ORIGINAL RESEARCH PAPER

Volume-8 | Issue-5 | May-2019 | PRINT ISSN No 2277 - 8179

INTERNATIONAL JOURNAL OF SCIENTIFIC RESEARCH

SIMPLE SOLUTIONS TO DIFFICULT PROBLEMS

Plastic Surgery

Dr. Sridharan Murugesan M.S., M.Ch, Associate Professor, Dept. of Plastic, Reconstructive & Faciomaxillary Surgery, Madras Medical College, Chennai - 600 003.

ABSTRACT

INTRODUCTION : Surgeons are often facing difficult problems in patient management. Problems can be related to the age, sex, body weight, anaesthetic fitness, surgical fitness etc,. When we think of the problem, it is often manageable with simple solutions. Here we are discussing about the problems of three different individuals which were treated accordingly.

MATERIALS AND METHODS : Three patients were treated. First two cases are babies with meningomyelocoele who underwent surgery for closure of the defect by neurosurgeons. The third patient is a 76 year old diabetic male who had to undergo below knee amputation following cellulitis with raw area over the knee joint anteriorly.

RESULTS : Cover was possible in all the patients with flap from the adjoining areas. Flap cover was durable, healthy and resulted in good wound healing except in one patient, where the flaps necrosed resulting in ulceration which required further management.

KEYWORDS

Flaps, Meningomyelocoele, Diabetes, Amputation

CASE DESCRIPTION & DISCUSSION :

The first case involves an one year old baby with meningomyelocoele. Closure of the defect was done by neurosurgeons but resulted in a raw area measuring 7x5cms. Patient was referred to us for wound cover. In view of the recent surgery done previously, anesthesia fitness, operating time had to be modulated. Hence, flap from the surrounding area was planned. Rotation flap was planned so that there will be no secondary defect. In view of the previous dissection, flap was raised including the muscle fascia and transposed to cover the defect. Without undue tension, post operative period was uneventful. Wound healed well.

Still simpler skin cover in the form of skin graft was not done as any loss will have negative influences on the healing of wound.

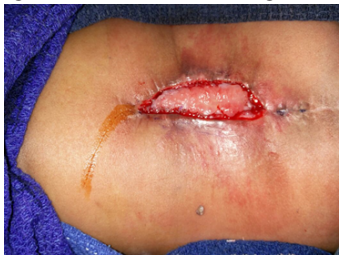

Fig.1., Defect of meningomyelocoele in the first baby

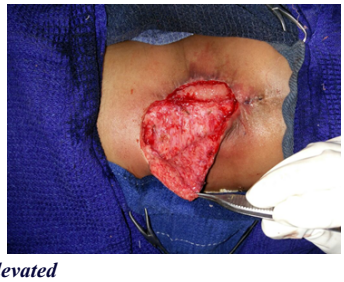

Fig.2., Flap elevated

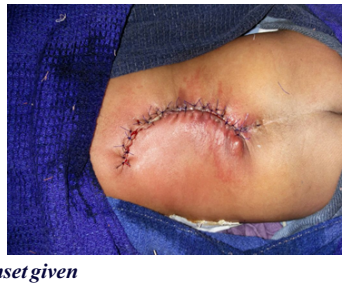

Fig.3., Flap inset given

Secondly, a similar case of meningomyelocoele closed by neurosurgeons with resultant raw area was planned cover by Z- flaps. Under Anesthesia, wound was prepared, Z-flaps marked and elevated. Flap insert given closing the ulcer completely. But the tips of all the Z-flaps necrosed because of extensive dissection. Hence debridement was done at a later date followed by further procedure to cover the wound.

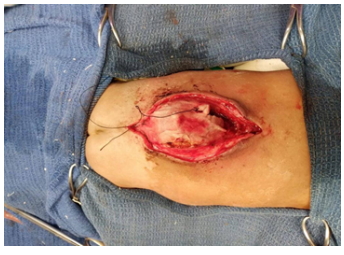

Fig.4., Meningomyelocoele defect in the second baby.

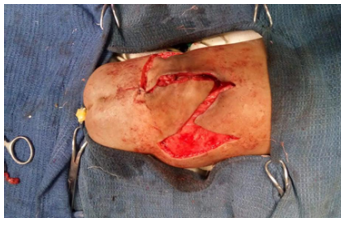

Fig.5., Flaps elevated

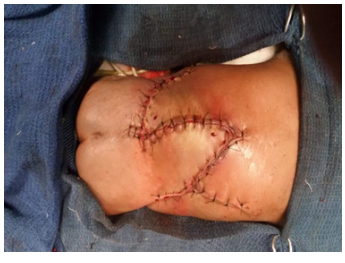

Fig.6., Z-plasty done in the second baby.

In both cases, flap cover required were executed. In the first case, simple elevation from the adjacent area was enough to cover the defect. Hence, the operating time, anesthesia time and tolerability by the child was short leading to success of the flap. Whereas, in the second patient, a similar defect was planned coverage by multiple Z-flaps which required a lot of dissection to elevate the flap. Though flap base was wide, it was not enough to supply upto the tip leading to necrosis. So any failure similar to this puts the patient on the need for second surgery with complications. Hence it is prudent to plan a simple flap which will go a long way to cover the defect without further complications. A child cannot be subjected to multiple surgeries as the tissue tolerability is poor.

Thirdly, a 76 years old diabetic male patient suffered with cellulitis of the right leg underwent below knee amputation with raw area on the anterior aspect of the right knee joint exposing the patella bone. With bone depth raw area in the anterior aspect of knee joint, wound failed to heal inspite of good healing of the stump. This was due to the constant movement done by the patient fearing stiffness of the joint as he was informed about the need for good knee joint for using artificial leg.

Initial examination showed 14x12 cm nearly elliptical raw area over the anterior aspect of knee joint exposing the patella covered by granulation tissue. Edges of the wound were hypertrophic. Granulation appeared mature without bleeding on touching. Knee joint movements were well preserved. Patient was a known Diabetic on treatment for the past 5 years. Skin cover over the joint should be planned as a flap because of the mobility of the joint to prevent recurrent break down. The possible options were fasciocutaneous flap from medical side of the stump or flap from thigh. Since the stump was well healed to bear the artificial limb, surgery was avoided in the leg. Flap from thigh was chosen as a rotation flap. Incision made beginning from medial end of the raw area and deepened to include the muscle fascia also. Anterior thigh skin elevated as a flap with rotation and advancement of the inferior edge to the defect. Lower wound edge undermined by extending the lateral edge of the wound inferiorly in a 'Z' fashion to produce a comfortable closure of the defect. Wound healed completely.

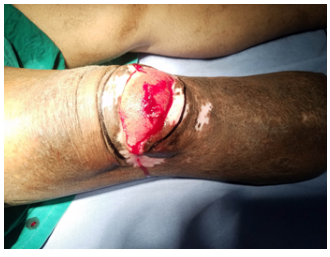

Fig. 7., Raw area in the knee joint (third patient)

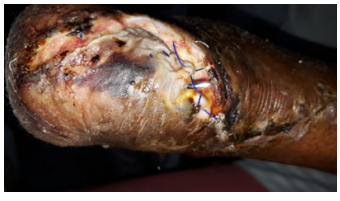

Fig. 8., Immediate post-op period

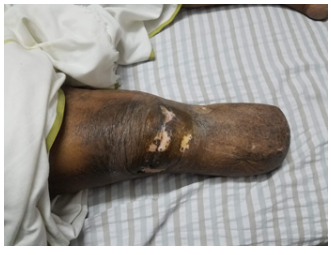

Fig. 9., Healed wound

CONCLUSION :

In problematic cases one needs to execute simpler approach that will definitely be successful. Various considerations has to be given for each case. If one has to choose the top most priority for each we will require more personnel, time, operation theatres to carry out such procedures like free flap. Hence a little modification of the surgeries combining the plastic surgical principles will do well. In both patients results are more than needed than the methods. A typical rotation flap is not possible in both locations. But elevation of flap with part of transposition and lateral advancement helps to achieve the coverage of defect. Whenever muscle fascia is included robustness of the flap is well guaranteed. A combination of rotation, transposition and lateral advancement is able to bring nearby tissues to the defect with minimal dogear deformity. In below knee amputation patient, it is possible to fit prosthesis early and mobilise him thus avoiding complication of old age, bed sores etc,.

Post operative period maintenance of flap cover is easy as it settles well in the long run without depending on the intelligence of the patient or attender to take care of the operated site. It doesn't preclude the care of the flap like scar massage, compression garments which has to be necessarily carried out.

REFERENCES :

1. Chittoria R, Mishra SM. Fasciocutaneous flaps in reconstruction of lower extremity: Our experience. Kathmandu Univ Med J (KUMJ) 2004;2:344-8.
2. Mackenzie DJ, Seyfer AE. Reconstructive surgery lower extremity coverage. In: Mathes SJ, Hentz vr, editors. Plastic Surgery Trunk and Lower Extremity. 2nd ed. Philadelphia: Saunders Elsevier; 2006. p. 1364.
3. Mess D. Lower extremity trauma principles of evaluation and early management. In: Cohen M, editor. Mastery of Plastic and Reconstructive Surgery. 1st ed. New York: Little Brown and company; 1994. p. 1773.
4. Burke M. Z-plasty. How, when and why. Aust Fam Physician. 1997;26:1027–9.
5. Rohrich RJ, Zbar RI. A simplified algorithm for the use of Z-plasty. Plast Reconstr Surg. 1999;103:1513–7.