Evaluation of treatment outcome and long-term stability of class II correction by Forsus Fatigue Resistant Device – Case Report

Aim

Among the various treatment methods introduced to treat Class II malocclusion, fixed functional treatment approach is widely used. To date, only few studies evaluated the long term post-treatment effects induced by fixed rigid functional appliances, while no previous study assessed the post-treatment effects of hybrid fixed-functional appliances on post-peak patients. In this case report, two patients were presented to investigate stability and possible relapse following the use of Forsus "fatigue resistant device".

Subject

Two post-peak patients with class II malocclusion were treated in the department of orthodontics – Marmara University with the fixed functional protocol using Forsus, the treatment was performed between 2014 & 2016, and the patients were followed up after two years in 2018.

Method

Lateral cephalometric radiographs were taken at the end of the treatment and at the follow up session. The lateral cephalometric radiographs were traced, superimposed and evaluated by one person at two different times, with a mean being formed from the two measurements, using NemoCeph program.

Results

Case #1	Post-treatment	Post-retention
SNA	85	85
SNB	79	78.5
ANB	6	6.5
Ar (articular angle)	139	141
Go (Gonial angle)	132	128
SN/MP	36	37
ANS-Me/N-Me%	50.3	50.4
Overjet (mm)	4.3	4.9
Overbite (mm)	2.3	2
SN/OP (occlusal plane)	17	19
U1SN	117	117
IMPA	99	99

Results for case #2 illustrate significant differences for the cephalometric variables, which indicates that the class II correction did not last in the long-term and the treatment was not stable.

Case #2	Post-treatment	Post-retention
SNA	77	77
SNB	72	72
ANB	5	5
Ar (articular angle)	141	141
Go (Gonial angle)	133	134
SN/MP	37	38
ANS-Me/N-Me%	54.5	54.5
Overjet (mm)	2.6	2.8
Overbite (mm)	2.3	2.5
SN/OP (occlusal plane)	20	20
U1SN	97	97
IMPA	100	99

Results for case #2 did not reveal any significant differences for the cephalometric variables, which indicates that the class II correction lasts in the long-term and the treatment is stable.

Conclusion

At the end of the post retention period of these two cases it is clear that a major controversy over fixed functional appliances “Forsus” whether the class II correction lasts in the long-term. Furthermore, it is worth highlighting that there is lack of studies dealing with the appliance long-term effects.

For these reasons a study at Marmara University about this subject will be done in order to advance our understanding about the effects of the fixed functional devices and to answer the apprehensions about the stability of this treatment approach.

REFERENCES

Giorgio Cacciatorea; Luis Tomas Huanca Ghislanzonib; Lisa Alvetroc; Veronica Giuntinid; Lorenzo Franchie. Treatment and posttreatment effects induced by the Forsus appliance A controlled clinical study. Angle Orthodontist. 2014; 84-6.