

Neurology of Head, Neck, and Face Pain and The Future of FSM in Dentistry By Mary Ellen S. Chalmers, DMD - 2023

Dr. Mary Ellen Chalmers shares her journey and expertise on diagnosing and treating complex oral facial pain.

From personal anecdotes to detailed medical insights, Dr. Chalmers delves into the intricacies of the trigeminal nerve and its interactions with other cranial nerves, stressing the importance of accurate diagnosis and interdisciplinary treatment. She highlights the role of stable state assessment and introduces FSM (Frequency Specific Microcurrent) as a promising tool in dentistry for alleviating pain and inflammation.

Whether you're a seasoned dental professional or a curious learner, this talk offers a wealth of practical knowledge and new approaches to managing chronic facial pain.

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Exploring the Complexities of Oral and Facial Pain: A Neurological Perspective

In the ever-evolving field of dentistry and oral health, understanding the underlying mechanisms of oral and facial pain is crucial for providing effective patient care. Dr. Mary Ellen S. Chalmers,

DMD, highlights the intricate relationship between neurology and dentistry, shedding light on how disorders of the head, neck, and face manifest and affect patients.

The Diagnostic Challenge of Oral Facial Pain

Diagnosing oral facial pain represents one of the most complex challenges faced by practitioners. Patients experiencing such pain typically seek help from a dentist, thinking it's related to their teeth. However, this isn't always the case. While tooth-related pain can be resolved relatively easily, the source of discomfort is often elsewhere, making a comprehensive understanding of underlying neurological pathways imperative.

The Trigeminal and Other Nerves Involved

A crucial aspect of diagnosing oral facial pain lies in understanding the neurological pathways involved, primarily the role of the trigeminal nerve, the largest of the cranial nerve nuclei. This nerve is central to facial sensation and its misfiring can result in pain disorders like migraines or trigeminal neuralgia. The relationship between the trigeminal nerve, facial nerve, and even the vagus nerve plays a significant role in these pain patterns.

From Anatomy to Manifestations

The anatomy of the head and neck plays a significant role in how pain is manifested. Different branches of the trigeminal nerve contribute to various pain presentations, such as migraine, toothache, and temporomandibular disorders. Understanding this distribution helps in discerning whether conditions such as herpes virus infections or structural issues at cervical vertebrae levels (like C1 and C2) are contributing factors.

The Role of the Autonomic Nervous System

Oral facial pain can trigger responses from the autonomic nervous system. The proximity of the nucleus ambiguus and the vagal nuclei to the trigeminal pathways means symptoms can extend beyond mere pain, potentially affecting cardiac function and gastrointestinal motility. This emphasizes the importance of considering a comprehensive treatment approach that addresses these neural interconnections.

Implications of Orofacial Anatomy on Learning and Memory

Recent studies highlight the significant impact of oral proprioception on brain function, particularly in memory and cognition. Alterations in bite and occlusion can affect the hippocampus, suggesting that dental health may have far-reaching implications on neurological health.

Special Considerations: Unique Pain Patterns and Cases

Conditions like Bell's palsy or Ramsay Hunt syndrome arise from complications along these nerve pathways and present unique challenges. Identifying whether pain is due to muscle, joint, or nerve disorders through careful examination, imaging, and sometimes diagnostic interventions is critical. Each patient's presentation requires a tailored approach to effectively alleviate their symptoms.

The Future of FSM in Dentistry

The application of FSM within the dental field, particularly for the diagnosis and treatment of orofacial pain, continues to expand. As our understanding of these complex neural interactions grows, so too does the potential to alleviate suffering from chronic pain syndromes that were previously misunderstood or inadequately treated. By integrating FSM and embracing a holistic view of patient care, we can foresee a more effective, comprehensive approach to managing the multifaceted issue of orofacial pain. As we unlock the intricacies of these conditions, the future of FSM in dentistry indeed looks promising.