

CS 9300C System

CBCT Visualization Verifies Suspected Ankylosis and Affects Treatment Plan

Brett Coleman, DMD, MS

Case Overview:

A 32-year-old male patient presented with a desire to improve his smile through orthodontic treatment. The patient had previously undergone limited orthodontic treatment as a young boy. Upon clinical examination, the patient's entire upper left quadrant was on a much higher plane than the right quadrant. The patient's bite was in occlusion on the right side; however, the bite was completely open on the left side. His teeth in the lower left quadrant were supra-erupted in an effort to establish occlusion with the upper left teeth. The patient requested treatment to extrude the upper left side to correct the open bite. He reported no history of occlusal or facial trauma.



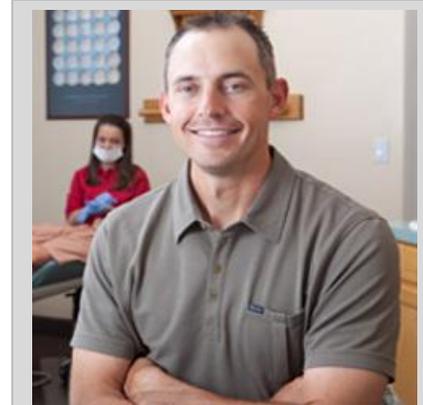
Figure 1: Center photo in occlusion



Figure 2: Left buccal photo in occlusion



Figure 3: Panoramic Image



Brett Coleman, DMD, MS

Dr. Brett Coleman is a native of North Ogden, Utah. He attended Weber High School and Weber State University. Following his undergraduate training at Weber State, he attended the University of Louisville School of Dentistry graduating Summa Cum Laude with a DMD degree. He was inducted into the Alpha Omega International Honorary Dental Fraternity for attaining the highest academic standing during his years of study. He continued his residency training in orthodontics at the University of Louisville where he received his Masters in Science degree and certificate as a specialist in orthodontics.

He is currently a member of the American Association of Orthodontists, Rocky Mountain Society of Orthodontists, American Dental Association and Utah Association of Orthodontists. He is Board Certified by the American Board of Orthodontics. He frequently lectures to dentists and their staff members about the benefits of orthodontics. Dr. Coleman also enjoys speaking to students in schools about careers in dentistry and orthodontics. He is an active member of a local interdisciplinary dental team specializing in the treatment of challenging dental and orthodontic problems. He is a Certified Provider for Invisalign® and Incognito® lingual braces.





Figure 4: Ankylosed tooth #9

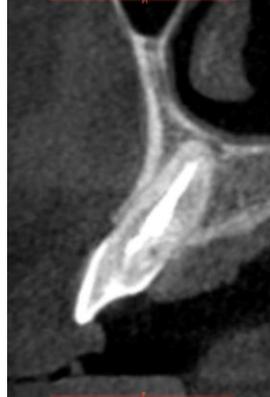


Figure 5: Ankylosed tooth #10



Figure 6: Ankylosed tooth #11

Treatment Plan:

The clinical concern was that the teeth on the upper left side may be ankylosed. If they were in fact ankylosed, braces would create more of a problem by canting his entire upper arch up and to the left. Standard 2D radiographs were reviewed in our practice and by a local oral surgeon. A definitive diagnosis regarding ankylosis could not be determined by these radiographs or clinical examination alone. A 10x10 field-of-view cone beam computed tomography (CBCT) scan was ordered using our CS 9300C CBCT, panoramic and cephalometric imaging system. Evaluation of the CBCT scan confirmed that teeth numbers 9, 10 and 11 were in fact ankylosed. The patient was informed that orthodontic treatment alone was not the proper solution to correct his problem; however, the patient elected to decline any orthodontic or surgical attempt to correct his malocclusion.

Testimonial:

One of the unique features of the CS 9300C system is the ability to take excellent quality images in both 2D and 3D. This flexibly provides me with the all the clinical tools needed to provide the best care efficiently and in accordance with the ALARA and ALADA principals. Without the high-resolution CBCT image, it would have been a guess on the eventual diagnosis of ankylosis of the teeth in question. In this—and many other—cases, the CS9300C helped us to efficiently identify the best course of action for the patient.

Would you like to know more? Visit us on the web at www.carestreamdental.com.

