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A CLINICAL OUTCOMES ASSESSMENT COMPARING GROWTH MODIFICATION AND ORTHOGNATHIC SURGERY IN CLASS II DIVISION 1 SUBJECTS

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After more than a century of Functional Appliance use in orthodontics, recent orthodontic literature and Randomized Clinical Trials (RCT's), are challenging the value of this treatment modality. Accordingly, the present study evaluated the clinical outcomes of severe skeletal Class II subjects treated using an initial growth modification protocol with functional appliance therapy.

Subjects and Methods: The treatment group included the retrospective evaluation of eleven skeletal Class II subjects, with severe overjets, treated via growth modification with a "Headgear Activator of van Beek" removable orthopedic appliance, followed by full-fixed orthodontic appliance therapy. The growth modification subjects were contrasted and compared to ten similarly matched post-PHV control subjects where growth modification was not undertaken. These subjects were treated via full fixed orthodontic appliances in combination with orthognathic surgery.

Results: In the growth modification subjects, after both treatment phases, profile and dental improvements were obtained. The surgery control subjects required regular orthodontics in combination with orthognathic surgery to correct their facial disharmonies. The orthopaedic phase [phase 1], varied in duration from 4 to 11 months ($\bar{x} = 6.45 \pm 2.07$). Total treatment time (TTT) for phase 1 and phase 2, varied from 19 to 38 months ($\bar{x} = 25.09 \pm 6.38$ months). TTT for the combined orthodontic/orthognathic surgery subjects, varied from 21 to 37 months ($\bar{x} = 28.6 \pm 5.82$). TTT was compared with the paired t-test and was not significant ($p > 0.05$).

Conclusion: Growth modification, remains a valuable clinical adjunct and alternative for the treatment of severe Class II malocclusions, particularly as an alternative to surgical intervention.