

# Orofacial Pain By Mary Ellen S Chalmers, DMD - 2023

We delve into the complexities of orofacial pain with Mary Ellen Chalmers from USC's prestigious master's program in oral medicine and orofacial pain. This presentation covers a wide array of topics including the anatomy and physiology of the trigeminal nerve, various types of orofacial pain, examination techniques, red flag conditions, and the role of frequency specific microcurrent (FSM) in treatment.

Learn about the diagnosing and managing of pain symptoms, neural and vascular components of headaches, neurogenic pain presentations, the importance of dental history and imaging, and how comorbidities contribute to trigeminal dysfunction.

Case studies provide real-world insights on effective diagnosis and intervention methods. Perfect for anyone looking to understand the vast scope of orofacial pain and its modern treatments.

00:00 Introduction to Orofacial Pain  
01:42 Understanding the Trigeminal Nerve  
05:36 The Role of the Autonomic Nervous System  
08:36 Mastication and Cognitive Function  
11:27 Presentations of Orofacial Pain  
13:36 TMJ and Masticatory Muscle Disorders  
14:56 Headaches and Neurogenic Pain  
19:57 Intraoral Pain Disorders  
27:11 Red Flags and Diagnostic Imaging  
47:59 Clinical Cases and Real-World Applications  
56:04 Conclusion and Final Thoughts

## **Unraveling the Mysteries of Orofacial Pain: Insights from Mary Ellen S. Chalmers, DMD**

Orofacial pain is an intricate and often misunderstood area of medical science, affecting countless individuals worldwide. Recently, I have delved deeply into this subject, drawing on my experiences as a resident in the Master's program at the University of Southern California (USC). Here, I'd like to share insights and discoveries about orofacial pain, its mechanisms, and treatment approaches.

### **Understanding Orofacial Pain**

Orofacial pain is strictly defined as pain and dysfunction affecting the motor and sensory transmission of the trigeminal nerve. This nerve plays a crucial role in transmitting information about touch, proprioception, temperature, and pain from the orofacial region to the brain.

## **Pathways and Mechanisms**

The trigeminal nerve, the largest cranial nerve nuclei, has both sensory and motor components, managing sensory information from the face, head, and other orofacial areas. Importantly, it provides motor innervation to masticatory muscles and other crucial areas.

## **Examinations and Diagnoses**

In our quest to effectively diagnose orofacial pain, thorough examinations are critical. These include evaluating the trigeminal nerve, identifying comorbidities, and understanding the patient's symptoms to recommend appropriate treatments.

## **Red Flag Conditions**

Certain red flags must be recognized to avoid complications. These include infections, systemic symptoms, and potential malignancies, which can have serious ramifications if not addressed properly.

## **Trigeminal Nerve and Its Connections**

The trigeminal nerve's complex connections with the autonomic nervous system, limbic system, and various cranial nerves underscore the wide-reaching implications of treating orofacial pain. For instance, any disturbance in this nerve can result in diverse presentations, such as migraines, neuralgia, and TMJ disorders.

## **Clinical Insights and Case Studies**

Throughout my studies and clinical experiences, I have observed that orofacial pain often involves various mechanisms, including peripheral and central sensitization. Addressing these effectively can revolutionize how pain is managed.

## **Role of Frequency Specific Microcurrent (FSM)**

FSM has emerged as a distinct modality in treating orofacial pain, acting both therapeutically and diagnostically. It helps address specific nerve dysfunctions and provides insights into the complexity of each case.

Orofacial pain requires a multidisciplinary approach and a keen understanding of its complex nature. As we continue to explore and learn, our ability to diagnose and treat this type of pain improves significantly. By integrating novel approaches, like Frequency Specific Microcurrent and a detailed understanding of anatomical pathways, we are making strides in providing relief to those affected by orofacial pain.

Thank you for joining me on this exploration of orofacial pain. As I continue my studies, I hope to share more on this topic, contributing to better understanding and treatments for patients experiencing these challenges.