Pectoralis Major Rib Osteomyo Cutaneous Flap in Primary Mandibular Reconstruction in Floor of the Mouth Cancer

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We report pectoralis major rib osteomyocutaneous flap in reconstruction of cancer floor of the mouth in 8 cases. We have discussed its advantages in country like ours over the microvascular graft. The rib (Vascularised bone graft) incorporated in this flap gives ideal support for mandibular arch reconstruction.

Key words
P. M. rib Osteomyocutaneous flap, free graft, mandibular arch.

Resection of mandible for floor of the mouth cancer results in predictable deformity depending on the extent of resection. Anterior segment resection results in medial rotation of both remaining segment combined with loss of support for the base of the tongue and hyoid bone. Such a defect results in a devastating functional and aesthetic deformity which so debilitating that primary reconstruction is mandatory.

Reconstruction of composite defect is performed with bone and soft tissue in one operation as far as possible to shorten the hospital stay.

The reconstruction of bony part is always a challenge. It may be plates, titanium trays, cortico cancellous grafts etc. These have high complication rate for extrusion and infection. By contrast, vascularised bone graft like Osteomyocut. and microvascular flaps allow for primary healing of the graft as if it were a simple fracture (3). The recent popularity of free graft
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has made them a first choice for many surgeons. However the increased operating time, high failure rate, frequent need for operative rescue, specialised post operative care and facilities and specialised training required to perform them have prompted many extripative surgeons to attempt other techniques like P.M. Osteomyocut. flap for mandibular reconstruction. We present the procedure, complications and results of single stage P.M. rib Osteomyocut. flap reconstruction in cancer floor of the mouth in a series of 8 cases.

PATIENTS AND METHODS

These patients were admitted to our centre between Jan, 1991 to June, 1993. All these 8 cases were biopsy proved cases of squamous cell carcinoma. Details of these patients are given in the Table-I. The anatomy and operative technique of the P.M. composite flap are well documented (3 & 7).

The blood supply to the skin flap is through the muscle perforators and to the rib via periosteal blood supply. The skin flap can be cut obliquely or transversely. We have taken it transversely in all our female patients at the infra mammary site for better cosmesis. Fifth and sixth rib can be taken as the bony component (1, 2). But we have used 5th rib in all our cases because of more muscle attachment to it (3). The disadvantages of 5th rib is the pedicle remains under tension due to it's short length, but in our series we were comfortable in our repair. Rib is first fixed with mandible by 24 gauge wire. To avoid tension due to post operative oedema we have always taken a little redundant flap. The flap was stitched by atraumatic 1/0 silk. Oral feeding was started on 5th post operative day.

RESULT

We had no cases of flap necrosis. The Orocutaneous fistula and epidermal separation were managed by debridement and local dressing. The infection in the first cases did not subside for a long period, then we remove the steel wire under local anaesthesia after 8 months and it healed.

In two cases the pleural cavity was opened and we prophylactically put the intercostal tube. In two cases the flap covered both mucosa as well as skin, as skin involvement was there. These two