PRIMARY SQUAMOUS CELL CARCINOMA OF THE BREAST- THE FIRST REPORTED RARE BREAST CANCER FROM THE CARIBBEAN COUNTRIES

Article *in* International Journal of Current Advanced Research · November 2017

DOI: 10.24327/ijcar.2017.7460.1154

CITATIONS
0

READS
53

4 authors:

Shariful Islam
University of the West Indies, St. Augustine
117 PUBLICATIONS **135** CITATIONS
SEE PROFILE

Allan Tinnie
University of the West Indies, St. Augustine
3 PUBLICATIONS **0** CITATIONS
SEE PROFILE

Jacob Oba
General Hospital San Fernando
2 PUBLICATIONS **0** CITATIONS
SEE PROFILE

Vijay Naraynsingh
Medical Associates
336 PUBLICATIONS **1,726** CITATIONS
SEE PROFILE

International Journal of Current Advanced Research
ISSN: O: 2319-6475, ISSN: P: 2319-6505, Impact Factor: SJIF: 5.995
Available Online at www.journalijcar.org
Volume 6; Issue 11; November 2017; Page No. 7457-7460
DOI: http://dx.doi.org/10.24327/ijcar.2017.7460.1154

Research Article

PRIMARY SQUAMOUS CELL CARCINOMA OF THE BREAST- THE FIRST REPORTED RARE BREAST CANCER FROM THE CARIBBEAN COUNTRIES

Islam S[1]., Tinnie A[1]., Oba J[1] and Naraynsingh V[2]

[1]Department of General Surgery, San Fernando General Hospital, Trinidad and Tobago
[2]Medical Associates Hospital, St. Joseph, Trinidad and Tobago

A R T I C L E I N F O

Article History:
Received 12th August, 2017
Received in revised form 15th September, 2017
Accepted 8th October, 2017
Published online 28th November, 2017

Key words:

Primary squamous cell carcinoma of the breast, breast cyst, breast abscess

A B S T R A C T

Primary squamous cell carcinoma of the breast is a rare phenomenon. Similarly, the finding of squamous cell carcinoma entirely inside the breast without involvement of skin is very rare.We present the case of a 75 year old female with a right breast lump and confirmed as a pure squamous cell carcinoma of the breast by needle core biopsy. Wide local excision of the lump was performed. The final histopathological examination revealed a primary squamous cell carcinoma of the breast. A literature review was performed. To our knowledge this is first reported case of primary squamous cell carcinoma from the Caribbean countries.

INTRODUCTION

Squamous cell carcinoma is a well-known malignancy of the skin and other organs surrounded with squamous cells such as the esophagus and the anus. However, pure primary squamous cell carcinoma of the breast is very rare. It represents less than 0.1 % of all breast carcinomas [1]. It is important to discriminate this entity from malignancies of the skin of the breast or metastasis of a squamous cell carcinoma some where else in the body. Its clinical and radiologic appearances are not specific to discriminate malignant versus benign lesions or to characterize the histotype. The correct management of this disease is debated.

The prognosis of this type of breast cancer is still a subject of controversy; some reports suggest that it is aggressive, with an outcome comparable to poorly differentiated ductal carcinoma of the breast [2-5].

An extensive review of the literature reveals about fifty reports and two important series of pure squamous cell carcinoma of breast strictly following the Macia *et al*. diagnostic criteria [6]: thirty-three patients by M.D. Anderson Cancer Center and eleven patients reported by a Spanish group [7, 8]. However there is no reported case in English literature from the Caribbean countries. We report a case of primary squamous cell carcinoma of the breast in a 75 year old female presented as a breast cyst. Management of option this rare cancer is explored and literature review was performed.

Corresponding author:* **Islam S
Department of General Surgery, San Fernando General Hospital, Trinidad and Tobago

Case report

A 75 years old female presented with a lump to her right breast for two months. She felt the lump during her routine self-breast examination. The patient denied of any associated symptoms or signs including, nipple discharge or skin changes. Of note the patient used OCPs for twenty years, had her menses from 12 to 56 years and raised two fully breast fed children. No family history of breast disease was noted and she never smoked or consumed alcohol. On examination, the breasts were symmetric but a 3cm x 3 cm firm irregular mass was noted in the UOQ (10 O'clock position) of right breast. No enlarged axillary nodes, skin or nipple changes were noted. Ultrasound evaluation revealed two lesions, a 10.4 mm x 7.9 mm simple cystic collection at 2 o'clock position and an 11.8 mm x 8 mm oval cystic mass at 10 o'clock position. No adverse axillary nodes were seen. Further mammographic examination showed a 30.7 mm x 20.3 mm x 21 mm lesion in Right UOQ. Reported as a likely cyst (BIRADS 3), the margins were fairly defined with no significant 3D speculations or clusters of micro calcifications.

Needle core biopsy was done and it revealed small groups of benign cells with no other evidence of malignancy. Patient was offered a wide local excision and sentinel lymph node biopsy, which was negative. The final histo-pathologic examination revealed a cyst lined by Squamous epithelium with solid wall components in which there was a 17 mm Metaplastic Squamous Cell Carcinoma. There were no ductal hyperplasia or carcinoma in situ (AJCC; pT1c pNx). The case was discussed at MDT and no further treatment was offered.

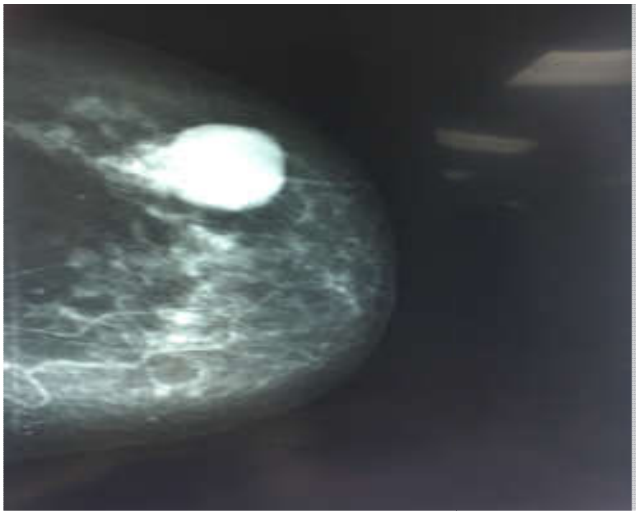

Fig 1 Mammogram showing 30.7 mm x 20.3 mm x 21 mm lesion in Right UOQ, fairly well defined margins with no 3D speculated mass or clusters micro calcifications.

The patient was followed up in the breast clinic and at 2 years follow up the patient has not developed any local or distal metastasis.

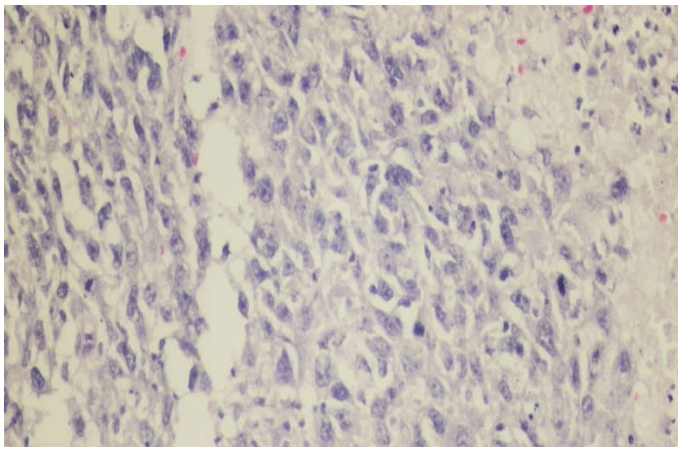

Fig 2 Histo-micrographs showing a cyst lined by Squamous epithelium with solid wall components in which there was a 17mm metaplastic Squamous Cell Carcinoma. There were no ductal hyperplasia or carcinoma in situ (AJCC; pT1c pNx)

DISCUSSION

Squamous cell breast cancer is one of the rare subtypes with incidence under 1% of Breast Cancer cases worldwide [1]. As such data on the subject is limited and most were case reports and small case series. The California Cancer Registry (Grabowski) was among the largest with 177cases over 18 years[2][9]. Still, it is too rare at present for randomised studies on optimum management strategies.

Described by Troellin 1908, it arises directly from the epithelium of the mammary ducts, and an alternate theory is that the tumor arises from foci of squamous metaplasia within a preexisting adenocarcinoma of the breast. The latter explains why some cases are receptor positive [10]. According to Rosen *et al*, acceptable diagnostic criteria for pure SCC of the breast include an absence of an associated primary SCC in a second site or absence of skin involvement as well as > 90% of areas with SCC at histologic examination [1].

Similarly Macia *et al*, defined pure squamous cell carcinoma as a tumor with following characteristics**:(**a) The tumor origin must be independent from the overlying skin and nipple (b) Absence of other neoplastic elements such as ductal or mesenchymal in the tumor and (c) Absence of an associated primary squamous cell carcinoma in a second site [6].

The mean age at presentation is 54years although it can range between 20 -90 years [11-16].Our case was consistent with this finding. Only one reported male case has been documented to date [17].

Invasive Ductal Carcinoma on the other hand represents 75% of cases, of which 95% occur at younger ages (> 40 years) with a median age at diagnosis of 61yrs [18,19]. Cardoso *et al*[7] suggested BSCCs are generally large (usually >4 cm) at presentation and cystic in more than 50% of cases [20].But Zhang *et al* in his series of 30 cases noted a large proportion BSCC was diagnosed at early stage disease[17]. However, in the literature there are examples of less typical presentations, for example starting as an abscess [21-23]**.**Our case was considered early stage from the final AJCC classification.

Lymph node involvement was found to be a significant prognostic factor in both overall survival and progression free Survival [23]. In published series, regional lymph node metastases were present in 6- 50% of patients at diagnosis[3]. Menes *et al* found a rate of 22% versus the estimated 40-60% typically seen in IDC [4]. No lymph node disease was found in our case.

Histologically they are considered high grade with less hormone receptor positivity and High frequency of EGFR positivity [25]. The latter may be exploited in the development of future treatments for this disease. Hormone and growth factor testing was not available for our case.

In terms of management most cases in the literature were treated using standard protocols. Surgery was the primary treatment for most patients, as was in this case. Much of the cases reported had MRM as they presented often in a relatively advanced state and exhibited poor responses to neoadjuvant therapy in other cases[17]. BCS was undertaken in some cases and no significant differences were observed between the two approaches. Lumpectomy was reported in a small group of elderly females who also had refused other approaches as with our case. Axillary sampling is recommended in all cases because of a relative uncertainty of LN spread [3]. In the adjuvant setting current breast cancer chemotherapy regimens reportedly have limited activity [26] while platinum-based regimens showed some activity in patients with metastases. Additionally, SCC of the breast is often relatively radio resistant as discovered by Hennessy *et al* 2005 where 43% vs 33% had locoregional recurrence with and without radiotherapy [27]. Zhang *et al* also noted a recurrence and or progression of 33% and subsequent survival was a dismal 6 months [17]. Others reported high locoregional recurrence rates even for T1 lesions [28]. The SEER database between 1988 and 2001 found a 64% five-year Overall survival rate which is supported by other studies by Zhang (OS 67% and PFS 57%) [3,5]. The data from most series so far seems to suggest BSCC can be an aggressive malignancy with a poor outcome. Clearly more Clinical trials are needed to determine optimal management strategies.

CONCLUSION

Pure primary squamous cell carcinoma of the breast can develop even from a simple breast cyst. Therefore, it is of paramount important to send all benign breast lumps (whether

simple or complex cyst and solid mass) for histopathological evaluation. Our case highlights a very rare form of breast cancer in the Caribbean region and adds to the relatively small body of knowledge on this subject.

Conflicts of interest:
The authors declare no conflicts of interest.
Author contribution:
All authors have contributed significantly in designing and organizing to write manuscript, collecting data as well help in critical analyzing the manuscript. All authors have approved the final version of this manuscript
Funding:
No fund was received to publish this article.
Consent:
Patient consent was obtained.

Guarantor:
The corresponding author and the first author will accept the full responsibility for the work.

References

1. Rosen PR: Squamous Carcinoma. 1997, Lippincott Williams & Wilkins, 455-461.
2. Tayeb K, Saadi I, Kharmash M, El Omari-Alaoui H, Mansouri A, Errhani H, Benjaafar N, ElGueddari BK: Primary squamous cell carcinoma of the breast: Report of three cases (French). *Cancer Radiother*. 2002, 6: 366-368. 10.1016/S1278-3218(02)00258-5.
3. Behranwala KA, Nasiri N, Abdullah N, Trott PA, Gui GP: Squamous cell carcinoma of the breast: Clinico-pathologic implications and outcome. *Eur J Sur Oncolo*. 2003, 29: 386-389. 10.1053/ejso.2002.1422.
4. Menes T, Schachter J, Morgenstern S, Fenig E, Lurie H, Gutman H: Primary squamous cell carcinoma (SqCC) of the breast. *Am J Clin Oncol*. 2003, 26: 571-573. 10.1097/01.coc.0000045809.85995.3B.
5. Moisidis E, Ahmed S, Carmalt H, Gillett D: Primary squamous cell carcinoma of the breast. *ANZ J Sur*. 2002, 72: 65-67. 10.1046/j.1445-2197.2002.02298.x.
6. Macia M, Ces JA, Becerra E, Nova A: Pure squamous carcinoma of the breast. Report of a case diagnosed by aspiration cytology. *Acta Cytol*. 1989, 33: 201-204.
7. Hennessy BT, Krishnamurthy S, Giordano S, Buchholtz TA, Kau SW, Duan Z, Valero V, Hortobagy GN: Squamous cell carcinoma of the breast. *J Clinical Oncology;* 2005, 31: 7827-7835. 10.1200/JCO.2004.00.9589.
8. Aparicio I, Martinez A, Hernandez G, Hardisson D, De Santiago J: Squamous cell carcinoma of the breast. *Eur J Obstet Gynecol*. 2008, 137: 222-226. 10.1016/j.ejogrb.2007.03.021.
9. Grabowski J, Saltzstein SL, Sadler G, Blair S. Squamous cell carcinoma of the breast: a review of 177 cases. *Am Surg*. 2009; 75:914-917.
10. Troell A: ZweiFalle von Palttenepithelcarcinom. Nord Med Ark 1::1,1908-11
11. Youssef Seddik1, Sami Aziz Brahmi1, Said Afqir1, Primary squamous cell carcinoma of the breast: a case report and review of literature. *The Pan African Medical Journal.* 2015; 20:152. doi:10.11604/pamj.2015.20.152.6188
12. Hemlata Kamra1, , Santosh Munde2, , Swaran Kaur3, , Sarita Yadav4, , Kirti Ahuja5 Squamous Cell Carcinoma of Breast in a 21 Years Old Female - A Rare Case Report.; *Annals of International Medical and Dental Research,* Vol (3), Issue (1) Page 10 Section: Pathology Case Report ISSN (O):2395-2822; ISSN (P):2395-2814 DOI: 10.21276/aimdr.2017.3.1.PT3
13. Sachin A Badge, Nitin M Gangane, Vitaladevnni B Shivkumar, and Satish M Sharma. Primary squamous cell carcinoma of the breast, *Int J Appl Basic Med Res*. 2014 Jan-Jun; 4(1): 53-55. doi: 10.4103/2229-516X.125697, PMCID: PMC3931217
14. Cichon P, Drucis K, Piotrkowski J. Primary squamous cell carcinoma of the breast - a case report. PolMerkurLekarski. 2015 Mar; 38(225):140-3.[Article in Polish]
15. Gupta N, Vashisht R, Nimbran V, Gupta R, Dhingra N, Bhutani A. Primary squamous cell carcinoma of the breast: Case report and management decisions. *J Can Res Ther* 2012;8:323-5
16. Nidhi Gupta1, Rajesh Vashisht1, Vinod Nimbran1, Rakesh Gupta1, Neerja Dhingra2, Anjali Bhutani2, Primary squamous cell carcinoma of the breast: Case report and management decisions Analytical Report Year : 2012 | Volume : 8 | Issue : 2 | Page : 323-325
17. Zhang Li , LiYu-tian*et al*. Squamous cell carcinoma of the breast, *The American Journal of Surgery*, Volume 147, Issue 5, May 1984, Pages 701-702, https://doi.org/10.1016 /0002-9610(84)90147-8
18. Lakhani SR, Ellis IO, Schnitt SJ, Tan PH, van de, Vijver MJ. WHO Classification of Tumours of the Breast. 4th ed. Lyon, France: IARC Press, 2012.
19. Gupta C, Malani AK, Weigand RT, Rangineni G. Pure primary squamous cell carcinoma of the breast: a rare presentation and clinico-pathologic comparison with usual ductal carcinoma of the breast. *Pathol Res Pract.* 2006; 202:465-469.
20. Cardoso F, Leal C, Meira A, Azevedo R, Mauricio MJ, Leal Da Silva JM, Lopes C, Pinto Ferreira E: Squamous cell carcinoma of the breast. *Breast*. 2000, 9: 315-319. 10.1054/brst.1999.0145.
21. Wrightson WR, Edwards MJ, McMasters KM: Primary squamous cell carcinoma of the breast presenting as a breast abscess. *Am Surg*. 1999, 65 (12): 1153-1155.
22. Nair VJ, Kaushal V, Atri R. Pure squamous cell carcinoma of the breast presenting as a pyogenic abscess: a case report. *Clin Breast Cancer*. 2007;7:713-715.
23. Gupta C, Malani AK. Abscess as initial presentation of pure primary squamous cell carcinoma of the breast. *Clin Breast Cancer*. 2006; 7:180.
24. Gupta G, Malani AK, Weigand RT, Rangenini G: Pure primary squamous cell carcinoma of the breast: A rare presentation and clinico-pathologic comparison with usual ductal carcinoma of the breast. *Pathol Res Pract*. 2006, 6: 465-469.10.1016/j.prp.2006.01.006.
25. Bossuyt V, Fadare O, Martel M, Remarkably high frequency of EGFR expression in breast carcinomas with squamous differentiation. *Int J Surg Pathol*. 2005; 13:319-327.
26. Rostock RA, Bauer TW, Eggleston JC. Primary squamous carcinoma of the breast: A review. *Breast*. 1984; 10:27-31.

27. Hennessy BT, Krishnamurthy S, Giordano S, Squamous cell carcinoma of the breast. *J Clin Oncol*. 2005; 23:7827-7835.
28. Nayak A, Wu Y, Gilcrease MZ. Primary squamous cell carcinoma of the breast: predictors of loco-regional recurrence and overall survival. *Am J Surg Pathol*. 2013; 37:867-873.

How to cite this article:

Islam S *et al* (2017) 'Primary Squamous Cellcarcinoma of Thebreast-The first reported Rare Breast Cancer From The Caribbean Countries', *International Journal of Current Advanced Research,* 06(11), pp. 7457-7460.
DOI: http://dx.doi.org/10.24327/ijcar.2017.7460.1154

****