



Case Report

A rare case of breast squamous cell carcinoma and literature review

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A B S T R A C T

Introduction: Breast Squamous Cell Carcinoma (SCC) is quite a rare tumour that the features portray squamous cell differentiation.**Presentation of case:** We report a case of a 56-year-old female presented left breast lump that had been increasing in size for a 7 months duration associated with nipple retraction for one week. Ultrasound breast was done and revealed a large mixed echo density mass lesion in the left breast at 12 o'clock, 2cm from the nipple and measuring 4.2 × 3.4cm along with an enlarged node in the left axilla with thickened cortex and as for Mammogram revealed suspicious left breast lesion with enlarged axillary nodes, BIRADS 5. Histopathology from the left breast showed Invasive carcinoma with squamous differentiation, B5b, ER: negative, PR: Positive, Her2: Negative, CK5/6: Positive. Then a staging CECT Thorax, Abdomen and Pelvis was done which showed enhancing mass lesion seen at the left breast (4.1 × 4.3cm) with areas of necrosis within and multiple enlarged left axillary nodes seen with no local infiltration to the muscle or skin as well as no distant metastases. Patient underwent Neoadjuvant chemotherapy for 6 cycles and completed them.**Discussion:** This case highlights the crucial need of early detection along with the obstacles faced in reaching an early diagnosis tagged with the lack of guideline to manage this patient.**Conclusion:** In the management of Breast Squamous Cell Carcinoma, the standard treatment would be to go for mastectomy with axillary clearance. However, the prognosis usually depends on the tumour size and the advance age of the patient as described in this article.

1. Introduction

Squamous cell carcinoma of the breast is a rare type of breast cancer. The common age of presentation for SCC of the breast ranges from 40 to 60 years old with the median age being around 55 years old and commonly presented with T2 lesion (around 3cm) with axillary node involvement. There has not been any specific mammographic study reported for this condition. The hormonal receptors usually come back as triple negative(1–3). We report a case of breast squamous cell carcinoma in a 56-year-old lady and highlight on its common presentation, common pathological characteristic and its latest management recommendation.

2. Case presentation

A 56-year-old lady, para 6 presented with a left breast lump that had been increasing in size for a 7 months duration associated with nipple retraction for one week. Ultrasound breast done which revealed large mixed echo density mass lesion in the left breast at 12 o'clock, 2cm from the nipple and measuring 4.2 × 3.4cm along with an enlarged node is

noted in the left axilla with thickened cortex and as for Mammogram revealed suspicious left breast lesion with enlarged axillary nodes, BIRADS 5 (Fig. 1). Histopathology from the left breast showed Invasive carcinoma with squamous differentiation, B5b, ER: negative, PR: Positive, Her2: Negative, CK5/6: Positive. Then a staging CECT Thorax, Abdomen and Pelvis was done which showed enhancing mass lesion seen at the left breast (4.1 × 4.3cm) with areas of necrosis within and multiple enlarged left axillary nodes seen with no local infiltration to the muscle or skin as well as no distant metastases. Patient underwent Neoadjuvant chemotherapy for 6 cycle and proceeded with surgery uneventful.

3. Discussion

Multiple study has been done to elicit the incidence of squamous cell carcinoma of the breast and associated common characteristic such as age of presentation, common stages, hormonal status, treatment modality and prognosis, it was found that the topic of discussion which is squamous cell carcinoma itself is a rare condition. On average, this condition occurs anywhere between 40 to 70 years old with 50 years old

Abbreviations: Breast cancer, squamous,, metaplastic.

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Fig. 1. (Mammogram image, tumor showed with white arrow).

being the median age. Apart from that, the hormonal status was found most of these cases were oestrogen and progesterone receptor negative. Most patients have undergone mastectomy with axillary clearance [1–3]. In other article it was mentioned that the usual presentation age for SCC of the breast ranges from 40 to 60 years old with the median age being around 55 years old. There has not been any specific mammographic features reported for this condition [2]. The size of the tumour itself can be found to be large (around 3cm) with axillary node involvement [3]. It is consistent in our case, as the patient is 56 years old lady which is close to the median age of most studies done with tumor size 4.2×3.4 cm and with nodal involvement.

Most of the SCC usually do not express oestrogen or progesterone receptors like in invasive ductal carcinomas which usually reveal ER and PR positive. As for HER2 not many cases revealed it to be positive while CK 5/6 were usually overexpressed in cases. The gist of it can be said as whether pure or metaplastic squamous cell carcinoma the expressions are usually triple negative [4]. With reference to our case, patient only has ER and CK 5/6 positive whereas the other two receptors, ER and HER2 remain negative [5]. With reference to our patient, the tumor size in this case is roughly 3×3 cm clinically with multiple enlarged axillary lymph nodes.

The mainstream treatment for squamous cell carcinoma of the breast

is none other than mastectomy. It is advisable to include it with axillary clearance as well due to the fact that most cases have nodal involvement [5]. Post operatively the patient can further undergo chemotherapy and radiotherapy. These patients should be closely monitored and followed up due to the fact that this disease is usually aggressive and can cause metastasis [6]. Therefore, a routine CT scan is recommended to always keep the patient's condition in check. In this case patient underwent mastectomy with axillary clearance and subsequently referred to oncology for further management.

The prognosis of breast squamous cell carcinoma is debatable due to the fact that many studies have shown that it is aggressive when compared with breast adenocarcinoma that is poorly differentiated. However, the most important factors that determine the prognosis would lie upon the tumor size itself as well as the age of the patient. Many believe that this disease might take a drastic turn in women below the age of 40 years and/or those that the tumor is bigger than 3cm. This is due to the fact that there is a tendency for aggressive invasion, relapse and metastasis to other organs [2].

Apart from that, it is also learnt that the disease does not tend to recur after 5 years. Most recurrences tend to occur in the first 5 years which makes us think that it merely focuses on histology rather than localization of the tumor [7].

4. Conclusion

Breast SCC are considered to be a rare and aggressive malignant condition. Due to it being quite rare, there have not been many established research on this case. In most cases, the hormonal expressions are usually triple negative whereas the best choice of treatment would be a mastectomy with axillary clearance. Regarding the prognosis, it usually depends on the size of the tumor, nodal involvement as well as the age of the patient. There should also be a close follow up for the first 5 years as it may recur within the first 5 years.

Ethical approval

Approval was obtained from local administrative and this included consent from patient.

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Author contribution

Siti Zubaidah Sharif, Ho Kah Yee and Nik Amin Sahid Nik Lah initiated, planned the case report. Bhirrinta Varughese did the writing of the manuscript. Nik Amin Sahid supervised, reviewed and edited the manuscript.

Guarantor

Bhirrinta Varughese will be the guarantor and accepts full responsibility for the work and/or the conduct of the study, had access to the data, and controlled the decision to publish at this given time of submission.

Statement of ethics

The authors have no ethical conflicts to disclose.

Disclosure statement

The authors declare that there are no conflicts of interest.

Consent

All procedures followed were in accordance with the ethical standards of the responsible committee on human experimentation (institutional and national) and with the Helsinki Declaration of 2013 and its later amendments. Informed consent was obtained from the patients family for being included in this case report prior to submission. Written informed consent was obtained from the patient for publication of this case report and accompanying images. A copy of the written consent is available for review by the Editor-in-Chief of this journal on request.

Provenance and peer review

Not commissioned, externally peer-reviewed.

This case report was written based on SCARE care report guideline 2020 [8].

Declaration of competing interest

All authors declare that they have no conflict of interest.

Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.amsu.2022.103825>.

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