# Reconstruction of the Angular Defects of Cheek

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ANGULAR defects means the defect of the upper, lower lip and the angle of the mouth involving the cheek. Its reconstruction presents the various complex problems. Gillies and Millard (1957) has stressed the importance of initial repair of the angle of the mouth, later on repair of the cheek defects. Owens (1955) has designed a compound neck pedicle flap for the repair of massive facial defect, other methods of repair of a large defect is by rotation of two delayed flaps from the neck. It is not suitable in male patients, because of the presence of hair follicles, transferred to the inner surface of the cheek. The use of forehead flap based on the temporal region to provide the inner lining and neck flap for cover is a method of obviating the above disadvantage. There is another method in which the forehead flap is brought down to form the lining of the defect, the flap form the lower part of the face furnishes the outer covering of the defect.

Tube-Pedicles have been utilized in the repair of cheek defect,but because of the tissue involved is often unsatisfactory of colour match, its use is restricted to the most extensive defect or those in which the presence of scar tissue makes the use of rotation flap impossible.

## I. Conditions responsible for the angular defects

a. Cancrum oris.

b. Carcinoma at the angle of the mouth.

c. Trauma,

d. Tumours (haemangiomas)

## II. Methods of Reconstructions of the defects

1. To assess the defect the mouth should be fully opened up (otherwise false ankylosis may occur)

2. In these cases the lining is more important (So start stitching the lining first).

3. Suitable tissue used for the Reconstruction of the face defect :

   a. Tube Pedicles

      i. Trans-cervical tube pedicles,

      ii. Acromio-thoracic (in old age group)

      iii. Abdominal tube pedicles.

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b Skin flap

i. Acromio-pectoral flap.

**III. Type of repair depends upon**

1. Extent of the defect
2. Amount of the tissue loss.
3. Age, and sex of the patient (older patients have loose tissue, so advencement, transposition, rotation of the flap is greater advantage but having critical vascularity)

**IV. Problems after reconstruction of the defect**

1. Unacceptable appearance.
2. Unable to speak properly.
3. Angle of the mouth is not properly shaped.
4. Reconstructed cheek looks thicker.
5. Ectropian of the lower lip.
6. Methods need further reshaping the angle of the mouths

**A. Reconstruction by transcervical tube pedicle** (fig. 2)

i. Reconstruction of upper and lower lip by transcervical tube.
ii Prominent swelling remains at the cheek.
iii. Mouth is not closed properly.

**B. Reconstruction by Acromio-pectoral flap** (figs. 3,4 & 5)

i. Lower lip remains everted.
ii. Macro-stoma present.

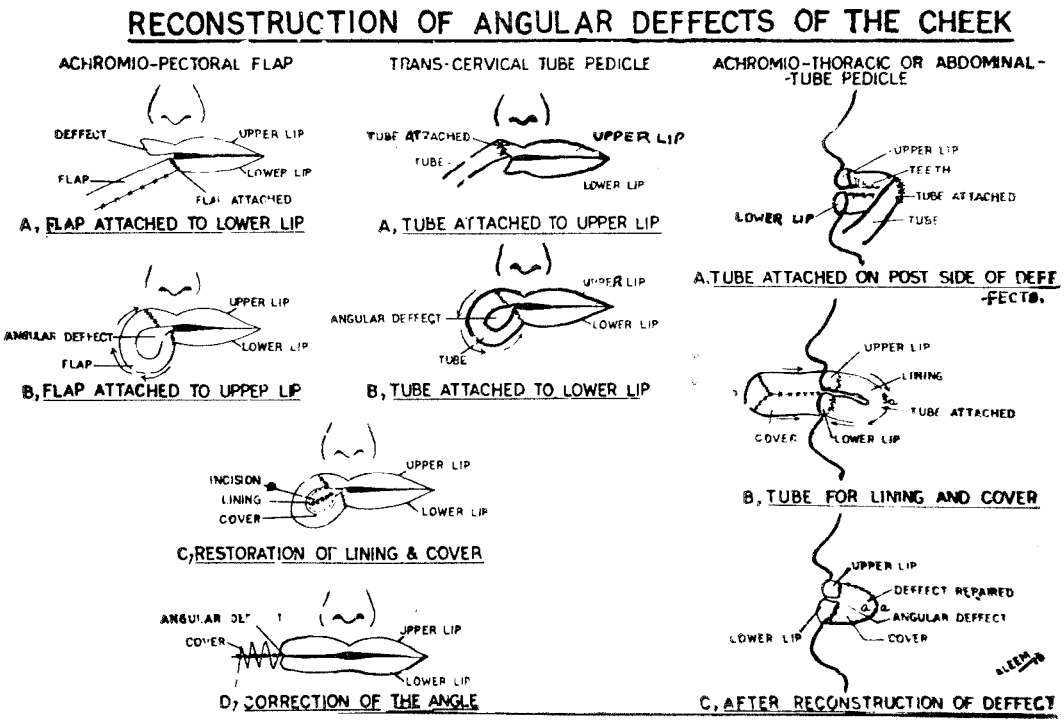


*Fig. 1*

*Fig. 2*

*Fig. 3*

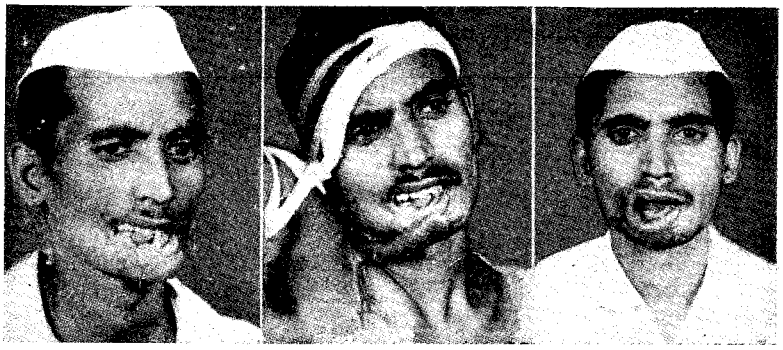

*Fig. 4*

*Fig. 5*

*Fig. 6*

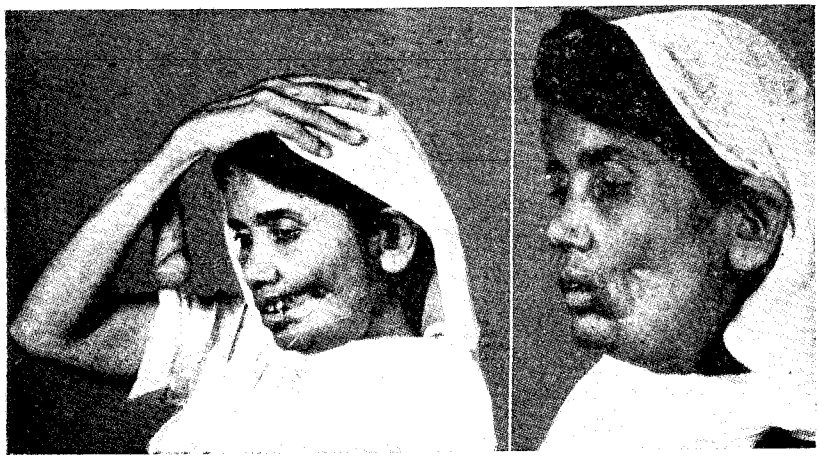

*Fig. 7*

iii. Thick swelling at the site of the cheek (fig. 3).

i. Ectropian of lower lip present.
ii. Dribbling of saliva (fig. 4).

i. Buckling at the angle of the lip.
ii. Lower lip is quite thick (fig. 5).

**C. Acromio-thoracic tube pedicle** (fig. 6).

I. In old patients the skin is lax: Acromio-pectoral tube pedicle can be used.

ii. Reconstructed cheek looks thicker.

**D. Reconstruction by the abdominal-tube pedicle**

i. Reconstructed cheek looks thicker.

ii. Angle is not properly shaped.

iii. Results are comparatively satisfactory but color is dark.

## Discussion

In the reconstruction of angular defects various methods have been used but none of them is satisfactory, due to the bulky look of the cheek as the tube and flaps carries a lot of subcutaneous tissue along with it. Until and unless it is thinned out the shape does not become normal. The angle of the mouth looks oblique, bulky and having ectropian of the lip. A satisfactory acute angle of the mouth without any bulge or eversion is keystone of aesthetic success, the new angle will be at the correct level in all dimension. There is no advantage of using distant flap which shrinks and curles inwards due to lack of muscular tissue. So effort should be made to utilize the local flaps in small defects.

In cases where the defect was large or upto the last molar tooth, and needs adqeuate quantity of suitable tissue reconstruction was done by flap or tube pedicle. In older age patients the pectoral skin is loose, a tube pedicle can be formed, and utilized for the reconstruction of cheek defects, which is satisfactory. If it is not possible, acromio-pectoral flap may be used in the reconstruction of the larger defects of the cheek

Excision of fibro-fatty tissue and Z-Plasty at the angle was done. So part of the defect was improved but it was not up to the satisfaction. Later on the skin of the reconstructed lip becomes whitish in colour and it look like the mucus membrane of the lip.

## Conclusions

Various methods of reconstruction of the angular defects of the cheek have been described, but none of them are satisfactory. Results of the tube-pedicle are satisfactory than that of flaps. Excision of the fibro-fatty tissue and Z-plasty at the angle may improve the cosmetic and functional results.

## REFERENCES

1. Owens, N. : A compound neck pedicle designed for the repair of massive facial defects. Plast. and Rec. Surg., 15 : 369, 1955.

2. Baxi, U.K. and Goleria, K.S. : Cheek Reconstruction following Excision for Malignancy. Ind. J. Plast. Surg., 27 : 3, 1970.