

DELTOPECTORAL AND FOREHEAD FLAPS IN FACIAL RECONSTRUCTION

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The more aggressive the surgical approach in intra-oral cancer the more extensive are the post excisional defects. Many defects of moderate size can be closed by direct suture, taking advantage of the mobility of tongue and buccal mucosa, particularly when resection of mandible has allowed some collapse inwards of the cheek. Many patients find the resulting fixation of a tongue anchored to the buccal mucosa very irksome. Further direct suture is apt to have disadvantages elsewhere in the mouth even when it is technically feasible.

In contrast the techniques which allow tissue to be brought in from elsewhere and are sufficiently versatile to permit their being used to repair any of the various types of mucosal defects commonly resulting from extensive intra oral tumours, are more useful.

The purpose of this paper is to describe a method used by the author for closing such defects caused by excision of intra oral cancer. The author has used the fore-head flap for lining and deltopectoral flap for cover in most of these cases.

Principles of the Method

Forehead flap :

A standard temporal flap stops at the midline. This limits the availability of non hair bearing skin as the lining for the oral cavity. So it was decided to modify by raising the flap from across the midline as shown in the shaded area of the diagram, and to stop

short just at the level of the lateral angle of the eye for the base of flap. (The second shaded area of the diagram).

The flap is raised and turned downwards with raw surface outwards. This is brought into oral cavity through subcutaneous tunnel. A bridge of skin is returned back to the forehead in 3 weeks like any other forehead flap. The opening into the mouth is in the region above the buccal sulcus and the temporary external fistula is so high as to cause any leakage.

Deltopectoral flap :

In 1965 Bakamjian, at Roswell Park, USA first used a deltopectoral flap to reconstruct the upper oesophagus. This flap depends for

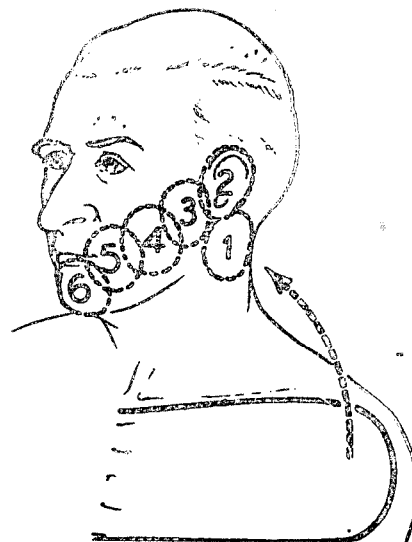


Fig. 1

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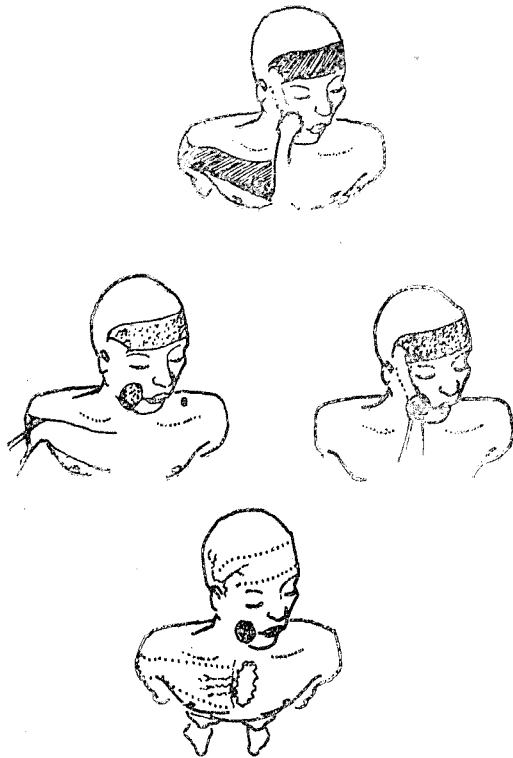


Fig. 2

its blood supply on the upper three perforating branches of the internal mammary vessels. These supply an extended skin area out to the Shoulder region. The area of skin supplied extends to the anterior surface of the deltoid muscle where we come to a 'meeting of the waters' and thus any flap raised beyond this point is random in type and often in survival. We have not delayed the flap in any of our cases and stopped at the coronal plane of the shoulder as outer limit of the flap.

Material and Methods :

We had a total of 19 cases operated in the past three years. The nature of the cases are shown in table I.

14 of these underwent commondo operations. Reconstruction was primary in cancer cases, at the time of surgery and secondary in rest of the cases. The types of the flaps used were deltopectoral and fore-head flap in 9 cases. The deltopectoral alone was used in

Table I

Skowing type of cases.

Carcinoma cheek	...	12
Carcinoma lip and angle of mouth	...	2
Carcinoma alveolus	...	1
Cancrum oris	...	1
Cancrum naris	...	1
Burns	...	1

six cases. Forehead flap with a split skin graft lining was used alone in 2 cases. A midline forehead flap was used in two cases for reconstruction of the nose.

Complications :

There was haemorrhage in 3 cases : necrosis of the flap in one case and infection in four cases. Local recurrences occurred in three cases.

Discussion :

Extensive defects of face resulting from large defects resulting after excisional surgery



Fig. 3

for oral cancer, pose a challenge to the reconstructive surgeon. Although numerous methods have been described in the literature, there is as yet no unanimity of opinion regarding the best method. In this series the reconstruction has been done by providing lining with the forehead flap can be safely extended beyond the midline. The method is safe and simple and can be applied safely to a wide variety of defects of the head and neck region.

Conclusion :

Fore head flap for lining deltopectoral as cover is versatile combination for reconstruction of defects of cheek following extensive excision for cancer cheek. It is not necessary to stop at the midline for the forehead flap.

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