



Wide Local Excision Of Lower Lip Tumour With Local Rotation Mucocutaneous Flap With Functional Neck Dissection In Carcinoma Of Lower Lip - Case Study

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Abstract-

Carcinoma of the lip is a common oral malignancy with potential for regional lymph node spread. Wide local excision with adequate margins remains the primary treatment to achieve oncological clearance. Reconstruction of the post-excisional defect using a suitable local flap helps restore lip function and cosmetic appearance. Neck dissection is performed to manage or prevent cervical lymph node metastasis. Histopathological evaluation confirms margin status and nodal involvement. This combined surgical approach provides effective disease control with satisfactory functional and aesthetic outcomes.

Introduction-

Carcinoma of the lip is a common malignancy of the oral region, often presenting at an early stage but with potential for regional lymph node metastasis. Surgical management remains the cornerstone of treatment. This abstract describes the role of wide local excision of a lip tumour combined with appropriate reconstructive flap coverage and neck dissection to achieve optimal oncological and functional outcomes. A patient diagnosed with carcinoma of the lip underwent wide local excision with adequate oncological margins to ensure complete tumour clearance. Depending on the size and location of the defect, reconstruction was performed using a suitable local flap to restore lip continuity, oral competence, and acceptable cosmetic appearance. Simultaneously, a selective or modified radical neck dissection was carried out to address clinically or radiologically suspected cervical lymph node metastasis. Postoperatively, the patient was monitored for wound healing, flap viability, speech, swallowing function, and complications such as infection or nerve injury. Histopathological examination confirmed tumour-free margins and provided staging information to guide further management. The combined approach of wide local excision, flap reconstruction, and neck dissection offers effective local disease control while preserving functional and aesthetic aspects of the lip.

This integrated surgical strategy remains a reliable and definitive treatment modality for lip malignancies with regional nodal involvement, contributing to improved survival and quality of life.

Case presentation- Chief Complaints-

A 40 years old male patient visited OPD of our hospital for growth at lower lip and pain at growth site since 3 months

History of present illness-

Approximately since 3 months the patient has gradually increasing growth at lower lip. He done biopsy of growth at other hospital which indicated invasive moderately differentiated squamous carcinoma. For which he visited to our OPD for immediate surgical intervention.

History of past illness-

Other than the present complaints, the patient had surgical history of biopsy of lower lip with known medical history of jaundice with known history of hypertension.

Personal and family history-

Occupation -Worker

Diet- Mixed

Habit- Alcohol

Allergy-No any Known drug allergy

Clinical examination-

General examination

Patient conscious, oriented and afebrile

No pallor, icterus, cyanosis or pedal oedema

Physical examination

P- 60/Min

BP-130/80 mmHg

SpO2- 98% on RA

RR-18/Min

Local examination



On inspection

Growth noted at right side of lower lip

Size- 4×3 cm

On palpation

Consistency- Hard

Laboratory examinations-

Hb- 11.5 gm/dl

WBC- 4980/cmm

Plat- 2.47 lakh/cmm

Sr Creat- 1.2 mg/dl

Imaging Examination-

CECT Face and Neck

Laterality: III defined mildly enhancing lesion is seen in the lower lip on the right side, measuring 2.1x1.4x1.4 cm.

Primary Disease extent:

Retromolar trigone: Not involved

Floor of mouth: Not involved

Gingivolingual sulcus: Not involved

Tongue: Not involved

Right parapharyngeal space: Not involved

Masseter muscle involvement: Not involved
Masticator space involvement: Not involved
Infratemporal fossa: Not involved
Retroantral space extension: Not involved
Lateral pterygoid muscles involvement: Not involved
Pterygoid plates: Not involved
Pterygopalatine fossa: Not involved
Pterygomaxillary fissure: Not involved
Temporalis Muscle: Not involved
Condylar fossa: Not involved
Maxillary sinus involvement: Not involved.

Hard palate involvement: Not involved

PERINEURAL SPREAD: Absent

Vascular involvement: Absent

BONE STATUS

Dentition: Present

Bony Erosion: Absent

NODES:

Few small subcm sized prominent level la, right level ib, II nodes are seen.

Necrosis: Absent

Other findings: Mucosal thickening is seen in left maxillary sinus.

Final Diagnosis-

Moderately differentiated squamous cell carcinoma of right lower lip

Treatment-

After diagnosing, intravenously administered antibiotics- Inj Ceftriaxone 1 gm IV BD, Inj Pantaprazol 40 mg IV BD

Procedure name - Wide local excision of tumour at lower lip with local rotation pedicled muco cutaneous flap with functional neck dissection

Preoperative procedure- Ryle's tube insertion and foley's catheterization

Position - Supine with neck extended

Anaesthesia - General Anaesthesia

Procedure

Under all aseptic precautions painting and draping done.

1. Functional Neck Dissection

Cervical incision (apron or modified Schobinger incision) given.

Subplatysmal flaps raised.

Dissection carried out for levels I to III (\pm IV) as indicated.

Spinal accessory nerve, internal jugular vein, and sternocleidomastoid muscle preserved.

Lymphatic tissue removed en bloc.

Specimen sent for histopathology.

2. Closure

Thorough haemostasis achieved.

Suction drain placed in neck.

Platysma and skin closed in layers.

3. Tumour margins marked with 1–1.5 cm oncological safety margin.

Flap design (e.g., Abbe, Estlander, Karapandzic or Bernard-Burow flap) marked depending on defect size.

4. Wide Local Excision of Lower Lip Tumour

Incision taken around the tumour including skin, orbicularis oris muscle, and mucosa.

Tumour excised en bloc with adequate margin.

Specimen oriented and sent for histopathological examination.

Haemostasis achieved.

Resultant defect assessed for reconstruction.

5. Reconstruction with Local Pedicled Mucocutaneous Flap

Pre-designed local pedicled mucocutaneous flap raised preserving vascular supply.

Flap mobilized and rotated/advanced to cover the lip defect.

Muscle layer sutured with absorbable sutures to restore oral sphincter function.

Mucosa closed intraorally and skin closed externally ensuring proper lip alignment.

Adequate mouth opening and symmetry ensured.

Haemostasis achieved

Dressing done with Betadine.

Fig 1 - Preoperative Image.



Fig 2 - Dissection



Fig 3 - Intra Operative Images



Fig 4- First Dressing after surgery



Fig 5 - After removal of all sutures



The Specimen was sent for Histopathological Examination

Result :

- 1) Moderately differentiated squamous cell carcinoma of the right lower lip.
 - The tumor involves the mucosal surface of lower lip and contiguously spreads into the skin of lip.
 - Tumor size : 3x2.4x2 cm (Maximum Depth of invasion - 0.3cm)
 - Worst pattern of invasion (WPOI) : Pattern 4
 - Moderate tumor infiltrating lymphocytes.
 - Lymphovascular emboli are not seen.
 - Perineural invasion is not seen.
 - All mucosal, muco-cutaneous, skin cut margins and base are free of tumor.
- 2) Level I lymph nodes with submandibular gland -
 - All 9 lymph nodes are free of tumor (0/9)
 - Salivary gland is free of tumor.
- 3) Jugulo-digastric lymph node -
 - Three lymph nodes, free of tumor. (0/3)

On POD - 5 Dressing of Operative site done.

On POD - 12 All skin sutures removed.

On POD- 15 Ryle's tube removed and feeding given orally

After patient was discharged from hospital advised oncologist opinion for further oncological management

Oncologist suggested radiation therapy .

Outcome and Follow up-

The patient experienced no complications during the early postoperative period. Six days after surgery the patient recovered and discharged. The patient was able to carry out daily activities without any post operative complications.

Discussion-

Carcinoma of the lip, predominantly squamous cell carcinoma, is a common malignancy of the oral cavity with a relatively favorable prognosis when detected early. Surgical excision with adequate margins is the treatment of choice, as it provides effective local control and allows accurate histopathological assessment. In the present case, wide local excision was performed to ensure complete tumour clearance while minimizing the risk of local recurrence.

Reconstruction of the resultant lip defect is crucial for maintaining oral competence, articulation, mastication, and acceptable facial aesthetics. The use of an appropriate local flap allowed satisfactory restoration of lip contour and function with good flap viability and minimal morbidity. Early reconstruction also contributed to faster rehabilitation and improved quality of life.

Cervical lymph node metastasis significantly influences prognosis in lip carcinoma. Therefore, neck dissection was undertaken to manage suspected regional nodal disease and to achieve accurate pathological staging. Histopathological examination confirmed clear surgical margins and provided valuable information regarding nodal status, guiding further adjuvant treatment decisions. This case highlights that a combined approach of wide local excision, flap reconstruction, and neck dissection offers optimal oncological safety with good functional and cosmetic outcomes in lip malignancies.

Conclusion-

Wide local excision with adequate margins remains the cornerstone of treatment for lip carcinoma to achieve effective oncological control. Reconstruction using an appropriate flap is essential to restore lip function, oral competence, and facial aesthetics. Neck dissection plays a vital role in managing regional lymph node involvement and in accurate pathological staging. A combined surgical approach ensures good disease control with satisfactory functional and cosmetic outcomes. Early diagnosis and comprehensive management significantly improve prognosis and quality of life in patients with lip malignancy.

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