Authors Joseph E Van Sickels, George Kushner

7.1 Definitions, diagnosis, and treatment planning

1 Introduction

Orthognathic surgery has both functional and esthetic goals. Functional goals include improved mastication, speech, temporomandibular joint function, and, in patients with sleep apnea, an increase of airway space. With careful planning both the occlusion and the patient's appearance are improved. After the introduction of rigid fixation, the dental and skeletal results achieved are more stable and predictable compared to those seen after wire osteosynthesis. Several studies have shown an improvement in patient's temporomandibular joint function as well.

Orthognathic surgery today is usually conducted by an interdisciplinary team which includes surgeons, orthodontists, and, if needed, other disciplines. Therefore, before making the decision to start the treatment, patients should always meet at least both an orthodontist and a surgeon to receive as much information and as reliable a diagnosis and treatment option as possible. Preoperative orthodontic care takes on average 1.5 years and when the patients are ready for surgery, they meet the surgeon again to get further information. It must be kept in mind that the inclusion of patients in decision making increases their awareness and acceptance of the result. Postsurgical support is also mandatory.

In addition to these functional improvements, orthognathic surgery can have a profound psychological effect on a patient. It has been shown that many dental and facial disfigurements have significant effects on patients and result in social disadvantage for them. Esthetic correction is often a motivation for surgery. Improvement of the occlusion is also important to patients. The majority of the patients seem to have more than one reason for undergoing surgery.

In the initial evaluation of the patient, the patient's motivation for surgery should be assessed. While patient satisfaction following orthognathic surgery is high, with many patients reporting improved self-confidence and social skills after treatment, a few patients report dissatisfaction with their results. Patients with poor self-concept may be prone to postoperative dissatisfaction.

Conceptually, patients presenting for care should be viewed as variations from the average. It is implied that the average individual is able to occlude, breathe, or has some other functional or esthetic difference from the patients presenting for orthognathic care. The goal of treatment should be to address those patient concerns that make this individual vary from the average, given their ethnic and gender differences. Diagnosis then becomes a matter of assessing the magnitude of those differences and how they can best be managed.

Extra care must be taken with patients suspected of exhibiting dysmorphophobic tendencies. If there is any doubt, psychiatric referral should be undertaken. Preoperative consultation and sometimes also therapy can be very valuable in order to avoid unnecessary surgery or, on the other hand, to diminish the risk of postoperative problems. Regarding dysmorphic disorders, it is generally accepted that surgery rarely improves the situation. Questionnaires and interviews for assessing patients have been published but they are time-consuming and difficult to analyze without formal training in this field. When taking an ordinary patient history, it is important to remember that these patients are usually unmarried and unemployed, they avoid social contacts, they may be depressive, they spend a lot of time in front of the mirror, their concerns are very specific, they have visited many clinicians, and they see the surgery as the solution to all their problems.