Reconstruction of the Nose with Groin Flap

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Acid burns of the face is not infrequent. In one such case groin skin has been chosen for reconstruction of the nose following destruction of the skin and a part of the cartilages. The result was satisfactory.

Case Report

A 31 year old lady was admitted with extensive acid burn of the face, ears, eyes (Fig. 1), upper part of the chest, both shoulders and both upper limbs affecting approximately 22% of the body surface. Burns were mostly deep and Thiersch skin graft was used to cover the granulating surface following separation of slough. Both upper and lower eye lids and the skin of the nose with the part of the alar cartilages on both sides were also destroyed. Attempts were made to save both corneas but within two weeks they became thinner and came out of the limbal attachments as a whole. After about six months the left upper eye lid was reconstructed by left arm flap and the right one by abdominal flap, specially prepared for this purpose.

Reconstruction of the Nose

Groin tubed pedicle flap was used for reconstruction of the nose. A pattern of nasal skin requirement was first mapped over the right groin placing the alar part of the pattern on the lateral aspect and the other end over the middle of inguinal ligament. The skin flap was then transferred over the nose and the right wrist acted as an intermediate carrier. A period of two and half months was required for transfer and placement of the flap over the nose. A few minor operations were also carried out for removal of extra fat and readjustment of the flap. Following reconstruction patient felt some constriction of the nostrils and difficulty in easy breathing. A little shortening of the alar part of the nose relieved the patient to a considerable extent (Fig. 2).

Discussion

Reconstruction of the nose by cheek flaps was known to ancient Hindu Surgeons about three thousand years before the Christ (Padgett and Stephenson, 1948). The commonly used forehead flap (known as Indian method of Rhinoplasty) has the advantage of good colour matching, better texture, minimum subcutaneous fat and is a less time consuming procedure. Other sites as medial aspect of the arm, acromio-thoracic region, abdominal wall are not generally used for this purpose. Karnahan (1968) stated that these sites are only used when the forehead skin is unsuitable due to scars etc. Further, these flaps do not match properly with the colour of the facial skin and easily collapse at the opening of the nostrils for their loose texture. Cheek flaps and nasolabial flaps (Cameron et al., 1973) which may match fairly well, will with difficulty provide sufficient skin to cover the entire nose. This patient had deep burns of the forehead and of the cheeks, so were unsuitable for any flap. Acromioclavicular region and the medial aspect of the right arm were also deeply burnt, hence the groin skin was chosen for reconstruction of the nose. Groin flap described by McGregor and Jackson (1972) is an “axial pattern flap” (McGregor and Morgan, 1973) can be raised to a

Fig. 1. Appearance of the face and nose after the treatment with free skin grafts following formation of granulation tissue.

Fig. 2. One and a half years after covering the nose with groin skin flap.
considerable length without intermittent 'delay' procedure. Based on this method the flap has been raised and used successfully. Scars on the forehead, arm and acromiothoracic region often brings dissatisfaction to the patients and this is obviated by groin flap method. Thick texture of the skin of the lateral part of the groin is suitable for replacement of the skin round the nostrils and the thin fat free skin of the groin crease line gives better contour and shape of the upper part of the nose particularly over the bridge of the nose.

References