

# THE CERVICAL MUSCULAR FLAP IN RECONSTRUCTION OF THE ORAL AND CREVICAL DEFECTS

M. RUSU<sup>1</sup>

PhD candidate of "Lucian Blaga" University in Sibiu

**Keywords:** tumours, muscular flap, reconstruction

**Abstract:** Patients with large oral and cervical defects after excision of malignant tumors will present different degrees of functional and esthetic impairment. From the myriad of reconstructive options the sternocleidomastoidian muscle flap becomes an accessible, easy to perform and predictable solution. The major criteria of exclusion from the reconstructive plan are represented by the adherent cervical adenopaties to the muscle. Being a versatile solution it can be used in composite defects utilizing skin, fascia, muscle and even bone.

**Cuvinte cheie:** tumori, lambou muscular, reconstrucție

**Rezumat:** Pacienții cu defecte extinse oro-cervicale în urma exciziei tumorilor maligne vor prezenta diferite grade de afectare funcțională și estetică post-ablație. Din multitudinea de opțiuni de reconstrucție lamboul mușchii sternocleidomastoidian se impune ca o variantă accesibilă, ușor de efectuat și prelevabil din zona adiacentă. Criteriul de excludere major în opțiunea de reconstrucție cu acest mușchi este reprezentat de existența adenopatiilor laterocervicale aderente mușchii. Fiind o soluție versatilă poate fi folosit în defecte compozite utilizând tegument, fascie, mușchii și chiar și os.

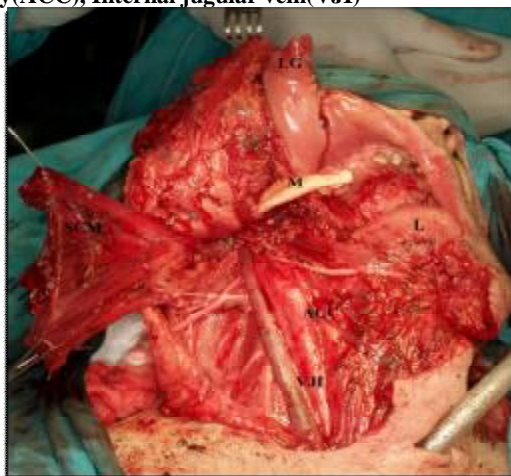
## INTRODUCTION

The sternocleidomastoidian muscle constitutes the lateral from of the neck. In case of neck metastases frequently encountered in the tumoral pathology of the oropharynx when we can approach the case in a conservative manner the muscle is spared thus offered for a reconstruction solution(1).

### Technical aspects

The vascular source is offered by three pedicles, dominants being the middle and the superior ones(3). The sternocleidomastoidian muscle can be imagined in four ways as a flap: muscular flap, musculocutaneous flap, musculoperiosteal flap or osteomuscular flap with clavicle raising either continuous either splitted.

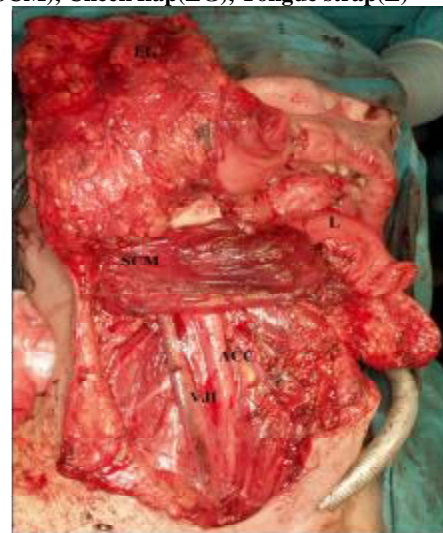
**Figure no. 1. Sternocleidomastoidian flap(SCM), mandibular border (M), Lingual strap(L) Common carotid artery(ACC), Internal jugular vein(VJI)**



First we are going to dissect the sternal and clavicular head going upwards to the level where the arch of ratation is going to permit the insertion of the muscle in the defect. Saving the superior thyroid artery is a must in order to save as much as possible of the muscle vascular inflow(4).

The mucosal edges are going to be sutured by overlapping wide with the muscle. This one is going to heal excelent by means of secondary intraoral epitelisation but also can be covered with a splitted skin graft.

**Figure no. 2. The muscular flap applied in the orpharyngeal defect (SCM), Cheek flap(LG), Tongue strap(L)**



The indications in using this flap are the reconstruction of small or middle sized oral cavity defects, tunneled to the level of floor of the mouth can be applied also in

<sup>1</sup>Corresponding Author: M. Rusu, block of flats 27, app. 8 Bdul V. Milea street, Sibiu, Romania; tel +40-0745 369011  
Article received on 02.02.2011 and accepted for publication on 16.07.2011  
ACTA MEDICA TRANSILVANICA September 2011; 2(3)454-455

## CLINICAL ASPECTS

---

oropharyngeal defects(5). The donor place can be sutured in most of the cases primarily or with local or regional solutions of rotated flaps. The literature studies which compare the inferior or superior flap raising do not show significant survival rates between but the skin island in the majority of the cases suffers necrosis(6).

The most important aspect in raising this flap is local or regional reconstructive solution also in the case of patients previously irradiated.

### BIBLIOGRAPHY

1. Ross UH, Klenzner T. The myocutaneous sternocleidomastoid flap for reconstruction of the mouth cavity and pharynx. *Laryngorhinootologie*. 1998 Mar;77(3):168-71
2. Kierner AC, Zelenka I, Gstoettner W. The sternocleidomastoid flap--its indications and limitations. *Laryngoscope*. 2001 Dec;111(12):2201-4
3. Taylor GI, Palmer JH: The vascular territories (angiosomes) of the body: experimental study and clinical applications. *Br J Plast Surg* 1987;40:113.
4. Schuller D: Cervical skin flaps in head and neck reconstruction. *Am J Otolaryngol* 1981;2:62.
5. Ariyan S: The sternocleidomastoid myocutaneous flap. *Laryngoscope* 1980;90:676
6. Larson DL, Goepfert H: Limitations of the sternocleidomastoid musculocutaneous flap in head and neck cancer reconstruction. *Plast Reconstr Surg* 1982;70:328.
7. Gray's Anatomy. Elsevier. New-York, Paris 1978