

Case C 1

Class III Dental/Skeletal Dysplasia

The patient, a 36 year old Caucasian male, was first seen for orthodontic consultation regarding dental pain and inability to eat properly due to poor bite. Dentally, he exhibited a prognathic mandible and constricted maxilla, characterized by a bilateral crossbite, hypertrophied gingival tissue, with poor oral hygiene. He revealed a severe anterior crossbite with the prognathic mandible 12 mm. forward to the retruded maxilla. The occlusal plane was divergent and open in the anterior segment as a result of a strong tongue thrust.

A review of the cephalometric measurements indicated a severely retruded maxilla in relation to the anterior cranial base (SNA 74) with the mandible positioned forward (SNB 86) with a negative ANB difference of 12°. The maxillary first bicuspid and third molars were previously extracted. The mandibular incisors were crowded and deviated to the left. Facially, he exhibited an elongated vertical height with a prominent chin and symphysis.

Answer the following:

1. How would you prioritize treatment objectives?
2. How important is hygiene control in the stability of the finished result?
3. Would you extract the mandibular first bicuspid and third molars to establish a more balanced tooth relationship prior to surgical correction?
4. Present your treatment plan to correct this patient's skeletal and dental dysplasia.

Case C 2

Class II Division I (Angle) Malocclusion with Severe Protrusion

The patient, a 35 year old Caucasian female, was seen for orthodontic consultation because of her protruding teeth. Past medical history elicited chronic pain and tenderness in the right temporal-mandibular area. She had been evaluated by an oral surgeon for myo-functional discomfort. An orthognathic surgical advancement of the mandible was recommended, to correct her malocclusion and eliminate symptoms. However, she was strongly opposed to any surgical procedure.

Dentally she exhibited a somewhat mutilated dentition with unilateral loss of vertical dimension, resulting from earlier extractions. She was edentulous distal to the left mandibular first bicuspid. Pain and tenderness were present in palpation overlying the right masseter muscle. A slight shift of the mandible to the right was observable from centric relation to centric occlusion.

The full mouth x-rays indicate generalized early crestal bone loss with infrabony pockets in the mandibular right first and second molar areas. A review of the cephalometric analysis indicates an apical base measurement (SNA 82) that is ideally positioned relative to the cranial base reference (Steiner). The mandibular apical base measurement (SNB 72) reflects a severely retruded mandible with an apical base discrepancy of 10° , which may have contributed to the marked anterior-posterior skeletal dysplasia. The circumoral muscles of facial expression exhibit severe disharmony, with lip incompetency.

Answer the following:

1. Review possible etiologic factors that may have contributed to the existing malocclusion.
2. Present a coordinated treatment plan using a multidisciplinary approach to correct the patient's chief complaint.
3. Discuss stability and prognoses of the finished result.