Perception of dentofacial deformities: From psychological well-being to surgery indication

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Patient perceptions of orthognathic surgery treatment, well-being, psychological and psychiatric status: a systematic review

Clinicians who attend to patients with dentofacial deformities often comment on the grief experienced by these patients due to their deformity. A recurring theme in this area is whether or not, and to what extent, we can help those undergoing treatment to have a better quality of life. With the purpose of better understanding this issue, Finnish authors conducted a systematic review of studies on the psychological well-being of orthodontic-surgical patients.[1] They evaluated articles published in English between 2001 and 2009 on the PubMed, PsycInfo and Web of Science databases. The review was performed by two investigators who excluded publications that focused on methodological issues, cleft or syndromic patients, surgically assisted maxillary expansion or intermaxillary block. References to all review papers were searched manually with a view to retrieving new articles to support the study. Thirty-five articles met the selection criteria and were included in the review. The main reasons for seeking treatment were linked to improvements in self-confidence, appearance and oral function. After treatment patients reported improvement in their well-being, although such finding departed from current methods used to assess this issue. Changes in well-being were generally identified by study designs developed to analyze the impact of oral health on quality of life, such as quality of life questionnaires related to orthognathic surgery, and impact on oral health. The major conclusion was that, in general, patients do not experience psychiatric problems related to dentofacial deformity. Certain patient subgroups, however, may experience conditions such as anxiety or depression. One key hurdle in the analysis of these patients stems from the fact that most studies compare the means of patient groups with control subjects and/or population standards. In other words, no stratification or covariate analysis is allowed to influence the outcome of the sampled variables. This is fertile ground for new studies, particularly prospective studies that address daily mood swings and changes in well-being.

Class II and Class III surgical patients are less happy about their facial and dental appearance than control subjects

It is commonly accepted that the main benefits of orthognathic surgery are psychosocial in nature and that most patients who seek treatment do so because of their dissatisfaction with dentofacial aesthetics. A relatively small number of studies have examined the perception of facial attractiveness among orthognathic surgery patients. To fill this gap, an Irish study assessed whether or not the self-perceived dental and facial attractiveness of patients requiring orthognathic surgery differed from that of control subjects.[2]

Satisfaction with facial and dental appearance was assessed through questionnaires, which were completed by 162 patients in need of orthodontic-surgical treatment and 157 control patients.

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Variables were obtained from visual analogue scales, binary and open-ended responses. The data were analyzed by different statistical methods. The orthognathic surgery patients, especially Class II patients, were less happy with their teeth and face than control subjects. Among orthognathic surgery patients, Class III patients and women were in general more likely to have taken a critical look at their face in profile. A higher proportion of Class II, rather than Class III patients, would like to change their appearance and the older the subject—even among control patients—the more dissatisfied they were with their facial appearance.

These data are important for understanding patients' perceptions of their own problem. This is particularly relevant in view of the growing concern to provide treatments that focus on patients' wishes. There is still much ground to be covered by researchers wishing to examine the physical discomfort and psychological suffering of those who undergo orthodontic preparation for surgery.

The perceived need for orthognathic surgery treatment varies according to the anteroposterior position of the mandible

An exciting study was conducted by Brazilian researchers to investigate the possible association between the anteroposterior position of the mandible and the perceived need of orthognathic surgery by orthodontists, maxillofacial surgeons, artists, and laypeople.[3] To this end, four photographs of adults of both genders, two Afro-descendants and two Caucasians, were digitally altered. The changes applied to each photograph produced seven photos: a straight profile, three increasing degrees of mandibular retrusion and three increasing degrees of mandibular protrusion. The 28 photographs were then analyzed by a panel of evaluators, who were asked to decide which side would require orthognathic surgery to make the profile more attractive, and if they themselves would seek surgery if the profile of that given face were their own. The results showed that the greater the discrepancy—regardless of Class II or Class III correction—, the greater the tendency of all evaluators to indicate surgery and manifest themselves more likely to operate if that was their profile. Moreover, the faces of Class III women were more indicated for surgery than those of Class II. Furthermore, Class II men received more indications for surgery than Class III ones. When the evaluators were asked to answer whether or not they would perform surgery if that was their own profile, women's photographs yielded more positive responses than men's. This may reflect a well-known higher prevalence of women among patients seeking orthognathic surgery.

When the evaluator factor was analyzed, laypeople were less likely and maxillofacial surgeons more likely to indicate surgery than other groups. A particularly interesting result is that examiners generally exhibited a significant difference between the indications for facial surgery—whether or not the profiles were theirs. When the profiles belonged hypothetically to evaluators, they were less likely to indicate surgery than if the profiles belonged to some other person. No significant difference was found between the indications for surgery of Afro-descendants and Caucasians.

REFERENCES

1. Alanko OM, Svedström-Oristo AL, Tuomisto MT. Patients' perceptions of orthognathic treatment, well-being, and psychological or psychiatric status: a systematic review. Acta Odontol Scand. 2010 May 31. [Epub ahead of print].
2. Johnston C, Hunt O, Burden D, Stevenson M, Hepper P. Self-perception of dentofacial attractiveness among patients requiring orthognathic surgery. Angle Orthod. 2010 Mar;80(2):361-6.
3. Almeida MD, Bittencourt MAV. Anteroposterior position of mandible and perceived need for orthognathic surgery. J Oral Maxillofac Surg. 2009 Jan;67(1):73-82.

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