

Facial Profile Changes during a Two-phase Orthodontic Treatment of Skeletal Class II in the Chinese Population

Nga Yi Rhonda Cheung¹, Urban Hagg², Yan Qi Yang¹, Ricky Wong¹

¹Paediatric Dentistry and Orthodontics, The University of Hong Kong, Hong Kong, China, ²Faculty of Health Sciences, Institute of Odontology, University of Copenhagen, Copenhagen, Denmark

Objective: To evaluate the facial profile changes during a twophase orthodontic treatment of skeletal Class II malocclusion.

Materials and methods: Thirty consecutively treated males aged 11–16 who had undergone two-phase treatment with Herbst appliance and fixed appliance was sampled. Cephalograms taken before treatment (T0), end of phase I (T1) and end of phase II (T2) were analyzed for facial profile changes according to Pancherz's method.

Results: During phase I (T0-T1), hard tissue and soft tissue profile angles (nose excluded) increased by 4.1 ± 3.49 degrees ($p < 0.001$) and 2.4 ± 3.90 degrees ($p < 0.01$), respectively; while in phase II (T1-T2), the corresponding figures were 0.4 ± 3.13 degrees ($p > 0.05$) and -1.2 ± 2.60 degrees ($p < 0.05$), respectively.

Conclusion: Facial profile changes during a two-phase orthodontic treatment involve convexity reduction contributed by Herbst treatment and some relapse during fixed appliance treatment. Therefore, overcorrection with Herbst appliance in phase I is necessary.