Case Report
Volume 1 Issue 2 - June 2017

Breast Reconstruction Using a Latissimus Dorsi Flap with Skin Graft after Total Paliative Mastectomy in a Large Advanced Carcinoma Breast

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Submission: April 27, 2017; Published: June 01, 2017
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Abstract
The latissimus dorsi (LD) myocutaneous flap has long been regarded as the second choice flap for autologous breast reconstruction following a mastectomy in our department. Despite uncertainty about donor-site morbidity, it is regarded as a relatively safe procedure; moreover, in contrast to our first choice, the deep inferior epigastric perforator flap, no microsurgical expertise is needed. LD breast reconstruction with skin graft is a safe choice for autologous breast reconstruction in case of unexperienced hands and where microsurgery facility are not available.

Keywords: Latissimus dorsi (LD); Myocutaneous flap; Mastectomy; Skin graft

Introduction
Latissimus dorsi (LD) myocutaneous flap can be regarded as the choice flap for autologous breast reconstruction following a total mastectomy in a case of large breast cancer with skin graft where microsurgical expertise are not available and patient are not suitable for other different types of flap. It is regarded as a relatively safe procedure, no microsurgical expertise is needed with fewer complications.

Case Presentation
A 50-year-old female diagnosed an advanced carcinoma of the right breast. After four cycles of neoadjuvant therapy, tumour size was decreased but still it was 15*10 cm in dimension, free from chest wall, multiple ulcerations with foul smelling discharge with liver metastasis. Patient underwent a right sided total paliative mastectomy and immediate breast reconstruction with a right sided latissimus dorsi (LD) myocutaneous flap, but the defect was very large, flap and skin was opposed under tension. On seventh post operative day, it was noticed that upper flap was not apposed, there after patient was subjected for skin graft. Post operative period was uneventful. Patient is sent into radiotherapy department for further management.

Discussion
The latissimus dorsi (LD) flap was first described in the seventies for breast reconstruction [1]. Early attempts to increase the volume of the flap by including fascial extensions were described by Hokin in 1983 and then by Hokin and Silverskind in 1987 taking the whole muscle and lumbar fascia with the largest possible skin paddle running obliquely along the back. The skin paddle could be partly or wholly de-epithelialized for added volume [2,3]. In the current study, we have designed the skin paddle in a transverse direction and we were still able to harvest enough fat from the scapular and lumbar regions. The transverse scar was quite acceptable to patients (Figure 1).

Some authors have abandoned the use of the fleur-de-lis skin paddle design because of the resulting extensive donor-site scar and have adopted to use the transverse skin paddle instead, where it can be hidden in the bra line [4]. Nevertheless, dorsal flap necrosis is a potential problem and it has been variably reported...
by several authors. Chang et al. [4] reported 16% necrosis rates in 75 patients while Delay et al. reported 3% incidence in 100 patients [4]. In this case report patient developed necrosis of the edges of the flaps. It required reoperation with skin graft (Figure 2). It is important that the primary wound closure of the donor site should be relatively tension-free [4]. Inadvertently excessive thinning of back flaps as well as greater tension created in wound closure due to poor skin paddle design have resulted in necrosis and wound breakdown (Figure 3). On the other hand, the LD flap itself is a very reliable flap with very low incidence of partial or complete necrosis. It is noteworthy that a higher incidence of fat necrosis is expected in larger flaps due to the harvest of some fat from beyond the borders of the muscle with its random blood supply [4].

**Figure 2:** Defect after palliative mastectomy.

**Figure 3:** LD Flap with skin graft.

**Conclusion**

The LD flap is a good alternative that can be offered for autologous breast reconstruction in a large breast cancer patient were palliation is required. The flap is primarily indicated for those who are not suitable candidates for TRAM flaps or for that group of patients who would prefer the back donor site and are reluctant to proceed for the prolonged recovery of the pedicled TRAM or for the possible morbidity and the complexity of free tissue transfers. The disadvantages of the flap lie in the high incidence of seroma, mild contour deficiency of the back, limitations in the size of the flap making it unsuitable for certain groups of patients who have very large and/or severely ptotic breasts which is managed an association with split skin graft

**References**
