

CASE STUDY: Combining occlusion-based diagnosis and treatment with effective consultation software resulting in greater case success.

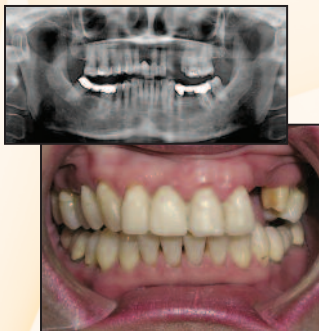
*Developed by Dynamic Thought® and Don Reid DDS, the BiteFX™ animation software provides the dental professional with a simple to use, easy to present graphic tool for presentation of malocclusion concepts to the dental patient. BiteFX is compatible with Windows operating systems.**



Patient who was fitted with a full dental bridge that was anatomically correct but occlusally incorrect causing neuromuscular and tooth pain. Photo shows obvious occlusal disease that was not addressed.



Ceramic crown failure due to poor preparation and lack of required equilibration.



Patient had multiple replacement and failures of bridge with loss of teeth due to unrecognized severe occlusal disease from previous dentist. Patient required full mouth reconstruction.

ABSTRACT

As a former chair for the CDA Council on Peer Review Appeals Panel, I have evaluated many complaints lodged against dentists in California. This included peer-review evaluation based on standards of quality of care as well as arbitration of disputes of substandard outcomes. The majority of valid complaints concerning quality of treatment were related to occlusal disease (80%)*. Often times, treatment did not observe accepted protocols of diagnosis, treatment planning and correct placement of treatment into the occlusal scheme (recognition of occlusal principles). Dentists found to have provided substandard care are often ordered to reimburse the patient and/or provide corrective treatment, often making the dentist directly responsible for very expensive remedies. Proper diagnosis and treatment planning based on occlusal principles, combined with effective patient consultation using BiteFX animations significantly increases understanding, case acceptance and treatment success.

THE PROBLEM – Treatment failure.

The majority of problems that the dentists face are caused by treatment failure resulting from inadequate occlusal diagnosis (e.g., ceramic fracture, poor aesthetic outcome, bone loss, mobility of teeth, tooth pain, TMJ pain, and neuromuscular pain).

THE SOLUTION – Occlusion focus.

Simply put, the solution is to pay careful attention to occlusion. That is, go back to the tried-and-true principles of treatment analysis, diagnosis, and treatment planning with occlusal analysis, working within existing vertical dimensions or creating new vertical dimensions.

KEYS TO SUCCESS – The three components.

There are three components vital to total treatment success and patient satisfaction. They are:

- Prosthetic cosmetic restorative treatment.
- Dental implant treatment.
- Occlusion.

It is crucial to begin with a good diagnosis by following the problem to the disease. For example the dentists may see problems in the front of the mouth but the cause may actually be in the back (cause and effect). Important steps include accurately mounted casts and correct occlusal analyses (identify primary prematurities, faceting, missing teeth, direction to which the jaw is forced, mobility of teeth, and enamel wear).

Signs and symptoms of occlusal disease may also include popping and clicking of the TMJ, muscle soreness or tenderness, and/or deviation of the mandible on opening with possible limited ability to open the jaw. It is also essential to perform radiographic diagnosis specific for bone loss due to occlusal interferences.

**Special arrangements can be made for those wishing to use the animations on Macintosh systems.*

***The opinions expressed in this case study are those of Dr. Smith and are not sanctioned by the CDA.*



Tooth #3 showing anatomically designed crown resulting in facial bone loss due to poor equilibration and inappropriate placement of crown in the existing occlusal plane. The BiteFX animation is instrumental in helping the patient understand this complicated cause and effect.



Patient photo showing occlusal wear and multiple abfractions. BiteFX animations clearly demonstrate cause due to lack of canine guidance resulting in severe occlusal disease.



Patient photos showing pre-treatment and long term success of full mouth restoration produced by correct occlusal analysis and treatment planning.

TREATMENTS – Good planning sets up success.

Regardless of the case, the dentist must decide on the appropriate treatment plan before any corrective treatment is performed. When occlusal disease is diagnosed, all occlusal issues must be resolved first. There are essentially two ways to perform proper treatment 1) work within the existing vertical dimension and 2) create a new vertical dimension.

If working with the existing vertical dimension, the dentist must know how best to equilibrate for the existing condition and fit the treatment into that system. In addition, the dental lab must be counseled not to perform inappropriate re-contouring of the crown or bridge structures.

If creating a new vertical dimension, it's not necessary to worry about existing occlusal interferences because the occlusion will be reconstructed. In this case the dental lab needs to understand that they are creating a new occlusal anatomy appropriate to the patient's neuromuscular and joint positioning.

How to get this information into the patient's head.

Explaining complex occlusal diseases and treatment plans to patients can often be a daunting challenge. Often times, patient photographs and carefully worded explanations are simply inadequate. To this challenge, I use a consultation tool called BiteFX. The software can be installed on standard PC computers and uses colorful, anatomically accurate animations to clearly convey occlusal disease to any patient, regardless of background. BiteFX lends credibility to the treatment recommendations. Because people process visual information faster than verbal communication, these concepts are readily understood by the patient.

Consultation to case acceptance made easier.

My preferred consultation technique is to sit the patient in front of a pair of monitors and manually display appropriate animation sequences beginning with the ideal, healthy mouth with no pain or disease using one monitor. I follow this by showing the appropriate pathology animations on the same monitor while showing actual photographs of the patient's mouth on the second monitor. The synergy between the animations and the actual clinical photographs has a powerful impact on the patient and creates ownership of the problem. Once the patient owns the problem, the path to achieving case acceptance is made much easier. Patients appreciate education on occlusal disease and understand the value of extensive treatment recommendations.

RESULTS

- Every case is the same – they are all dependent on occlusion and BiteFX helps explain all cases.
- BiteFX creates credible interest by the patient immediately.
- I use this tool for virtually all of my consultations.
- Use of BiteFX has been a vital consultation tool for over two years and has increased my revenues by at least 20%.

For additional information or customer support, please contact BiteFX at 1.877.224.8339 or 1.530.582.1189.

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