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Oral Session O11 – Orthodontics

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### Oral Session O11/Orthodontics

### O11–79

### Cephalometric evaluation of soft tissue profile changes following functional therapy in Class II Division 1 patients

#### G. ESLAMI AMIRABADI<sup>1</sup> & M. BIRIA<sup>2</sup>

<sup>1</sup>Department of Orthodontics, Dental School, Shahed University; <sup>2</sup>Department of Pedodontics, Dental School, Shaheed Beheshti Medical Sciences University, Tehran, Iran

**Introduction:** The purpose of this retrospective study was the cephalometric evaluation of soft tissue profile changes following functional therapy in Class II Division 1 patients. 32 patients (17 girls and 13 boys) with Class II division 1 malocclusion, who were treated with a modified activator in a private office by an orthodontist, were selected for this study. At the onset of treatment, the mean age of girls was 10 years and 4 months, and the mean age of boys was 11 years and 7 months. Functional therapy lasted 10 months in girls and 12 months in boys.

**Materials and methods:** Pre-treatment and post-treatment lateral cephalograms of the patients were analysed. 28 soft tissues, skeletal and dental variables were chosen in order to evaluate the functional therapy effects, especially soft tissue changes. Paired T-test was performed to determine the variance significance of the variables. **Results:** Based on the results of this study, the following variables had significant changes: Upper lip and Lower lip distance from S-line, Lower soft tissue component, Lower facial height, Upper I to Frankfort horizontal plan, Lower lip length, Inferior sulcus thickness, Lower sulcus, Point B and Overjet.

**Conclusion:** Based on the results of this study, it can be concluded that functional therapy has beneficial effects, especially on soft tissue profile in Class II Division 1 malocclusion patients.

#### **O11-80**

### Characteristics of impacted maxillary canines in southern Chinese children and adolescents

A. K. SAJNANI & N. M. KING

Paediatric Dentistry and Orthodontics, Faculty of Dentistry, The University of Hong Kong, Hong Kong SAR, China

**Introduction:** Maxillary canines are second only to mandibular third molars in the frequency of impaction. Studies conducted in Caucasians to determine the prevalence, gender differences, buccal to palatal impaction ratio and radiographic features revealed differences in the figures for these variables. However, few studies have been conducted to determine the status of this condition in Chinese subjects. Given the paucity of data and the apparent discrepancies in the literature, a retrospective audit was conducted to estimate the prevalence and the status of impacted maxillary canines.

**Materials and methods:** The study population consisted of 217 children and adolescents with impacted maxillary canines who were being provided with treatment in the Paediatric Dentistry and Orthodontics Clinic at Prince Philip Dental Hospital, The University of Hong Kong. All available records of the patients were reviewed and analysed to gather data on the clinical and radiographic characteristics before, during and after treatment.

**Results:** Of the 217 patients, 72.8% had unilateral impacted canines while 27.2% had bilateral impactions. Furthermore,

60.3% of the impacted canines were located buccally while 25.3% were found palatally. Females (58.5%) were more frequently affected than males (41.5%). Radiographic assessment revealed varied positions of the impacted canines in relation to the adjacent teeth. The nature of the treatment provided and the associated post-operative complications were recorded.

**Conclusion:** Awareness of the prevalence, presenting characteristics, associated anomalies and techniques for early diagnosis allow for better treatment plans and prediction of the prognosis of impacted maxillary canines.

### 011-81

### Social judgements made by children in relation to orthodontic appliances

A. J. PATEL, H. D. RODD & P. E. BENSON

Department of Oral Health and Development, School of Dentistry, Sheffield, UK

**Introduction:** Convincing evidence exists that social judgements are made on the basis of dental appearance. This study sought to determine whether children pass judgement on other children in relation to fixed orthodontic appliances.

**Patients and methods:** 322 pupils, aged 11–15 years, from a state secondary school, London, UK were asked to look at colour photographs of a girl and boy and to make a social judgment about these subjects. Participants were randomly allocated pictures of children either wearing fixed orthodontic appliances or the same two subjects without appliances. Using a previously validated child-centred questionnaire, participants rated subjects using a four-point Likert scale for three negative and six positive attributes. The outcome measure was a total attribute score, where a low score (minimum = 9) indicated a favourable assessment and a high score (maximum = 36), a negative assessment.

**Results:** The mean score for the female subject was 19.4 (95% CI 18.8–20.1) with a brace and 19.2 (95% CI 18.5–19.9) without a brace. The mean score for the male subject was 19.9 (95% CI 19.1–20.6) with a brace and 20.1 (95% CI 19.3–20.9) without a brace. There was no significant difference between scores according to the presence of an orthodontic appliance (P < 0.05, *t*-test).

**Conclusion:** Fixed orthodontic braces do not appear to be associated with negative peer assessments of social attributes. This is in contrast to previous studies, where orthodontic-related teasing has been reported, suggesting that appliances are now viewed as a 'normal' aspect of everyday life.

### 011-82

### Clinical and radiographical characteristics of maxillary canine impaction in a university clinic in Tehran

J. RAMEZANI & M. ORDOOBAZARI

Department of Orthodontics, Dental School, Shahid Beheshti University, Tehran, Iran

**Introduction:** This retrospective study was performed to compare the clinical and radiographic features of patients with and without maxillary canine impaction

#### **Oral Presentations**

Patients and methods: The study was based on chart view of 60 patients (mean age 15, range11–26, 70% female) at the department of orthodontics, school of dental medicine, Shahid Beheshti University, Tehran-Iran and a private clinic in Tehran. Patients with at least one maxillary canine impaction (impaction group) were matched by gender and type of malocclusion with controls with normal maxillary canine eruption. The following parameters were obtained: Anomalous lateral, lateral missing, sector (location of the cusp tip of the canine in relation to the adjacent lateral incisor), angulation (mesial angle formed by the bicondylar line and the long axis of the unerupted tooth), Upper Arch Length Tooth Size Discrepancy (UALTSD), Sum of Posterior Angles (SPA) and buccal/palatal differentiations in impaction group.

**Results:** There was no statistically significant difference in the anomalous or missing lateral incisors between the impaction and control group (P > 0.05). There was a statistically significant difference in the UALTSD between impaction and control group (P < 0.01). Also, there was an association between less than normal SPA and maxillary canine impaction (P = 0.02). 70% of impactions were palatal impaction and 30% were buccal impaction. Angulation was higher for buccal impactions with a mean of 77 ordm; compared with 59.5 ordm; for palatal impactions.

**Conclusion:** Canine impaction is a multifactorial phenomenon and specific dental anomalies might cause a marked increase in the risk of canine impaction. Follow up of maxillary canine eruption by clinical palpation and supplementary radiograph is recommended. Early diagnosis of canine impaction enables the clinician to perform preventive managements.

### 011-83

### Clinical success of a new fixed space maintainer

S. GULEC<sup>1</sup>, M. C. DOGAN<sup>1</sup>, E. GURAY<sup>2</sup>& C. SARITURK<sup>3</sup> Department of Paediatric Dentistry; <sup>2</sup>Department of Orthodontics, School of Dentistry; <sup>3</sup>Department of Biostatistics, School of Medicine, Cukurova University, Adana, Turkey

**Introduction:** The aim of this study was to evaluate the clinical success of a newly designed fixed space maintainer.

**Patients and methods:** Thirty one healthy children aged between 6 and 12 (mean  $8.7 \pm 2.4$ ) participated in this study. Forty three space maintainers were applied either to the maxillary or mandibular arch. The study was approved by the Ethical Committee of the Medical School of Cukurova University. The Gingival index (GI), plaque index (PI) and probing depth (PD) were recorded at baseline. The possible effects of the maintainers on the oral hygiene were assessed by comparing the baseline index scores with the first week, first month and the third month index scores. The success rate of the new fixed space maintainers was also evaluated by survival analyses and compared with log rank tests with a 12 months follow-up duration.

**Results:** The overall mean survival rate for all the space maintainers was 286 days. The mean success rate was evaluated according to gender, age, and the arch that the appliances were applied to. Age was found to be an independent risk factor for the success of the maintainer according to Cox Regression Analyses, however gender was not. The appliances used in the mandibular arch were found more successful than the appliances used in the maxilla.

**Conclusion:** The results indicate that this space maintainer (Ez Retainer) could be a good alternative to other fixed appliances in respect of time saving, ease of application and the considerably long survival time of the space maintainer.

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