



PMMC FLAP AS A RECONSTRUCTIVE OPTION IN ORAL CANCERS: AN INSTITUTIONAL EXPERIENCE OF 137 PATIENTS WITHIN THE COVID 19 PANDEMIC.

ENT

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ABSTRACT

Oral cancer is one of the most common malignancies in developing countries like India and surgical excision is the mainstay of treatment of oral squamous cell carcinomas. Pectoralis Major Myocutaneous Flap (PMMC) is considered as a "Workhorse Flap". A total of 137 PMMC flap reconstructions have been accomplished in the Head Neck Oncosurgery wing under the Department of ENT & Head Neck Surgery all through the year 2020–2022 following institutional ethical clearance. Patients had been evaluated primarily based on history, clinical, radiological, histopathological findings, and routine blood examination prior to treatment. Parameters included in our study had been post-operative complications of PMMC flap in terms of:

- Flap related complications – partial flap necrosis, complete flap necrosis, wound dehiscence.
- Donor site complications – infection, wound gaping.

Amongst flap related complications, wound dehiscence was the most common comprising of 5.8 % (10 out of 137 cases), whereas partial flap necrosis occurred amongst 2.2 % of cases (3 out of 137 patients). Wound gaping occurred in 2.9 % of cases and wound infection occurred in 1.5 % of cases. PMMC flap remains the workhorse of oral cancer defect reconstruction due to its ease of availability and lesser failure rates due to its robust blood supply from a reliable pedicle.

KEYWORDS

PMMC flap; Oral cancer

INTRODUCTION

Oral cancer is one of the most common malignancies in developing countries like India and surgical excision is the mainstay of treatment of oral squamous cell carcinomas. Pedicled flaps are a reliable reconstructive option in oral malignancies⁽¹⁻³⁾ though free flaps are now considered as "gold standard" for reconstruction of post-resection defects⁽⁴⁾. The main aim of reconstruction should be to restore near normal form and function in the individual. Among the pedicled flaps, Pectoralis Major Myocutaneous Flap (PMMC) is considered as a "Workhorse Flap" because it has many advantages like extremely good vascular supply, proximity to head and neck vicinity, ease of harvesting and protecting critical structures of neck⁽⁵⁾.

METHODS

A total of 137 PMMC flap reconstructions have been accomplished in the Head Neck Oncosurgery wing under the Department of ENT & Head Neck Surgery all through the year 2020–2022 following institutional ethical clearance. This is a Prospective Study where patients had been evaluated primarily based on history, clinical, radiological, histopathological findings, and routine blood examination prior to treatment making plans.

Inclusion Criteria :-

- Patients diagnosed with oral carcinoma confirmed after histopathology.
- Patients willing to be a part of the scientific research.
- Cases in which the defect need reconstruction with local flap, PMMC flap.
- Compromised patient status where free flaps are contraindicated.

Exclusion Criteria:-

- Patients not willing to be a part of the study.
- Cases where the defect size would need reconstruction with free flap.

Parameters Included In Our Study Had Been Post-operative Complications Of Pmmc Flap In Terms Of:

- Flap related complications – partial flap necrosis, complete flap necrosis, wound dehiscence.
- Donor site complications – infection, wound gaping.

RESULTS

Amongst the 137 patients, 113 patients were males and the remaining

24 patients were females. The patients were between the age groups of 35-65 years with the median age being 50.4 years. All the patients had biopsy confirmed squamous cell carcinoma of the oral cavity. The patients underwent surgical resection of the primary tumor and reconstruction with PMMC flap. Among the primary lesions of the oral cavity, right buccal mucosa was the most common site of involvement comprising of 36.4 % of the cases. The distribution of lesions amongst the various subsites of the oral cavity has been exhibited in **Table 1**.

Table 1

Site Of Primary Lesion	No. Of Patients (N = 137)	Percentage Of Patients (%)
Right Buccal Mucosa	50	36.4
Left Buccal Mucosa With Floor Of Mouth	21	15.3
Left Buccal Mucosa	22	16.2
Right Alveolus	5	3.6
Right Retromolar Trigone (Rmt)	8	5.8
Left Mandible	9	6.2
Left Rmt	7	5.2
Left Alveolus	11	8.3
Right Buccal Mucosa With Rmt	4	2.6

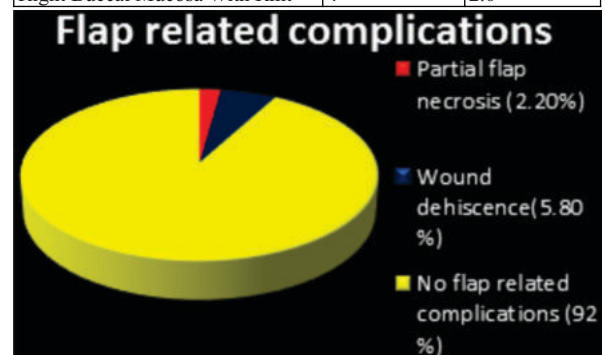


Figure 1

From **Figure 1**, it is seen that amongst flap related complications, wound dehiscence was the most common comprising of 5.8 % (10 out of 137 cases), whereas partial flap necrosis occurred amongst 2.2 % of

cases (3 out of 137 patients).

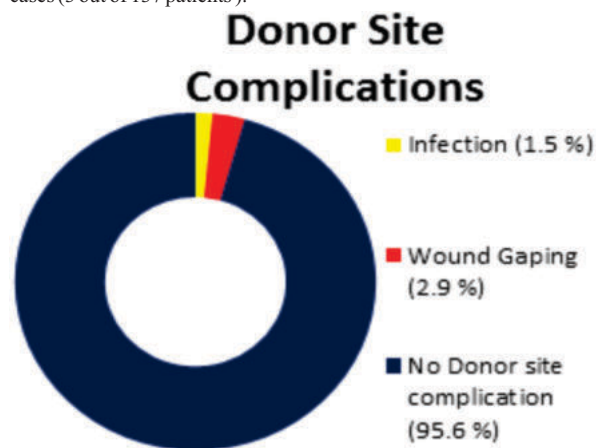


Figure 2

Figure 2 shows the distribution of donor site related complications amongst the study population. Although most of the patients didn't have any donor site complications (95.6 %), wound gaping occurred in 2.9 % of cases and wound infection occurred in 1.5 % of cases.

DISCUSSION

In our study, males clearly outnumbered females (113/137 vs 24/137) and the median age of the patients was 50.4 years. This is similar to a study by V. Girhe et al⁶. Amongst the flap related complications, wound dehiscence occurred in 5.8 % cases and partial flap necrosis occurred in 2.2 % cases. There was no case of complete flap necrosis. This was similar to findings in the study by Saito et al.⁷ and Sharma et al.⁸ With respect to donor site complications, wound gaping occurred in 2.9 % of cases and infection occurred in 1.5 % of cases. The results were better and similar to various studies in the literature.^{7,8}

CONCLUSION

We conclude that the Pectoralis Major Myocutaneous Flap (PMMC) is a reliable and effective option of head neck reconstruction in cases of oral malignancy. It still remains the workhorse of oral cancer defect reconstruction due to its ease of availability and lesser failure rates due to its robust blood supply from a reliable pedicle.

Ethical Approval

Approved by the institutional ethics committee.

Conflict of interest : None

Funding: None

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