Skeletal, Dent alveolar and Soft Tissue Parameters in Individuals with Palatal Maxillary Canine Displacement

Dr. Elham S Abu Alhaija, Department of Preventive Dentistry, Faculty of Dentistry, Jordan University of Science and Technology
E-mail: elham@just.edu.jo

Abstract

When the extraction site has insufficient bone height or volume for an implantation, an autogenously tooth bone block for a socket reconstruction and bone graft can be implemented. In these case studies, we obtained outstanding treatment outcomes using autogenously tooth bone block reconstructing extracted socket and ridge augmentation. This study presents its clinical and radiological findings together with reviews of related literature.

Keywords: Palatably; Canine; Displacement

Introduction

Displacement or ectopic eruption of the canine was defined as the

Divergence from the normal path of eruption; the canine can either

Erupt in an unusual position or become impacted ducally or palatally

[1]. the maxillary canine tooth is second to mandibular third molar in

Its frequency of impaction [2, 3]. The reported prevalence for maxillary

Canine impactions vary from 0.8-2.8% [4]. The displaced canine is

Placed palatal to the dental arch in 85% of cases and labial/buccal in

15% of cases [5]. Palatably and basically impacted or displaced canines are considered as two completely different phenomena, where the etiology for one differs from the other [6-8]. Ducally displaced canines is thought to be a form of crowding and results from insufficient space in the upper arch [7]. However, the etiology of palatably displaced canines (PDCs) is obscure, but probably multifactorial. Several etiological factors have been suggested including arch dimension, mesiodistal width of teeth, tooth morphology and tooth size–arch length relationship, rate of root restoration of deciduous teeth, trauma of the deciduous tooth bud, disturbances in tooth eruption sequence, availability of space in the arch, rotation of tooth buds, premature root closure [9-11]. Lang erg and Peck [14] reported no statistically significant difference in either anterior or posterior maxillary arch widths between subjects with PDC and controls. [14] Reported no statistically significant difference in either anterior or posterior maxillary arch widths between subjects with PDC and Controls.

Material and Methods

This study has been approved by the University of Golden State, metropolis (UCSF) Committee on Human analysis. Development of the informative and Clinical Curriculum: A 10-week interprofessional medical specialty oral health course for college students in medicine, nursing, medicine, associate degreed pharmacy was administered by an knowledge base school team. This course enclosed weekly 1-h lectures for 10 weeks. Four lectures were delivered via pre-recorded on-line lectures, and six lectures (including case shows and discussion session) were delivered in-class. The topics of those lectures enclosed introduction on children's oral health, oral health disparities, and clinical assessment and follow.

Results

For the masticatory loading (chewing condition, FE analysis is carried out as discussed in the previous section. The solid models Are imported from Solid Edge software to ANSYS Workbench and Material properties are assigned as per the Table 1. Load of 1000 N is Applied. They are solved to get the final solution. The contour plot of 'Von misses stresses' and 'strain' was separately obtained for all the three Appliance models as well as the jaw model without the device. The final Deformation is plotted with the result of 'von miss stresses' and 'strain 'Calculations and shown in Figures 7A-7C for the band and loop, Nance Appliance and Trans-palatal arch respectively

Discussion

This study was carried out to investigate the skeletal, dent alveolar and soft tissue features associated with maxillary PDCs using lateral cephalometric analysis. The study and the control groups were matched by age and gender to avoid any influence of age and gender differences on the measurements of the craniofacial structures. Lateral cephalograms were analyzed using computer software. It has been found that digital cephalometric analysis can be reliably chosen as a routine diagnostic tool [20]. In this study, male: female ratio was 1:1.4 which agrees with the unequal distribution between males and females for PDCs reported by others [8, 21-23]. This may suggest a genetic component in the etiology of this tooth displacement with a possible involvement of the sex chromosomes.

Conclusions

Most subjects (62%) with PDCs had Class I skeletal relationship And (33%) class II division 2 incisor relationship.
Subjects with PDCs had reduced vertical dimensions, short Maxilla, short mandibular body, small dent alveolar heights,
Increased inter-incise angle and returned upper and lower lips..