



THORACO-ABDOMINAL FLAP FOR COVERING DEFECT AFTER MASTECTOMY FOR HUGE FUNGATING BREAST TUMOUR-CASE REPORT

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Abstract

Locally advanced breast cancer (LABC) is a major concern for surgeons due to its large numbers and its complex treatment. In these cases, skin and soft tissue cover is one of the most challenging issues. This case report describes a 45-year-old patient who presented with huge fungating and ulcerative mass in left breast discharging pus and serosanguinous fluid. The patient was resuscitated, investigated and operated by experienced general surgeon. On elective operative list mastectomy with excision of axillary lymph nodes was done and large skin and soft tissue defect was managed with thoracoabdominal flap. In view of its simplicity, low cost, good postoperative compliance and well tolerability it can be concluded that thoracoabdominal flap (TA) can be the first choice in LABC patients requiring skin and soft tissue cover after surgery.

Key Words: Locally advanced breast cancer; post-operative skin and soft tissue defect; Thoraco-abdominal flap

Introduction:

Breast cancer is the most common place cancer of ladies each in advanced and developing nations and is the main motive of most cancers' deaths in girls. The percentage of LABC ranges among 40 and 50% in developing nations where as in evolved countries, the share of LABC ranges among 10 and 15%. The usual of care for most of the regionally advanced breast cancers is with the aid of neoadjuvant chemotherapy (NACT) followed by surgical procedure and radiotherapy. But, no matter NACT, 10 to 15% of LABC won't respond and may present with massive fungating, bleeding tumors, tremendous skin involvement, and from time to time with chest wall infiltration. Those sufferers need radical surgical excision resulting in large post-mastectomy soft tissue defect not amenable for primary closure. There is more than one alternative described in literature for handling such tissue defects including transverse rectus abdominis myocutaneous flap (TRAM), latissimus dorsi myocutaneous flap (LD) flap, thoracoabdominal flap, skin grafts, and omental flap with pores and skin graft. However, the selection of alternative relies upon on various factors along with institutional practice and to be had surgical know-how.^{1,2}

In a try to address the above troubles, we present our reveal in of thoracoabdominal (TA) flap cover for huge mastectomy defects. The TA flap is a type-C rotation advancement fasciocutaneous flap which utilizes the skin and subcutaneous tissue of the anterior abdominal wall. It's far based totally on two units of direct perforating segmental arteries arising from the intercostal and deep epigastric arcades.⁴ There are two sets of perforating branches—the lateral, springing up from subcostal and intercostal arteries at the extent of the anterior border of the latissimus dorsi, and the medial row

of perforators, springing up from the deep epigastric arcade at the lateral border of the rectus abdominis. Sub-fascial anastomosis is present between the medial and lateral perforators. It is designed and harvested in a rotation development fashion. For post-mastectomy defects on the lateral side of the chest wall and axilla, a medially based flap based on the medial perforating branches is preferred whereas for medial soft tissue defects of the chest wall, a laterally based flap on the lateral perforators is recommended. The plane of dissection is maintained superficial to the rectus fascia and aponeurosis of the external oblique muscle. The limits of the flap are the midline medially (for the lateral-based flap), the anterior axillary line laterally, and a horizontal plane at the level of anterior superior iliac spine inferiorly. The lax abdominal skin can be adequately mobilized to facilitate primary closure of the donor site

Case Presentation:

History: Non hypertensive, non-diabetic 45-year-old unmarried patient presented in outpatient department of allied hospital Faisalabad with complaint of huge fungating mass in left breast for 08 months. She was in her usual state of health almost 12 months ago, when she felt a mild tearing pain in her left breast. She went to some private clinic and got surgery for some breast lesion on same side 12 months before (no record available). Initially mass was small in size and then continued to grow in size over the next four months, reaching the dimensions of an orange, and eroding through the upper outer quadrant of the breast. For 15 days patient have developed foul smelling discharge and pus coming out from lump. She attained menarche at 13-year with regular menstrual cycles. No any family history of breast malignancy. She was unemployed, living at home with her family. Patient has taken 8 cycles of radiotherapy but tumors is non responsive

Examination: BP: 120/70, Pulse : 84/min ,RR:14/MIN, Temperature:99. Regional examination revealed a 13x11cm lump in the upper outer quadrant with a 5x7cm area of ulceration involving the nipple-areola complex, with a fixed fungating mass with profuse bleeding and foul odor. Fixed axillary lymph nodes present on ipsilateral side. Systemic examination unremarkable

Investigations: On histopathology mass proved to be spindle cell neoplasm. A CT scan was done which revealed a huge mass in the central portion of the left breast adjacent to the anterior chest wall as well as metastatic axillary lymph nodes ^{fig-1}. The bone scan was negative for bony metastasis.

Treatment: A senior general surgeon with good experience proceeded with a mastectomy, excision of lymph nodes and immediate breast reconstruction by a thoracoabdominal flap was performed. Total duration of the surgery was 03 hours. The total weight of the mass plus the breast tissue excised was 2 Kg with foul- smelling discharge. Axillary lymph nodes were excised. Hemostasis was secured and a drain was placed. The subcutaneous stitches were done with Vicryl 2.0 and the skin was closed with a stapler. The specimen was sent for histopathology. The patient was monitored for the next 03 days, and 03 pints of blood were transfused to normalize the hemoglobin level. She was subsequently discharged and was advised to follow up regularly for chemotherapy and radiotherapy sessions.

DEPARTMENT OF RADIOLOGY & MEDICAL IMAGING
ALLIED HOSPITAL (FAISALABAD MEDICAL UNIVERSITY) FAISALABAD
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NAME	Suraiya bibi	REG NO	9322
AGE		DATE OUT	12-05-2023
DATE IN			

CT NECK CHEST ABDOMEN AND PELVIS WITH CONTRAST
(Not Valid for Court)

K/C of CA left breast

Neck

- Glottic supraglottic and infraglottic region appearing unremarkable.
- Oropharynx, nasopharynx and laryngopharynx are unremarkable.
- No cervical lymph adenopathy.

CHEST

- There is appreciated soft tissue density aggressive looking left breast mass lesion having irregular margins and showing heterogenous enhancement, measuring approx. 12x11cm. in separable from underlying chest wall.
- Enlarged ipsilateral left axillary lymph node also seen.
- No axillary lymphadenopathy seen.
- No pleural or pericardial effusion noted.

ABDOMEN AND PELVIS

- Liver is of normal size, regular and smooth margins. No definite focal lesion seen. Portal vein and hepatobiliary channels are unremarkable.
- Spleen is not enlarged. No focal lesion seen.
- Pancreas appearing unremarkable.
- Bilateral kidneys are unremarkable, no stone, cyst, mass, hydronephrosis seen.
- No ascites noted.
- No abdominopelvic lymphadenopathy seen.
- Visualized skeleton shows decreased density and expansion and of trabeculae noted.

Bone scan is strongly recommended to rule out osseous mets.

IMPRESSION:
Features of primary aggressive left breast lesion with ipsilateral axillary metastatic deposit. Bone scan is strongly recommended to rule out osseous mets.

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Patient's Name: SURRIYA Patient's ID: FMU-40053 Lab ID: H-23-1922
Age: 45Yr Gender: Female Mobile Applied on: 19-Apr-23 Day: WEDNESDAY
Address: Faisalabad Referred By: Allied Hospital

HISTOPATHOLOGY REPORT

GROSS EXAMINATION:
TRUCUT BIOPSY BREAST.
grey white tiny cores
PAS in one block.

MICROSCOPIC EXAMINATION:
THE HISTOLOGICAL EXAMINATION OF THE SECTION REVEALS A CELLULAR NEOPLASM COMPOSED OF SPINDLE CELLS. SPINDLE CELLS SHOW MILD NUCLEAR ATYPIA. THE STROMA IS MYXOID. AREAS OF NECROSIS ALSO SEEN.

CONCLUSION:
* SPINDLE CELL NEOPLASM
* HISTOLOGICAL FEATURES ARE SUGGESTIVE OF PHYLLODES TUMOR.

Dr. Anisa Saeed
Sr. Demonstrator

This is a computer-generated Report. No signatures are required.
Lab Reports should be interpreted by a physician in correlation with clinical and radiology findings.
Thursday, April 27, 2023

Figure :1- CT scan Neck, Chest ,Abdomen & Pelvis

Figure :2- Histopathology



Figure 3: Preoperative photo



Figure 4:- After Tumour excision



Figure 5:- Flap mobilized



Figure 6:- Initial wound approximation



Figure 7:- Final wound closure



Figure 7:- 3rd postoperative day



Figure 7:- 6th postoperative day

Discussion:

Breast cancer is the most common cancer among women globally and the incidence of breast cancer in India is showing an increasing trend. Majority of breast cancer patients presents with locally advanced stage in developing countries like Pakistan due to lack of awareness, lack of screening, social stigma, delay in referral, inadequate healthcare infrastructure, and long waiting list at tertiary care cancer centers. Surgery is an integral part of a multimodality approach for treating locally advanced breast cancer after neoadjuvant chemotherapy. Patients who do not respond to NACT can sometimes present with extensive skin involvement necessitating radical removal of involved skin resulting in large soft tissue defects not amenable for primary closure. These patients require some additional surgical procedures to manage soft tissue defects. For managing such post-mastectomy defects, there are multiple options described in literature from the time of Halstead era. In the first half of the twentieth century, large post-radical mastectomy defects were managed by a principle of healing by secondary intention and staged split-thickness skin grafting. In the last quarter of the twentieth century, myocutaneous (MC) flaps revolutionized the field of reconstructive surgery with excellent outcomes. In 1896, Ignio Tansini first used the latissimus dorsi (LD) myocutaneous flap for managing large post-radical mastectomy defect [3]. Subsequently, the usage of LD flap has declined significantly as Halstead thought this to be unnecessary and hazardous procedure. In 1975, LD flap was reintroduced for the reconstruction of postmastectomy defects and this option remained popular till 1982. Hartrampf et al. in 1982 described transverse rectus abdominis myocutaneous (TRAM) flap for breast reconstruction. In view of superior cosmetic outcomes, reliability, positional advantage, and added bonus of abdominoplasty, TRAM flap has become workhorse for breast reconstruction until the 1990s. The thoracoabdominal (TA) flap was first described by Brown et al. in 1975. TA flap is a type-C fasciocutaneous flap and the skin and fat of the upper abdomen are used based on medial or lateral perforating vessels [18]. It has been used for breast reconstruction along with a prosthesis and soft tissue cover following surgery for LABC in some studies during the late 1970s and early 1980s. Significant advantages of TA flap are short hospital stay (mean 4.5 days) and low morbidity. TA flap provides good-quality vascularized skin cover and all patients tolerated postoperative radiation without major wound morbidity.

Conclusion:

Outcomes of our procedure showed that TA flap is an easy, reliable, and value-powerful method for dealing with big postmastectomy soft tissue defects in LABC. It has huge potential in developing countries handling a wide variety of LABC patients due to simplicity and short learning curve

Consent

“Written informed consent was obtained from the parent of this patient for publication of this case report and accompanying images”.

Declaration of Competing Interest

The authors reported no declarations of interest.

Funding

All authors have nothing to declare.

Ethical approval

This study was exempted by the Institutional Review Board

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