

ABSTRACTS

OF LECTURES AND SCIENTIFIC POSTERS

EUROPEAN ORTHODONTIC SOCIETY

91st Congress Venice, Italy, 2015

13-18 June

Berna Ertekin¹, Elçin Esenlik¹, Yavuz Fındık², Hikmet Orhan³, ¹Orthodontic Department, ²Oral and Maxillofacial Surgery Department and ³Public Health Department, Suleyman Demirel University, Isparta, Turkey

AIMS: To investigate the effects of bone anchored maxillary protraction with or without alternate rapid maxillary expansion and constriction (Alt-RAMEC) in individuals with skeletal Class III malocclusions

SUBJECTS AND METHOD: Thirty subjects with retrognathic maxillae in the peak pubertal period, randomly divided into two groups. Group I consisted of 8 girls and 7 boys (mean age 12.13 ± 0.58 years) treated only with skeletal anchorage, and group II. 7 girls and 8 boys (mean age 12.11 ± 0.59 years) treated with skeletal anchorage with the Alt-RAMEC protocol. Treatment continued until a positive overjet was obtained. Changes in the dentoskeletal cephalometric variables were compared in the two groups. Statistical comparisons were performed with *t*-tests.

RESULTS: Treatment durations were 1.2 and 1 year in groups I and II, respectively. Anterior displacement of the maxilla was similar for both groups (1.53 mm in group I and 1.7 mm in group II), while the protraction rate was significantly more in group II (0.15 mm per month in group I and 0.21 mm per month in group II, $P < 0.05$). Mandibular and dentoalveolar changes were similar except for the significantly more evident protrusion of the upper incisors in group I ($P < 0.05$). The maxillomandibular relationship and soft tissue profile were improved remarkably in both groups.

CONCLUSION: In subjects with maxillary retrognathia treated with skeletal anchorage in the peak pubertal period, the treatment duration is significantly shorter and the protrusion of the upper incisors is significantly less with the Alt-RAMEC protocol.

21 WHICH WHITE WIRE? A MULTI-CENTRE RANDOMISED CONTROLLED TRIAL ON ALIGNMENT EFFICIENCY AND COLOUR PERFORMANCE

Zaid Esmail, Aman Ulhaq, Anis Kamaruddin, Dirk Bister, Martyn Sherriff, Department of Orthodontics, King's College London, U.K.

AIMS: To evaluate the alignment efficiency and colour performance of four coated nickel-titanium aligning archwires over an eight-week period. The aim was to establish whether the latest aesthetic archwires have dispelled their reputation.

SUBJECTS AND METHOD: One hundred and twenty participants requiring fixed appliance orthodontic treatment had each dental arch randomly allocated to one of four interventions: (1) Forestadent® BioCosmetic® 0.017 inch (2) Forestadent® Titanol® Cosmetic 0.016 inch (3) TP Orthodontics Aesthetic 0.014 inch (4) Ortho Organizers® Tooth Tone® 0.016 inch. The archwires were ligated and remained *in situ* for an eight week period. Changes in Little's Irregularity Index were measured on dental casts using digital callipers and retrieved archwires were measured for colour change (ΔE) and coating loss. Colour assessments were made using digital photography and Adobe® Photoshop®, with ΔE values computed using the CIE L*a*b* system. Coating loss was measured by analysing digitally scanned images and using Autodesk® AutoCAD®.

RESULTS: One hundred and nineteen patients (74 females, 45 males) completed the trial. Significant alignment was achieved in all groups, however, one-way ANOVA showed no difference in alignment efficiency among the four groups. All four archwires showed significant mean colour change and coating loss after clinical use. One-way ANOVA showed a statistically significant difference between the archwires for ΔE ($P = 0.001$), with Titanol Cosmetic showing the greatest statistically significant colour change. There was no statistically significant difference between the archwires for coating loss.

CONCLUSION: There was no difference in alignment efficiency amongst the coated archwires used, however there was appreciable colour change and coating loss after clinical use of coated aligning archwires. The aesthetic properties of these coated archwires are not ideal.

22 IMPACT OF EXTRACORPOREAL SHOCKWAVE THERAPY ON TOOTH MOBILITY IN ADULT ORTHODONTIC PATIENTS: A RANDOMIZED PLACEBO-CONTROLLED CLINICAL TRIAL

Frank Falkensammer¹, Xiaohui Rausch-Fan^{1,2}, Wolfgang Schaden³, Danijel Kivaranovic⁴, Josef Freudenthaler¹, Departments of ¹Orthodontics and ²Oral Biology. University Clinic of Dentistry Vienna,