

Clinical case

Maxillary lateral incisor agenesis treated with closing space

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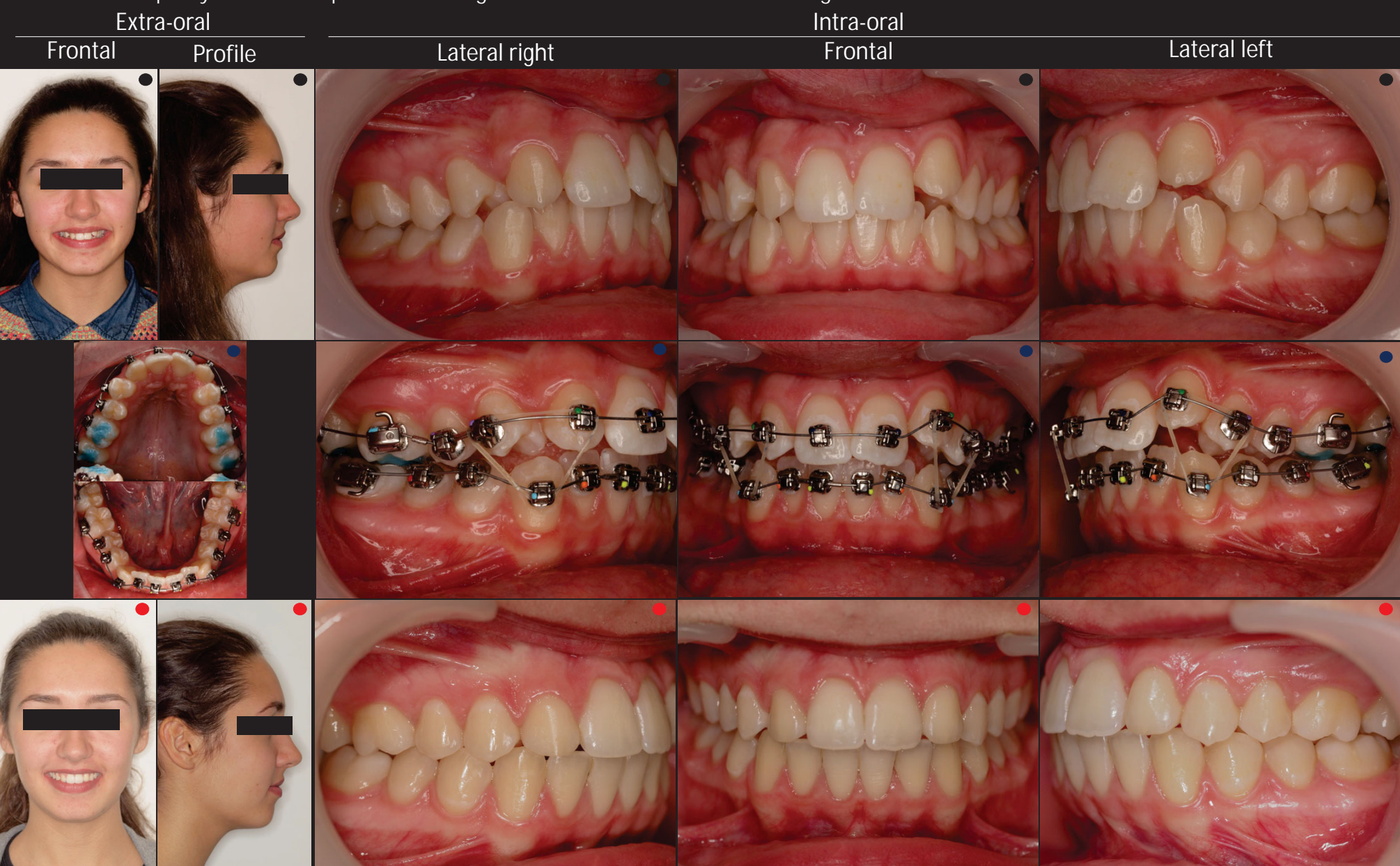
DESCRIPTION OF CASE

A 12 years old patient, female, pretended orthodontic treatment to improving the aesthetics of her smile (January 2013). It was reported family history of maxillary lateral incisor agenesis (MLIA).

Extra-oral examination showed a convex facial profile, balanced facial thirds, nasolabial angle and smile line within the norm. Intraoral examination indicated a bilateral Class II molar and canine relationships; absence of 1.2 and 2.2 teeth; morphological asymmetry of 1.3 and 2.3 teeth, 1.3 with negative torque, 2.3 with positive torque and a higher level position; mild crowding; mandibular line shifted to the right and overbite and overbite within the norm.

In orthodontic diagnosis it was required a panoramic radiography, a teleradiography, intra and extra-oral photographs and study models. The panoramic radiograph confirmed the MLIA and the presence of the four third molars, that have not erupted yet. The cephalometric analysis indicated a skeletal Class I (facial convexity = 0.7mm), an alveolar Class I (AB = distance 4.0mm), a severe brachyfacial pattern (1.0 degree of severity), a hypodivergent pattern (FMA = 21,4°) and the interincisal angle was reduced (120.1°). It was a favorable prognosis.

The treatment approach was bimaxillary orthodontic fixed appliance, Damon Q®, closing space, torque compensations in canines and bicuspid, and canines coronoplasty in order to replace the missing lateral incisors and external bleaching in the end of the treatment.



DISCUSSION

There are several factors with influence on therapeutic decision making, including the patient's age, facial profile, smile line, canine characteristics, number of missing teeth, type of agenesis and malocclusion. According to the literature, young patients⁵ are treated with space closing, although it is important to consider other factors. The hypodivergent pattern usually is an indication for space opening, but the convex profile and the bilateral Class II molar and canine relationships indicated space closing, without affecting negatively the profile; although canines had asymmetric and a higher saturation, they had favorable dimensions for coronoplasty. Canine saturation was solved due to external bleaching. In unilateral agenesis opening space is usually indicated. However, this patient had bilateral agenesis, without other missing teeth, that is more associated with space closing. In opening space treatment the high smile line could be a problem, but in this clinical case the smile line was good and did not constitute a problem. Skeletal Class I malocclusion was not a problem for the selected approach.

CONCLUSION

According to the diferents factors considered, closing space was the best treatment option for this patient, it was a early and definitive resolution for patients with MLIA. And despite the asymmetry of canines, it was achieved a harmonious smile.

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