

Peer Review File

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Reviewer A

Comment 1: Page 3 line 63: should be 'axilla' instead of 'axillary'

Reply 1: Yes, we have fixed it by using "axilla".

Changes in the text: we have modified our text as advised (see Page 3, line 65)

Comment 2: What is B-ultrasound? What does the B stands for?

Reply 2: B-ultrasound is B-scan ultrasonography. B stands for brightness.

Changes in the text: we have deleted B in our text as advised (see Page 3, line 65,69,70)

Comment 3: Page 3 line 64: 'B-ultrasound examination showed a 31 * 17mm mass in the right axillary accessory breast'- one can either say that the mass was found in the axillary tail region or mention weather or not there was a clinical suspicious for accessory breast tissue (bilateral enlargement of the area). Axillary mass does not make the diagnosis of axillary accessory breast.

Reply 3: Yes, we have fixed it by using "the mass was found in the axillary tail region".

Changes in the text: we have modified our text as advised (see Page 3, line 66)

Comment 4: Page 3 line 65 : instead of 'No mass was found in both sides of breast' it is more correct to say- 'No masses were found in both breasts'

Reply 4: Yes, we have fixed it by using "No masses were found in both breasts".

Changes in the text: we have modified our text as advised (see Page 3, line 68)

Comment 5: Why was MRI not done as part of the workup?

Reply 5: MRI is an important examination for breast tumor. It helps us diagnose breast cancer and find micro lesions. However, it costs more and takes more time than ultrasound and mammography. Actually, in our hospital, patients usually have to wait one week or longer to get MRI examination while patients receive the examination of ultrasound and mammography in one day. At the same time, MRI is not the necessary examination before breast surgery. So we did not perform MRI for the patient.

Changes in the text: none.

Comment 6: Page 3 line 68: 'axillary accessory breast tumor' instead of 'axillary accessory tumor'

Reply 6: Yes, we have fixed it by adding breast.

Changes in the text: we have modified our text as advised (see Page 3, line 72)

Comment 7: Given the rarity of male breast cancer, especially triple negative subtype, on top of the rarity of accessory breast cancer- the combination of all

together- is extremely unexpected so any efforts made to rule out other origins of cancer should be highlighted (especially given the triple negative stainings). More details are given in the end of the discussion, when it is more relevant to the description of the case. (clarify that breast tissue was actually seen in the specimen and highlight what stains were performed to verify the breast origin).

Reply 7: Yes, we have fixed it. For this patient, there was a clinical suspicious accessory breast tissue with enlargement of the right axilla by physical examination and ultrasound showing some accessory breast tissue.

Immunohistochemistry showed ER (-), PR (-), Ki-67 30%, HER2 (2 +), GATA-3 (+), GCDFP-15(+) with FISH negative. At the same time, we found normal accessory breast tissue next to the accessory breast tumor in Hematoxylin Eosin staining. So, the mass was finally diagnosed axillary accessory breast cancer.

Changes in the text: we have modified our text as advised (see Page 5, line 115-123)

Comment 8: Page 3 line 70: 'Intraoperative pathological examination confirmed axillary invasive cancer' – how was this confirmed? I suggest using a more accurate pathological terms. What is 'axillary invasive cancer'?

Reply 8: Yes, we have fixed it. It is invasive cancer, originating from accessory breast firstly considered.

Changes in the text: we have modified our text as advised (see Page 3-4, line 74-75)

Comment 9: Have you considered a sentinel node biopsy or at least a pathological proven nodal disease before performing axillary dissection?

Reply 9: Sentinel lymph node biopsy is an important technique to reduce upper limb edema for patients without axillary lymph node metastasis by avoiding axillary dissection. However, for patients with clinical suspicious lymph node metastasis, we usually perform axillary dissection directly. For this patient, we suspected axillary lymph node metastasis by physical examination during the surgery and ultrasound. We perform axillary dissection directly.

Changes in the text: none.

Comment 10: What radiation fields were given? Was the whole breast radiated? Was the axilla radiated? It is much more interesting and relevant than the chemo regimen.

Reply 10: Yes, we have fixed it. Irradiation was given to the whole breast, chest, supraclavicular lymph nodes and infraclavicular lymph nodes. The patient received 50Gy intensity-modulated radiotherapy (IMRT) to the breast and chest 5 days per week for 5 weeks, 16Gy three-dimensional conformal radiotherapy to the supraclavicular lymph nodes and infraclavicular lymph nodes for 8 days and 34Gy electron beams as boost for 17 days.

Changes in the text: we have modified our text as advised (see Page 4, line 87-92)

Comment 11: The discussion is written in a cluttered, disorganized manner. I recommend re-editing it in a more methodical fashion.

Reply 11: Yes, we have fixed it. The discussion is followed by incidence, differential diagnosis, pathological examination, surgery, adjuvant chemotherapy, adjuvant radiotherapy, tolerance and follow-up.

Changes in the text: we have modified our text as advised (see Page 5-7, line 105-182)

Comment 12: Proofreading by an English-speaking person is highly recommended.

Reply 12: Yes, we have gotten English language editing.

Changes in the text: none

Comment 13: The authors did not shed any light on the incidence of male accessory breast cancer- Are there any previous reports? What is the reported incidence? And what is the incidence of triple negative male breast cancer? It's not enough to say it is rare. I suggest the authors expand the literature review of this condition.

Reply 13: Yes, we have fixed it. A United States study showed male triple-negative breast cancer accounted for 5.5% of the male breast cancer, while Pang L reported the incidence rate of accessory breast cancer is 0.3–0.6% of all the breast cancer. We do not find any reported incidence of male accessory breast cancer or male triple negative accessory breast cancer.

Changes in the text: we have modified our text as advised (see Page 5, line 105-107)

Comment 14: I think there is redundancy in regard to the adjuvant chemotherapy regimen and tolerance. It is not relevant to the point of the case report which deals with a very rare condition.

Reply 14: Yes, we showed a rare case and the treatment, follow-up of the case. Adjuvant chemotherapy is an important treatment of triple negative breast cancer. Dose-dense chemotherapy is a better treatment for triple negative breast cancer. However, he refused it for poor tolerance. We believe the description of the adjuvant chemotherapy regimen and tolerance is appropriate.

Changes in the text: none.

Comment 15: Was genetic testing done for this patient as recommended for every male with breast cancer?

Reply 15: No, we have recommended BRCA1/2 genetic testing for the patients. He refused for the cost.

Changes in the text: none.

Reviewer B

Comment 1: They showed immunohistochemistry about ER, PgR, Ki67, HER2, GATA3, GCDFP-15, and AR. These are the basis of accessory breast cancer. However, GATA3 shows positive not only in breast cancer but in urothelial cancer. GCDFP-15 shows positive not only in breast cancer but in adnexal and skin appendage neoplasm. So, it is not always possible to declare breast cancer by immunostaining alone. In this case, certainly, as they say, “triple negative type of male breast cancer is rare” is a discussion point, however, “Is this surely accessory breast cancer? (adnexal and skin appendage neoplasm or accessory breast cancer)” seems to be a true discussion point.

So, I recommend that they confirm there is normal breast tissue next to the accessory breast tumor in Hematoxylin Eosin staining. Moreover, they show that the axillary tumor is separated to breast tissue.

Reply 1: Yes, we have fixed it. For this patient, there was a clinical suspicious accessory breast tissue with enlargement of the right axilla by physical examination and ultrasound showing some accessory breast tissue. Immunohistochemistry showed ER (-), PR (-), Ki-67 30%, HER2 (2 +), GATA-3 (+), GCDFP-15(+) with FISH negative. At the same time, we found normal accessory breast tissue next to the accessory breast tumor in Hematoxylin Eosin staining. So, the mass was finally diagnosed axillary accessory breast cancer.

Changes in the text: we have modified our text as advised (see Page 5, line 115-123)

Comment 2: They performed intraoperative pathological examination. It is sometimes difficult to know whether it is surely malignant or not. Did they perform cytology or tissue examination of axillary tumor and axillary LN before surgery?

Reply 2: No, we did not perform preoperative biopsy either for the tumor or the lymph nodes. Preoperative biopsy is the good way to make the diagnosis of the tumor. However, it takes more time and sometimes gives false negative results for the few specimens. Intraoperative pathological examination showed about 95% accuracy for the diagnosis and we could remove the tumor at the same time no matter the tumor is malignant or not.

Changes in the text: none.

Comment 3: Have authors considered Hereditary breast cancer ovarian cancer (HBOC) for this patient? Male breast cancer is a key factor for HBOC. How about his family history?

Reply 3: No, Male breast cancer is a key factor for HBOC. However, he denied his family history of breast cancer or ovarian cancer. He also refused genetic test for the cost. So it is difficult to diagnose him as HBOC.

Changes in the text: we have modified our text as advised (see Page 3, line 63)

Comment 4: In line 78, “Fish” should be “FISH” and it is an abbreviation, so “fluorescence in situ hybridization” should be added.

Reply 4: Yes, we have fixed it by using “FISH” and adding an abbreviation.

Changes in the text: we have modified our text as advised (see Page 2, line 37-38, see Page 4, line 82)

Comment 5: This patient had 5 LN metastases. Please show the detail of the method for radiation therapy.

Reply 5: Yes, we have fixed it. Irradiation was given to the whole breast, chest, supraclavicular lymph nodes and infraclavicular lymph nodes. The patient received 50Gy intensity-modulated radiotherapy (IMRT) to the breast and chest 5 days per week for 5 weeks, 16Gy three-dimensional conformal radiotherapy to the supraclavicular lymph nodes and infraclavicular lymph nodes for 8 days and 34Gy electron beams as boost for 17 days.

Changes in the text: we have modified our text as advised (see Page 4, line 87-92)