



## ORIGINAL RESEARCH PAPER

## Oncology

## Use of Platysmal Muscle Flap for Reconstructing floor of mouth defects : A single centre study of 34 cases.

**KEY WORDS:** Platysmal muscle flaps, floor of mouth, tongue lesions

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### Introduction:

The floor of the mouth for the purpose of surgical planning is defined as the space between the mucosal surface and the mylohyoid muscle sling. The mylohyoid muscle sling separates the floor of the mouth from the right and left submandibular spaces and midline submental space. The smaller, superior portion of the submandibular gland hooks around the posterior aspect of the mylohyoid muscle with a finger like projection from the submandibular space into the posterior aspect of the floor of the mouth.

In this article, we demonstrate an interesting result in 34 patients who underwent platysmal muscle flap for reconstruction of floor of mouth defects that sacrificed the facial artery and vein for intraoral reconstruction.

### Materials and Methods:

We reviewed 34 patients from September 2012 to September 2015 who underwent platysmal muscle flap for reconstruction of intraoral defect after a primary tumor excision at our institute. Modified radical or selective neck dissection was also performed on the patients. All 34 cases were reconstructed with platysmal muscle flaps that sacrificed the facial artery and vein. Tumor excision and defect reconstruction were both performed by the same team. The age and sex of the patients, location and size of the lesions, surgical complications, and outcome were recorded. We obtained the histological diagnosis from the resected specimens. Informed consent was obtained from all of the patients involved in the study.

### Results:

In this series of 34 selected patients, 33 patients had carcinoma tongue as follows: 30 patients had lesions in the anterior and middle one third of the tongue and 3 patients had lesions in the middle and posterior one third of tongue and none of the patients had tongue lesion involving the base of tongue. All the tongue lesions were away from the mandible and Tonsillo-lingual sulcus and none of them required resection of the mandible. 15 patients amongst these had received neo-adjuvant chemotherapy and 10 patients had their tongue lesion going into floor of mouth or just abutting floor of mouth but away from the mandible. All these patients underwent wide local excision of tongue lesion with approximately 1cm margin and in all these cases, the continuity of the floor of the mouth was disrupted. Amongst the 34 patients, 1 patient

had carcinoma in the floor of mouth, the size being 1\*0.5cm and not requiring mandible resection. None of the 34 patients had received pre-operative radiotherapy.

After the excision of the primary tumor, the defect in the floor of

the mouth was repaired primarily in 20 cases and platysma flap put in addition and secured to the adjoining structures and in the rest 14 cases, only platysma muscle was used to reconstruct floor of mouth defects without primary closure.

Among the 34 patients with platysma flap, all the patients were allowed liquid diet from seventh post operative day and amongst them, 2 patients had leak from the floor of mouth. This in one patient was evident from the immediate post operative period when the neck drain negativity could not be maintained and in the other patient it was manifested by increased amount of fluid in the neck drain. Both these patients were managed conservatively and they were kept nil per oral for long periods (15 to 20 days) and only ryles tube feeding was given for this period and followed up regularly.

30 patients among these were subjected to post-operative radiotherapy and none of them had any morbidities related to the flap site.

### Conclusions

Vertical platysma muscle flap that sacrificed the facial artery, with the specific advantages of being easy to prepare and having few limitations, may provide an efficient method for reconstructing the floor of mouth defects. The one thing which should be kept in mind is that while raising the skin flaps for neck dissection in cases of oral carcinoma, care should be taken to handle the platysma gently which otherwise may lead to tears in platysma and thus, making it unsuitable for use as a flap. Also, this flap may not be reliable in cases of large defects in floor of the mouth or lesions requiring mandible resection as well in which other flaps should be considered.

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