

Trapezius Myocutaneous Extended As Fasciocutaneous Flap For Neck Contracture.

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KEY WORDS

Submental resurfacing, Extended flap.

ABSTRACT

Ten cases of severe post burn contracture are treated with extended horizontal trapezius myocutaneous flap during a period of two years, (1989 to 1991) at I.P.G.M.E. & R., Calcutta. This flap is designed and used, leaving submental area for cover by split skin graft for better aesthetic appeal. Results, of this improvisation are superior and give a near normal neck chin contour.

INTRODUCTION

By several methods post burn flexor neck contracture is corrected and each one enjoy its own popularity. Two important deviations have been tried in our series. The results are presented of these improvisations.

MATERIAL AND METHODS

Patients with severe degree of neck contracture were selected for this study. It was mandatory that they have normal skin over posterolateral part of neck and of shoulders.

Dominant vascular supply of trapezius muscle comes from transverse cervical artery a branch of thyrocervical trunk. In addition to this the upper part of trapezius muscle is supplied by the branches of occipital artery. This independent vascular arrangement allow the cervical part of trapezius muscle to form a separate myocutaneous flap and it can be extended onto the lateral shoulder as a fas-

ciocutaneous flap which is supplied by the perforators. Inclusion of this part of the muscle with its independent vascular supply, enhances the mobility and viability of the myocutaneous flap with extended fasciocutaneous part which is otherwise similar to the cervico humeral or epullete flap.

After release of contracture, defect is measured. The flap is out lined on the shoulder of the same size. Incision begins a little below and behind the ear lobule and goes down and anteriorly along the anterior border of trapezius muscle up to the tip of acromion. The poster margin parallels the anterior

incision and goes upto the midline in the nape of neck. Flap width varies from 6 to 12 cm and length varies from 25 to 35 cms. Two perforators e.g. suprascapular and transverse scapular are usually cut across. Occipital artery is not usually seen as it is high up neck shoulder angle just medial to the spinal accessory nerve which is carefully preserved. Now the flap with the muscle is raised and can be easily taken to the anterior neck from the mento cervical angle to sternal notch and sutured together. The submental area of chin and the raw area on chest are covered with split thickness skin grafts.

Photographs 1,2,3,4,5,6,7.



Figures :

1. Preoperative Contracture
2. Post-Op. Results.
3. Defect (Pre. Op.)
4. Post. Op. Results
5. Contracture Pre. Op.
6. (a) Post-Op. Result (Front View)
(b) Lateral View.

In one patient tip of the right sided flap necrosed which was excised and skin grafted. The longest follow up of the case is of two years.

Result is satisfactory. Texture and colour of the flap is indistinguishable from neck skin. Mento cervical angle is well maintained. There is full range of movement of neck. Shoulder movements are satisfactory. Donor region in the back treated with split skin grafts looks fine and is usually seen covered with clothings.

DISCUSSION :

Various methods in use for neck contractures are split skin grafts, tubed pedicals, fascio and myocutaneous flaps and free flaps. Split skin grafts is a time honoured method and most practiced one. The main disadvantage is irregular shrinkage of graft, break down in places, leading to recurrence of contracture and prolonged period of splintage that is needed for a satisfactory result. To overcome this disadvantage Padgett used free full thickness skin, but due to high rate of failures, gave up. Acromio cervical or humoural flaps have also been used. These being random flaps chances of flap failure are considerable. Few cases by Stephens Mathes and Vascons in 1978 were treated by a use of cervico humeral flap as a single stage procedure but their results are not known.

In 1981 Pontine introduced concept of a fasciocutaneous flap. Roberts Dickson in 1988 used this in 9 cases of post burn neck contractures. In 1980 J.A. Bertotte et al used island trapezius myocutaneous flap for malignancies of head and neck.

Use of horizontal trapezius myocutaneous flap is first reported by John B. McCrow et al in 1979 in three cases of malignancies in shoulder region, in neck and the floor of mouth. Further search of literature reveals that trapezius myocutaneous flap is not used as yet for flexer post burn neck contracture. However in 1991 Negin et al have used it as an island free flap for a small lesion in neck.

CONCLUSION

Extended horizontal trapezius myocutaneous flap may be used for defects that are very large in the neck, with good results. Procedure is reliable. Following advantages can be listed in support.

i) No splintage is needed. ii) Close proximity to recipient area. iii) Favourable texture and colour match iv) Chances of flap failure are remote. v) Inclusion of cervical part of trapezius muscle makes the flap more vascular and its mobility is enhanced.

Combination of split thickness skin graft in submental area gives a good mento cervical angle and avoids obliteration of neck contour, and prevents bull neck deformity which is always present in cases where flap is used in place of a split skin graft.

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