A Case of Class III Low Angle Corrected by Multiloop Edgewise Arch Wire Mechanics

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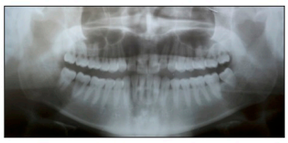
Abstract: Patient presented a concave profile, Skeletal Class III (orthognathic maxilla and prognathic mandible), low angle also known as functional reversed occlusion, insufficient vertical dimension and steepening in the posterior area, Class III Canine and Molar relationships on both sides, proclined upper incisors and retroclined lower incisors, Curve of Spee of 7 mm on the right and 6.5 mm on the left and anterior crossbite of -8mm overjet. The deep overbite reversed occlusion was due to excessive rotation of the mandible related to the insufficiency of the vertical dimension.

The treatment objective for this case were: to improve profile, to achieve Class I Canine and Molar relationships on both sides, to flatten occlusal plane and achieve a good interdigitaion and intercuspation, to inhibit the excessive functional rotation of the mandible and to achieve a good overbite and overjet.

Profile photos

Cephalometric and Panoramic Radiographs

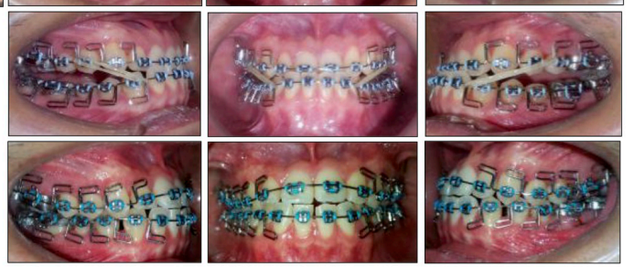


Intraoral photos

Progress photos

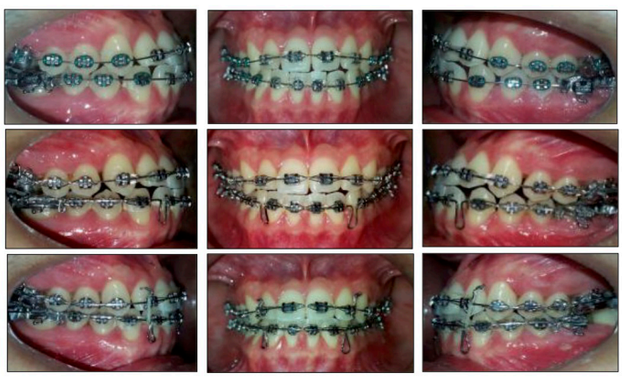
An acrylic bite block was placed to avoid contact of lower teeth to upper brackets.

.016 x .022 ss with multi loops, tip back and class III (3/16) heavy elastics.

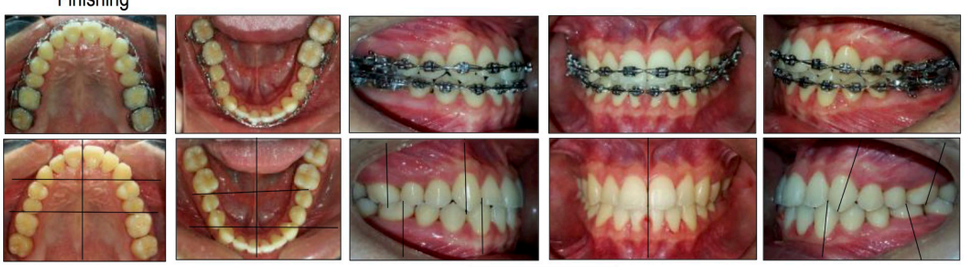


Space consolidation with sliding and loop mechanics;

Interlocking the bite with box Elastics

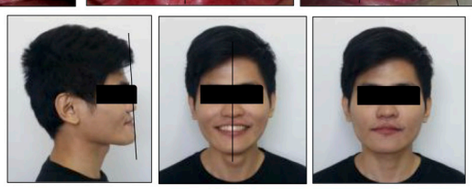


Finishing



Debonding

Profile evaluation: improved smile by correcting anterior crossbite; improved naso-labial angle.



Conclusion: Orthodontic treatment combined with surgery should be considered for patients with a large discrepancy of maxillo-mandibular relationship; however, patient's choice must be respected. The MEAW technique was shown to have an excellent treatment outcome, achieving the proposed treatment objectives and patient's satisfaction, although this technique required excellent professional ability.

Reference: *Contemporary Orthodontics 4th edition by William R. Proffit, DDS, PhD;*
MEAW technique by Sadao Sato, Susumu Akimoto, Atsumi Matsumoto, Akiyoshi Shirasu, Junzo Yoshida