



Assessment of post operative quality of life in patient with Mandibular Resection followed by Free fibular flap Reconstruction in Oral Cancer.

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ABSTRACT

Squamous cell carcinoma of the oral cavity is a common type of cancer, especially among male patients, due to heavy use of tobacco, smoking and drinking habits.

Unfortunately, these tumors are often diagnosed in advanced stages (III and IV), demanding multimodality treatment which includes extensive resection and radiation or chemo radiation treatments and poor quality of life. Aim of our study is to estimate the post operative health related quality of life in patient with mandibular resection followed by free fibular flap Reconstruction in oral cancer.

KEYWORDS :

INTRODUCTION

- Squamous cell carcinoma of the oral cavity is a common type of cancer, especially among male patients, due to heavy use of tobacco, smoking and drinking habits.¹
- Unfortunately, these tumors are often diagnosed in advanced stages (III and IV), demanding multimodality treatment which includes extensive resection and radiation or chemo radiation treatments.²
- Free fibular flap as a source of vascularised bone has gained wide-spread use since its first description by Taylor in 1975.¹
- Compared to other free flaps, the free fibula flap offers the greatest bone length, a single vascular pedicle of sufficient length with large diameter vessels and rich periosteal blood supply.²
- This allows multiple osteotomies to bridge large mandibular defects across the midline, the option for a skin paddle of intermediate thickness and the opportunity to operate simultaneously at the donor

AIM

- To estimate the post operative health related quality of life in patient with mandibular resection followed by free fibular flap Reconstruction in oral cancer.

OBJECTIVES

- Oncological effectiveness of neck dissection and reconstruction with Free fibular flap
- Morbidity after mandibular resection followed by Free fibular flap Reconstruction
- Functional, Physical and Social quality of life
- mplications of quality of life.

METHODOLOGY

- A questionnaire survey was performed by Gujarat cancer research institute Ahmedabad and Department of Head and Neck oncology unit.
- The patients who were treated for oral cancer with segmental mandibular resection followed by reconstruction with vascularised Free Fibular Flaps were included in the study.
- All patients underwent post-operative radiation as per the MDTs decision.
- The Patients with recurrence were excluded in this study
- Patients' Quality Of Life was measured 3 months after surgery.

Following a free interval of 3 to 5 weeks after the end of irradiation, the tumour resection and neck dissection.

(ND) according to staging (N), was performed. In case of N0 staging (verified by CTscans and sonography) an ipsilateral selective neck dissection (sND) of the levels 1–3 was carried out, that

procedure was done bilaterally in case of midline transgression.

Where lymph node metastasis was proven, a modified radical (mrND) including levels 1–5 was performed.

The tumour was extirpated with a safety margin of at least 1 cm en bloc with the neck dissectate. In the case of bone-tumour adhesion or suspected periosteal infiltration a segmental resection of the mandible was performed, whereas all others had marginal resection or only soft tissue resection if the distance of the tumour to the bone was 1 cm or larger.

All patients included in this study received microsurgically revascularized free flaps.

Questionnaire

The University of Washington Quality of Life (UW-QOL) questionnaire was used in this study.

The questionnaire is composed 12 disease-specific questions. (Pain, Appearance, Activity, Recreation, Swallowing, Chewing, Speech, Shoulder, Taste, Saliva, Mood, And Anxiety).

Each of the 12 included questions has 3-6 response options.

The domains are scored on a scale ranging from 0 (worst) to 100 (best).

We scored the individual domains according to the University of Washington Quality of Life guidelines.

Pain.

1. I have no pain. (100)
2. There is mild pain not needing medication. (75)
3. I have moderate pain - requires regular medication. (50)
4. I have severe pain controlled only by narcotics. (25)
5. I have severe pain, not controlled by medication. (00)

Appearance.

1. There is no change in my appearance. (100)
2. The change in my appearance is minor. (75)
3. My appearance bothers me but I remain active. (50)
4. I feel significantly disfigured and limit my activities due to my appearance. (25)
5. I cannot be with people due to my appearance. (00)

Swallowing.

1. I can swallow as well as ever. (100)
2. I cannot swallow certain solid foods. (70)
3. I can only swallow liquid food. (30)
4. I cannot swallow. (00)

Chewing.

1. I can chew as well as ever. (100)
2. I can eat soft solids but cannot chew some foods.(50)
3. I cannot even chew soft solids.(00)

Speech.

1. My speech is the same as always. (100)
2. I have difficulty saying some words but I can be understood over the phone. (70)
3. Only my family and friends can understand me.(30)
4. I cannot be understood.(00)

Taste.

1. I can taste food normally. (100)
2. I can taste most foods normally.(70)
3. I can taste some foods. (30)
4. I cannot taste any foods. (00)

Saliva.

1. My saliva is of normal consistency. (100)
2. I have less saliva than normal, but it is enough.(70)
3. I have too little saliva. (30)
4. I have no saliva.(00)

Anxiety.

1. I am not anxious about my cancer. (100)
2. I am a little anxious about my cancer. (70)
3. I am anxious about my cancer. (30)
4. I am very anxious about my cancer.(00)



F7: followup

RESULTS

Mean Age	39 yrs
Gender Distribution	28 Males
	13 Females

- The alveolus(N=15, 38.23%) and buccal mucosa (N=14, 35%) were the most common sites. Followed by tongue (N=9, 22%) and floor of mouth (N=3, 7.31%)
- In terms of location of mandibular resection, 32.35% were located in the anterior, 23.53% in posterior, and 44.12% combined.
- 14 patients of 41(34.14%) were classified as T1–T2, while 27 (65.85%) were classified as T3–T4.

Domain Names	Mean %
Pain	82.31
Appearance	79.87
Activity	85.36
Recreation	93.90
Swallowing	59.02
Chewing	47.56
Speech	75.51
Shoulder	88.29
Taste	5.85
Saliva	55.36
Mood	74.39
Anxiety	84.39

DISCUSSION

- The increased survival rates of cancer patients following multimodal therapy are meaningless, if an
- at least moderate quality of life can not be sustained.1
- Functional, aesthetic, emotional and social factors determine quality of life.5
- Health Related quality of life should be considered as part of the overall process of care for oral cancer patients.7
- Oral cancer has a profound impact on the quality of life for patients and their families.3
- Mandibular bone defects can cause facial asymmetry and tooth loss compromises chewing.7
- The mandible plays a major role in airway protection and support of the tongue, lower dentition, and the muscles of the floor of the mouth permitting mastication, articulation, deglutition, and respiration.8
- The free fibula flap as a source of vascularised bone in reconstructive surgery is in wide use.1
- The fibula has been demonstrated to be an ideal flap for mandibular reconstruction. This is particularly true when a limited number of fibular osteotomies is needed to provide appropriate bone shape.4
- Wenli Yang et al⁸, Studied the 34 patients with mandibular resection followed by FFF reconstruction. (12 months)
- The worst score of the domains was chewing and saliva while in our study worst score of domains was Taste, chewing, saliva and Swallowing.
- Raghuram P. Boyapati et al⁵ (6 months)
- Studied 38 patients
- The worst score of the domains was chewing while in our study worst score of domains was Taste, chewing and Swallowing.

CONCLUSION

- Head and Neck surgeons must consider of all the options available for reconstruction of surgical defects for good quality of life and functions.
- In our survey the quality of life and functions are satisfactory with Free Fibular Flap reconstructive methods and should be considered as part of their treatment.

REFERENCES

1. Chandu A, Smith AC, Rogers SN. Health-related quality of life in oral cancer: a review. *J Oral Maxillofac Surg.* 2006;64:495-502.
2. Girish RS, Aditya TN, Gopinath KS, Anand K. Free fibula flap in the reconstruction of mandible: a report of six cases. *J Maxillofac Oral Surg.* 2009;8:275-8.
3. Hidalgo DA, Disa JJ, Cordeiro PG, Hu QY. A review of 716 consecutive free flaps for oncologic surgical defects: Refinement in donor-site selection and technique. *Plast Reconstr Surg.* 1998;102:722-32.
4. Hidalgo DA. Fibula free flap mandibular reconstruction. *Clin Plast Surg.* 1994;21:25-35.
5. Raghuram P. Boyapati. Quality of life outcome measures using UW-QOL questionnaire v4 in early oral cancer/squamous cell cancer resections of the tongue and floor of mouth with reconstruction solely using local methods; *British Journal of Oral and Maxillofacial Surgery* 51 (2013) 502–507
6. Rogers SN, Laher SH, Overend L, Lowe D. Importance-rating using the University of Washington Quality of Life questionnaire in patients treated by primary surgery for oral and oro-pharyngeal cancer. *J Craniomaxillofac Surg.* 2002;30:125-32
7. Taylor GI, Miller GD, Ham FJ. The free vascularized bone graft. A clinical extension of microvascular techniques. *Plast Reconstr Surg.* 1975;55:533-44.
8. Wenli Yang. Health-related quality of life after mandibular resection for oral cancer: Reconstruction with free fibula flap; *Med Oral Patol Oral Cir Bucal.* 2014 Jul 1;19 (4):e414-8.