

PP20: THE BIOMECHANICS OF ALIGNER ORTHODONTICS IN CASES WITH INCREASED VERTICAL DIMENSION.

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AIM

The aim of this presentation is to present the unique properties of aligners when used in the treatment of open bite cases.

METHODS AND CASES

A thorough literature review was conducted to evaluate the unique properties that allow aligners to be especially efficient in open bite cases. These properties were explored in the cases that are presented.

Advances in aligner technology have expanded their use in more challenging malocclusions. It was early noted that the lack of extrusive effect of the aligners on the posterior teeth resulted in better efficiency than wire mechanics, when vertical dimension was concerned.^{1,2,3}

Moreover, aligners can demonstrate an intrusive effect as the plastic that covers the teeth acts as a “bite block”, which is particularly helpful in this type of cases.^{4,5} We would like to illustrate those properties by presenting 2 cases treated in a private practice.

CASE 1

INITIAL PHOTOS



FINAL PHOTOS

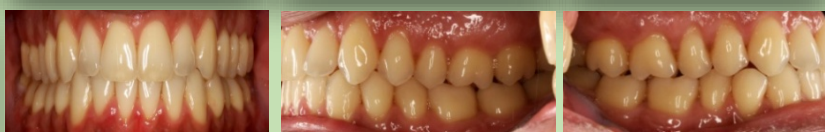


CASE 2

INITIAL PHOTOS



FINAL PHOTOS



RESULTS

Clear aligners apart of being a comfortable and invisible esthetic treatment option possess clinical advantages when vertical dimension is concerned.^{4,6}

CONCLUSIONS

- Patients with vertical dimension problems can be efficiently treated with the use of clear aligners
- Aligners accomplished the correction of open bite, by combining upper and lower incisor extrusion with maxillary and mandibular molar intrusion. This lead to mandibular autorotation that resulted in anterior vertical height reduction.
- Upper and lower incisor retraction was also observed at a satisfactory level.¹

As in every other orthodontic appliance proper diagnosis and mechanics sequence by a specialist along with patient compliance are essential for optimal results.

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