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

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Objective: To evaluate the facial profile changes during a two-phase 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.