

## Original Research Article

# Evaluation of quality of life profile of patients submitted to bichectomy

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### Palavras-chave:

quality of life; adipose tissue; oral surgery.

### Abstract

**Introduction:** The bichectomy has been increasingly sought in dental practice, whether due to functional or aesthetic complaints. It is considered an aesthetic and functional surgery, for improving both facial harmony and chewing. **Objective:** This study aimed to establish a quality of life profile of patients submitted to bichectomy surgery in a private service in Curitiba, PR, Brazil. **Material and methods:** The OHIP-14 was applied in a single moment in patients who underwent bichectomy in the last 6 to 18 months. **Results:** Thirty-six individuals of both sexes were evaluated, being 1 man and 35 women, with the median age of 31 (19-53) years. The median OHIP-14 scores were 0.00 (0-24) points. There was no association between OHIP-14 with age, postoperative complications, postoperative time or tobacco smoking ( $p > 0.05$ ). **Conclusion:** The individuals were satisfied after performing the surgical procedure, presenting very low scores when compared to the literature.

## Introduction

The bichectomy is being increasingly sought in dental practice, either functional or aesthetic complaints. This procedure can bring benefits, such as thinning of the cheeks and consequent reduction of lesions in the buccal mucosa by biting, improvement of facial appearance, and improvement of self-esteem and patient confidence [20]. Among all the factors evaluated for the surgical procedure, the asymmetries, facial proportions, face types and hypertrophy of the masseter muscle should be taken into account so that facial disharmony caused by the procedure does not occur [12].

When performed correctly, intervention is a viable option with low morbidity for patients seeking an improvement in facial symmetry and masticatory functionality [1]. However, the risks and complications include paraesthesia, facial paralysis, local hemorrhage, infection and traumas in the parotid duct [12].

The Oral Health Impact Profile (OHIP) is currently the most widely used instrument for studies involving oral health assessment and quality of life, in which the individual's perception of oral disorders associated with quality of life is captured [10]. This indicator covers the physical, psychological and social dimensions of daily life and has been validated and considered reliable, including linguistic and cross-cultural adaptations for different countries [7, 14, 17].

Due to the lack of studies related to this procedure, it is not yet known what the real postoperative impact in the life of patients who are undergo bichectomy. In this way, this study sought to outline a quality of life profile of patients undergoing bichectomy surgery in a private service in Curitiba, PR, Brazil, so that it can serve as a basis for future studies in the scientific community.

## Material and methods

After approval by the Ethics Committee, under CAE number 89540418.7.0000.0093, individuals of both sexes were invited to participate in this study, aged 18 years or more and who underwent bichectomy procedure in the time interval of 6 to 18 months.

Data such as gender, age, reason for searching for the procedure, presence of postoperative complications and use of tobacco cigarettes were collected.

## OHIP-14 assessment

The OHIP-14 evaluation instrument, validated for portuguese language, was applied in a single moment. The patients were instructed to answer the questionnaire always regarding the surgical procedure performed and the current moment. The possible answers were: never, rarely, sometimes, often or always. The values of the responses correspond, respectively, to a scale ranging from 0 to 4. Thus, the sum of the values can range from 0 to 56, with higher scores indicating greater negative impact, while the lowest values indicate a positive impact.

## Statistical analysis

The data were cataloged in a spreadsheet in Microsoft Word Excel® for tabulation. Descriptive and statistical analyzes were performed with the IBM SPSS v.24.0® (Statistical Package for Social Science) software. To evaluate the normality of the dependent variable, the Shapiro-Wilk test was performed. To evaluate the association of OHIP-14 with independent variables (age, smoking and postoperative complications), the Mann-Whitney test was performed for independent samples ( $\alpha = 0.05$ , 95% confidence interval,  $p < 0.05$ ).

## Results

This study was characterized by being observational and transversal, in which a total of 36 individuals of both sexes were evaluated, being 1 man and 35 women, with the median age of 31 (19-53) years. The median OHIP-14 scores were 0.00 (0-24) points.

The independent variable age was categorized according to the median: patients up to 31 years ( $n = 18$ ) and patients over 31 years ( $n = 18$ ). There was no association between OHIP-14 and age in patients submitted to bichectomy ( $p > 0.05$ ).

Sixteen individuals considered having some type of surgical complication and 20 considered themselves to have no complications. There was no correlation between the OHIP-14 score and the presence of postoperative complications ( $p > 0.05$ ).

Regarding the time of surgery, patients who underwent surgery less than one year did not present differences in the impact of quality of life when compared to individuals with more than one year of postoperative ( $p > 0.05$ ).

Patients smokers did not present differences when compared to non-smokers in the impact of quality of life and presence of complications ( $p > 0.05$ ).

Age and OHIP-14 numerical variables were evaluated from Spearman's correlation, and no positive result was found for this association ( $p < 0.05$ ).

**Table I** - Statistical analysis of the variables compared with the OHIP-14 score

VARIABLE		OHIP-14 Median (Min.- Max.)	P Value
Age n (%)	≤31 18 (50%)	0 (0 - 24)	0.44
	>31 18 (50%)	0 (0 - 6)	
Tobacco n (%)	Yes 31 (86.11%)	0 (0 - 24)	0.54
	No 5 (13.88%)	2 (0 - 5)	
Complications n (%)	Yes 16 (44,44%)	1,5 (0 - 24)	0.17
	No 20 (55,56%)	0 (0 - 6)	
Postoperative follow-up n (%)	≤12 months 8 (22,22%)	12 (0 - 6)	0.83
	>12 months 28 (77,78%)	18 (0 - 24)	

Mann-Whitney test considering  $P < 0.05$ .

## Discussion

Although this surgical procedure is mostly sought for aesthetic purposes, the process of great positive impact on quality of life has positive repercussions, once the function improving cheek bite injury and should be considered a functional surgical procedure.

Regarding the gender aspects, there was a prevalence of female gender with respect to demand and realization of bichectomy surgery procedure. This is often found in studies that evaluated quality of life and oral health [6, 7, 11, 13, 14, 18, 21]. The literature considers that women are more connected to the self-care and look for health services and

cosmetic procedures more when compared to males [3, 16].

It can be observed from the results obtained that the deleterious habits such as tobacco smoking did not influence the presence of postoperative complications or unsatisfactory results in relation to quality of life, contradicting research findings that corroborate that the worst OHIP-14 results are associated with smoking [15].

It was interesting to find such low scores not yet seen in the literature [2, 5] and this fact makes us think of some hypothetical situations to justify the finding. We know that the variation of the OHIP-14 score may be related to socio-demographic conditions of the study population [4]. However, patients who search for this procedure in general, have an economic and cultural level not so low despite the service being a university that serves the entire community, precisely because it has a largely aesthetic nature of demand. Thus, patients who present other complaints or dental conditions to be treated (periodontal or prosthetics problems, orofacial pains), are always referred to other specialties before being able to proceed with bichectomy as a complementary procedure.

Overall, all patients experienced a large positive impact on quality of life after the procedure. Although it is not possible to make a comparison with a moment before the procedure, it is possible to affirm that there is a high degree of satisfaction and adherence to the treatment. However, as there is a scarcity of research in the literature on bichectomy, there is no way to compare results with other studies, nor to conduct a systematic review. In this way, we were able to compare our results to other studies involving the same instrument to measure quality of life.

Corso and collaborators in 2015, showed an average score of 08 points in a postoperative of 6 months of orthognathic surgery. The authors also observed that the same questionnaire applied at a time corresponding to the peak of edema (1-3 months postoperative) can represent a great negative impact on the life of individuals, and this score changed to a large positive increase in 6 months of follow-up when compared to that before the procedure [2]. This negative change may be related to a greater difficulty of function with presence of trismus and edema.

Most of the participants in our study considered edema and trismus as a postoperative complication. However, there is a controversy whether these factors really are complications or whether they are a normal repair process consistent with the surgical procedure. To better understand this

situation, a new questionnaire should be applied in the period from 15 to 30 days postoperatively, in which we clinically observe the peak period of edema and discomfort of bichectomy.

The major limitation found in this study was the lack of previous parameters for comparison (longitudinal studies), associated with a small number of participants. However, further studies should be performed to give greater reliability to the results and understanding the improvement of the quality of life.

Although it is well established that this is a pilot study, in order to compare the real impact of bichectomy on quality of life of the individuals, there is a need for long-term follow-up of patients undergoing this surgical procedure.

## Conclusion

Although it is not possible to evaluate the bichectomy impact on quality of life in the studied group, the individuals were satisfied after performing the surgical procedure, presenting very low scores when compared to the literature. Now, new studies could be performed and compared with the quality of life profile of patients who underwent bichectomy.

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