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A comparison of the suitability of a new Preadjusted edgewise and a differential Straight arch fixed appliance system in orthodontic management of bimaxillary dentoalveolar protrusion

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Objectives

Objective of this study is to select a fixed orthodontic appliance from among the contemporary ones that addresses the problems of bimaxillary dentoalveolar protrusion in patients of Indian ethnicity most efficiently.

Method

The patients who reported for treatment of proclined teeth were selected for study. The cases were also considered for fixed orthodontic treatment after extraction of all first premolars. The selected cases were randomly distributed in two treatment groups. Group 1 patients were taken up for treatment with PEA (0.022" MBT) appliance and the second Group 2 patients were taken up for treatment with Tip Edge appliance (TEA). Each group comprised of thirty patients. All the patients were on the treatment and the outcome assessed at the end based on the cephalometric and modal analysis. The pre and post treatment study casts were evaluated using the Peer Assessment Rating Index.

. Results

The results showed that there was no statistically significant difference between the total average number of appointments with the use of PEA and TEA mechanics, a significant difference exists when average time per appointment and total treatment time are taken into account. The differences between the two groups were found to be statistically. The post treatment PAR scores showed no significant difference between the two groups.

Recommendations

In any given clinical situation, any type of appliance can be used, based on appropriate diagnosis and case selection. However when amount of total time and average chairside time with the appliance have been considered, TEA showed prospective result with significant less time requirement.