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RESEARCH

Dental Craniofacial Research

Which One of Two Ectopic Mandibular Canines will erupt to a Normal Position in the Dental Arch?

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Abstract

The purpose of this paper is to demonstrate 4 cases with bi-lateral ectopic mandibular canines and to demonstrate in each case which one of the two canines erupted to a normal position in the dental arch.

The canines are observed from Orthopantomograms from 4 children (aged 8-13 years of age) in the mixed dentitions stages. Of these children 2 were males and 2 were females.

From each child there was between 3-5 Orthopantomograms. These were observed over 3-4 years period.

In each of the 4 cases with bi-lateral ectopia of the mandibular canines the one mandibular canine erupted into a normal position, while the other one declined into a horizontal position during the mixed dentition period.

These 4 cases demonstrated that the inclination of the canines were important to observe and diagnose from the initial stage (first ortopantomogram). The cases presented, demonstrated that the unsuccessfully erupted canines ending in a horizontal position, were the canines which inclined slightly more that the contra lateral canine already from the initial stage.

Keywords: *Mandibular canine; Ectopia; Mixed dentition; Eruption; Orthopantomogram*

Introduction

Ectopic mandibular canines are rare. The prevalence is not known, but it has been reported that females are more often affected than males [1]. Most authors have described single cases of uni-lateral or bi-lateral occurrence of ectopic mandibular canines. Ectopic mandibular canines are often mentioned as transmigrating mandibular canines [1,2].

In the literature focus has been specifically on diagnostics and treatment [3]. The etiology behind ectopic mandibular canines is not known, but has been discussed in several papers [2,4,5]. Early detection and prevention has been in focus in the literature [6-8], so has treatment options [9]. When the ectopic mandibular canines appear in a horizontal position then they are often surgical removed [9]. Meanwhile the mandibular ectopic canines are often not positioned horizontally but inclined in different angulations compared to the mid-axis and in these casesprediction for eruption is difficult. The question is if the inclined canines can switch into a vertical position or if it gradually inclines to a horizontal position. As the etiology behind the ectopic canines is not known prediction for eruption to a normal position is complicated. Follow-up studies distinguishing between cases with unilateral or bi-lateral occurrence is not generally performed. It could be hypothesized that the uni-lateral and bi-lateral occurrence have different etiologies.

The purpose of this paper is to demonstrate 4 cases with bi-lateral ectopic mandibular canines and to demonstrate in each case which one of the two canines erupted to a normal position in the dental arch.

Material and Methods

In this paper bi-lateral ectopic mandibular canines are studied.

The canines are observed from Orthopantomograms from 4 children (aged 8-13 years of age). The children were all in the mixed dentitions stages. Of these children 2 weremales and 2 were females.

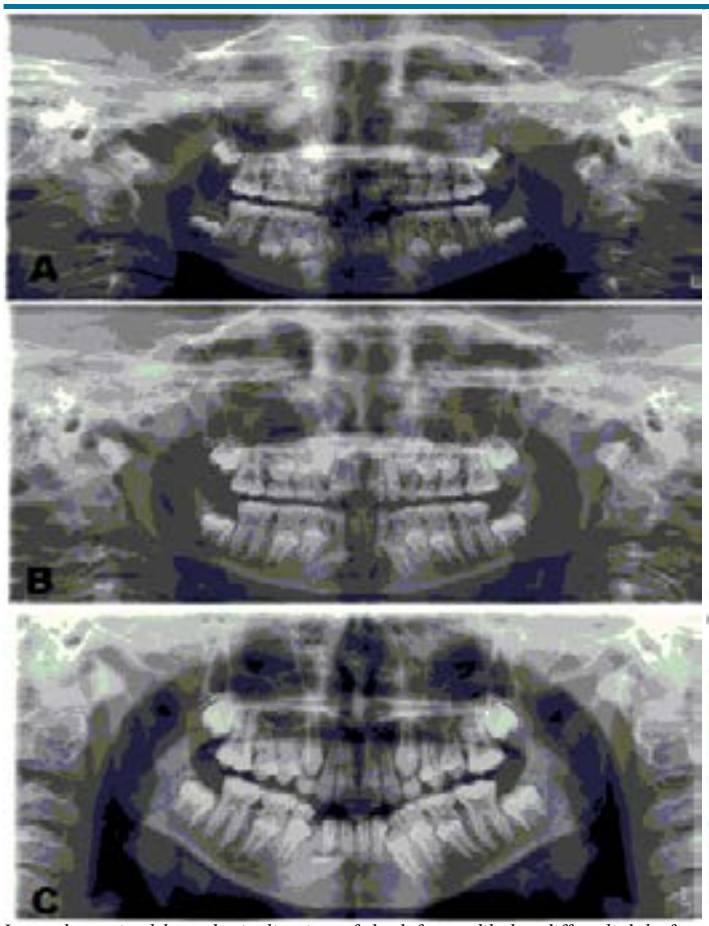
From each child there was between 3-5 Orthopantomograms. These were observed over3-4 years period.

Results and Discussion

Results are demonstrated by figures (Figures 1-4). In each of the 4 cases with bi-lateral ectopia of the mandibular canines the one mandibular canine erupted into a normal position, while the other one declined into a horizontal position during the mixed dentition period.

These 4 cases demonstrated that the inclination of the canines were important to observe and diagnose from the initial stage (first ortopantomogram). The cases presented,demonstrated that the unsuccessfully erupted canines ending in a horizontal position, were the canines which inclined slightly more that the contra lateral canine already from the initial stage.

Explanation for this development cannot be given, but spaceproblems in the mental region in the mandible might be a plausible reason for this type of ectopia.



It can be noticed how the inclination of the left mandibular differ slightly from

Figure 1. Follow-up orthopantomograms from a boy. The radiograps were taken within intervals from the boy was 9 to 12 years of age.

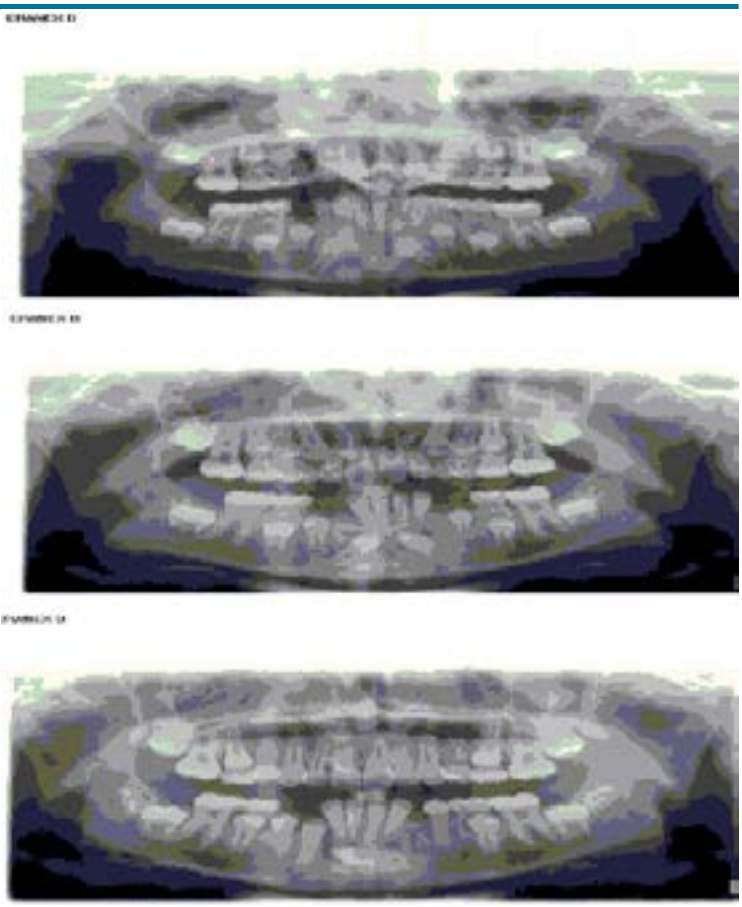


Figure 3. Follow-up orthopantomograms from a boy. The radiographs were taken within intervals from the boy was 9 to 12 years of age.

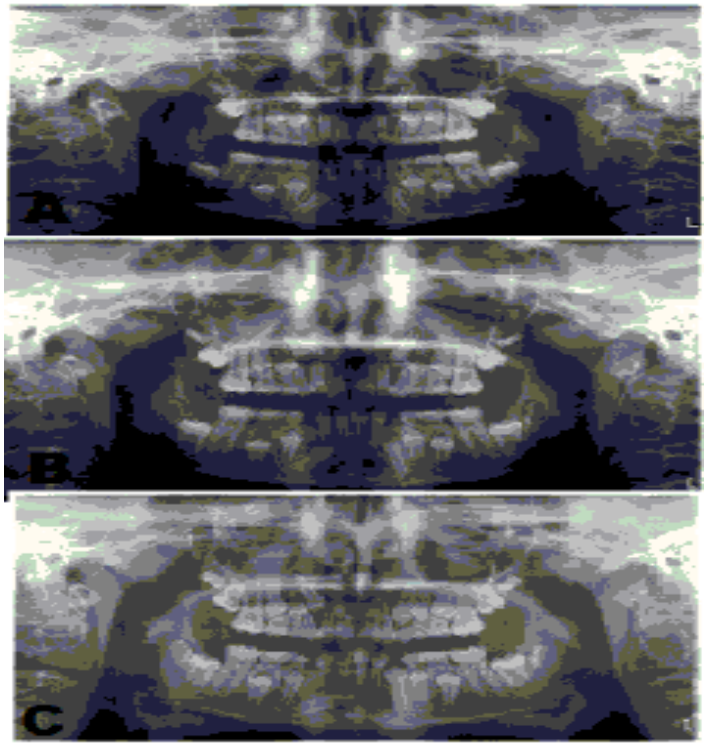


Figure 2. Follow-up orthopantomograms from a girl. The radiograps were taken within intervals from the girl was 10 to 13 years of age.

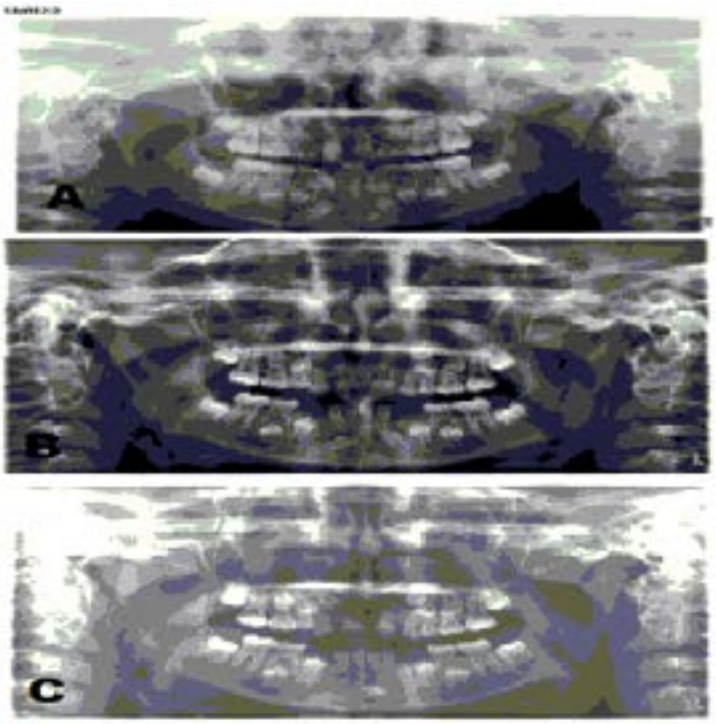


Figure 4. Follow-up orthopantomograms from a girl. The radiograps were taken within intervals from the girl was 8 to 11 years of age.

the inclination of the right mandibular canine. This difference persisted over the years. In Figure 1C it appears that the left canine changes position and erupts seemingly to a normal vertical position while the right mandibular canine rotated and ended up in a more or less horizontal position.

It can be noticed how the inclination of the left mandibular differ slightly from the inclination of the right mandibular canine. This difference persisted over the years. In Figure 2C it appears that the left canine changes position and erupts seemingly normal while the right mandibular canine rotated slightly and ended up in a more or less horizontal position.

It can be noticed how the inclination of the left mandibular differ slightly from the inclination of the right mandibular canine. This difference persisted over the years. In Figure 3C it appears that the left canine changes to a vertical position while the left mandibular canine rotated and ended up in a more or less horizontal position.

It can be noticed how the inclination of the left mandibular differ slightly from the inclination of the right mandibular canine. This difference persisted over the years. In Figure 4C it appears that the left canine changes position and erupts seemingly normal while the right mandibular canine declined to a horizontal position.

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