Case Report: A Simple Thoraco - Abdominal Flap to Reconstruct Wide Defect of Radical Mastectomy in Squamous Cell Carcinoma of Breast

Pitu Anda Tusta Adiputra*, I Wayan Sudarsa

Division of Surgical Oncology, Surgery Department, Udayana University, Sanglah General Hospital, Denpasar, Bali, Indonesia

Abstract

BACKGROUND: Squamous cell carcinoma (SCC) of the breast is very unusual. Thoraco-abdominal (TA) flap is a simple flap, and it is a rotation advancement fasciocutaneous flap. Here, we present a case of using TA flap for chest wall reconstruction in a quick in-quick outpatient.

CASE PRESENTATION: A Russian woman 48 years old presented enlarging lump on her left breast for the last 5 years. She was diagnosed as stage IV low-differentiated breast cancer luminal B and had a history of 4 cycles chemotherapy. Patient getting worsening and no response to chemotherapy. We decided to perform palliative radical mastectomy to improve quality of life. Primary skin closure was not possible due to the wide defect of skin and soft tissue. We decided to use TA flap to cover the defect. Histopathology result was compatible with SCC.

CONCLUSION: TA flap can be the choice in patients with a wide defect of skin and soft tissue after a radical mastectomy. Given its simplicity and shorter operative time, TA flap is an ideal option for quick in-quick outpatient.

Introduction

Squamous cell carcinoma (SCC) of the breast is very unusual. The incidence of primary SCC of the breast was 0.04-0.1% of all breast cancer. In 1908, the SCC of the breast was first time reported, and until 2002, there were 85 cases [1]. SCC of the breast may originate from a neoplasm of the breast skin or spreading of SCC another side of the body. Breast metastasis of SCC may be from skin, cervix, pharynx, stomach, and lung. Pure SCC of the breast can be from the epidermis, the nipple or epithelium of a deep-seated dermoid cyst or metaplasia on chronic inflammation [2].

The wide defect produced during surgery, thoraco-abdominal (TA) flap is a simple flap and suitable for quick in-quick outpatient. This flap is a rotation advancement fasciocutaneous flap. This flap uses the skin and subcutaneous tissue of the anterior abdominal. Here, we present a case of using TA flap for chest wall reconstruction in a patient with SCC of the breast. This patient was not in her optimum state, so we choose the best action for quick in-quick outpatient.

Case Presentation

A-Russian woman 48 years old presented enlarging lump on her left breast for the last 5 years. Patient neither visited the doctor nor been examined
or treated. On 2014, lump getting bigger and patient lost 7 kg during a month. She was hospitalised in Moscow for follow up examination. CT scan showed a mass in the left breast, lymph node enlargement on the left axilla, and pleural effusion on the left lung. The core biopsy revealed as low-differentiated breast cancer, luminal type-B. MRI brain showed no metastasis.

Patients had history 4 cycles of chemotherapy (Adriamycin + Cyclophosphamide 2 cycles and switched to Docetaxel 40 mg/m² + Capecitabine 2000 mg/m² per day, 1-14 days about 2 cycles). There was no response to chemotherapy but follow up on the chest and abdominal CT scan, no fluid in the lung, and no metastatic on the liver. Laboratory finding was within normal limit. The patient then continued her treatment at the place residence in Bali.

Restaging post-chemotherapy course was complicated. She getting worse and no response to chemotherapy was noticed. The wound became smell odour (Figure 2).

Laboratory findings result in anaemia and hypoalbuminemia. We decided to perform palliative radical mastectomy to improve quality of life. Primary skin closure was not possible due to the wide defect of skin and soft tissue (Figure 3).

Considering the patient's condition was not in an optimum state, we have to choose simple action for reconstruction. We decided to use thoraco-abdominal (TA) flap to cover the defect and defect on
the medial side we used a split-thickness skin graft from the left thigh (Figure 4).

Histopathology result was compatible with SCC (Figure 5). After the operation, she started three cycles of chemotherapy Gemcitabine 1800 mg, and Carboplatin 600 mg then continue with Tamoxifen 20 mg daily and Goserelin acetate 3.6 mg per month.

![Figure 5: Histopathology result](image)

The TA flap was viable, and there was no complication (Figure 6). The wound was well healed after two months of the operation (Figure 7).

![Figure 6: Wound healing after three weeks of operation](image)

**Discussion**

This patient in the early had diagnosed as low-differentiated breast cancer, luminal type-B and has the change to be SCC after mastectomy. This is a primary cause of SCC of the breast.

![Figure 7: The scar slowly disappeared after two months of operation](image)

SCC of the breast is the tumour of the elderly group [3]. Based on the literature, tumours frequently huge and can expand more than 5 cm in diameter. This case was 48 years old woman and the presented lesion measured 14 x 11 x 8.5 cm and would probably be the first case of this size. In Menes et al., study, SCC was associated with a lower risk of lymph node metastasis at the tumour site and a significant risk of distant metastasis without lymph node involvement [4]. In our case, she had distant metastatic to the lung without involvement malignant metastatic of the lymph node.

The result of histopathology examination on the removed tumour was SCC grade III. No metastatic deposit on 14 lymph nodes observed. Microscopically, the lump is consisting of malignant epithelium, invasive into connective tissue, partially covered by the epidermis. Mitotic index more than 20. No evident of intralymphatic and intravascular invasion. There also some intraductal carcinoma.

Approximately 30% of the patients with SCC of the breast will spread to other organs [5]. The treatment of pure SCC of the breast is unclear. Dejager et al. showed that cisplatin chemotherapy could be thought over in the chemotherapy regimen. In this type of cancer, Weigel et al. recommended the combination treatment using radiotherapy, because SCCs are radiosensitive. The small size of the primary SCCs of the breast could be managed with lumpectomy and axillary dissection followed by radiotherapy [6].

A lump of this patient was 14 cm, and she had a metastatic process on her left lung. The patient had chemotherapy like an adenocarcinoma in the same stage. After chemotherapy 6 cycles, pleural effusion on the lung was disappeared, but the lump had no response to chemotherapy and getting worsen with unstable laboratory result. The patient got anaemia...
Carcinoma of Breast

SCC of the breast is an extremely unusual malignancy, so primary SCC of the breast is an extraordinary phenomenon. Based on the literature, outcome and appropriate approach for treatment is still controversial. Every new case report would help to determine the right management to this disease.

In conclusion, pure SCC of the breast is an extremely unusual malignancy, so primary SCC of the breast is an extraordinary phenomenon. Based on the literature, outcome and appropriate approach for treatment is still controversial. Every new case report would help to determine the right management to this disease.

In this case, we had got different histopathology finding after mastectomy. Learn from here; we should think probability another diagnosis when we accept a new case from the patient who had been treated by a doctor before, moreover without improvement of the disease. For surgery approach, TA flap can be the choice in patients with a wide defect of skin and soft tissue after a radical mastectomy. In view of its simplicity and shorter operative time, TA flap is an ideal option for quick in–quick outpatient.

Acknowledgement

Authors thanks to the patient and colleagues who take photos during the operation.

References

1. Gupta C, Malani AK, Weigand RT, Rangenini G. Pure primary squamous cell carcinoma of the breast: A rare presentation and clinicopathologic comparison with usual ductal carcinoma of the breast. Pathol Res Pract. 2006; 6:465-469. https://doi.org/10.1016/j.prp.2006.01.006 PMid:16497446

2. Weigel RJ, Ikeda DM, Nowels KW. Primary squamous cell carcinoma the breast. South Med J. 1996; 89:511-515. https://doi.org/10.1097/00007611-199605000-00013 PMid:8638180

3. Behranwala KA, Nasiri N, Abdullah N, Trott PA, Gui GP. Squamous cell carcinoma of the breast: Clinico-pathologic implications and outcome. Eur J Surg Oncol. 2003; 29:386-389. https://doi.org/10.1055/s-0023-529285 PMid:12711295

4. Gürsel B, Bayrak IK, Çakır S, Yiğit L, Gürsel M, Yücel I, Primary squamous cell carcinoma of the breast: A case report and review of the literature. Turkish Journal of Cancer. 2007: 37:114-116.

5. Filkweert ER, Hofstee M, Liern MLS. Squamous Cell Carcinoma of the Breast: A Case Report. World J Surg Oncol. 2008; 6:135. https://doi.org/10.1186/1477-7819-6-135 PMid:19099605 PMCid:PMC2626594

6. Deijager D, Redlich PN, Dayer AM, Davis HL, Komorowski RA. Primary squamous cell carcinoma of the breast: sensitivity to cisplatinum-based chemotherapy. J Surg Oncol. 1995; 59:199-203. https://doi.org/10.1002/jso.10236 PMid:7609529

7. Das DK, Choudhury UC. “Thoraco-Abdominal Flap”- A Simple Flap for Skin and Soft Tissue Cover Following Radical Surgery for Locally Advance Breast Cancer-The Malaysian Experience. International Journal of Collaborative Research on Internal Medicine & Public Health; 2013; 5:398-406.

8. Matros E, Disa JJ. Uncommon Flaps for Chest Wall Reconstruction. Semin Plast Surg. 2011; 25:55-59. https://doi.org/10.1055/s-0031-1275171 PMid:22294943 PMCid:PMC3140228

9. Deo SV, Purkayastha J, Shukla NK, Asthana S. Myocutaneous versus thoraco-abdominal flap cover for soft tissue defects following surgery for locally advanced and recurrent breast cancer. J Surg Oncol. 2003; 83:31-35. https://doi.org/10.1002/jso.10236 PMid:12722094

10. Pramesh CS, Chaturvedi P, Saklani AP, Badwe RA. Squamous cell carcinoma of the breast. J Postgrad Med 2001; 47:270-271.