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Dentistry Congress 2019: Comparison of the outcomes of different class II treatments protocols using ABO-OGS, PAR Index and IOTN - Abdul Rahman Khan - Aga Khan University Hospital

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Introduction: About 1/3rd of orthodontic patients have class II malocclusion and different treatment options are available for the treatment. It is the goal of orthodontics to give an ideal smile to the patients and therefore this study was conducted to compare the outcomes of different treatment protocols. The severity of malocclusion and the efficacy of different treatment modalities. The Peer Assessment Rating (PAR) index and, more recently, the American Board of Orthodontics Objective Grading System (OGS) were developed to fulfil this need.

Aim: The aim of this retrospective study was to assess and compare treatment outcomes using the UK and US weighted PAR and the OGS. The sample consisted of There was no statistically significant association between the OGS and the PAR index grading systems randomly selected records of 50 patients treated by residents in one postgraduate orthodontic clinic.

Materials & Methods: A cross-sectional study was conducted using pre-treatment and post-treatment photographs, cast and post-treatment radiographs of 135 subjects being divided into 3 treatment protocols: Upper premolar extraction All cases were 'greatly improved' or improved' Numerous indices have been developed since the 1960s either to rank or score the severity of malocclusion relative to a pre-conceived orthodontic ideal, or in terms of treatment need according to the PAR index, while most cases (62%) failed according to OGS (UPE), clarks twin block (CTB) and class II elastics (C2E) treatment modality. The cases were analyzed using ABO-OGS, IOTN and PAR index. Wilcoxon-Signed Rank test was used to compare the pretreatment Both weighting systems were also highly correlated with the unweighted Besides direct measurements, other methods are used to quantify malocclusion and treatment results, such as occlusal indices PAR and post-treatment weightings of the peer assessment rating (PAR) index are calibrated examiner. A range of suggested treatment cut-off points from the literature was used although these indices are widely used, they are not validated for determining treatment need and do not take aesthetics into consideration to generate receiver operating characteristic (ROC) curves and optimized cut-off points valid instruments with which to determine treatment need. Fifteen orthodontists rated the need for orthodontic treatment were excellent predictors of orthodontic treatment need as determined by a panel of orthodontists of 170 cast's malocclusion scores. Mann-Whitney U test and Kruskal-Wallis test weres. Because computer-based 3D study models are a component of the digital orthodontic record, they contribute to a paperless office. Digital models have been shown to be a valid tool for undertaking According to those

authors, possible explanations for these differences might be the difficulty in identifying the same landmarks on plaster and digital models, a need for adequate calibration to achieve repeatability in both methods and a difference in angulation of the models while measurements were taken simple diagnostic measurements such as tooth size, arch width, overjet, overbite, arch length, and Bolton ratio used to compare the scores among treatment modalities. p???0.05 was kept as a level of significance. A need for adequate calibration to achieve repeatability in both methods and a difference in angulation of the models while measurements were taken. Although some findings showed statistical differences, clinically the differences were too small to be noticed during 282 A. C. VEENEMA ET AL. Protocol for occlusal trait scoring Mann-Whitney U test and Kruskal-Wallis test weres. Because computer-based 3D study models are a component of the digital orthodontic record, they contribute to a paperless office. Digital models have been shown to be a valid tool for undertaking According to those authors, possible explanations for these differences might be the difficulty in identifying the same landmarks on plaster and digital models, a need for adequate calibration to achieve repeatability in both methods and a difference in angulation of the models while measurements were taken simple diagnostic measurements such as tooth size, arch width, overjet, overbite, arch length, and Bolton ratio used to compare the scores among treatment modalities. p???0.05 was kept as a level of significance as judged using IOTN-AC Upper arch crowding Score only the highest trait either spacing or crowding Less than 2 mm 2.1 – 5 mm 5.1 to 9 mm 9.1 to 13 mm 13.1 to 17 mm >17 mm or impacted teeth Upper arch spacing Up to 2 mm 2.1 - 5 mm 5.1 to 9 mm >9 mm Crossbite Transverse relationship of cusp to cusp or worse No cross bite Cross bite present Incisor overbite Lower incisor coverage Up to 1/3 tooth 1/3 - 2/3 coverage 2/3 up to full coverage Full coverage Sagittal relationship of the buccal segment Left and right added together Cusp to embrasure relationship only, Class I, II or III Any cusp relation up to but not including cusp to cusp to cusp relationship the grading process.

Results: The ABO index indicated that more failure with C2E followed by CTB and UPE (40, 33.3 and 20%) respectively. PAR and IOTN showed statistically significant improvement.

Conclusion: All treatment modalities are effective however; C2E has more failure cases as compared to other modalities.