



# Numbness of the lower lip does not adversely affect quality of life or patients' satisfaction after mandibular orthognathic surgery

Z. Ahmad\*, J. Breeze, R. Williams

Department of Oral and Maxillofacial Surgery, Queen Elizabeth Hospital Birmingham, Mindelsohn Way, Edgbaston, Birmingham, B15 2GW

Accepted 6 April 2018

## Abstract

Measures of patient-reported quality of life (QoL) are increasingly being used to tailor services that are funded by Clinical Commissioning Groups (CCG) in England. Mandibular osteotomies may result in altered sensation of the lower lip, but we know of limited evidence about the resulting effect on QoL. The modified Bristol orthognathic patient outcomes questionnaire was given to patients who had mandibular osteotomies at the Queen Elizabeth Hospital, Birmingham, between March 2006 and April 2016. Questionnaires were collected at the final orthognathic postoperative appointment. The significance of the difference in QoL between those who had altered sensation of the lower lip and those who did not was compared using a two-tailed *t* test. During this period 170 patients had mandibular orthognathic operations. Completed questionnaires were received from 117 of those patients (69%) during this period, after a follow up of about six months. We found no significant difference between the perceived benefits of treatment between the 41 who had altered sensation and the 74 who did not ( $p=0.30$ ). Only 5/41 who reported residual numbness six months postoperatively stated that they would not choose to have the same treatment again. In conclusion, orthognathic surgery results in an appreciable improvement in QoL and should continue to be funded by CCG in England. Contrary to the perception of some clinicians, those patients with residual numbness of the lip did not have significantly poorer QoL. Future interpretation of the data will be improved if they are collected both before and after the operation.

Crown Copyright © 2018 Published by Elsevier Ltd on behalf of The British Association of Oral and Maxillofacial Surgeons. All rights reserved.

**Keywords:** Orthognathic; Surgery; Lip; Numbness; Commissioning

## Introduction

Patient-reported outcomes are an integral component of the evaluation of the success of elective operations such as orthognathic surgery.<sup>1</sup> These are complementary to more traditional, surgeon-reported outcome measures, including

clinical assessment, cephalometric comparisons with predicted measurements, and operative complications.

Quality of life (QoL) is one type of patient-reported outcome measure. Such an assessment covers not only the aesthetic component of dentofacial deformity, but also restoration of the patient's psychosocial component. It is easy to assume that the two go hand in hand, but the motivations, perceptions, and expectations of the individual patients play an important part in governing not only the surgical success, but also the psychosocial success of the operation.<sup>2</sup> QoL is highly subjective and difficult to predict among individual patients, which reflects the complex interactions between

\* Corresponding author.

E-mail addresses: [zahraa.ahmad@nhs.net](mailto:zahraa.ahmad@nhs.net) (Z. Ahmad), [john.breeze@nhs.net](mailto:john.breeze@nhs.net) (J. Breeze), [Rhodri.williams@uhb.nhs.uk](mailto:Rhodri.williams@uhb.nhs.uk) (R. Williams).

<https://doi.org/10.1016/j.bjoms.2018.04.003>

0266-4356/Crown Copyright © 2018 Published by Elsevier Ltd on behalf of The British Association of Oral and Maxillofacial Surgeons. All rights reserved.

psychosocial wellbeing, perceived function, aesthetics, and social interaction.<sup>3</sup> However, a systematic review in 2013 showed that orthognathic surgery may have beneficial effects on QoL.<sup>2</sup>

In the United Kingdom, funding of orthognathic surgery within the National Health Service (NHS) has recently evolved as a result of commissioning of services through Clinical Commissioning Groups (CCG), most of the members of which will have little or no knowledge of orthognathic surgery, and this reflects its specialist nature. It is therefore incumbent upon secondary care clinicians to highlight its potential benefits on QoL.

The inferior alveolar nerve is particularly susceptible to injury during mandibular orthognathic surgery, and this is more prevalent during bilateral sagittal split osteotomy (BSSO), which is the most common operation used worldwide. Damage to the nerve may result in alterations to the sensation of the skin that overlies the lower lip or chin, and these sensory disturbances have the potential to affect patients' everyday lives because of the effects on speech, eating, drinking, self-esteem, and social interaction. Patients may also complain about disruption of normal oral function, which can be reflected by difficulty in putting on lipstick, shaving, or kissing. Despite this, we know of limited published evidence about the resulting effects on QoL.<sup>4</sup>

The modified Bristol orthognathic patient outcomes questionnaire is a patient-reported outcome measure that was originally developed and validated in a qualitative study using patients' focus groups.<sup>5</sup> The questionnaire is divided into six sections: reasons for requesting treatment; information given about treatment; experience of orthodontic treatment; experience at the time of operation both in hospital and at home; benefits of treatment; and long-term side-effects. Outcomes include function, alterations in sensation, and aesthetics.

The aim of this study was to assess the impact of orthognathic surgery on QoL prospectively, by focusing on the relation with any potential alteration in the sensation of the lower lip.

## Patients and Methods

The modified Bristol orthognathic patient outcomes questionnaire was given to all patients who had orthognathic surgery from March 2006 to April 2016. Questionnaires were provided in paper format immediately after the patient's final orthognathic postoperative follow up appointment. Only patients who had a BSSO or BSSO with maxillary orthognathic surgery were included in the analysis. Patients who had a BSSO combined with genioplasty were excluded. This study included only the sections of the questionnaire that specifically pertained to QoL (reasons for wanting treatment, benefits of having treatment, residual numbness of the lower lip, and whether they would have the same treatment again). The significance of differences was compared between those

Table 1

Patients' reasons for having orthodontic/surgical treatment (n = 115).

Reason	No. (%)
Improve my self confidence	84 (73)
Improve my looks	84 (73)
Improve my smile	96 (83)
Improve my social life	38 (33)
Straighten my teeth	104 (90)
Prevent further dental problems	86 (75)
Improve my ability to eat	57 (50)
Improve my speech	33 (29)

Table 2

Residual problems reported by patients (n = 54).

Residual problem	No.
Difficulty eating	9
Numbness	41
Dental problem	4

who reported altered sensation in the lower lip and those who did not, with the help of a two-tailed *t* test.

## Results

During this period, 172 patients had orthognathic surgery that involved the mandible, and 117 completed the survey, giving a 68% response rate. Forty-five patients had BSSO alone, and 70 had BSSO and maxillary orthognathic surgery. Two patients who had genioplasty alone were excluded from the analysis.

There were 84 women (73%) and 31 men (27%), with a mean (range) age of 20 (18–38) years. The mean postoperative period that the questionnaire covered was six months. Table 1 shows the reported reasons for having orthodontic and surgical treatment, and 54 patients (47%) reported residual problems (Table 2). Forty-one patients who had mandibular osteotomy reported that they had residual numbness of the lower lip, but no patients had numbness of the upper lip from maxillary procedures. Clinician-reported postoperative numbness in the same group was 24. There was no significant difference ( $p = 0.30$ ) in the perceived benefits between those who reported altered sensation to those who did not (Table 3). Only five of the patients who reported residual numbness stated that they would not have the same treatment again.

## Discussion

Orthognathic surgery has the potential both to improve QoL and to provide functional benefits to patients, which justifies the cost of treatment. In terms of QoL, improved smiles, facial appearance, and self confidence all make important contributions to patient's psychosocial wellbeing. This is similar to known psychological benefits, including improved self-

Download English Version:

<https://daneshyari.com/en/article/8696729>

Download Persian Version:

<https://daneshyari.com/article/8696729>

[Daneshyari.com](https://daneshyari.com)