Abstract

Study


Objectives
To evaluate the lower incisor (Li) changes after completion of comprehensive fixed treatment in subjects with different facial patterns who were treated with a FSIA for Class II correction.

Hypothesis
Once the lower incisor position has been established at the end of a FSIA treatment, they will remain stable in the same position after fixed treatment.

Subjects and methods
A retrospective chart review was undertaken, consisting of 115 subjects with Class II malocclusions, 43 male and 72 female. The average length of treatment was one year and seven months (S.E ± 0.57). The average age of the subjects at T1 was 13.7 years (S.E ± 1.5).

Results
Dental changes induced by fixed treatment included:
1. retroclination of the Li (Li-MP 5.7-9.7°±1.3 p<0.05)
2. retrusion of Li (Li-APo 0.0-1.0mm ±0.3mmp<0.05)

There was no significant difference among the different facial groups (p>0.05). There was an increased trend of less incisor retroclination and retrusion for the dolichocephalic group.

Conclusions
Incisor proclination resulting from the FSIA is reversed after fixed orthodontic treatment, and Li tend to retrocline and retrude. Use of zero or negative torque prescription in the Li bracket and Li uprighting mechanics throughout treatment ensure the Li return to a position between the initial treatment (T0) and the final position established with the FSIA (T2).

Facial growth pattern demonstrate no relation to the amount of Li movement. The dolichocephalic group shows less Li change when compared to the other facial patterns._

Intro
Each year in Canada, second-year orthodontic residents are tasked with summarizing their thesis ideas and then converting them to a poster-style format for the scientific session of the annual Canadian Association of Orthodontics (CAO). This annual rite of passage does more than simply provide each resident with a rewarding technical experience — it also provides all of orthodontics with some valuable research. Here is one of these resident studies.

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Subjects were then categorized into three growth types based on pre-treatment (T0) cephalometric variables (MPA, Y-axis, LFH) with 29 brachycephalic, 53 mesocephalic and 33 dolichocephalic subjects resulting. Data was compiled using digital lateral cephalometric analysis of the post-treatment FSIA subjects’ (T1) and post-treatment comprehensive fixed therapy subjects’ (T2) radiographs.

Statistical evaluation used a mixed model repeated command to calculate marginal means and a post-hoc analysis to determine pairwise differences with the Tukey’s test, reporting least square means.

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