

MANAGEMENT OF POSTBURN CONTRACTURE NECK USING PECTORALIS MAJOR MYOCUTANEOUS FLAP

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Varying degrees of post-burn contracture of the neck are quite frequent, following thermal and chemical injury. Their treatment consists of releasing the contracture, with or without excision of the scar, to achieve normal contour of the neck and the chin. Thereafter it is essential to provide a stable skin cover.

Once the intubation problem is tackled, releasing the contracture is usually not difficult. The important decision regarding the quality of the skin cover and the postoperative maintenance of the neck contour has significant bearing on the ultimate result. This requires an analysis of the deformities, the diagnosis of the size of the tissue loss and resultant defect, the choice of the technique of repair and the donor sites.

Various methods have been evolved for this purpose. In selective moderate degree contracture we have achieved gratifying result using ipsilateral pectoralis major myocutaneous flap. The advantages and limitations have been discussed.

Case report: A 50-years male sustained acid burn of the face and the neck resulting in disfigurement and moderate contracture of the

neck. The contracture mainly involved the left side of the neck extending across the midline, restricting all the movements specially extension of the neck. The scar was hypertrophied and associated with multiple sinuses (Fig. 1).

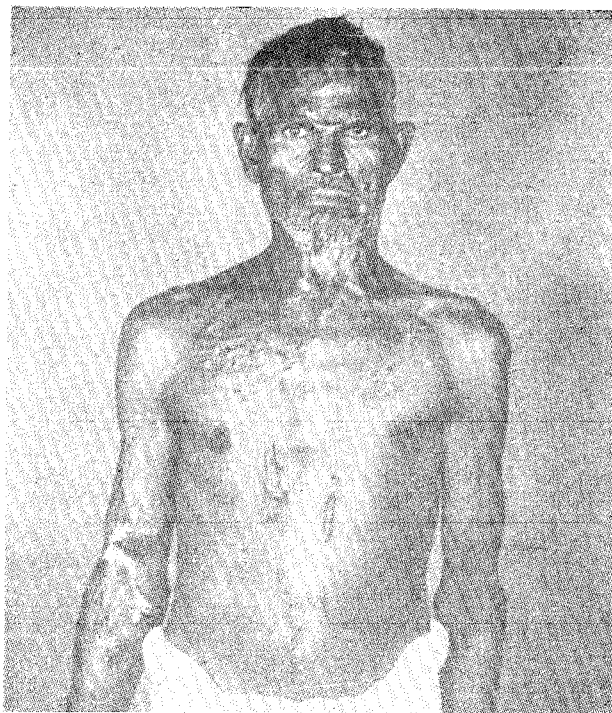


Fig. 1. Preoperative photograph

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The hypertrophic scar was excised and the contracture was released, resulting in a large contour defect. A left pectoralis major island myocutaneous flap measuring 9 cm in width and 17 cms in length was raised and transferred to the defect after tunnelling under the infraclavicular skin. The muscle was stitched to the adjacent strap muscles.

The clavicular head of the muscle was preserved. After undermining and reducing the size of donor area it was covered with split-skin graft. No cervical cast was given. The patient was advised to do physiotherapy of the left arm after 24 hours.

The post-operative period was uneventful. Simple neck extension exercises were advised for 6 to 8 weeks. Review after 6 months showed maintenance of normal contour without any recurrence (Figs. 2 & 3).

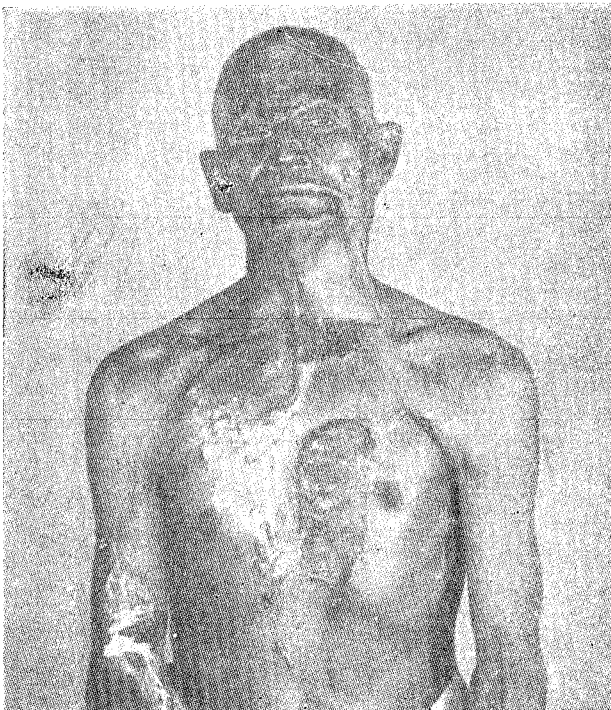


Fig. 2&3. Front and lateral views six months following surgery

Discussion

For the defect following release of contracture split skin graft was commonly used which was initially popularized by Cronin (1961, 1964). It is still a popular method because it is simple, easy, quick and does not involve special skill. However, it requires prolonged use of cervical splints otherwise recurrence is inevitable. It has been our experience that often these patients discontinue the use of cervical splint leading to unsatisfactory result. Moreover, the graft does not always prove to be a stable skin cover and may break down at places. A flap cover is thus desirable to overcome these problems.

Although various regional flaps have been described, their option is usually limited due to the surrounding scar. Converse (1948, 1957), Edwards (1948) and Longrace (1964) have described thoraco-abdominal jump flaps in selective

cases. Recently Bafna *et al.* (1982) have used multistaged lateral thoracoabdominal tube flap.

The use of pectoralis major myocutaneous flap has been already rationalised for the reconstructive surgery of the head and the neck following surgical ablation of malignant lesions. It is found that this flap is extremely useful for providing a stable skin cover in selected cases of neck contracture where most of the front of the chest is spared. This flap has the following advantages :

- (i) No postoperative neck collar is required;
- (ii) Minimum chance of recurrence;
- (iii) The skin is very stable;
- (iv) Corrects the contour defect;
- (v) The vital structures of the neck remains well protected;
- (vi) As the distance from the pedicle to the defect is short, a large flap can be used;
- (vii) Single-stage procedure;
- (viii) It does not produce any functional disability at the donor site as the clavicular head of the muscle is kept intact;
- (ix) The donor area remains concealed, and
- (x) Post-operative and future management is easy.

Thus this procedure is superior to many. It maintains neck contour without cervical splint. We feel that if the defect is longer then bilateral flaps may be used suturing them in the midline. If the defect is wider then also bilateral flaps can be used placing them one above the other. In both these instances two teams will cut short the operating time.

Certain limiting factors are :

- (a) This procedure is not feasible if the donor area is also scarred;
- (b) It is a lengthy procedure and requires special skill;
- (c) Not applicable in poor risk cases;

Thus one has to justify and individualise the selection of technique in cases of postburn contracture of the neck. The above technique may provide satisfactory results in a good number of cases.

Summary :

The use of pectoralis major myocutaneous flap for the management of post-burn contracture of neck is described. Its merits and demerits are discussed.

References

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