 27 lymph nodes metastasis. All treatments in this case were in line with national regulations and we had approval from the ethics committee of Hwa Mei Hospital, University of Chinese Academy of Sciences to publish the case details. The patient agreed to the publication of his images with a written informed consent.

Consent for publication

The patient provided written informed consent for publication of this case report and the associated images.

Competing interests

The authors declare that they have no competing interests.

Conflicts of Interest

The authors declare no conflicts of interest.

Funding

The processing fees for publication of this article was funded by Medical Health Science and Technology Project of Zhejiang Provincial Health Commission 2020KY837

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Figures

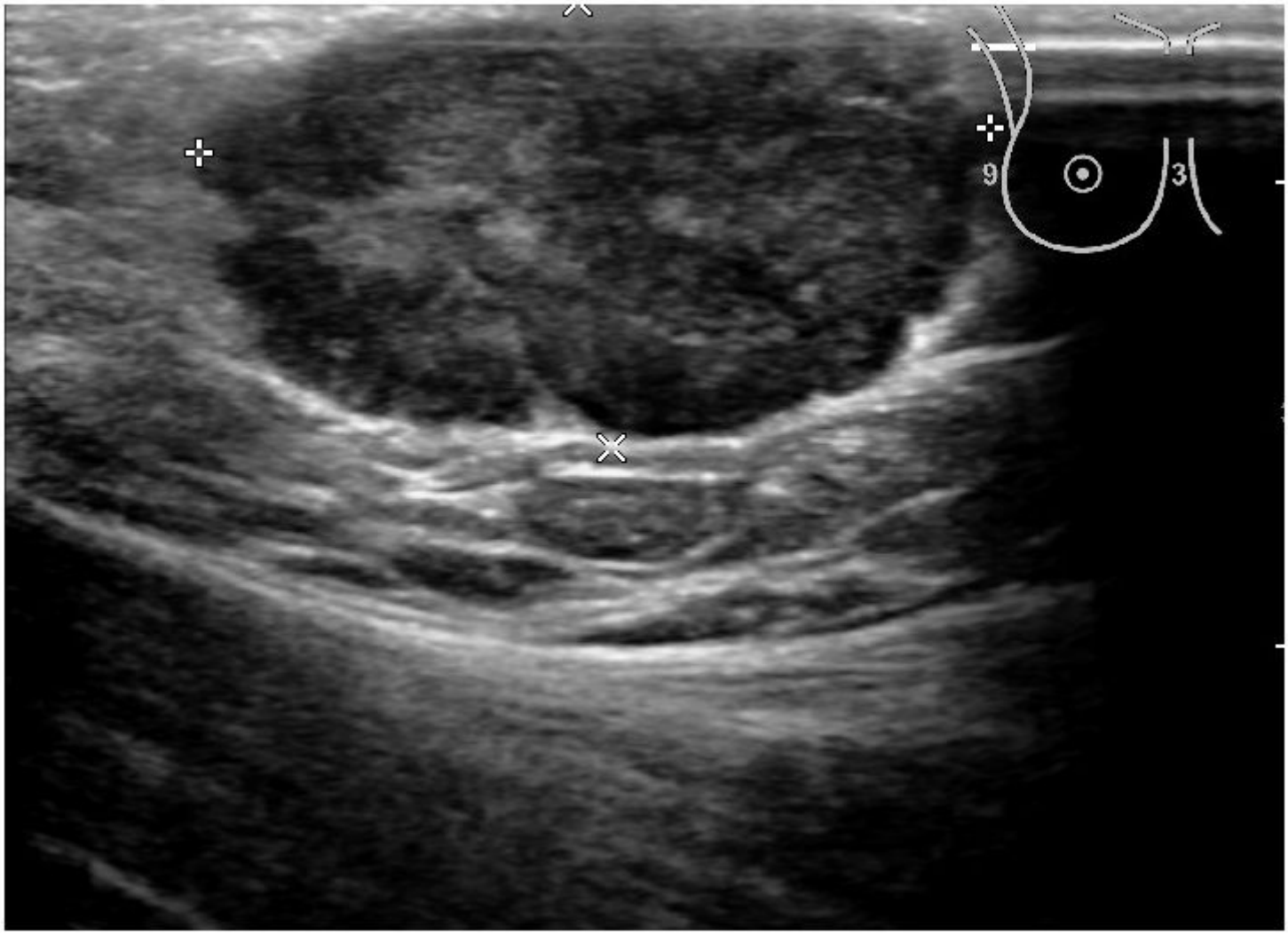

Figure 1

B-ultrasound examination showed a 31 * 17mm mass in the right axillary accessory breast.

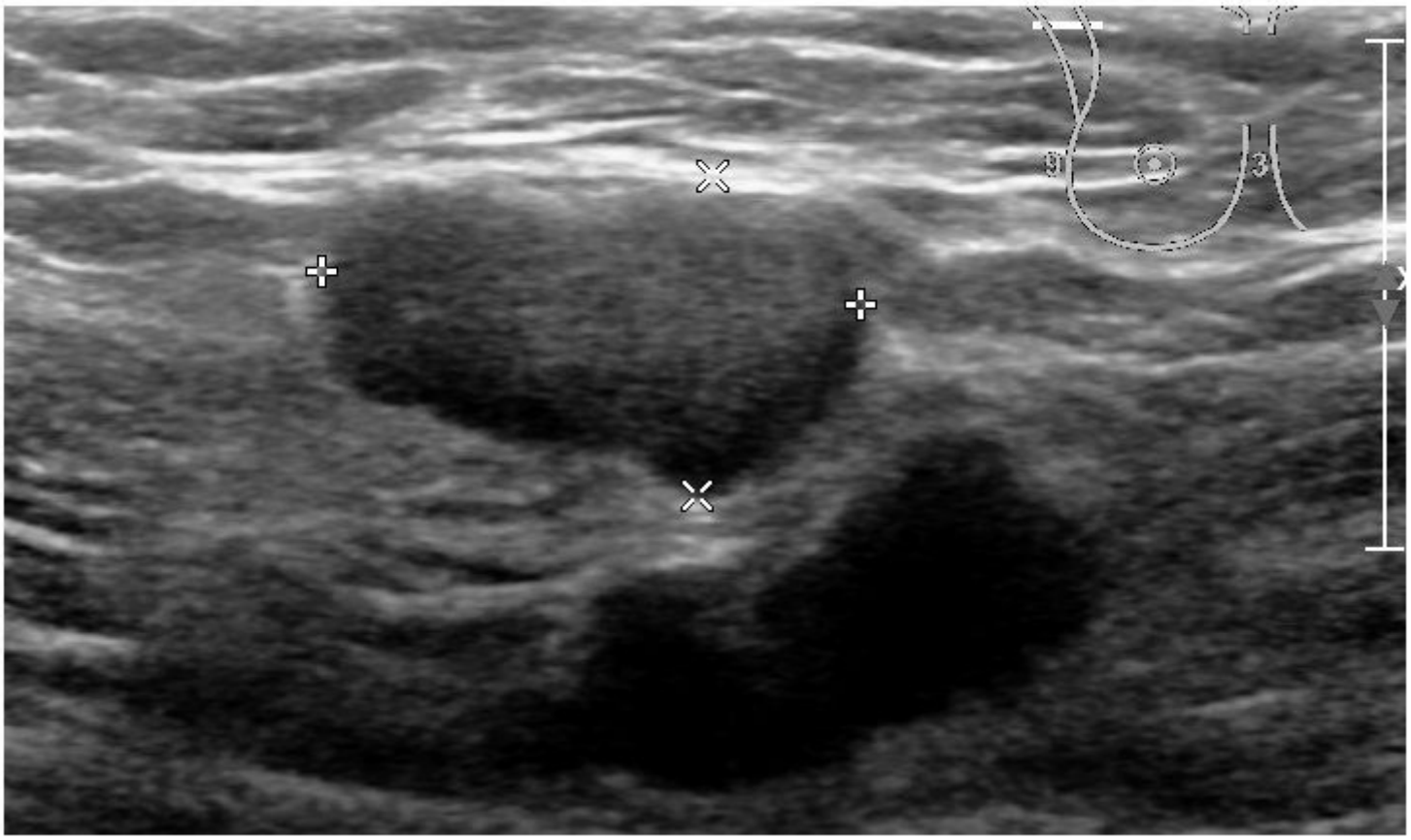

Figure 2

B-ultrasound examination showed a enlarged axillary lymph node.

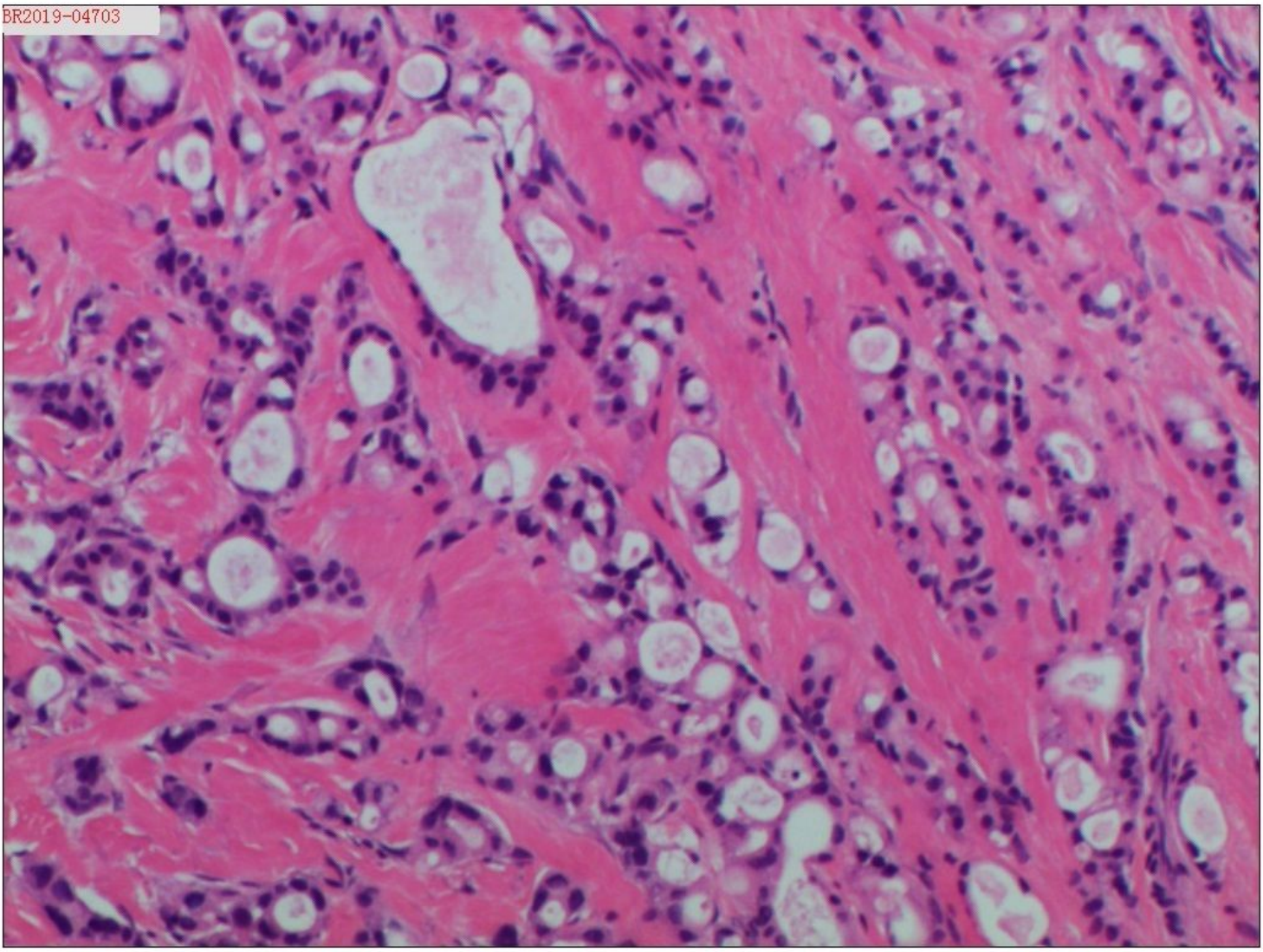

Figure 3

Postoperative pathological analysis revealed right accessory breast invasive ductal carcinoma with apocrine metaplasia