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A retrospective evaluation of skeletal, dental and profile changes effected during treatment using the tip-edge and edgewise bracket systems and the entrepreneurial use of this data to treat difficult malocclusions non-surgically

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Abstract

This research retrospectively evaluated the skeletal, dental, profile and occlusal changes that had taken place in the correction of Class II malocclusions treated with extraction of first-premolars using the Edgewise technique, and compared that data with changes that had occurred in a similar extraction sample treated using the Tip Edge technique.

This study demonstrated that the Tip-Edge cases had far greater incisor retraction than did the Edgewise cases. The lower incisors in the Tip-Edge sample were positioned close to normative ideal mean measurements. The incisor angulations in the Edgewise sample remained almost unchanged throughout treatment. The mean mandibular length increased by 7mm in the Tip-Edge sample and this change was highly significant.

The occlusal PAR scores for the two techniques displayed improvements in the occlusion following treatment. The Tip-Edge cases had a 90% improvement, whereas the Edgewise cases had an 80% change.

This study confirms the claims that the Tip Edge technique is efficient and effective and achieves adequate anchorage control without any adjuncts or extra-oral devices. Both techniques displayed major improvements in the occlusion following treatment. The results demonstrate that both techniques produce similar results with greater retraction of the incisors and a significant increase in the mandibular length and significant correction of the apical bases for the Tip-Edge sample. A full correction of the Class II relationship was consistently achieved.

The extrapolation of the research data has enabled the author to correct difficult malocclusions non-surgically.

Biography

Dr Chamda is a specialist orthodontic consultant at the University of the Witwatersrand and has completed his third Master's degree. He has a fellowship in Orthodontics from the Colleges of Medicine of South Africa; he is the vice president/secretary of the College of Dentistry and is the main examiner/convenor for the branch of Orthodontics. He was a Senator in the Colleges of Medicine. He has published several papers and has delivered many papers at conferences. He was invited to be a guest speaker in Egypt and Nigeria. He was awarded a scholarship by the British Dental Association and recently was awarded a research grant by the South African Dental Association .Dr Chamda has been accepted as a member of the Golden Key International Honour Society.