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# Current Orofacial Pain: An Updated Data for Physicians, Pharmacists, Nurses, Pathologists, Dentists, Physical Therapists, and Respiratory Specialists.

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## Abstract

*Orofacial pain is a prevalent health issue that significantly impacts patients' quality of life. It encompasses a wide range of conditions, including dental pain, musculoskeletal disorders, and neuropathic pain, each requiring distinct diagnostic and therapeutic approaches. Despite advancements in pain research, managing orofacial pain remains challenging due to its complex etiology and the lack of standardized diagnostic criteria.Aim: This review aims to provide an updated overview of orofacial pain, focusing on its classification, underlying mechanisms, and management strategies. It emphasizes the importance of accurate diagnosis, particularly in differentiating between neuropathic and odontogenic pain, and highlights the roles of various healthcare professionals in managing this condition.The review synthesizes current literature on orofacial pain, including its definitions, classifications, and treatment modalities. It discusses the International Classification of Orofacial Pain (ICOP), pharmacological and non-pharmacological interventions, and the roles of multidisciplinary teams in pain management.Orofacial pain is classified into nociceptive, neuropathic, and nociplastic categories, each requiring tailored treatment approaches. Neuropathic pain, in particular, poses diagnostic challenges due to its subjective nature and lack of definitive criteria. Effective management often involves a combination of pharmacological treatments (e.g., anticonvulsants, antidepressants) and non-pharmacological interventions (e.g., hypnosis, acupuncture, manual therapy). Collaborative care involving dentists, neurologists, nurses, physical therapists, and respiratory specialists is essential for optimal outcomes.Orofacial pain is a multifaceted condition that requires a comprehensive, multidisciplinary approach for effective management. Accurate diagnosis, patient education, and the integration of pharmacological and non-pharmacological therapies are crucial for improving patient outcomes. Future research should focus on refining diagnostic criteria and exploring innovative treatment modalities to address the complexities of orofacial pain.*

**Keywords:** *Orofacial Pain, Neuropathic Pain, Nociceptive Pain, ICOP, Multidisciplinary Care, Pharmacological Treatment, Non-Pharmacological Interventions.*

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## Introduction

Orofacial pain constitutes one of the most prevalent health concerns, significantly impairing the quality of life and daily functioning of affected individuals [1]. Within the broader orofacial region, a substantial proportion of patients report pain predominantly localized to the oral or dental areas. This is largely attributable to the fact that the etiology of orofacial pain is frequently linked to dental pathologies. Consequently, such pain is often classified as odontogenic in origin [2]. Among the most common dental conditions associated with pain are dental caries and tooth decay. If left untreated, even minor dental caries can escalate into more extensive oral health complications, leading to conditions such as pulpitis, which is characterized by inflammation of the dental pulp and represents one of the primary causes of dental and orofacial pain [1,2,3,4,5,6,7,8]. Another prevalent odontogenic pain condition is dentine hypersensitivity, which manifests as a brief, sharp pain triggered by external stimuli and is not attributable to any other organic causes [1,8,9,10]. It is noteworthy that any external stimulus, when applied to exposed dentine or a tooth affected by pulpitis, can elicit a painful response. However, a critical consideration is the unique and intricate nature of the sensory system and innervation within the tooth and the broader orofacial region (Figure 1). Despite the well-documented nature of many dental conditions, the mechanisms underlying the transduction of nociceptive signals remain poorly understood, complicating the development of effective treatment strategies [11,12]. This lack of clarity can result in suboptimal management of oral pain, including undertreatment, overtreatment in cases where intervention may be unnecessary, or inappropriate therapeutic approaches [1]. Furthermore, it is essential to recognize that pathologies affecting the somatosensory nervous system can paradoxically lead not only to functional deficits but also to heightened pain sensitivity and spontaneous pain.

As emphasized by Pigg and colleagues in their recent study, "Misinterpretation of the pain origin can lead to misdiagnosis and to subsequent mismanagement" [13]. This assertion holds broad relevance across the medical field but is particularly significant in dentistry. Inadequately diagnosed or managed pain is among the most frequently reported adverse events in dental practice, as noted by both clinicians and patients [11,14]. In this context, accurately interpreting a patient's signs and symptoms, assigning appropriate significance to these indicators, and ensuring a thorough diagnostic evaluation are paramount. Given the multifactorial origins of orofacial pain, the primary objective of this review is to delineate the key characteristics of general, acute, and chronic orofacial pain, with a particular focus on neuropathic pain and its therapeutic management. Additionally, the authors aim to highlight critical considerations in the management of chronic orofacial pain, emphasizing diagnostic strategies that facilitate the differentiation between neuropathic and neuralgic pain [8]. By doing so, this review seeks to provide a comprehensive framework to aid clinicians in achieving accurate diagnoses and implementing effective treatment plans, thereby improving patient outcomes in the management of orofacial pain.

### *Pain Definitions and Classifications*

Considering the preceding discussion, it is imperative to establish a clear and comprehensive definition of pain before delving into its management. The neurologist George Riddoch, in his seminal works during the early twentieth century, provided a foundational definition of pain, describing it as an experience that "is experienced only intermittently in the life of the healthy, its neural mechanisms lying dormant, but vigilant, ready to be awakened if the tissues of the body are threatened" [15,16]. This early conceptualization frames pain as a protective mechanism, a biological "tool" employed by the organism to safeguard itself against potential harm. According to this perspective, even healthy individuals may encounter pain at various points in their lives, albeit transiently. Consequently, some scholars have characterized pain as a distinct form of sensitivity, akin to a "sixth sense" [16,17,18,19].

The experience of pain has been a constant throughout human history, as evidenced by its depiction in art, literature, and historical records. This enduring presence has fueled scientific inquiry into the nature of pain, leading to significant advancements in its understanding. From the early contributions of Galenus to the pioneering work of Dr. John Bonica, often regarded as the father of pain medicine, the body of knowledge surrounding pain has expanded considerably. A pivotal moment in this evolution occurred in

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1979 when Merskey H. proposed a refined definition of pain, which not only described the sensation but also sought to establish a correlation between pain and its underlying causes [20,21]. According to Merskey, pain is "an unpleasant sensory and emotional experience associated with actual or potential tissue damage or described in terms of such damage." This definition, now widely adopted by the International Association for the Study of Pain (IASP), is significant because it distinguishes between physiological pain, which arises from tissue damage, and pain that persists beyond tissue healing, often influenced by psychological factors [8,22].

*Definition and Classification of Pain*

The sensory system, a critical component of the nervous system, is responsible for detecting and interpreting changes in both internal and external environments. In the context of pain perception, the term *nociception* refers to the complex neural processes through which the central nervous system (CNS) identifies and responds to harmful or potentially damaging stimuli. This process begins with nociceptors, specialized receptors that detect noxious stimuli and transmit signals to CNS. These signals are then converted into electrochemical impulses, which are processed in the brain, particularly in the cortical regions, to produce the conscious experience of pain [11,25,26]. Unlike other sensory modalities, pain perception is not a straightforward, unidirectional process. Instead, it involves intricate interactions among multiple neural pathways, biological systems, and regions of the CNS. Furthermore, this process is influenced by a myriad of internal and external factors, including psychological state, environmental context, and genetic predispositions [27,28,29,30]. Understanding the complexity of pain transmission is crucial for developing effective therapeutic strategies, as it underscores the need for a multifaceted approach to pain management [30,31,32,33].

The IASP categorizes pain into three primary mechanisms: nociceptive pain, neuropathic pain, and nociplastic pain. *Nociceptive pain* arises from identifiable damage to non-neural tissues, such as skin, muscles, or bones, and is mediated by the activation of nociceptors. In contrast, *neuropathic pain* results from direct damage or disease affecting the somatosensory nervous system, implicating the nerves themselves in both the generation and transmission of pain. A more recently recognized category, *nociplastic pain*, refers to pain stemming from altered nociception without clear evidence of tissue damage or neural pathology. This type of pain is thought to arise from maladaptive changes in the nervous system, leading to heightened pain sensitivity despite the absence of identifiable tissue or nerve damage [30]. In the context of orofacial pain, the International Classification of Orofacial Pain (ICOP) introduced a specialized classification system in 2020 to better characterize and diagnose pain in this region [34]. The development of such a classification reflects the growing recognition of the unique challenges associated with orofacial pain and the need for precise diagnostic criteria. Advances in scientific research and diagnostic technologies have facilitated the emergence of tailored treatment protocols, enabling a more personalized approach to pain management. This shift toward precision medicine underscores the importance of accurate pain classification, as it allows clinicians to identify the underlying mechanisms of pain and select the most appropriate interventions.

The classification of orofacial pain is particularly critical given the anatomical and functional complexity of the orofacial region. This area is densely innervated and highly sensitive, making it susceptible to a wide range of pain conditions, including dental pathologies, temporomandibular disorders, and neuropathic pain syndromes. By providing a standardized framework for diagnosis, the ICOP facilitates the differentiation between various types of orofacial pain, such as musculoskeletal, neurovascular, and neuropathic pain, thereby guiding clinicians in their diagnostic and therapeutic decision-making [34]. In summary, the definition and classification of pain are foundational to its effective management. From Riddoch's early conceptualization to the IASP's contemporary definitions, the understanding of pain has evolved significantly, reflecting its multifaceted nature. The classification of pain into nociceptive, neuropathic, and nociplastic categories provides a valuable framework for understanding its underlying mechanisms, while the ICOP offers a specialized system for diagnosing orofacial pain. These advancements underscore the importance of a nuanced and individualized approach to pain management, ensuring that patients receive the most appropriate and effective care. As research continues to unravel the complexities of pain, further refinements in its classification and treatment are likely to emerge, enhancing our ability to alleviate suffering and improve quality of life for those affected by pain.

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*Acute and Chronic Pain*

Acute and chronic pain represent two distinct yet interconnected dimensions of pain, each characterized by unique mechanisms, clinical presentations, and therapeutic implications. As previously discussed, the neural transmission of pain begins with the detection of an external noxious stimulus by specialized receptors, leading to the perception of acute pain [25,26]. Acute pain is typically self-limiting and serves as a protective mechanism, alerting the organism to potential or actual tissue damage. This initial pain stimulus often triggers the release of pro-inflammatory markers by nociceptive neurons, resulting in nociceptive pain with an inflammatory pattern. These markers can amplify the perception of pain by sensitizing local tissues and activating surrounding cells, thereby expanding the pain sensation beyond the original site of injury. This phenomenon, known as peripheral sensitization, contributes to the spread of pain over a larger area than initially affected [25,26]. While acute pain and its associated inflammatory response are usually resolved spontaneously, chronic pain represents a more complex and persistent condition.

Chronic pain, defined as pain lasting for more than three months, affects over 10% of the general adult population and poses significant challenges to both patients and healthcare providers. Unlike acute pain, which functions as a warning signal, chronic pain often loses its protective role and becomes a maladaptive condition that persists despite the absence of ongoing tissue damage [35]. This transition from acute to chronic pain involves a combination of physiological, psychological, and social factors, making it a multifaceted condition that requires a comprehensive approach to management. One of the critical aspects of chronic pain is its profound impact on the emotional and social well-being of patients. Chronic pain is frequently associated with conditions such as depression, anxiety, and reduced quality of life, highlighting the importance of addressing these dimensions in the treatment plan. Furthermore, the management of chronic pain differs significantly from that of acute pain. While acute pain can often be effectively managed with short-term interventions such as analgesics or anti-inflammatory medications, chronic pain necessitates a more holistic and multidisciplinary approach. This may include pharmacological treatments, psychological therapies, physical rehabilitation, and lifestyle modifications tailored to the individual needs of the patient [35,36].

To better understand the complexities of chronic pain, several theoretical models have been developed. Among these, the integrative model has gained prominence for its ability to incorporate multiple perspectives on pain. This model combines elements of the motivation-decision model, which emphasizes the role of goal-directed behavior in pain perception; the fear-avoidance model, which explores how fear of pain can lead to avoidance behaviors and perpetuate pain; the learned helplessness model, which examines the impact of perceived lack of control over pain; and the Bayesian expectation integration model, which considers how prior experiences and expectations shape pain perception [35,37,38]. By integrating these diverse frameworks, the integrative model provides a comprehensive understanding of the biopsychosocial factors that contribute to chronic pain and informs the development of personalized treatment strategies. In summary, acute and chronic pain represent distinct entities with differing underlying mechanisms and clinical implications. Acute pain serves as a protective response to tissue damage and typically resolves spontaneously, while chronic pain persists beyond the expected healing period and is influenced by a complex interplay of physiological, psychological, and social factors. The integrative model offers a valuable framework for understanding chronic pain, emphasizing the need for a multidisciplinary approach to its management. By addressing the emotional, social, and cognitive dimensions of chronic pain, healthcare providers can develop more effective and individualized treatment plans, ultimately improving outcomes for patients living with this debilitating condition.

*Orofacial Pain*

Orofacial pain is characterized as pain that primarily originates from the regions of the face and mouth, encompassing a wide array of structures with intricate anatomical, vascular, and neural complexities [10]. The orofacial region is one of the most anatomically sophisticated areas of the human body, housing a diverse range of structures, including the teeth, gums, jaw, muscles, nerves, and salivary glands, each with

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highly specialized vasculature and innervation [39]. This complexity not only makes the orofacial region susceptible to a variety of pain conditions but also complicates the diagnosis and management of such pain. Among the various types of orofacial pain, dental pain is the most prevalent, often arising from inflammatory conditions such as dental caries, pulpitis, or periodontal disease [10]. However, the orofacial region's heightened sensitivity means that even non-painful external stimuli can trigger pain sensations, further complicating the clinical picture [40,41,42]. The intricate innervation of the orofacial region plays a central role in the perception and localization of pain. This area is densely innervated by branches of the trigeminal nerve, which is responsible for transmitting sensory information from the face and mouth to the brain. Due to the overlapping neural pathways and the convergence of sensory inputs, patients with orofacial pain often struggle to pinpoint the exact location of their pain. This phenomenon, known as referred pain, can lead to diagnostic challenges, as the source of pain may not always correspond to the site where it is perceived. Consequently, many cases of orofacial pain are initially brought to the attention of dentists, even when the underlying cause does not involve structures within the odontostomatognathic system [10,39].

The head and neck regions are among the most common sites for chronic pain conditions, making accurate diagnosis and management of orofacial pain particularly critical [21,43,44]. Chronic orofacial pain can significantly impact a patient's quality of life, affecting their ability to eat, speak, and engage in social interactions. Given the complexity of the region and the potential for pain to arise from a multitude of sources, it is essential to adopt a systematic approach to diagnosis and treatment. This is where the International Classification of Orofacial Pain (ICOP) has emerged as a pivotal tool in clinical practice. The ICOP provides a standardized framework for classifying and diagnosing orofacial pain conditions, enabling clinicians to differentiate between pain of dental origin and pain arising from other structures or systems [13,45]. The ICOP categorizes orofacial pain into several major "families" of disorders, each with distinct diagnostic criteria. These include musculoskeletal pain, neurovascular pain, neuropathic pain, and idiopathic pain, among others. For instance, musculoskeletal pain in the orofacial region often involves conditions such as temporomandibular disorders (TMD), which affect the jaw joint and surrounding muscles. Neurovascular pain, on the other hand, includes conditions like migraines and cluster headaches, which can manifest as facial pain. Neuropathic pain, resulting from damage or dysfunction of the nervous system, may present as trigeminal neuralgia or postherpetic neuralgia. Idiopathic pain refers to pain conditions with no identifiable underlying cause, such as atypical facial pain [45].

While this review does not aim to delve into the specifics of each disorder, it is important to recognize the value of the ICOP in guiding clinicians through the diagnostic process. By providing clear diagnostic criteria and a structured classification system, the ICOP helps ensure that patients receive appropriate and targeted interventions. This is particularly crucial in cases where the pain may not originate from dental structures, as misdiagnosis can lead to unnecessary or ineffective treatments. In summary, orofacial pain is a complex and multifaceted condition that arises from the intricate anatomy and innervation of the face and mouth. Dental pain, often inflammatory in nature, is the most common type of orofacial pain, but the region's sensitivity means that even non-painful stimuli can trigger pain sensations. The overlapping neural pathways and the prevalence of chronic pain conditions in the head and neck further complicate diagnosis and management. The ICOP serves as an invaluable tool in this context, offering a standardized approach to classifying and diagnosing orofacial pain conditions. By facilitating accurate diagnosis and appropriate treatment, the ICOP helps improve outcomes for patients suffering from orofacial pain, ensuring that they receive the care they need to alleviate their symptoms and enhance t

*Differential Diagnosis*

Orofacial pain represents a significant clinical challenge due to the complexity of the anatomical structures involved and the diverse etiologies that can underline pain in this region. The diagnosis and management of musculoskeletal and neuropathic conditions affecting the orofacial system have garnered increasing attention in recent years, as pain remains a major public health issue in modern society. Studies indicate that approximately 10% to 20% of individuals in Western countries experience persistent pain, yet despite advancements in research and diagnostic techniques, improvements in pain outcomes have been modest [30,46,47,48]. This underscores the need for a more nuanced understanding of orofacial pain and the

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development of effective diagnostic and therapeutic strategies. Among the most common causes of orofacial pain are musculoskeletal and neuropathic conditions, which often coexist with or mimic dental pathologies such as dental caries and periodontal diseases. However, unlike dental pain, musculoskeletal and neuropathic pain cannot be resolved through dental interventions alone, necessitating a clear distinction between these conditions during diagnosis [2,49]. Over the years, advancements in diagnostic tools and a deeper understanding of the clinical features of these conditions have improved the ability to differentiate between them. For instance, magnetic resonance imaging (MRI) has become the gold standard for diagnosing temporomandibular joint (TMJ) disorders, as it allows for detailed visualization of soft tissues that are not easily assessed using other radiological methods [2,50]. Similarly, MRI is invaluable in diagnosing neuropathic pain conditions, such as trigeminal neuralgia, which arise from lesions or dysfunction of the peripheral or central nervous system and present with distinct sensory symptoms and signs.

In dental practice, differentiating between odontogenic and non-odontogenic pain is critical, as the diagnostic and therapeutic approaches for these conditions differ significantly. Dental pain, often inflammatory in nature, is a common symptom that can coexist with other pain conditions, further complicating the diagnostic process [2,51,52]. A thorough patient history is essential in this context, as it provides valuable insights into nature and characteristics of the pain. Key aspects to consider include the timing of the pain (onset, duration, and periodicity), its location and radiation (e.g., within specific nerve distributions), the quality and severity of the pain, and factors that alleviate or exacerbate the pain. Additionally, clinicians should assess associated factors, such as the presence of headaches, migraines, chronic widespread pain, or fibromyalgia, as well as the overall impact of pain on the patient's daily life. Genetic and medication history should also be considered, as these factors can influence pain perception and treatment outcomes.

A comprehensive clinical examination is another cornerstone of accurate diagnosis. In addition to evaluating the oral cavity, an extraoral examination of the head and neck region is essential. Visual inspection can reveal color changes, swellings, or skin lesions that may provide clues to the underlying cause of pain [2]. Despite these precautions, differential diagnosis remains a challenging aspect of dental practice, and misdiagnosis is a common pitfall. For example, neuropathic pain conditions such as glossopharyngeal neuralgia share many characteristics with trigeminal neuralgia but differ in their anatomical distribution. Similarly, trigeminal autonomic cephalgias, a group of unilateral episodic pain conditions, can be easily mistaken for trigeminal neuralgia due to overlapping symptoms [53]. Persistent idiopathic facial pain (PIFP), also known as atypical facial pain, is another condition that is frequently misdiagnosed, highlighting the importance of distinguishing between neuropathic and odontogenic pain. The ability to differentiate between these two broad categories of pain—neuropathic and odontogenic—is crucial for guiding appropriate treatment. Neuropathic pain, which arises from nerve lesions or dysfunction, often requires a multidisciplinary approach that may include pharmacological interventions, nerve blocks, or neuromodulation techniques. In contrast, odontogenic pain, which stems from dental or periodontal pathology, typically responds to dental treatments such as fillings, root canal therapy, or extractions. However, the coexistence of these conditions can complicate management, necessitating a collaborative approach involving dentists, neurologists, and pain specialists.

The International Classification of Orofacial Pain (ICOP) has emerged as a valuable tool in this context, providing a standardized framework for diagnosing and classifying orofacial pain conditions. By delineating the clinical features and diagnostic criteria for various pain conditions, the ICOP helps clinicians navigate the complexities of differential diagnosis and develop targeted treatment plans. For example, the ICOP distinguishes between musculoskeletal pain (e.g., TMJ disorders), neurovascular pain (e.g., migraines), neuropathic pain (e.g., trigeminal neuralgia), and idiopathic pain (e.g., PIFP), enabling clinicians to identify the underlying cause of pain more accurately [45]. In conclusion, orofacial pain is a multifaceted condition that requires a thorough and systematic approach to diagnosis and management. The differentiation between musculoskeletal, neuropathic, and odontogenic pain is essential for guiding appropriate treatment and improving patient outcomes. Advances in diagnostic tools, such as MRI, and the development of standardized classification systems, such as the ICOP, have enhanced the ability to diagnose and manage orofacial pain effectively. However, the complexity of the orofacial region and the potential for overlapping

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symptoms underscore the importance of a comprehensive clinical evaluation, including a detailed patient history and a thorough physical examination. By adopting a multidisciplinary approach and leveraging the latest diagnostic and therapeutic advancements, clinicians can better address the challenges of orofacial pain and improve the quality of life for affected individuals.

*Neuropathic Pain*

Neuropathic pain, as defined by the International Association for the Study of Pain (IASP), is pain caused by a lesion or disease of the somatosensory nervous system [16,54,55]. This updated definition represents a significant shift from the previous characterization, which described neuropathic pain as any pain "initiated or caused by a primary lesion, dysfunction, or transitory perturbation in the peripheral or central nervous system." The revised definition emphasizes that neuropathic pain must specifically involve damage or disease affecting the somatosensory system, excluding pain arising from lesions outside this pathway. This refinement is crucial because it underscores the importance of identifying the precise neurological origin of pain for accurate diagnosis and treatment [16,58]. Neuropathic pain is distinct from nociceptive and inflammatory pain, which arises from tissue damage or inflammation, respectively. Nociceptive pain is associated with physiological stimulation of peripheral nerves, transmitted via the trigeminal sensory system, and serves as a protective response to noxious stimuli. Inflammatory pain, on the other hand, results from tissue damage caused by noxious stimuli, leading to local inflammation and the release of inflammatory mediators, which increase the activity of peripheral nociceptors. In contrast, neuropathic pain is characterized by altered nerve structure, resulting from nerve damage or injury that causes peripheral sensitization, ectopic discharges, and glial cell activation. This type of pain manifests as spontaneous pain or pain in response to non-noxious stimuli, often accompanied by abnormal sensations such as dysesthesia and paraesthesia [16,54,55].

Historically, pain resulting from nervous system injuries has been categorized under various terms, such as nerve injury pain, neuralgia, deafferentation pain, neurogenic pain, and central pain. The IASP's current definition consolidates these categories under the umbrella of neuropathic pain, provided the lesion or disease affects the somatosensory system. This distinction is critical because it excludes pain arising from lesions outside the somatosensory pathways, such as motor or autonomic nervous system damage, from being classified as neuropathic [16,58]. In the orofacial region, chronic pain is a common complaint, and a significant proportion of these cases are neuropathic in nature. While the exact prevalence of neuropathic pain in the general population is not precisely known, previous estimates suggest that it affects approximately 1–1.5% of individuals [21]. Neuropathic pain is commonly divided into two forms: peripheral and central neuropathic pain. Peripheral neuropathic pain arises from damage to the peripheral nervous system, while central neuropathic pain results from lesions or diseases affecting the central nervous system. Patients with neuropathic pain often have complex medical histories, including systemic diseases such as multiple sclerosis or syringomyelia. For example, 28% of patients with multiple sclerosis and 75% of those with syringomyelia experience central neuropathic pain [21,59].

The causes of neuropathic pain are diverse and can include vascular compression, radiation, inflammation, trauma, infection, and exposure of the peripheral nervous system to neurotoxins [21,60,61]. Iatrogenic causes, such as improper dental or oral surgery treatments, are also significant contributors to neuropathic pain in the orofacial region. For instance, nerve damage during dental procedures, such as tooth extraction or implant placement, can lead to persistent neuropathic pain. Additionally, conditions such as trigeminal neuralgia, glossopharyngeal neuralgia, and post-herpetic neuralgia are well-documented causes of neuropathic pain in the orofacial area. Trigeminal neuralgia, characterized by sudden, severe, electric-shock-like pain in the distribution of the trigeminal nerve, is one of the most common forms of neuropathic pain in this region. Glossopharyngeal neuralgia, though less common, presents with similar symptoms but involves the glossopharyngeal nerve. Post-herpetic neuralgia, a complication of herpes zoster infection, can also cause chronic neuropathic pain in the orofacial region [21,60,61].

Diagnosing neuropathic pain can be challenging due to the subjective nature of pain and the lack of definitive diagnostic criteria. In some cases, such as post-herpetic neuralgia, painful diabetic neuropathy, and central post-stroke pain, the mechanism of nerve damage is well understood, making diagnosis

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relatively straightforward. However, in other cases, the presentation may be less clear, necessitating a thorough investigation to identify the underlying nerve damage [16]. Pain is inherently subjective, and patients may describe their symptoms in varied ways, making it difficult to establish standardized diagnostic criteria. To address this challenge, clinicians often rely on rating scales and questionnaires to assess and monitor symptoms and treatment efficacy. Commonly used tools include the Visual Analog Scale (VAS), Numeric Rating Scale (NRS), Verbal Rating Scale (VRS), Faces Pain Scale (FPS) for children, EVENDOL (EValuation ENfant DOuLeur) for newborns, and the Premature Infant Pain Profile (PIPP) for premature infants. These tools help quantify pain intensity and track changes over time, providing valuable insights into the patient's condition [62].

In 2008, an evaluation scheme was proposed to classify neuropathic pain into three categories: possible, probable, and definite neuropathic pain. This scheme has since been updated and is widely used in clinical practice. It distinguishes between these categories based on the patient's neurological history, the distribution of pain, and the presence and location of sensory signs, with confirmatory diagnostic tests required for a definitive diagnosis [16,63,64,65]. Possible neuropathic pain is characterized by a relevant neurological lesion or disease and a pain distribution that is neuroanatomically plausible. Probable neuropathic pain includes the additional criterion of sensory signs in the same neuroanatomically plausible distribution on clinical examination. Definite neuropathic pain requires confirmation of a lesion or disease of the somatosensory nervous system through diagnostic tests, such as imaging or nerve conduction studies [16,63,64,65].

Clinically, neuropathic pain can manifest spontaneous pain, which may be intermittent or continuous. Patients often describe the pain as burning, shooting, pricking, pins and needles, squeezing, or freezing. In some cases, spontaneous pain is accompanied by non-painful abnormal sensations, such as dysesthesia (an unpleasant abnormal sensation) or paraesthesia (an abnormal sensation that is not unpleasant). Additionally, many patients experience evoked pain, which occurs in response to touch or cold stimuli. Allodynia, or pain caused by a stimulus that does not normally provoke pain, and hyperalgesia, or increased pain from a stimulus that normally provokes pain, are common findings in patients with neuropathic pain. These symptoms are often associated with sensory loss, further complicating the clinical picture [16,17,66]. The management of neuropathic pain requires a multidisciplinary approach, as it often involves complex interactions between physiological, psychological, and social factors. Pharmacological treatments, such as anticonvulsants, antidepressants, and topical agents, are commonly used to manage neuropathic pain. Non-pharmacological interventions, including cognitive-behavioral therapy, physical therapy, and neuromodulation techniques, may also be beneficial. In some cases, surgical interventions, such as microvascular decompression for trigeminal neuralgia, may be necessary to address the underlying cause of the pain [16,66]. In conclusion, neuropathic pain is a complex and multifaceted condition that arises from damage or disease affecting the somatosensory nervous system. The IASP's updated definition emphasizes the importance of identifying the precise neurological origin of pain for accurate diagnosis and treatment. In the orofacial region, neuropathic pain is a common cause of chronic pain, often resulting from conditions such as trigeminal neuralgia, glossopharyngeal neuralgia, and post-herpetic neuralgia. Diagnosing neuropathic pain can be challenging due to its subjective nature and the lack of definitive diagnostic criteria. However, the use of rating scales, questionnaires, and a structured evaluation scheme can help clinicians classify and manage this condition effectively. A multidisciplinary approach, incorporating pharmacological and non-pharmacological interventions, is essential for improving outcomes and enhancing the quality of life for patients with neuropathic pain.

*Pharmacological Treatment of Peripheral Neuropathic Pain: When and How to Treat?*

The genesis of neuropathic pain is complex and multifaceted, making it challenging to define a universal therapeutic strategy that addresses all forms of this condition. Unlike nociceptive or inflammatory pain, neuropathic pain arises from nerve involvement rather than tissue damage, necessitating a different pharmacological approach. Dentists, often the first point of contact for patients experiencing orofacial pain, must be well-informed about the diagnostic and therapeutic options for neuropathic pain. Early differential diagnosis is critical, and if neuropathic pain is suspected, prompt referral to a specialist is

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recommended. The management of neuropathic pain typically involves medications that are not first-line treatments for other types of pain, reflecting the unique pathophysiology of this condition [67].

For inflammatory pain, such as that caused by dental caries or periodontal disease, anti-inflammatory drugs and pain relievers like paracetamol are commonly used. Similarly, post-surgical pain and temporomandibular joint-associated pain are often managed with anti-inflammatory medications and analgesics. However, neuropathic pain requires a distinct approach, often involving opioids, tricyclic antidepressants (TCAs), serotonin-noradrenaline reuptake inhibitors (SNRIs), and anticonvulsants such as gabapentin and pregabalin. These medications target the underlying nerve dysfunction rather than inflammation or tissue damage [67]. The stepwise management of nociceptive pain provides a useful framework for understanding pain treatment. For mild pain, non-opioid analgesics such as acetaminophen, aspirin, and other non-steroidal anti-inflammatory drugs (NSAIDs) are typically sufficient. Moderate pain may require the addition of weak opioids like tramadol or codeine, often combined with non-opioid adjuvants. Severe pain, on the other hand, necessitates strong opioids such as morphine or oxycodone. However, this approach is not directly applicable to neuropathic pain, which requires medications that modulate nerve activity rather than simply blocking pain signals [67]. The most effective pharmacological treatments for neuropathic pain include TCAs, gabapentin, pregabalin, and SNRIs such as duloxetine and venlafaxine. These drugs are recommended as first-line treatments due to their proven efficacy in modulating nerve-related pain. TCAs, for example, work by inhibiting the reuptake of serotonin and norepinephrine, thereby enhancing the body's natural pain-modulating pathways. Gabapentin and pregabalin, both anticonvulsants, reduce abnormal nerve activity by binding to calcium channels in the nervous system. SNRIs similarly enhance the activity of serotonin and norepinephrine, providing both analgesic and antidepressant effects [16,68].

In addition to these first-line treatments, other medications with weaker recommendations may be considered for specific cases. Capsaicin 8% patches, for instance, can provide localized pain relief by depleting substance P, a neurotransmitter involved in pain signaling. Lidocaine patches offer another localized option, numbing the affected area to reduce pain. Subcutaneous injections of botulinum toxin type A have also shown promise in managing peripheral neuropathic pain, although their use is more limited. Opioids and tramadol, while effective in some cases, are generally not recommended for long-term management due to the risk of dependence and side effects [16,69]. Despite the availability of these pharmacological options, the effectiveness of monotherapy is often limited. Many patients experience only partial relief, and the duration of the therapeutic effect may be insufficient. For this reason, combination therapies are increasingly being explored. Combining different classes of medications, such as an SNRI with an anticonvulsant, can enhance efficacy and provide more comprehensive pain relief. However, the use of combination therapies must be carefully managed to minimize side effects and drug interactions [70].

*Non-Pharmacological Interventions in the Treatment of Orofacial Pain*

Given the limitations of pharmacological treatments, non-pharmacological interventions have gained attention as complementary or alternative approaches to managing orofacial pain. These methods are particularly valuable for patients who do not respond adequately to medications or who experience significant side effects. Non-pharmacological interventions can also be used in conjunction with drug therapies to enhance overall outcomes. One such intervention is hypnosis, which has shown promise in modulating pain perception. Hypnosis works by altering brain activity in key regions involved in pain processing, including the primary and secondary somatosensory cortices, the anterior and mid-cingulate cortices, the insula, and the thalamus. By influencing these areas, hypnosis can reduce the intensity of pain and improve the patient's ability to cope with it. This approach is particularly useful in emergency situations, trauma, or acute inflammatory conditions where traditional drug therapies may be contraindicated or less effective. The dental and maxillofacial fields have shown particularly positive responses to hypnosis, making it a valuable tool for managing orofacial pain [70,71,76,77]. Acupuncture is another non-pharmacological intervention that has been explored for pain management. This traditional Chinese medicine technique involves the insertion of thin needles into specific points on the body to restore balance and promote healing. While the evidence for acupuncture's efficacy is still evolving, some studies suggest that it can provide short-term relief for various types of pain, including orofacial pain. Abdominal acupuncture, a

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relatively new technique, involves inserting needles at specific points in the abdominal wall and has shown promise in treating temporomandibular dysfunction. Although more research is needed to establish definitive guidelines, acupuncture offers a low-risk option for patients seeking alternative treatments [72,73,78].

Manual therapy, including techniques such as massage, mobilization, and manipulation, is another non-pharmacological approach that has gained traction in recent years. This method is particularly effective for managing chronic pain associated with musculoskeletal dysfunctions, such as temporomandibular disorders. Manual therapy works by improving joint mobility, reducing muscle tension, and enhancing blood flow to the affected area. It can also help address underlying biomechanical issues that contribute to pain. For patients with chronic orofacial pain, manual therapy offers a non-invasive and drug-free option that can be tailored to individual needs [74,75]. In conclusion, the management of neuropathic and orofacial pain requires a multifaceted approach that combines pharmacological and non-pharmacological interventions. While medications such as TCAs, SNRIs, and anticonvulsants remain the cornerstone of treatment for neuropathic pain, their limitations highlight the need for complementary therapies. Non-pharmacological interventions, including hypnosis, acupuncture, and manual therapy, offer valuable alternatives or adjuncts to traditional drug treatments. By integrating these approaches, clinicians can provide more comprehensive and personalized care, ultimately improving outcomes for patients with orofacial pain.

*Dentistry Pain: The Real Clinical Practice*

In everyday dental practice, it is not uncommon for patients suffering from orofacial pain to seek treatment from their dentist, often expecting a quick and effective solution. However, many general dentists may not be fully informed about the distinctions between neuralgic and neuropathic pain, leading to a tendency to treat all cases of pain similarly. Typically, the initial approach involves the use of non-steroidal anti-inflammatory drugs (NSAIDs). If these fail to provide relief, more invasive dental treatments such as extractions or root canal therapies are often pursued. This approach is frequently driven by patient expectations, as individuals often insist on immediate action, believing that any intervention will alleviate their discomfort. In many countries where dentistry is predominantly private, there is also a financial incentive for dentists to retain patients, which can lead to the initiation of dental treatments even in the absence of a clear dental pathology. This situation is further complicated when the pain has an iatrogenic origin, resulting from surgical treatments that inadvertently injure a nerve. In such cases, it is crucial to determine the nature of the nerve injury—whether it is neuropraxia, axonotmesis, or neurotmesis—as the treatment and prognosis vary significantly depending on the type of injury. In some instances, referral to a microsurgeon may be necessary to address the nerve damage effectively [79].

*Nerve Injuries and Their Management*

Nerve injuries in the orofacial region can be classified into three main types: neuropraxia, axonotmesis, and neurotmesis. Each type has distinct characteristics, recovery timelines, and treatment approaches.

- Neuropraxia: This is the mildest form of nerve injury, characterized by a functional block in nerve transmission due to compression or stretching. There is no structural damage to the nerve fibers, and recovery typically occurs within a few hours to a maximum of 12 weeks. Treatment usually involves anti-inflammatory drugs, and no surgical intervention is required.

- Axonotmesis: This type of injury involves the interruption of axons while the endoneuronal sheaths remain intact. Axonotmesis is further divided into three levels based on the severity of the injury:

    - **Level 1**: Involves nerve degeneration from the first upstream Ranvier node, with a regeneration rate of approximately 1 mm per day. Recovery can take up to a year, and treatment may include anti-inflammatory drugs.

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- **Level 2**: Involves a partial thickness scar of the endoneurium, requiring more than a year for recovery. Treatment may involve surgical removal of the scar (neurolysis) and suturing of the nerve stumps (neurorrhaphy).

- **Level 3**: Involves a full-thickness scar of the endoneurium, making recovery very difficult. Treatment includes neurolysis and neurorrhaphy.

- Neurotmesis: This is the most severe form of nerve injury, involving the discontinuation of both the nerve sheaths and axons. Functional regeneration is unlikely, and if it occurs, it often leads to the formation of a neuroma. Treatment involves neurolysis and neurorrhaphy, but the prognosis is generally poor [79].

*The Role of SISDO in Supporting Dentists*

Recognizing the challenges faced by general dentists in managing orofacial pain, the Italian Society for the Study of Pain (SISDO) was founded in 2009 with the aim of providing practical support to dental practitioners. SISDO offers a range of resources, including courses, lectures, articles, and a dedicated website, to help dentists make accurate differential diagnoses and understand the clinical aspects of orofacial pain. One of the key publications by SISDO is the book *Clinical, Neurochemical, and Experimental Aspects of Orofacial Pain in Dentistry*, which serves as a comprehensive guide for dentists [79]. The primary goal of SISDO is to ensure that dentists are equipped with the knowledge to recognize when a patient's pain may not be of dental origin. If, after a thorough examination—including X-rays, periodontal probing, and other diagnostic tools—no dental cause for the pain is identified, dentists should be aware that the solution may lie outside their area of expertise. In such cases, SISDO provides a network of consultants, including neurologists and other specialists, who can offer more appropriate diagnostic and therapeutic interventions. This collaborative approach ensures that patients receive the most effective treatment for their condition, whether it is of dental or non-dental origin [79].

*Expanding the Scope of Pain Management*

The expectation is that other countries will adopt similar approaches to support dentists in their daily practice, thereby improving patient outcomes. Dentists should not be expected to independently manage complex neuropathic pain conditions, given the wide array of tools and treatments now available. Recent advancements in pain management have expanded beyond conventional pharmacological approaches to include alternative therapies such as hypnosis, acupuncture, and electromagnetic wave therapy. These non-pharmacological interventions offer additional options for patients who may not respond adequately to traditional treatments or who experience significant side effects from medications [70,71,72,73]. Managing orofacial pain in dental practice requires a nuanced understanding of the different types of pain and their underlying causes. While general dentists are often the first point of contact for patients experiencing orofacial pain, they must be aware of the limitations of their expertise and the importance of accurate differential diagnosis. Organizations like SISDO play a crucial role in providing dentists with the knowledge and resources needed to identify when a patient's pain may require specialist intervention. By fostering collaboration between dentists and other healthcare professionals, and by exploring innovative treatment options, we can ensure that patients receive the most effective and appropriate care for their orofacial pain. This holistic approach not only improves patient outcomes but also enhances the quality of dental practice, ultimately benefiting both patients and practitioners alike.

*Role of Nursing, Physical Therapists, and Respiratory Specialists*

The management of pain, particularly chronic and complex pain conditions, requires a multidisciplinary approach that extends beyond the expertise of a single healthcare professional. Nurses, physical therapists, and respiratory specialists play critical roles in the comprehensive care of patients experiencing pain, including orofacial pain. Each of these professionals brings unique skills and perspectives to the table, contributing to a holistic treatment plan that addresses not only the physical but also the emotional,

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psychological, and functional aspects of pain. Their collaborative efforts are essential in improving patient outcomes, enhancing quality of life, and ensuring that pain management is both effective and sustainable.

*The Role of Nurses in Pain Management*

Nurses are often the first point of contact for patients in healthcare settings, making their role in pain management both pivotal and multifaceted. They are responsible for assessing pain, administering medications, monitoring treatment efficacy, and providing patient education. In the context of orofacial pain, nurses play a crucial role in identifying the type and severity of pain, as well as its impact on the patient's daily life. They use standardized pain assessment tools, such as the Visual Analog Scale (VAS) or Numeric Rating Scale (NRS), to quantify pain intensity and track changes over time. This information is vital for tailoring treatment plans and evaluating their effectiveness. Beyond pain assessment, nurses are instrumental in-patient education. They help patients understand the nature of their pain, the rationale behind prescribed treatments, and the importance of adherence to therapy. For example, in cases of neuropathic orofacial pain, nurses educate patients about the use of medications such as tricyclic antidepressants (TCAs) or anticonvulsants, potential side effects, and the need for regular follow-ups. They also provide guidance on non-pharmacological interventions, such as relaxation techniques, mindfulness, and lifestyle modifications, which can complement medical treatments. Nurses also serve as advocates for patients, ensuring that their pain is taken seriously and addressed promptly. They collaborate closely with other healthcare providers, including dentists, neurologists, and physical therapists, to coordinate care and ensure that treatment plans are aligned with the patient's needs. In cases where pain is chronic or complex, nurses may refer patients to specialized pain management clinics or support groups, providing them with additional resources to cope with their condition.

*The Role of Physical Therapists in Pain Management*

Physical therapists (PTs) are essential in managing pain, particularly when it is related to musculoskeletal dysfunction or nerve injuries. In the context of orofacial pain, PTs play a significant role in addressing conditions such as temporomandibular joint disorders (TMD), myofascial pain, and post-surgical pain. These conditions often involve muscle tension, joint dysfunction, or altered biomechanics, which can exacerbate pain and limit function. Physical therapists use a variety of techniques to alleviate pain, restore mobility, and improve overall function. One of the primary interventions used by PTs is manual therapy, which includes techniques such as joint mobilization, soft tissue mobilization, and myofascial release. These methods help reduce muscle tension, improve joint alignment, and enhance blood flow to the affected area, thereby alleviating pain and promoting healing. For patients with TMD, PTs may also prescribe specific exercises to strengthen the jaw muscles, improve range of motion, and reduce strain on the temporomandibular joint. In addition to manual therapy, physical therapists employ modalities such as ultrasound, transcutaneous electrical nerve stimulation (TENS), and laser therapy to manage pain. These modalities work by modulating nerve activity, reducing inflammation, and promoting tissue repair. For example, TENS units deliver low-voltage electrical currents to the affected area, which can help block pain signals and provide temporary relief. Similarly, low-level laser therapy has been shown to reduce pain and inflammation in patients with orofacial pain conditions. Physical therapists also play a crucial role in patient education and self-management. They teach patients techniques to improve posture, reduce muscle tension, and avoid activities that may exacerbate their pain. For patients with chronic orofacial pain, PTs may develop individualized exercise programs to improve strength, flexibility, and endurance, thereby enhancing overall function and reducing the risk of pain recurrence. By empowering patients to take an active role in their recovery, physical therapists help ensure long-term success in pain management.

*The Role of Respiratory Specialists in Pain Management*

While respiratory specialists are not typically the first professionals that come to mind in the context of pain management, their role is increasingly recognized, particularly in cases where pain is associated with respiratory conditions or systemic diseases. For example, patients with chronic obstructive pulmonary disease (COPD) or sleep apnea may experience orofacial pain due to altered breathing patterns, muscle tension, or nerve compression. Respiratory specialists are trained to identify and address these underlying

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issues, thereby alleviating pain and improving overall health. One of the key contributions of respiratory specialists is the management of sleep-related breathing disorders, such as obstructive sleep apnea (OSA). OSA is often associated with orofacial pain, particularly in the jaw, neck, and head regions, due to the strain placed on these structures during episodes of airway obstruction. Respiratory specialists may prescribe continuous positive airway pressure (CPAP) therapy or oral appliances to maintain airway patency during sleep, thereby reducing pain and improving sleep quality. In some cases, they may also recommend lifestyle modifications, such as weight loss or positional therapy, to address the root cause of the disorder.

Respiratory specialists also play a role in managing pain in patients with systemic conditions that affect both the respiratory and musculoskeletal systems. For example, patients with fibromyalgia or rheumatoid arthritis may experience orofacial pain as part of their broader symptom profile. Respiratory specialists work closely with other healthcare providers to develop a comprehensive treatment plan that addresses both the respiratory and pain-related aspects of these conditions. This may include the use of medications, pulmonary rehabilitation, and breathing exercises to improve lung function and reduce pain. In addition to their clinical role, respiratory specialists contribute to patient education and self-management. They teach patients techniques to improve breathing efficiency, reduce muscle tension, and manage symptoms of respiratory conditions. For patients with chronic pain, these techniques can be particularly beneficial, as they help reduce stress, improve oxygenation, and enhance overall well-being.

*Collaborative Care: Integrating Roles for Optimal Outcomes*

The effective management of orofacial pain requires a collaborative approach that integrates the expertise of nurses, physical therapists, respiratory specialists, and other healthcare providers. Each professional brings a unique perspective and set of skills to the table, contributing to a comprehensive treatment plan that addresses the physical, emotional, and functional aspects of pain. For example, a patient with TMD may benefit from the combined efforts of a physical therapist, who provides manual therapy and exercises, and a nurse, who offers education and support. Similarly, a patient with OSA-related orofacial pain may require the expertise of a respiratory specialist to manage their breathing disorder, in addition to the care provided by a dentist or neurologist. Collaborative care also involves regular communication and coordination among team members to ensure that treatment plans are aligned and that patients receive consistent, high-quality care. This may involve regular case conferences, shared electronic health records, and clear lines of communication to facilitate the exchange of information and ideas. By working together, healthcare providers can identify and address the root causes of pain, tailor interventions to the patient's specific needs, and monitor progress over time. Nurses, physical therapists, and respiratory specialists play indispensable roles in the management of orofacial pain. Their contributions extend beyond the traditional boundaries of their professions, encompassing pain assessment, patient education, therapeutic interventions, and collaborative care. By working together, these professionals help ensure that patients receive holistic, patient-centered care that addresses the physical, emotional, and functional aspects of pain. This multidisciplinary approach not only improves pain outcomes but also enhances the overall quality of life for patients, underscoring the importance of integrating these roles into comprehensive pain management strategies.

## Conclusion

Orofacial pain is a complex and multifaceted condition that significantly impacts patients' quality of life. Its management requires a comprehensive understanding of the underlying mechanisms, accurate diagnosis, and a multidisciplinary approach involving various healthcare professionals. The International Classification of Orofacial Pain (ICOP) has provided a valuable framework for diagnosing and classifying orofacial pain, enabling clinicians to differentiate between musculoskeletal, neurovascular, and neuropathic pain. This classification is particularly important given the anatomical and functional complexity of the orofacial region, which makes it susceptible to a wide range of pain conditions. Neuropathic pain poses significant diagnostic and therapeutic challenges due to its subjective nature and the lack of definitive diagnostic criteria. However, advancements in pharmacological treatments, such as tricyclic antidepressants, anticonvulsants, and serotonin-noradrenaline reuptake inhibitors, have provided effective options for

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managing this condition. Non-pharmacological interventions, including hypnosis, acupuncture, and manual therapy, offer additional tools for pain management, particularly for patients who do not respond adequately to traditional treatments. The roles of nurses, physical therapists, and respiratory specialists are indispensable in the comprehensive management of orofacial pain. Nurses play a crucial role in pain assessment, patient education, and coordination of care, while physical therapists address musculoskeletal dysfunctions through manual therapy and exercise programs. Respiratory specialists contribute by managing pain associated with respiratory conditions, such as sleep apnea, which can exacerbate orofacial pain. Collaborative care is essential for optimizing pain management outcomes. By integrating the expertise of various healthcare professionals, patients receive holistic, patient-centered care that addresses the physical, emotional, and functional aspects of pain. This multidisciplinary approach not only improves pain outcomes but also enhances the overall quality of life for patients. In conclusion, effective management of orofacial pain requires a nuanced understanding of its underlying mechanisms, accurate diagnosis, and a combination of pharmacological and non-pharmacological interventions. Future research should focus on refining diagnostic criteria, exploring innovative treatment modalities, and enhancing collaborative care models to address the complexities of orofacial pain and improve patient outcomes.

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# الألم الفموي الوجهي الحالي: بيانات محدثة للأطباء والصيادلة والممرضين وأخصائي الأمراض والتمريض وأطباء الأسنان وأخصائي العلاج الطبيعي وأخصائي الجهاز التنفسي.

**الملخص:**

**الخلفية :**يُعد الألم الفموي الوجهي مشكلة صحية شائعة تؤثر بشكل كبير على جودة حياة المرضى. يشمل مجموعة واسعة من الحالات، مثل ألم الأسنان، واضطرابات الجهاز العضلي الهيكلي، والألم العصبي، وكل منها يتطلب نهجًا تشخيصيًا وعلاجيًا مختلفًا. على الرغم من التقدم في أبحاث الألم، لا يزال تدبير الألم الفموي الوجهي يمثل تحديًا بسبب أسبابه المتعددة وعدم وجود معايير تشخيصية موحدة.

**الهدف :**يهدف هذا الاستعراض إلى تقديم نظرة محدثة عن الألم الفموي الوجهي، مع التركيز على تصنيفه، وآلياته الأساسية، واستراتيجيات علاجه. يبرز أهمية التشخيص الدقيق، خاصة في التمييز بين الألم العصبي والألم السني المنشأ، ويُسلط الضوء على أدوار مختلف المتخصصين في الرعاية الصحية في التعامل مع هذه الحالة.

**المنهجية :**يستعرض هذا البحث الأدبيات الحالية حول الألم الفموي الوجهي، بما في ذلك تعريفاته وتصنيفاته وطرق علاجه. يناقش التصنيف الدولي للألم الفموي الوجهي (ICOP) والتدخلات الدوائية وغير الدوائية، بالإضافة إلى دور الفرق متعددة التخصصات في تدبير الألم.

**النتائج :**يُصنف الألم الفموي الوجهي إلى ثلاث فئات: الألم النُصبي(nociceptive) ، والألم العصبي(neuropathic) ، والألم النصي البلاستي(nociplastic) ، ويتطلب كل منها استراتيجيات علاجية مخصصة. يمثل الألم العصبي تحديًا تشخيصيًا بسبب طبيعته الذاتية وعدم وجود معايير محددة له. يتطلب التدبير الفعّال غالبًا مزيجًا من العلاجات الدوائية (مثل مضادات الاختلاج ومضادات الاكتئاب) والتدخلات غير الدوائية (مثل التنويم المغناطيسي، والوخز بالإبر، والعلاج اليدوي). يعد التعاون بين أطباء الأسنان وأطباء الأعصاب والممرضين وأخصائي العلاج الطبيعي وأخصائي الجهاز التنفسي ضروريًا لتحقيق أفضل النتائج العلاجية.

**الخاتمة :**يُعد الألم الفموي الوجهي حالة معقدة تتطلب نهجًا شاملاً متعدد التخصصات لتحقيق إدارة فعالة. يُعد التشخيص الدقيق، وتثقيف المرضى، ودمج العلاجات الدوائية وغير الدوائية أمورًا أساسية لتحسين نتائج المرضى. يجب أن تركز الأبحاث المستقبلية على تحسين معايير التشخيص واستكشاف استراتيجيات علاجية مبتكرة لمواجهة تعقيدات الألم الفموي الوجهي.

**الكلمات المفتاحية :**الألم الفموي الوجهي، الألم العصبي، الألم النُصبي، التصنيف الدولي للألم الفموي الوجهي(ICOP) ، الرعاية متعددة التخصصات، العلاج الدوائي، التدخلات غير الدوائية.