

Chapter 18

Complex Medical Diagnoses With an Underlying Dental Etiology: Case Reviews

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ABSTRACT

The aim of this chapter is to present a series of chronic pain clinical cases that were originally diagnosed by non-dental healthcare professionals, as being something other than temporomandibular disorders (TMD). Specifically, the individual patient diagnoses were Phantom Bite Syndrome (PB), Meniere's Disease (MD), Cervical Dystonia (CD), and Trigeminal Neuralgia (TN), where the prior treatments rendered to each patient that were based upon these diagnoses, were all unsuccessful. Each patient was then re-evaluated with a series of biometric occlusal measurement technologies, which included the T-Scan 9/BioEMG III synchronization module. This two-function synchronized system was utilized in the re-diagnosis of each patient, as well as during their rendered occlusal treatment, in evaluating the accuracy of the treatment results, and during each patient's post-treatment maintenance. The four patients were treated with disclusion time reduction (DTR), after which each patient's symptoms either greatly improved, or resolved completely. The observations made in this chapter are highly suggestive that TMD can present as one of these alternative diagnoses, or that TMD was their original problem condition that was misdiagnosed, absent the objective occlusal force and timing data offered by the T-Scan 9 system.

INTRODUCTION

Most dentists would agree that no two topics can elicit a more passionate debate than TMD and Occlusion. TMD is an umbrella term that encompasses many different cofactors and etiologies. Traditionally, the diagnoses to be discussed in this chapter were rendered by taking an oral history of the patient (which is highly subjective) and adding what the clinician observed to then categorize the presentation of symptoms.

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Based on this categorization, a diagnosis was rendered. The classification of these different diagnoses was accomplished by categorizing the patient-reported symptoms into groups that demonstrated a high degree of symptom similarity. The one exception would be Cervical Dystonia, as one can observe the rotation of the head by aberrant firing of the neck and shoulders muscles.

Many dentists have presented and published case presentations where oral appliance therapy had helped patients with these unique diagnoses (Sims, Stack, & Demerjian, 2012; Bjorne, A. & Agerberg G. (2003a; Bjorne, & Agerberg, 2003b; Bjorne, & Agerberg, 1996; Bjorne, Berven, & Agerberg, 1998) Most likely, their reported therapeutic success was founded in two important factors that could contribute symptomology resolution:

- A change in TM joint condylar position
- An optimized, corrected occlusion.

This chapter will evaluate several different, and very unique chronic condition diagnoses, based upon each patient's occlusion as observed with T-Scan data. These considered "non-dental" chronic conditions are:

- Phantom Bite Syndrome
- Meniere's Disease
- Cervical Dystonia
- Trigeminal Neuralgia

This chapter will then illustrate with individual Case Reports, that when T-Scan guided corrections were made to these pathologic occlusions, each of these unique chronic conditions markedly improved.

The T-Scan computerized occlusal analysis system (T-Scan 9, Tekscan, Inc. S. Boston, MA, USA) is a digital diagnostic occlusal force and timing analyzer, that illustrates graphically in video format, excursive movement occlusal interferences, varying levels of relative occlusal force, and Occlusion and Disclusion timing. To record data, the patient occludes or excurses onto a thin, pressure sensitive sensor, which records 256 levels of relative occlusal force in 0.003-second-long fractional time increments (Kerstein, 2015). The recorded data is displayed in a movie-form on a computer screen for analysis, which can be used to make precise and targeted occlusal force and timing abnormality corrections (Kerstein, 2015). Please refer to Chapter 4 for highly detailed descriptions of the T-Scan, and its many clinical uses.

Data Collection

Each presented patient was evaluated with the following technology-driven, diagnostic protocol (Sutter, 2017):

- A review of the patient's medical history, with a comprehensive intraoral exam, and the completion of a form that detailed the patient's existing symptomology (Figure 1).
- Cone Beam Computer Tomography verified the Temporomandibular Joints were stable and adapted, absent of any structural compromise (Galileo, Sirona, Corp. Charlotte, NC, USA).
- A full mouth set of dental radiographs (FMX) were obtained to rule out odontogenic sources of pain.

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