

KODAK 9000C 3D Panoramic and Cephalometric System

Impacted Canine and Lateral Incisor Root Interference: Who Wins?

Robert L. Waugh, DMD, MS, and Assistant Professor of Orthodontics, Medical College of Georgia

Case Overview

This 14 year 1 month old boy was being treated orthodontically to erupt an upper left permanent canine that was fully impacted near the apices of the adjacent anterior teeth.

Following the surgical exposure the patient had an infection, delaying the application of orthodontic forces for one month. The delay allowed the tissue to heal over the gold chain attachment at the crest of the alveolar ridge (Figure 1). One month of labial traction resulted in no clinical signs of movement from this trajectory.

A Kodak 9000C 3D system scan revealed the direction of pull ineffective, with interference between the crown of the canine and the root apex of the adjacent permanent lateral incisor (Figure 2). Early resorption of the lingual aspect of the lateral incisor's root tip was evident when compared to the contralateral side (Figure 3).



Figure 1



Figure 2

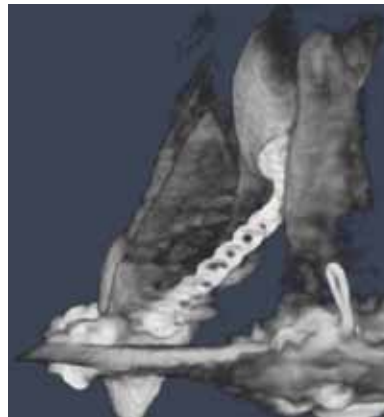


Figure 3



**Robert L. Waugh, DMD, MS,
and Assistant Professor of
Orthodontics, Medical College
of Georgia**

Dr. Bob Waugh, a native Georgian, has been practicing in the Athens area since 1989. He received his BS degree from Mercer University in 1983. Dr. Waugh then became the Medical College of Georgia School of Dentistry's first combined degree graduate in 1987, earning both his D.M.D. and an M.S. in Oral Biology. Upon graduation, he was elected to Omicron Kappa Upsilon, the national dental honor society. Dr. Waugh attended his residency in orthodontics at the Baylor College of Dentistry, earning his certificate of specialization in 1989 and becoming a Diplomate of the American Board of Orthodontics in 2000.





Figure 4

Following administration of local anesthetic, the chain was redirected lingually using a diode dental laser for a more advantageous pull, as identified by the 3D scan (Figure 4).

Testimonial

Two-dimensional radiographs provide only part of the needed information to safely and efficiently move teeth. In patients with fully impacted canines the crown may not be fully visible, making it difficult to assess its position as well as the location of the surgeon's attachment. Without three-dimensional knowledge, decisions regarding the trajectory of orthodontic mechanics can be unsafe and ineffective.

Three-dimensional radiographic examinations provide complete information – including recreation of 2D, if needed – to effectively and efficiently access, engage, and erupt impacted canines.

