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ABSTRACT

Introduction: Open bite malocclusion is one of the most difficult dentofacial deformities to treat. Although this type of malocclusion can occur unilaterally or bilaterally in the buccal segments. It is mostly seen in the anterior segment where there is no incisal contact and vertical overlap of the lower incisors by the uppers.

Objectives: The study was aimed to find out the incidence of open bite malocclusion and their pre and post treatment evaluation of the treated cases and also compare the result of two study groups (skeletal open bite and dental open bite).

Methods: A total number of 31 patients with open bite malocclusion out of 1372 patients reported to Department of Orthodontics, Dhaka Dental College and hospital for treatment. Out of them 21 patients were included in this study with mean age 22 ± 5.4, who successfully completed treatment. Of them 14 were included in the dental group and 07 in the skeletal group. Pre treatment history, clinical examination along with pre and post-treatment photographs, study models and x-ray lateral cephalogram were used to compare the treatment outcome between the two study groups.

Results: The incidence of open bite was 2.3%. Out of 21 open bite samples 14 were of dental type and the rest 07 were of skeletal type. 47.6% open bite had Angles Class I malocclusion, 42.9% were Class II and Class III 9.5%. Cephalometric analysis of vertical measurements showed that the mandibular plane angle, palatal plane angle and SNA angle significantly decreased from pre-treatment to post-treatment ($p<0.05$) in both groups. Gonial angle remains unchanged. Cephalometric analysis of the linear and dental measurements showed increased upper face height, posterior face height and inter-incisal angle. Soft tissue evaluation on cephalometry showed significant decrease of esthetic plane and interlabial gap. A statistically significant mean difference was found in case of negative overbites among the patients with dental group ($p<0.001$). Less time was required for completion of treatment in dental group and prognosis was significantly better ($p<0.05$)

Conclusion: The result of the present study indicates that the treatment period and wear time of appliance in dental type was shorter than skeletal type. Both groups showed significant improvement though prognosis was better in dental type of open bite cases.

Key words: Open Bite malocclusion, Skeletal, Dental. (Ban J Orthod and Dentofac Orthop, Oct 2011; Vol-2, No. 1, p 47)

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Tooth size discrepancies among different malocclusions in a Bangladeshi ortho-
dontic population

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ABSTRACT

Objectives: To identify the possible sex differences in anterior, posterior, and overall tooth size ratios and to evaluate whether any differences exist in tooth size ratios and distribution of subjects with clinically significant tooth size discrepancies among Angle Class I, Class II, and Class III malocclusion groups in Bangladeshi Orthodontic population.

Materials and Methods: Each malocclusion group comprised 40 subjects (20 males and 20 females). The mesiodistal width from first molar to first molar were measured on each pretreatment cast to the nearest 0.01mm using digital calipers, and the anterior, posterior and overall ratios were calculated. Students t-test, Wilcoxon nonparametric test, analysis of variance, and x2-test were performed for statistical analysis.

Results: No statistically significant differences in anterior, posterior, or overall ratios were found among the malocclusion groups. No significant sex differences were found in anterior, posterior, or overall ratio in any group, Significant anterior and overall tooth size discrepancies outside 2 SD from the Bolton's means were found in 31% and 11.6% of all malocclusion subjects respectively.

Conclusion: Bolton's values can be used with confidence for the Bangladeshi orthodontic population.

Key words: Anterior ratio, Posterior ratio, Overall ratio, Tooth size discrepancy, Malocclusion, Bangladeshi population. (Ban J Orthod and Dentofac Orthop, Oct 2011; Vol-2, No. 1, p 48)

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