

عنوان مقاله:

Comparison of Ricketts, Pancherz and Centographic Superimposition Methods in Post-Treatment Assessment of the Effects of Twin Block-Appliance Therapy

محل انتشار:

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نویسندگان:

Rency Annie Abraham - Department of Orthodontics, Government Dental College, Calicut, India

Shobha Sundareswaran - Department of Orthodontics, Government Dental College, Calicut, India; Kerala University of Health Sciences, Calicut, India

خلاصه مقاله:

Objectives Aim of this study was to do a comparative post-treatment assessment, using three superimposition methods (Ricketts, Pancherz and Centographic), in patients with Angle's Class II Division ۱ malocclusion and functional retrusion of mandible following twin block appliance therapy. **Methods** In this retrospective cross sectional study, pre and post-treatment lateral cephalometric radiographs of ۳۳ cases were analyzed and compared using Ricketts, Pancherz and Centographic superimposition methods. Changes were evaluated quantitatively for all three methods using a reference grid. The anteroposterior position of upper and lower centroids with respect to the centroid plane was evaluated. **Results** Paired samples t-tests and intraclass correlation coefficient revealed excellent reliability of Ricketts, Pancherz and Centographic superimposition techniques for all parameters. An advancement of $4.14 + 2.24$ and $4.18 + 2.26$ in Pancherz, $4.30 + 2.14$ and $4.38 + 2.18$ in Ricketts and $4.36 + 2.19$ and $4.50 + 2.19$ in Centographic superimposition methods was shown by point B and pogonion respectively. The observed advancement of Point B and restriction of mesial movement of upper first molar (U۶) was statistically significant for Centographic method as compared to Pancherz. Advancement of lower centroid was seen in all cases with ۷۲.۷% in level with centroid plane and ۲۴.۲% within ۱mm of it. **Conclusions** All three superimposition methods (Ricketts, Pancherz and Centographic) proved equally reliable in assessing treatment changes following twin block therapy. Forward movement of lower centroid was observed in ۱۰۰% of the cases indicating true mandibular advancement following twin block appliance therapy in Skeletal Class II Division ۱ malocclusions.

کلمات کلیدی:

Twin Block Appliance, Centographic Analysis, Superimposition

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