



The radial forearm free flap versus the nasolabial flap in adults having reconstructive surgery for oral cancer: A comparison of quality of life outcomes

Abstract

Background: Surgical resection is the preferred treatment for tongue cancer. The Radial Forearm Free Flap (RFFF) has classically been used in oral reconstructions, however, there has been research into an alternative option in the form of the Nasolabial Flap (NLF). Surgical research is becoming more and more focussed on Quality of Life (QOL) outcomes as a way to measure a successful recovery. As a result, this review has focused on QOL as well as functional outcomes.

Objective: The aim of this review is to determine if there are better QOL outcomes between patients undergoing tongue reconstruction with the NLF or the RFFF. The quality and limitations of the included papers will be discussed.

Methods: Four databases were searched using set search terms and inclusion/exclusion criteria. These searches yielded fourteen final papers which were assessed using a CASP checklist and a bias tool for quality.

Results: A variety of outcome measures were featured; despite this, all the papers found good functional and QOL results at follow-up. There were problems with bias throughout all the papers and several reoccurring limitations such as small sample size and the retrospective nature of all but one study.

Conclusion: Due to the significant amount of bias found, the overall low quality of literature available, and discrepancies between outcome measures, further research is needed in the form of a long-term prospective study with a larger cohort that includes objective outcome measures.

Keywords: Tongue, reconstruction, hemiglossectomy, glossectomy, surgical flap, pedicled, speech, swallowing.

Introduction

Oral cancer is one of the few life-threatening oral cavity diseases still affecting the Western world [1]. The epidemiology and survival rates of oral malignancy vary depending on the specific region; however, tongue carcinoma, the most common of oral cancers representing 40% of all occurrences [2], in particular, is increasing in incidence. Primary surgical resection followed by possible adjuvant therapy is the standard treatment for oral cancer [3]. In the case of tongue cancer, this could involve full or partial removal of the tongue, a glossectomy, or hemiglossectomy [4]. In order to improve any functional impairment that the patient may be left with, reconstructive surgery can be performed. The reconstruction can be done by primary closure or secondary intention if the defect is small enough, but this will not restore any of the lost bulk. Therefore, the usual

reconstructive technique after resection is with a surgical flap [5].

The two main styles of the flap are free and pedicled. A free flap is one that is taken from a spot on the body and moved to another with its blood supply, whereas a pedicle flap is one where the tissue is left partly attached to the donor site and the rest is oriented into the recipient site, leaving its blood supply intact [5].

For the purposes of this review, the two flaps under consideration are the Nasolabial Flap (NLF) and the Radial Forearm Free Flap (RFFF). This is not only a comparison between locations of the body but also between flap techniques. The RFFF is the most commonly used flap for tongue reconstructions [6]. The RFFF can be used as a pedicled flap, however, this review will be focussing on the free flap technique (**FIGURE 1**).

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