

# The Ectopic Maxillary Canine: a Case Report

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**Abstract:** A case is described of a severely ectopic maxillary canine, which underwent initial spontaneous improvement, and following extraction of the deciduous canine erupted satisfactorily. It provides a cautionary tale when considering surgical removal of ectopic maxillary canines.

*Index words:* Ectopic Canine, Interceptive.

## Introduction

The prevalence of impaction or ectopic eruption of the permanent maxillary canine has been reported at between 0.9 and 2.0 per cent (Thilander and Jakobsson, 1968; Ericson and Kuroi, 1986). Ericson and Kuroi (1986) advise that the maxillary permanent canine should be palpable in the buccal sulcus at 10 years of age, and if this is not the case then radiographic examination should be considered to determine the canine position.

A case is presented in which a maxillary permanent canine was severely ectopic, and of poor prognosis as determined by criteria described by Ericson and Kuroi (1988). Despite the degree of ectopia the canine showed some spontaneous improvement in position. Following this improvement, extraction of the primary canine resulted in satisfactory eruption of the permanent successor.

## Case History

A boy aged 11 years 8 months was referred by his general dental practitioner who suspected that the maxillary canines were ectopic. The patient's medical history was unremarkable. He was a regular dental attender and had required several small restorations to his deciduous dentition.

He presented normal facial proportions with a Class I skeletal pattern. Intra-orally he was in the mixed dentition with mildly spaced arches. The upper right permanent canine (13) could not be palpated, although the upper left permanent canine (23) was palpable high in the palate. Radiographic examination showed the 13 to be lying almost horizontally high above the root apices of the permanent premolars and lateral incisor (Fig. 1). The crown of the 13 appeared to be intimately related to the root apex of the permanent lateral incisor, although there was no evidence of any root resorption. There appeared to be an enlarged follicle associated with 13.

## Treatment Plan

1. Extraction of the upper left deciduous canine (63).
2. Review regarding the position of 13, 23.
3. Monitor the root form of 53.

The patient was reviewed at 12 years 10 months when radiographic examination (sectional orthopantomograph) showed the position of 23 to be improving following the extraction of the deciduous canine (Fig. 2). This radiograph also revealed, unexpectedly, the position of 13 to be improving, with the tip of the canine crown moved to a position one-third down the root of the permanent lateral incisor with minimal overlap of the root surface.

At this stage it was decided to request the extraction of the upper right deciduous canine (53), to encourage further improvement of the position of the 13. The situation was again reviewed by sectional orthopantomograph at age 14 years 1 month (Fig. 3). The 23 had erupted normally into the line of the arch and the 13 had improved considerably with the tip of the crown now lying adjacent to the cervical third of the root of the lateral incisor.

At age 15 years 4 months the radiographic examination was repeated, and demonstrated a continued improvement in the position of the 13, with the tooth almost erupting. No active intervention was considered and the patient was reviewed at age 16 years 5 months. At that stage the 13 was erupting satisfactorily into the mouth (Fig. 4). The patient was happy with the appearance of the teeth, and delighted that no appliances would be required. He was prepared to accept the mild degree of residual spacing in the upper labial segment, and was advised that this spacing may close in the future.

## Discussion

This case report provides us with a cautionary tale with respect to severely ectopic maxillary canines. The original position of this patient's 13 at age 11 years 8 months was very high above the root apices of the adjacent permanent teeth. Criteria established by Ericson and Kuroi (1988) would suggest that this tooth was of extremely poor prognosis. Specifically, the distance of the crown from the occlusal plane, and its mesial inclination to the midline on the orthopantomogram would make it an unlikely candidate for alignment. If orthodontic treatment was being considered with movement of the apices of the adjacent teeth, then surgical removal of the ectopic canine may have been deemed appropriate (Moss, 1972; Ferguson, 1990).

In the light of this case report, if a severely ectopic canine



FIG. 1 Orthopantomogram at age 11 years 8 months.



FIG. 2 Sectional orthopantomogram at age 12 years 10 months.

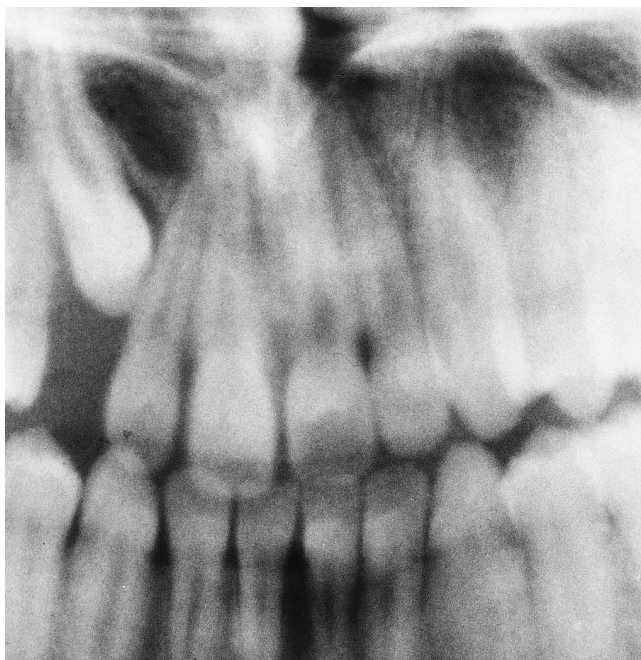


FIG. 3 Sectional orthopantomogram at age 14 years 1 month.



FIG. 4 Clinical photograph showing 13 erupting satisfactorily (age 16 years 5 months).

is encountered, it may be worthwhile allowing a period of observation with a repeated radiographic examination prior to requesting surgical removal of the offending tooth.

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