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Decoding Dental Pain ...Care to Cure

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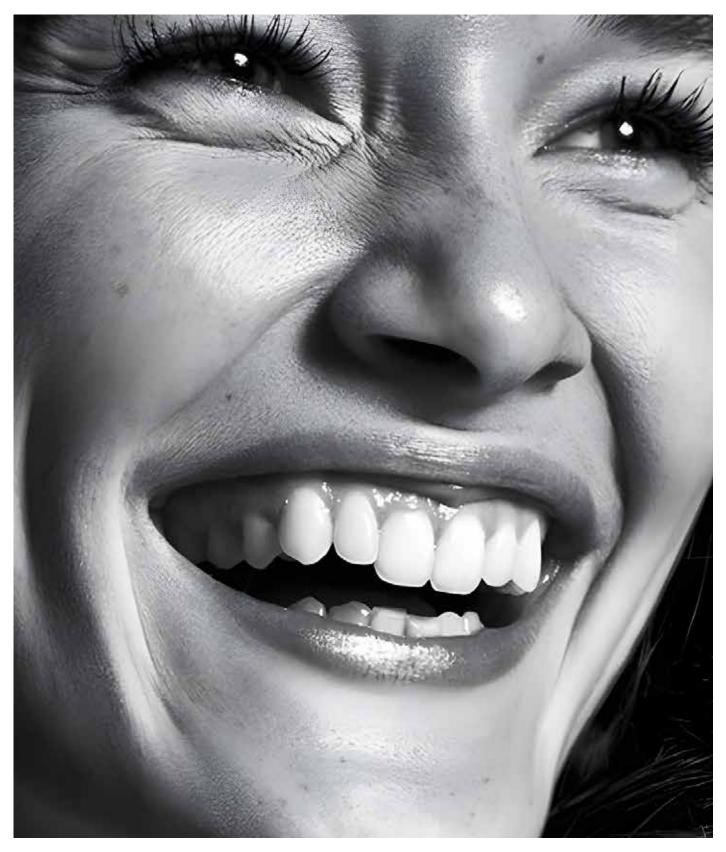
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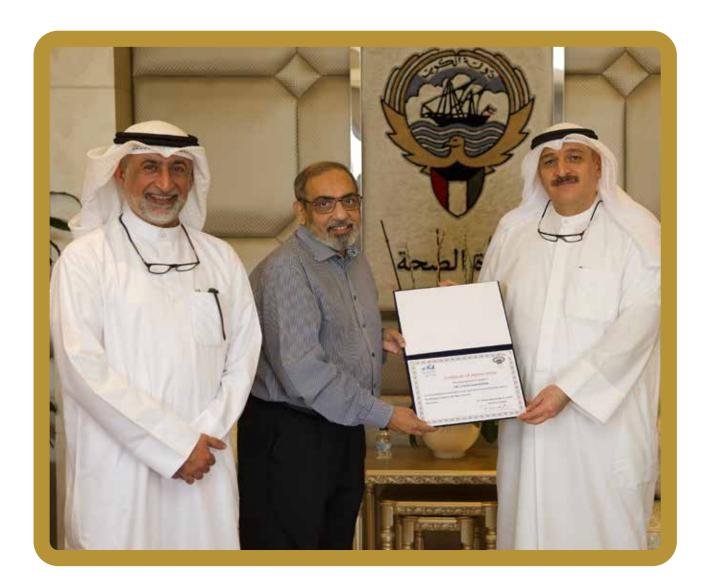
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MESSAGE

I am happy to learn that the Indian Dentists' Alliance in Kuwait (IDAK) is organizing a cultural event "Cinephilia" on 29th November 2024 at 'The Regency Hotel' and also releasing their 9th Edition of their Oral Health Guide titled 'Dental Pain Decoded'.

- 2. I understand that IDAK has been educating members of the Indian community in Kuwait about dental health and oral hygiene, by conducting Dental Camps, Symposiums etc., and by publishing Oral Health Guides and Patient Handbooks.
- 3. I convey my best wishes for the success of the event and also wish IDAK all success in their future endeavors.

(Dr. Adersh Swei

(Dr. Adarsh Swaika)

Kuwait 10 November, 2024

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10th October 2024

The President, Indian Dentists' Alliance in Kuwait.



Greetings and best wishes on the release of 9th **IDAK Oral Health Guide.** Indian Dentists have always played a stellar role in the field of dental care in Kuwait and are much appreciated.

The Oral health Guide titled "Decoding Dental Pain - Care to Cure' will serve as an invaluable tool for improving oral health and spreading awareness on the importance of dental care.

I would like to wish all the members of IDAK the very best in all their future endeavors.

Best Regards

Dr. Ahmad Asad Assistant Undersecretary Dental Administration

Ministry of Health State of Kuwait







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Dear IDAK Council and Members.

Greetings from the Kuwait Dental Association. It gives me great honor and pleasure to note that IDAK is getting ready to release the 9th Oral Health Guide titled 'Decoding Dental Pain - Care to Cure' a comprehensive resource dedicated to promoting better oral health for all. I am sure this guide covers essential topics, including proper dental hygiene, preventive care, and tips for maintaining a healthy smile for life.



Dr. Mohammad Dashti

Kuwait Dental Association is happy to offer our support for all your activities and wish you continued success as your guide reaches and helps more people!

Regards,

Dr. Mohammad Dashti Chairman

Kuwait Dental Association





info@kda.org.kw







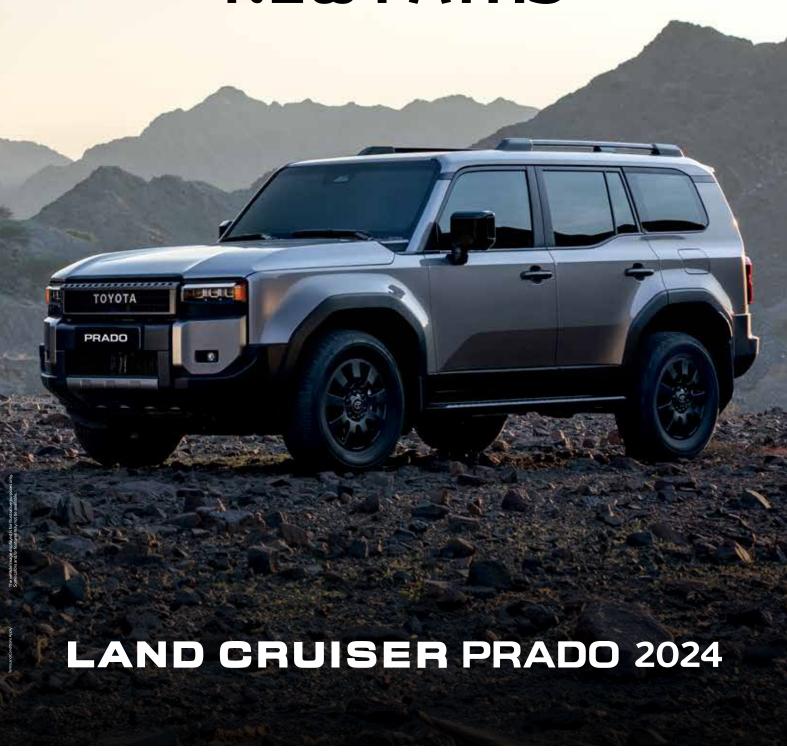


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State Of Kuwait Ministry Of Health Dental Administration



10th October 2024

The President, Indian Dentists' Alliance in Kuwait.



It's always a pleasure to address the Indian Dentists in Kuwait who play an important role in the dental landscape of Kuwait. Congratulations on completing 18 years of **IDAK's** existence and on the release of the 9th **IDAK Oral Health Guide**.

The Oral health Guide titled "Decoding Dental Pain - Care to Cure' will undoubtedly make a lasting impact, empowering people to take better care of their oral health.

I would like to wish all the members of IDAK the very best in all their future endeavors.

Best Regards,

Dr. Sabiha Al Mutawa Director, Dental Administration Ministry of Health State of Kuwait

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جامعة الكويت كلية طب الأسنان مكتب العميد Dean's Office College of Dentistry Kuwait University



15 October 2024

TO : IDAK President and Members

FROM : DR. RASHED AL-AZEMI

Dean.

College of Dentistry, Kuwait University

SUBJECT : Oral Health Guide & Cultural Show - 2024

Dear IDAK President and Members,

I am very glad to note that IDAK is going to release the 9th volume of Oral Health Guide titled 'Decoding Dental Pain - Care to Cure' this year. I am sure it will be of great use to spread awareness about oral health in our community and wish IDAK will continue to take up such initiatives in the future too.

I am also thrilled to know that the IDAK Cultural Show named 'Cinephilia'24' will also be presented along with the release of the guide, and I am looking forward for it.

Best Wishes to all the organizers.

Thank you.

Dean, Faculty Bestister Kuwait University

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President's Message

Dear IDAKians,

IDAK turns 18! What a remarkable journey it has been up to this point from 2006 November 26th. As we enter adulthood, new responsibilities and countless opportunities lie ahead. We have grown each day, and we remain grateful to all the past leaders for nurturing IDAK to this stage. I am confident that our present and future leaders will continue to raise the bar, guiding us to even greater heights.



The 9th volume of the IDAK Oral Health Guide, "Decoding

Dental Pain," is poised to be an invaluable resource, serving as a coffee table guide for the public. Toothache, being one of the most common afflictions, makes this guide highly relevant. My sincere appreciation goes to the editorial team, led by **Dr. Lini Mathew**, for selecting such a vital topic and for their meticulous efforts in ensuring its timely release. I also extend my gratitude to all the authors who contributed thoughtful articles, keeping the needs of the readers in mind.

This year's much awaited "IDAK Cultural Show, Cinephilia", is the result of a grand vision, careful planning, and flawless execution. Words cannot adequately express the appreciation I have for the dedication and passion shown by all involved with Cinephilia. My thanks to the Cultural Committee, led by **Dr. Aysha John**, and the Cinephilia production crew, led by **Mrs. Soumya Pratap**, along with all the participants, for their tireless efforts of many months.

Over the years, IDAK has been fortunate to receive unwavering support from the **Indian Embassy**, the **Ministry of Health**, the **Kuwait Dental Association**, and the **Faculty of Dentistry** at Kuwait University. We are deeply indebted to them for their guidance and support. Additionally, we extend our gratitude to all our sponsors for their generous financial assistance.

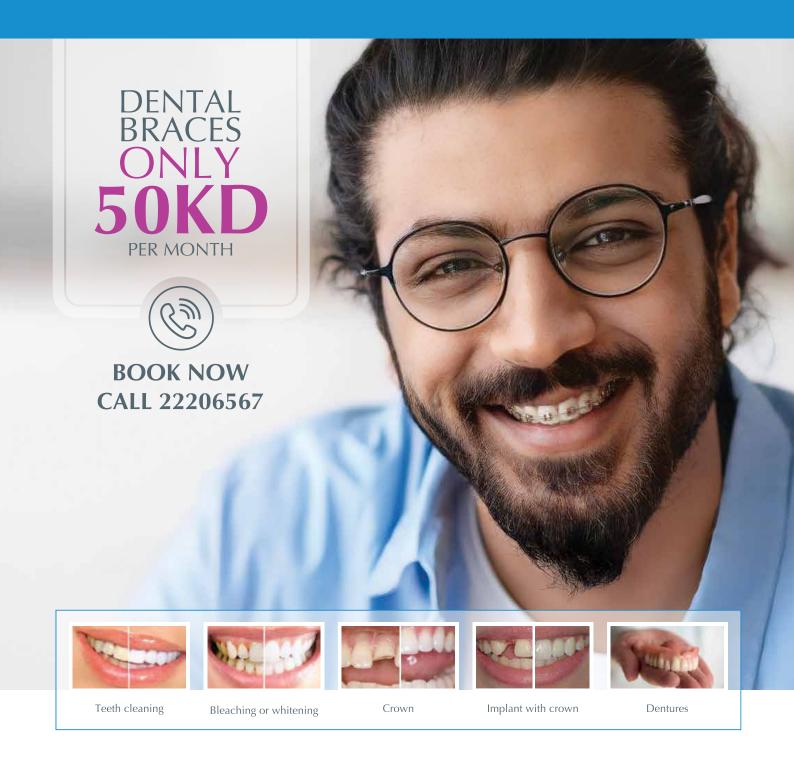
As we embark on the next phase of our journey, on behalf of the Council, I thank all our members, their families, and the entire Executive Committee for their invaluable contributions toward advancing our profession and enriching our lives in this wonderful country we call our second home. In closing, I leave you with the motto of our executive team: 'I Can't, But We Can!'

Best Wishes,

Dr. George P Alex,

President, 2024-25

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General Secretary's Message

Warm greetings to one and all.

18 and counting! It's been a long journey for IDAK. And I have been blessed to be a part of that journey from it's infancy to date. I joined IDAK when it was a year old in 2007. Since then, I've been a part of it in various capacities of the Executive Committees and Executive



Council, and lately donned the mantle of IDAK's General Secretary for the second time. The friendships forged and the camaraderie involved over the years, have all been very fulfilling to say the least. In a foreign country that we have chosen to call our second home and hold very close to our hearts, such activities and interactions help us break the monotony of our routine lives. I must say the journey has helped me grow at a personal level as well.

This time, the biennial edition of the IDAK Oral Health Guide has been compiled diligently and painstakingly by Dr.Lini Mathew and her team. The chosen topic is Dental Pain. It is without doubt one of the basic, most commonly encountered dental problems and when in its most severe form, can even disrupt your daily life. I'm sure this edition of the IDAK Oral Health Guide will be very informative and help all those who go through it, understand the causes, preventive measures and treatment options.

I also must applaud the other members of the Executive Committees and Councils, both present and past, the potent combination of veterans and young blood/newcomers, who bring to the table their various levels of experience and varied talents. They have all so selflessly contributed to the growth of IDAK and helped it grow by leaps and bounds to bring it to its current commendable stature.

With the unwavering and continuous support of the Indian Embassy, the Ministry of Health, Kuwait Dental Association, the Faculty of Dentistry at Kuwait University, Kuwait Institute for Medical Specialization, all our generous sponsors, well-wishers and ofcourse our talented and dedicated members, I'm sure we will go to much greater heights in the years to come.

May God bless all of us.

Jai IDAK & long live Indo-Kuwait friendship!

Dr.Jijan Sam Thomas General Secretary IDAK 2024-25



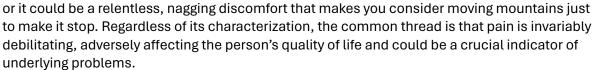




Editor's Note

Welcome to **Decoding Dental Pain**; a souvenir and oral health guide that aims to demystify one of the most perplexing aspects of dental health - PAIN.

Dental pain is a universal experience that manifests in various forms. It can range from a mild, sensitive discomfort that is easily brushed off,



In alignment with the principle that "pain is sometimes inevitable, but suffering is optional," we, at IDAK, are dedicated to alleviating patient anxiety. Through this guide, we aim to illuminate the causes of dental pain and raise awareness about the various dental specialties involved in managing pain in the oral and maxillofacial region. While this book is not a comprehensive guide, it is designed to provide valuable insights and direct readers towards effective pain management strategies. Our goal is to empower the lay person with knowledge, and to support them on their journey to optimal dental care.

While we, IDAKians, are deeply committed to our scientific and community welfare programs, we enthusiastically gather for social and cultural activities as well. This magazine also serves as a souvenir, providing a glimpse into our events held over the past year.

I extend my heartfelt appreciation to the Council for their unwavering support and to the authors, the backbone of this guide, for their insightful perspectives and research that inform and inspire. A special mention to Dr. John Joy whose insights and encouragement as advisor to the editorial committee have been instrumental in shaping the contents and vision of the magazine. A shout-out to my outstanding editorial team, Dr. Payal Sharma, Dr. Joe Daniel, Dr. Mathew George, Dr. Seema Samuel and Dr. Shiraz Usman who meticulously scrutinised, analysed, and deconstructed every detail, while ensuring the timely completion of this book. The dedication and the attention to detail by the team at Al Jazzaf Royal Advertising ensured that our vision was beautifully translated into print.

I also express my profound gratitude to our invaluable sponsors. Your unwavering belief in our vision and your generous contributions have positively impacted Kuwait, a country we proudly call our home away from home.

So, readers, dive into the 9th volume of our souvenir and oral health guide for an informative and entertaining experience. Enjoy exploring the wealth of knowledge and highlights we've gathered for you!

Happy reading!

Dr. Lini Mathew Editor 2024 -2025





GOOD FORME







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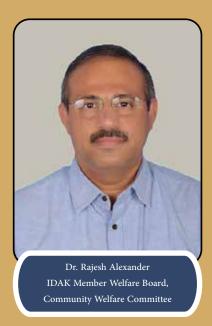
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DENTINAL HYPERSENSITIVITY A TOUGH NUT TO CRACK!!!!!

Dr. Sharon J Thomas MDS (Periodontology)
Work affiliation: Working as Periodontist & Implantologist in Al Muhallab Dental Centre,
Al Riggae.

INTRODUCTION

Dentinal hypersensitivity (DH), a frequent oral health condition, has plagued clinicians and their patients since the beginning of the dental profession.

While some cases are easy to diagnose and treat, others are more mysterious and complex. It's not unusual for affected patients to return to the office, visit after visit, reporting ongoing symptoms that cannot be resolved despite their best efforts¹.

In some of these scenarios, there is no visible radiographic or clinical pathology, which can leave the provider feeling bewildered as to what they should recommend for relief. Some contributing factors have been widely established and recognized, while others are relatively new developments in research.

Different terminologies have been used to describe DH based on the place of occurrence such as **Dentin**, **Dentinal**, **Cervical**, **Root**, **Cemental hypersensitivity** /sensitivity².

DEFINITION

The definition of dentin hypersensitivity is a "short, sharp and transient pain arising from exposed dentin in response to stimuli typically thermal, evaporative, tactile, osmotic or chemical and which cannot be ascribed to any other form of dental defect or disease" according to Holland et al (1997), in an international workshop on the design and conduct of clinical trials for treatments of the condition³.

INCIDENCE

The **incidence** of DH is rising, particularly in **adults**, since they have

- · Retained their dentition throughout life
- · Increasing tooth wear.
- Combined with frequent functional and parafunctional habits⁴.

 The pain experience may be subjective and influenced by emotional status, coping, and illness beliefs.

To fully understand dentin sensitivity, it is important to explore its causes, methods of diagnosis and treatment strategies.

PATHOGENESIS

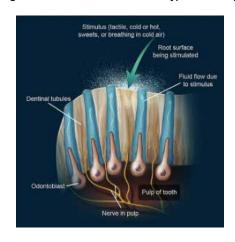
The development of dentin sensitivity is closely linked to the structure of teeth. A tooth is composed of three layers; enamel, dentin and pulp.

Enamel acts as a layer for the tooth; however, when it becomes compromised due to factors like erosion, abrasion or gum recession the underlying dentin gets exposed.

Dentin contains tubules that contain nerve endings which are sensitive to external stimuli. When these tubules are exposed, stimuli like changes in temperature or acidic substances can cause movement within them resulting in stimulation of nerve endings in the pulp and subsequent pain⁵.

PAIN MECHANISM OF DENTAL HYPERSENSITIVITY

Fig. 1: Pain Mechanism of Dentinal Hypersensitivity



Source: Strassler HE, Serio F. Managing Dentin Hypersensitivity.2008;4 (7)

Sensitive dentin arises from the **stimulus-triggered fluid flow** within the dentin tubules, leading to the subsequent **activation of nociceptors** at the



Dentinal Hypersensitivity

border between the pulp and dentin (Figure 1). It is believed that intradental myelinated A- fibers and some A- fibers respond to stimuli that displace the fluid within the dentin tubules, culminating in the distinct, brief, and sharp pain experienced in cases of DH⁶.

CLINICAL MANIFESTATIONS

Pain: Sudden and intense, short lived, extremely unpleasant resembling a shock⁵ that shoots through the tooth or teeth.

Teeth affected: Confined to teeth or surfaces where the **dentin is exposed** (Figure 2).

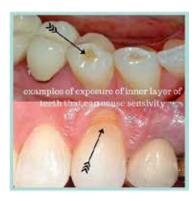


Fig. 2: Teeth affected by Sensitivity

Triggering factors: Changes in temperature, sweet or acidic substances and mechanical triggers⁷.

DIAGNOSIS

To diagnose dentin hypersensitivity, a **thorough clinical evaluation**⁸ is necessary which involves examining the patient's history conducting an examination and performing tests.

Understanding the nature of the pain its triggers and how long it lasts is crucial when considering the patient's history.

During the **examination,** we identify exposed dentin, assess gum recession and evaluate dental conditions that could contribute to hypersensitivity.

Diagnostic tests like using an air/water syringe,⁹ performing tactile or thermal tests with cold stimuli can help confirm if hypersensitivity is present.

Furthermore, **insights from patients** about how dentin hypersensitivity affects their lives are valuable.

MANAGEMENT

The treatment of patients with DH entails a structured series of steps, comprising six key points¹⁰:

- Accurate diagnosis subsequent to recording the patient's dental history and initial clinical examination.
- Identification of etiological and predisposing factors, with particular attention to dietary and brushing habits and their potential impact on erosion and abrasion.
- 3. Differential diagnosis to rule out other conditions presenting similar pain symptoms.
- 4. Therapeutic intervention for any coexisting conditions manifesting symptoms similar to DH
- 5. Removal or mitigation of etiological and predisposing factors, accompanied by guidance on appropriate dietary habits and oral hygiene practices.
- Dispensing patient instructions or implementing office-based treatments in accordance with the patient's requirements.

Managing dentin hypersensitivity focuses on relieving pain and reducing sensitivity while addressing its causes. The available treatments can differ based on the level of sensitivity experienced. Figure 3 describes the various treatment strategies for dentinal hypersensitivity.

Dental professionals play a role in diagnosing the condition and tailoring management strategies that cater to each patient's needs. Whether it's through modifications, using desensitizing toothpaste or even in office treatments like application and dentin bonding agents, the ultimate goal is to alleviate pain and enhance the overall quality of life for those affected by dentin hypersensitivity. Figure 4 describes the various at-home and in-office therapeutic measures for dentinal hypersensitivity.

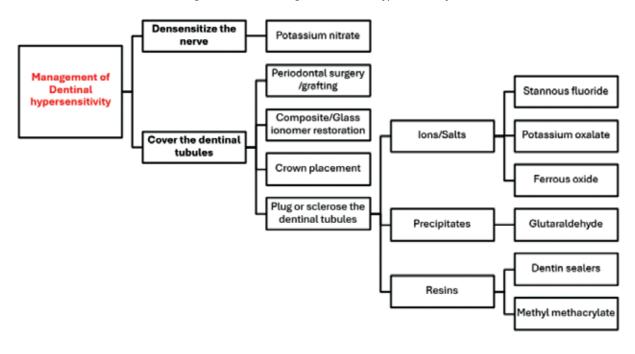


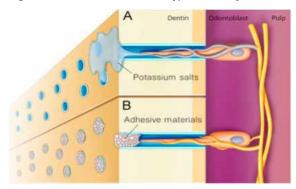
Fig. 3: Treatment strategies for Dentinal Hypersensitivity

Fig. 4: Therapeutic measures for Dentinal Hypersensitivity

Therapeutic approach	Active agents	Form
At home	Potassium salts Sodium chloride Hydroxyapatite Bioactive glass	Toothpaste- mouthwash
	Casein Phosphopeptide-Amorphous Calcium Phosphate	Toothpaste-mousse
	Stannous fluoride	Toothpaste-gel
	Potassium salts	Gel
In office	Low level laser irradiation	Irradiation
	Sodium fluoride	Varnish or gel
	Silver diamine fluoride	Solution
	Bioactive glass powder	Air abrasion
	Portland cement	Paste

Dentinal Hypersensitivity

Fig 5: Mode of Action of dentinal hypersensitivity treatment



Source: Kim J, Park. Dentin hypersensitivity and emerging concepts for treatments. Journal of Oral Biosciences. 2017;59
(4): 211-217

CONCLUSION

Patients should be informed of all the possible steps that may be necessary to eliminate their hypersensitivity.

The first step should be to identify and eliminate the cause.

The next is to rectify the recession or seal the exposed dentinal tubules from the oral environment.

If the patient is thoroughly informed of all the possible steps then they become a **partner in the treatment process**, identifying for the dentist when they want to proceed to the next step.

This minimizes frustration on the patient's part and facilitates the process by which the dentist solves the problem.

REFERENCES

- 1. Johnson R H, Zulgar-Nairn B J, Koval J J. The effectiveness of an electroionising toothbrush in the control of dentinal hypersensitivity. *J Periodontal* 1982; 53: 353~359.
- 2. Acldy M. Dentine Hypersensitivity: definition, prevalence, distribution and aetiology. Orcharclson R (eds);2000:pp 239~248...
- 3. Holland G R, Narhi M N, Acldy M, et al. Guidelines for the design and conduct of clinical trials on dentine hypersensitivity. J Clin Periodontol 1997;24: 808~8 1 3.
- 4. Favaro L, Soares PV, Cunha J. Prevalence of dentin hypersensitivity: Systematic review and meta-analysis. J Dent. 2019;81:1-6.
- 5. Liu XX, Tenenbaum HC, Wilder RS, Quock R, Hewlett ER, Ren YF. Pathogenesis, diagnosis and management of dentin hypersensitivity: an evidence-based overview for dental practitioners. BMC Oral Health. 2020;20(1):220
- Matthews, B.; Andrew, D.; Wanachantararak, S. Biology of the Dental Pulp with Special Reference to Its Vasculature and Innervation. London, UK, 2000; pp. 39–51.
- Ajcharanukul O, Chidchuangchai W, Charoenlarp P, Vongsavan N, Matthews B. Sensory transduction in human teeth with inflamed pulps. J Dent Res. 2011;90(5):678-82.
- 8. Gillam, D.G.; Orchardson, R.; Närhi, M.V.O.; Kontturi-Närhi, V. Present and future methods for the evaluation of pain associated with dentine hypersensitivity. In Tooth Wear and Sensitivity; Addy, M., Embery, G., Edgar, W.M., Orchardson, R., Eds.; Martin Dunitz Ltd.: London, UK, 2000; pp. 283–497.
- 9. Porto, I.C.; Andrade, A.K.; Montes, M.A. Diagnosis and treatment of dentinal hypersensitivity. J. Oral Sci; 2009: 51, 323-332.
- 10. Canadian Advisory Board on Dentin Hypersensitivity. Consensus-based recommendations for the diagnosis and management of dentin hypersensitivity. J. Can. Dent. Assoc. 2003; 69: 221–226.



'KNOW THE ROPES' ABOUT TOOTH PAIN IN CHILDREN

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INTRODUCTION

Pain is defined by the International Association of the Study of Pain as "an unpleasant sensory and emotional experience associated with, or resembling that associated with, actual or potential tissue damage".

The 6 aspects of pain

- 1. Pain is always a personal experience.
- 2. Pain is different from nociception (pain processing).
- 3. Pain is learned through life experiences.
- 4. A person's pain report should be respected.
- 5. Pain can have adverse effects on function and well-being.
- 6. Verbal description is one of the several behaviors used to express pain.¹
- 7. Tooth ache is common source of orofacial pain in children and an estimated **95%** of orofacial pain results from tooth related causes. ¹

EPIDEMIOLOGY

Let's just go through some alarming epidemiological figures.

The WHO has reported **60-90%** of school age children have dental cavities and the reported **tooth** ache and **tooth infection** is more than **25%** and **12%** respectively.²

A recent report by ADA 2022, suggests that **1 out of 4 infants and children** up to the age of **5 years** have a tooth ache at some point and that number jumps to **one-half** of all children by the time they reach **early mixed dentition stage**. The quality of life of children greatly affected in terms which sometimes not all parents or caregivers are even aware about. (Fig.1)

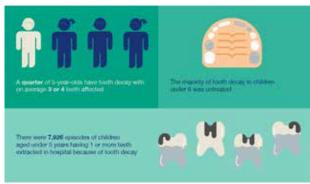


Fig.1

UNDERSTANDING DENTAL PAIN

There are 3 types of tooth pain

- a). Sensitivity pain: due to wearing away of tooth enamel, occurs when tooth is exposed to hot, cold, sweet or acidic stimuli.
- b). Dental cavity pain: pain from tooth cavity arises when bacteria in the mouth produce acids and expose the underlying layer with nerve endings.
- c). Gum related pain: condition that causes inflammation, infection, swellings and tooth mobility surrounding the tooth structure for eg; gingivitis, periodontitis.

CAUSES OF OROFACIAL PAIN IN CHILDREN

 a). Dental caries / tooth cavities - most common chronic cause of dental pain. (Fig.2)

Fig. 2



b). **Tooth eruption / teething** - when both baby and permanent teeth just emerge from the gums. (Fig.3)



Fig. 3

c). **Loose teeth** – loose baby teeth can be painful at times. (Fig.4)



Fig.4

 d). Aggressive brushing – faulty brushing may cause bruises on gums and excessive pressure while brushing can cause tooth sensitivity. (Fig.5)



Fig. 5

e). Bruxism/Clenching or grinding teeth - daytime or nighttime habitual bruxism can cause aching jaws and tooth sensitivity. (Fig.6)



Fig.6

f). **Trauma / injury -** broken or chipped teeth due to a hit, or dental trauma while playing a sport or game, accidents etc. (Fig.7)



Fia.7

g). **Gum diseases -** due to poor oral hygiene and often seen in children with special healthcare needs. (Fig.8)



Fig. 8

h). **Tooth abscess** - untreated tooth cavities lead to an infection in the tooth and / or gums. The pain in such cases can get unbearable. (Fig.9)



Fig.9

 i). Pathologic jaw lesions as seen in oral infections for example viral lesions like herpes etc., ulcers like in recurrent aphthous ulcers or ulcers due to trauma. (Fig.10)



Fig.10

- j). Joint disorders TMJ disorders. (Fig.11)
- k). Neuralgia This occurs when the nerves are injured or swollen, by an accident or significant cavity that forms in the pulp of the tooth.(Fig.12)





Fig.11

Fig.12

HOW DOES DENTAL PAIN AFFECT THE QUALITY OF LIFE OF CHILD AND PARENT?

Dental pain adversely affects, **physical, mental** and **social** functions.

The major difficulties are as follows:

- Inability to chew, remarkably affecting the eating routine and loss of appetite leading to nutritional deficiency.
- · Disturbed sleep.
- Inability to concentrate in school and frequent absenteeism in school.
- Decreased self-respect leading to low social relations.
- Delayed speech.
- Intense psychological reflections due to unesthetic decayed teeth lead to indifference in behaviors like remaining silent, avoids smiling, and a sense of anger.

 Parents' quality of life is inevitably affected and most parents develop anger, guilt, financial stress, loss of time/absence at work. (Fig.13)



Fig.13

We as parents and caregivers need to be well informed how to manage and more so to prevent these disturbing situations.²⁻⁴

IDENTIFYING THE CAUSE OF DENTAL PAIN IN CHILDREN

Pain is inherently a **subjective phenomenon** and hence the 'gold standard' for pain assessment in both children and adults is **verbal reporting**.

However, it is difficult to obtain reliable description of pain from infants, very young children and individuals with intellectual disability and often rely on the report of parents or caregivers.¹⁻²

The following are some of the challenges we are likely to face:

- 1. Underdeveloped mental abilities.
- 2. Inability of distinguish pain from fear and anxiety.
- 3. Added challenge of not being able to verbalize the quality of pain.
- 4. Inability to localize the pain most of the time the child points to the wrong specific tooth that is causing the pain in the region.

TIPS TO IDENTIFY PAIN IN VERY YOUNG CHILDREN AND SPECIAL HEALTHCARE NEEDS CHILDREN

- 1. **Eating less** tooth decay or even a cracked tooth can get painful or sensitive when exposed to hot or cold food. We need to take a look at our child's teeth and gums for discoloration, an abscess or swelling in the gums. In case of oral infections, the lesions may be painful affecting the eating patterns in children.
- 2. **Waking frequently** deep tooth decays can aggravate pain in the night which may cause sleepless nights for children.
- 3. Excessive salivation and putting the hands inside mouth more often these are usually seen in special healthcare needs children when there is a painful decayed tooth.
- 4. **Chewing constantly** toddlers seen chewing anything in sight, unusually cranky, drooling may have their new teeth erupting.
- Rubbing relentlessly rubbing near jaw lines, near the ears, sometimes on the cheeks could be an indicator that some teeth are bothering them.
- Sinus symptoms children with sinusitis
 may also experience tooth sensitivity and
 discomfort on a molar tooth. These symptoms
 will usually be accompanied with a runny nose
 or post nasal drip etc.

The most important step is to take your child to a dentist as soon as you notice any of these signs or symptoms.

HOW TO PREVENT DENTAL PAIN IN CHILDREN?

- Regular dental visits from the eruption of the very first baby tooth in the mouth of the child is the most effective way to prevent any dental problem.
- Good oral hygiene practices age-appropriate brushing techniques and assisted or monitored

- brushing until the age of 8 years can go a long way to avoid dental pain from decays.
- 3. **Balanced diet** nutrient dense, lean or low-fat foods like unsalted nuts, lean meat, eggs, fruits, vegetables etc. along with moderation and caution over sugary snacks or beverages, such as chocolates, cakes, biscuits, sugary breakfast cereals or aerated drinks etc.



CONCLUSION

Dental pain can be among the worst pains that human beings can endure, so do not take it lightly when your young ones presents signs of a tooth ache, as they struggle to express the intensity of the pain. The quality of life of both the child and parents can be adversely affected in many dimensions if these situations are not attended to on time. Regular routine visits to your dentist can be the best bet for prevention as well as management of dental pain.

REFERENCES

- 1. American Academy of Pediatric Dentistry. Pain managementininfants, children, adolescents, and individuals with special health care needs. The Reference Manual of Pediatric Dentistry. Chicago, Ill.: American Academy of Pediatric Dentistry;2023:434-42.
- 2. Dogan MS, Aras A, Atas O, Karaali AE, Gunay A, Akbaba HM, et al. Effects of toothache on the educational and social status of children. MakaraJHealthRes.2019;23.
- 3. Alaki S.M., Bakry N.S. Dental pain in children with intellectual disabilities: Caregivers' perspective. Int. J. Dent. 2012.
- 4. Kalantary M, Hashemipour MA, Ahmadbeighi M, Shafie L, Nassab ARG. Impacts of toothache on daily activities of children aged 5 to 9 years in Kerman, Iran. Pesqui Bras Odontopediatria Clin Integr. 2020;20:e4918.
- $5. \ \ Picture\ sources: very well health.com\ , CHILD\ DENTAL\ HEALTH: UK\ health\ security\ agency\ ,\ parenting\ for\ brain.com$

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Salmiya block-10, Yousef Al bader street Near biriyani pot restaurant Opposite boulevard park

65545330



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Salmiya block-10, Issa Al Qatami street, Building no-38, 2nd floor. Opposite to wahed Kabab restaurant



TOOTHACHE AND SORE GUMS IN PREGNANCY

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Pregnancy comes with a multitude of new experiences, emotions, uncomfortable side effects such as morning sickness, inflammation, hormone changes and some experience unbearable toothache. In this article, we discuss the causes of toothache and sore gums, effects on pregnancy and unborn child, safety of dental treatments and preventive aspects.

The most common causes of dental pain in pregnancy are from toothache due to cavities/broken tooth or wisdom tooth pain, bleeding and/swollen gums, gum/teeth sensitivity, dry mouth and sore mouth (ulcers).

Dental pain during pregnancy are mainly due to hormonal imbalance, Increased blood flow and diet.

Inadequate oral hygiene leads to "dental plaque" (Bacterial slimy layer on teeth) buildup. The body's response to fighting off plaque can change during pregnancy due to the hormonal changes and low immunity. The plaque increases the risk of cavities and gum diseases.

Hormonal **changes** (mainly estrogen progesterone levels in blood) and dental plaque build-ups are known to increase the risk of "Pregnancy gingivitis" (causing gums to swell, bleed, and trap food leading to increased irritation, dull pain to your gums) affecting 75% of the pregnant women (Fig.1). Some develop "Pregnancy tumors", on the gums caused by too much plaque. They are noncancerous growths during the second trimester (4th to 6th month) that cause tenderness and pain, making it difficult to eat or drink. The good news is that these tumors usually disappear after giving birth. Sometimes, when the tumor interferes with eating, your dentist may consider removal under local anesthesia (numbing agents) in second or third trimester (7th to 9th month) (Fig.2).



Fig.1 - Pregnancy Gingivitis



Fig.2 - Pregnancy Tumor

Depending on the severity of pregnancy gingivitis, one may develop "Periodontitis". This is a serious gum infection that destroys the bones supporting your teeth, leading to tooth loss. Usually, patients have itchy, sore gums with dull, gnawing pain.



Dental erosion is caused by vomiting **(morning sickness)** in pregnancy that occurs due to hormonal changes. The stomach acids erode the tooth enamel, thereby lead to **teeth sensitivity pain.**

"Xerostomia" or lack of saliva/spit in the mouth occurs due to hormonal changes in pregnancy. Spit helps to prevent the bacterial plaque buildup on teeth. Insufficient quantity of spit increases the risk of cavities, inflamed gums and mouth sores presenting with symptoms of burning pain.



Increased blood flow in the gums during pregnancy, increases gum pain (continuous dull pain), as well as gum irritability, swelling, gingivitis and wisdom teeth pain (jaw pain or sharp pain from the tooth).

Dietary changes during pregnancy also lead to toothaches especially when the pregnant women have strong cravings for sugary drinks and foods that lead to cavities. If left untreated, this could cause throbbing/sharp pain from the tooth cavities and further lead to tooth/gum infection such as an abscess (infected swelling) with bad taste in the mouth, with/without high fever, and face or jaw swelling.¹



Bacteria from the infected gums enter the blood stream and can impact the mother and the unborn baby. Untreated dental infections like **Gingivitis/Periodontitis** have ill effects on pregnancy and unborn child such as "pre-term birth" and "low birth weight babies" Fig.3. There is a strong association between untreated oral infection and "pre-eclampsia" (a condition with high blood pressure, high protein levels in urine). which could be fatal to the mother and child. Hence, expecting mothers shouldn't skimp on dental health during pregnancy.²

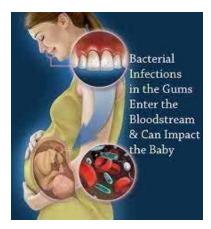


Fig.3

Source: lifemedicalcenterjlt.wordpress.com dental considerations in pregnancy

SAFETY OF DENTAL TREATMENTS IN PREGNANCY

Pregnancy and dental work questions are common for expecting moms. Preventive dental work while pregnant is essential to avoid oral infections. The below table provides the information about the most common dental treatment related queries by expecting mothers.

Scaling (Professional dental cleaning)



Preventive dental cleanings and annual exams during pregnancy are not only safe but are recommended.

X-Rays



Unnecessary x-rays are discouraged for pregnant women. However, if there is a requirement to have an x-ray during pregnancy, the risk to your unborn baby is considered minimal, since the womb is shielded by a lead apron. So, if you develop a dental condition that requires an x-ray, it is safe and not having one poses a risk to your health.³

Fillings

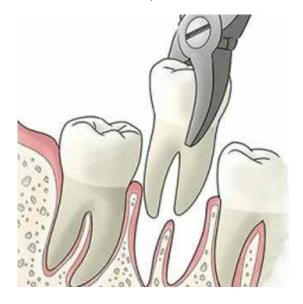


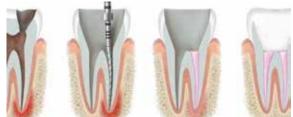


According to the American College of Obstetricians and the American Dental Association, getting cavities filled during pregnancy is entirely safe and recommended. Silver fillings can contain mercury, which could potentially pose a very small risk to the

baby, while tooth/white colour fillings (composites) are safe effective mode of treatment for cavities. Regardless, waiting to get a cavity filled after pregnancy will pose the highest amount of risk to you and your baby's health^{4,5}

Tooth Extraction and Root Canal Treatment (Tooth nerve removal treatment)





A necessary tooth extraction or wisdom teeth extractions or root canal treatment can be performed during the **second trimester** of pregnancy.

Shorter stress-free appointments and avoiding certain patient positions on dental chair, such as crossing the legs and/or seated in a reclined position for a longer time, could reduce pressure on the fetus, thereby making the appointment more comfortable for the pregnant mother.

Dental Anaesthetics (Numbing agents)

Local numbing agents, such as **novocaine or lidocaine** used for tooth removal (extraction) or nerve treatment (root canal treatment) are safe and better than those numbing medications delivered through veins (intravenous) or inhaled products (such as laughing gas /conscious sedation- which could pose a risk of abortion/miscarriage or birth defects.



Often a drug called **"epinephrine"** is present in the local numbing agents to prolong the numbing effect. Women who are given epinephrine run a higher risk of some minor birth defects. Hence, numbing agents without epinephrine is safe to use in pregnancy^{6,7}

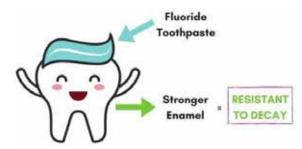
Pain Medications and Antibiotics



Non-steroidal pain medications such as **ibuprofen** and **aspirin** are avoided in pregnancy. **Acetaminophen** (Tylenol/ Panadol) is considered to be safe through most of the pregnancy. Stronger pain medications such as narcotics **(codeine)** are not recommended for long term use.

If you have an infection, your dentist may prescribe an antibiotic. Unless you are allergic to them, antibiotics such as penicillin/amoxicillin (Augmentin®), cephalosporin families, erythromycin, clindamycin and metronidazole (Flagyl®) are safe in pregnancy. However, tetracycline should be avoided since it can affect the teeth and bones of the fetus causing birth defects.8

Fluoride



It is used as a prevention measure for cavities. It is not known whether supplemental fluoride poses any risk to the fetus, and there is conflicting evidence whether taking fluoride supplements while pregnant will actually reduce the number of cavities your child develops later in life. The levels of fluoride found in city water supplies are probably safe for your baby and sufficient for preventing cavities.⁹

PREVENTION OF ORAL PROBLEMS

Practice good oral hygiene



It is highly recommended to brush your teeth twice daily (every 12 hours) using a soft bristled tooth brush and toothpaste that contains fluoride as it provides an extra barrier of protection against cavities.

Also make sure to floss at least once a day to remove food debris in between teeth.

Salt and warm water rinse

Gargling with salt water helps prevent inflammation and works to heal your gums in case of gingivitis and reduces swelling and gum sensitivity pain.

Other mouth rinses

Use fluoride or an antimicrobial mouthwash to prevent the plaque buildup and gingivitis. For morning sickness and vomiting, it is advised to rinse with a diluted solution of 1 cup water and 1 teaspoon of baking soda to neutralize the effect of gastric acids on the teeth enamel.

Managing teeth sensitivity



Toothpastes for managing teeth sensitivity features active ingredients such as stannous fluoride or potassium nitrate that are clinically proven to protect teeth from painful sensitivity.

Avoid sensitivity triggering foods such as ice cream, cold beverages etc.

Healthy diet & habits



It is important to eat a diet rich in balanced whole foods such as fruits, vegetables, cereal, milk, dairy products, meat, fish and eggs that are rich for A, C, D vitamins, calcium and phosphorus.

Sugary foods should be avoided as much as possible, especially between meals.

Increase calcium intake as it helps to counter the acids in your mouth that may cause decay.

Avoid smoking and alcohol in pregnancy as it causes oral dryness, leading to gum infections and cancer.

Drink plenty of water to stay hydrated.

Visit your Dentist



Make sure to keep up with your regular dental checkups. Also, take care of any oral issues as they arise to prevent their severity from escalating.

CONCLUSION

Teeth and gums are affected by pregnancy just like other parts of the body. Oral health could affect the overall health of the mother and the unborn baby. Hence, it is important to maintain good oral hygiene for a healthier pregnancy and a healthy baby.

REFERENCES

- 1. Yenen and Ataçağ. Oral care in pregnancy. J Turk Ger Gynecol Assoc 2019; 20: 264-8.
- 2. Corbella S et al. Adverse pregnancy outcomes and periodontitis: A systematic review and meta-analysis exploring potential association. Quintessence Int. 2016 Mar;47(3):193-204.
- 3. https://www.iaea.org/resources/rpop/health professionals/dentistry/pregnant-women.
- 4. Hujoel et al. Mercury Exposure from Dental Filling Placement during Pregnancy and Low Birth Weight Risk. Am J Epidemiol 2005;161:734–740.
- 5. Berge et al. Polymer-based dental filling materials placed during pregnancy and risk tothe foetus. BMC Oral Health (2018) 18:144.
- 6. Ana Carolina Figueiredo Pereira Cherobin, Glaysson Tassara Tavares. Safety of local anesthetics- Review. An Bras Dermatol. 2020;95(1):82-90.
- 7. Ji Min Lee, Teo Jeon Shin. Use of local anesthetics for dental treatment during pregnancy; safety for parturient- Review. J Dent Anesth Pain Med 2017;17(2):81-90.
- 8. Kurien et al. Management of Pregnant Patient in Dentistry. Journal of International Oral Health. Jan-Feb 2013; 5(1):88-97.
- 9. Vitale et al. Dental management in pregnancy: recent trends Clin. Exp. Obstet. Gynecol. ISSN: 0390-6663 XLIII, n. 5, 2016 doi: 10.12891/ceog3237.2016.

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سعادة CuLu **PAPPINESS** LOYALTY REWARD

















UNDERSTANDING OROFACIAL PAIN: A GUIDE TO ORAL MUCOSA PAIN

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INTRODUCTION

Orofacial pain, particularly oral mucosa pain, is a prevalent yet often misunderstood condition that can have profound effects on an individual's quality of life. It encompasses a wide range of conditions that affect the soft tissues within the oral cavity, leading to discomfort, sensitivity, and sometimes debilitating pain. Understanding the various aspects of orofacial pain, including its causes, types, assessment, diagnosis, and treatment modalities, is crucial for both patients and healthcare professionals.

This guide will cover the definition, etiology, types, assessment, diagnosis, and treatment modalities of oral mucosa pain, including recent research, innovations, and the challenges involved in managing this complex condition.

DEFINITION

Oral mucosa pain refers to pain or discomfort originating from the soft tissues lining the mouth, including the lips, cheeks, tongue, floor of the mouth, and palate. This pain can range from mild to severe and may be acute or chronic, significantly affecting daily functions such as eating, speaking, and swallowing.

ETIOLOGY

The etiology of oral mucosa pain is multifactorial, encompassing a variety of causes:

Traumatic Injuries: Cuts, burns, abrasions from accidental bites, sharp food particles, or dental procedures (Fig.1A).

Inflammatory Conditions: Oral ulcers, gingivitis, periodontitis (Fig.1B).

Infections: Bacterial, viral (e.g., herpes simplex), or fungal (e.g., candidiasis).

Neurological Disorders: Trigeminal neuralgia¹, neuropathic pain.

Systemic Conditions: Autoimmune diseases (e.g., lupus, Sjögren's syndrome, Pemphigus Vulgaris, Lichen planus), nutritional deficiencies (e.g., vitamin B12 deficiency), hormonal imbalances.



Fig.1A-Traumatic Ulcer



Fig.1B-Geographic tongue

TYPES OF PAIN

Oral mucosa pain can be categorized based on its characteristics and underlying causes (Table 1).

TABLE 1: TYPES OF PAIN

Type of Pain	Characteristics	Examples
Acute Pain	Sudden onset, associated with tissue injury, inflammation, or infection.	Cuts, burns, oral ulcers.
Chronic Pain ²	Persistent, lasting beyond normal healing time, often linked to systemic conditions or neuropathic disorders.	Chronic ulcers, systemic diseases (e.g. lupus).
Neuropathic Pain ^{3,5}	Arising from nerve dysfunction or damage, characterized by sharp, shooting, or burning sensations.	Trigeminal neuralgia, post- herpetic neuralgia.
Referred Pain	Pain perceived in a different location from its source.	Pain from dental issues felt in the gums or cheeks.

ASSESSMENT AND DIAGNOSIS⁴

Accurate assessment and diagnosis are crucial for effective management. The diagnostic process involves:

Clinical Examination: Visual inspection, palpation, assessment of dental occlusion.

Patient History: Detailed history of symptoms, onset, duration, and associated factors.

Imaging Studies: Dental X-rays, intraoral cameras.

Diagnostic Tests: Biopsies, microbial cultures.

TABLE 2: DIAGNOSTIC TOOLS FOR ORAL MUCOSA PAIN

Diagnostic Tool	Purpose
Clinical Examination	Identifies visible lesions and abnormalities.
Patient History	Provides context and potential causative factors.
Imaging Studies	Detects underlying structural issues.
Diagnostic Tests	Confirms infections or specific conditions.

TREATMENT MODALITIES

The treatment of oral mucosa pain is tailored to its underlying cause, severity, and the patient's overall health. Common treatment options include:

Conservative Approaches: Topical analgesics, oral rinses, systemic medications.

Non-Pharmacological Interventions: Stress reduction techniques, dietary modifications,

oral hygiene measures.

Pharmacological Treatments: Anticonvulsants, antidepressants, opioid analgesics for

neuropathic or severe pain.

Emerging Therapies: Nerve blocks, botulinum toxin injections, low-level laser therapy.



RECENT RESEARCH AND INNOVATIONS

Advancements in research have provided deeper insights into the mechanisms of oral mucosa pain and led to the development of novel treatments.

Recent studies have focused on:

Neuroinflammation and Peripheral Sensitization: Understanding these processes can help identify new therapeutic targets.

Genetic Factors: Identifying genetic predispositions to certain types of orofacial pain.

Innovative Treatments: Gene therapy, stem cell transplantation, targeted drug delivery systems.

TABLE 3: EMERGING THERAPIES FOR ORAL MUCOSA PAIN

Therapy	Description	Potential Benefits
Nerve Blocks	Injection to block pain signals from specific nerves.	Immediate and targeted pain relief.
Botulinum Toxin Injections	Reduces muscle spasticity and pain intargeted areas.	Long-lasting pain reduction.
Low-Level Laser Therapy	Uses low-level lasers to reduce inflammation and promote healing.	Non-invasive with minimal side effects.
Gene Therapy	Alters genetic expression to reduce pain.	Potential for personalized treatment.
Stem Cell Transplantation	Uses stem cells to repair damaged tissues.	Promising regenerative potential.

CHALLENGES

Managing oral mucosa pain presents several challenges:

- Complex Diagnosis: Requires a multidisciplinary approach involving various specialists.
- Access to Care: Limited availability of specialized care in certain regions.
- **Treatment Side Effects:** Risks associated with certain medications, highlighting the need for safer alternatives.
- Patient Compliance: Ensuring patients adhere to treatment plans, especially for chronic conditions.

CONCLUSION AND SUMMARY

Oral mucosa pain is a multifaceted condition requiring a comprehensive understanding for effective management. By addressing its etiology, accurately diagnosing the condition, and utilizing appropriate treatment modalities, healthcare professionals can significantly improve patient outcomes. Ongoing research and innovation offer hope for more effective and personalized treatments in the future. By overcoming existing challenges, we can enhance the quality of life for individuals suffering from oral mucosa pain.



Oral Mucosa Pain

REFERENCES

- 1. Zakrzewska, J. M., & McMillan, R. (2011). Trigeminal neuralgia: the diagnosis and management of this debilitating orofacial pain. Postgraduate Medical Journal, 87(1028), 653-658.
- 2. Renton, T., & Durham, J. (2008). Oral surgery: part 2. Chronic orofacial pain. British Dental Journal, 204(8), 455-459.
- 3. Klasser, G. D., & Epstein, J. B. (2009). Diagnosis and management of orofacial pain and dysfunction. Dental Clinics of North America, 53(3), 515-528.
- 4. Benoliel, R., & Eliav, E. (2008). Chronic orofacial pain. Current Pain and Headache Reports, 12(1), 22-28.
- 5. Cruccu, G., & Truini, A. (2009). Refractory trigeminal neuralgia: current and emerging treatment options. Drugs, 69(8), 933-940.



PAIN FROM CARIES AND DENTAL TRAUMA

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PAIN FROM CARIES AND DENTAL TRAUMA

Toothache, also known as dental pain or tooth pain, is pain in the teeth or their supporting structures, caused by dental diseases or pain referred to the teeth by non-dental diseases.

PAIN FROM CARIES

Decayed tooth areas with formation of tiny holes are referred to as cavities. These must be treated as early as possible. Cavities can progress further (Figure 1), extending into the pulp of the tooth, leading to more pain in the tooth¹.



Fig.1
Source: Dental Cavities Medically reviewed by Drugs.com

The pulp becomes swollen and irritated from the bacteria in the cavity and as there is no place for the swelling to expand inside of the tooth, it starts to compress the nerve, causing pain.²

One can experience different types of dental pain like dull pain, throbbing pain, sharp pain, and pain from sensitive teeth.

At different stages of tooth decay, based on the extent and the longevity of tooth decay, the pain perception varies.

PAIN FROM TRAUMA

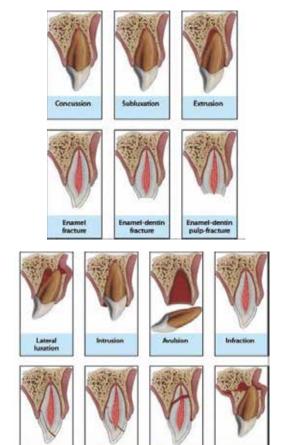
Tooth pain can also occur from trauma to the teeth or surrounding structures. These are called traumatic dental injuries and can be of different types (Figure 2).

Traumatic dental injuries (TDIs) are caused by sudden impact to the teeth generated by falls, fights, sports-related injuries, and or traffic accidents.

Trauma or injury to the dentition and supporting tissues may elicit pain immediately, shortly after, or within a few days.

Pain is a necessary response that dictates protective behavior of the injured tissue during the healing process.

Fig.2 Types of Dental traumatic injuries.



(Source: Dental trauma and tooth fracture: wow dental clinic by Dr.Ankitha Chintha)



SYMPTOMS

A: Cavites

A mild-to-moderate cavity symptoms may include:

Discoloration of the teeth, such as yellow, white, or brown spots.

- Tooth sensitivity feels like a stinging or sharp pain, while drinking cold or hot drinks.
- Occasional toothaches that go away with pain medication.
- Sensitivity on one side of the mouth, especially when chewing hard food.

When a cavity grows very large or causes a tooth abscess, then the symptoms may include¹:

- Intense pain that may affect just a single tooth.
- A vague but unrelenting dull ache.
- Pain that ranges from throbbing and stinging to pounding or burning.
- Swelling in the gums or face.
- Nausea, fever.
- Pain in the jaw, ears, or gums.

Sometimes, an abscessed tooth stops hurting for a period of time when the infection kills the nerve or the pulp of the tooth. However, a person may still have other symptoms, such as swelling, and the pain may return if the infection reaches the gums or bone¹.

B: Traumatic Dental Injuries⁴

(Example of a Dental emergency)



Fig.3
Source: traumatic-dental-injuries-emergency-assessment-and-

Some Traumatic dental injuries can be emergencies (Fig.3), and may require immediate treatment, however they are of different types, and the symptoms and their management depend on the type of injury you have (Fig.3A).

These may include:

- · Toothache.
- · Discolored tooth.
- Mouth pain and bleeding from mouth.
- · Swelling.
- · Difficulty in opening your mouth.
- Change in your regular bite pattern.
- · Loosening of tooth.

 $\label{lem:Fig.3A.} \textbf{Symptoms and Management of Dental traumatic injuries.}$

Type of trauma	Definition	Clinical features	Management	Definitive dental management
Enamel infraction*	Incomplete fracture limited to the enamel structure of the crown without a loss of tooth structure	Typically asymptomatic; minor enamel fractures may be visualised	No management required	Aesthetic management of infraction lines may be required in the setting of staining
Uncomplicated crown fracture, enamel or enamel-dentine fracture	Fracture limited to either the enamel or enamel and dentine of the crown, with a subsequent loss of tooth structure; no pulpal exposure	Visible loss of tooth structure with absence of any pulpal exposure; typically asymptomatic with no tooth mobility	Radiography to rule out loss of the fragment into the surrounding soft tissue; appropriate localisation of the fragment and referral to a dental practitioner for aesthetic restoration	Aesthetic restoration of enamel and dentine defect with pulpal therapy as indicated
Complicated crown fracture, enamel-dentine-pulp fracture*	Fracture extending through the enamel and dentine of the crown with concurrent pulpal exposure and a loss of tooth structure	Visible loss of tooth structure with pulpal exposure; no tooth mobility; pulpal exposure is typically associated with increased sensitivity to stimuli	Radiography to rule out loss of the fragment into the surrounding soft tissue; appropriate localisation of the fragment and referral to a dental practitioner for pulpal and restorative therapy; application of a calcium hydroxide paste to the exposed pulp if a dental trauma kit is available	Pulpal therapy and subsequent restorative therapy
Crown root fracture*	Fracture extending through the enamel, dentine and root cementum, with or without pulpal involvement	Fracture line typically extends below the gingival margin, with the coronal fragment typically retained; coronal segment is mobile relative to the root segment; tooth is typically tender	Stabilisation and splinting of the coronal segment until referral to a dental practitioner	Pulpal therapy as indicated, and restorative reconstruction of the defect associated with a possible loss of the fragment
Root fracture*	Fracture of the tooth limited to the dentine, pulp and cementum of the root structure of the tooth	Coronal segment is often mobile or displaced with tenderness on examination; gingival bleeding may be noted	Repositioning of the displaced coronal segment, ideally with radiographical confirmation of the position, with stabilisation and splinting of the tooth; often requires intra-oral radiography for a definitive diagnosis	Prolonged stabilisation, and pulpal therapy of the coronal segment as indicated
Alveolar bone fracture	Fracture of the supportive alveolar bone around the tooth and possibly adjacent teeth	Visible bone deformity of the alveolar bone, bone segment mobility with possible movement of the associated dentition displaced dentition associated with the alveolar bone segment, associated gingival lacerations	Repositioning of the bone segment and associated dentition with suturing of the associated soft tissue lacerations; stabilisation of the dentition with a splint until referral to a dental professional	Prolonged stabilisation, and pulpal therapy of the coronal segment as indicated, with placement of a definitive splint

Source: Managing dental trauma in regular practice; Jake A. Campbell, Weber Huang

Type of trauma	Definition	Clinical features	Management	Definitive dental management
Concussions	Symptomatic presentation following trauma without clinical tooth damage or movement from the anatomical position	Tender to percussion, without mobility or displacement in the socket	No treatment required	Ongoing monitoring with no treatment required
Subjuxation*	Symptomatic presentation including tenderness and mobility following trauma without clinical tooth damage or movement from the anatomical position	Tender to examination with associated mobility, without displacement in the socket	Splinting for patient comfort until referral to a dental professional	Ongoing monitoring with short-term splinting for patient comfort
Extrusive luxation	Extrusive displacement of the tooth from its socket	Appearance of elongation of the suspected tooth relative to the adjacent teeth, with associated mobility	Repositioning of the tooth into the correct anatomical position within its socket; stabilisation and splinting	Ongoing monitoring with short-term splinting for patient comfort, with associated pulpal therapy
Lateral luxation	Lateral displacement of the tooth from its socket	Tooth is positioned laterally towards the palate or the buccal or labial tissue; typically associated with fracture of the alveolar bone and subsequent trapping of the tooth, yielding limited tooth mobility	Repositioning of the tooth and alveolar bone into the correct anatomical position; appropriate stabilisation and splinting	Ongoing monitoring with short-term splinting for patient comfort with associated pulpal therapy
Intrusive luxation®	intrusive displacement of the tooth in its socket	Appearance of shortening of the suspected tooth relative to the adjacent teeth, with immobility	Intrusive luxation <3 mm requires no therapy, with greater intrusive luxation to be managed by a dental professional via orthodontic or surgical means	Pulpal therapy following orthodontic or surgical repositioning with splinting completed
Avulsion ^{6,9}	Complete displacement of the tooth from its anatomical socket	Absence of the tooth in its socket, with bleeding or haemostasis likely visible in the socket; associated alveolar bone fracture is possible	Anatomical replantation of the tooth into its socket ideally <60 min after avulsion, with limited direct contact with the tooth root surface, followed by splintling; if the tooth surface is soiled, place under running cold water for 10 seconds without agitation; if providing telehealth advice, recommend replantation immediately to minimise time out of the socket; if tooth storage is needed before replantation, use milk, patient saliva or suitable commercial storage agents (e.g. Save-a-tooth), avoiding storage in water; prescribe prophylactic antibiotics (e.g. amoxicillin) after replantation	Pulpal therapy following replantation with splinting

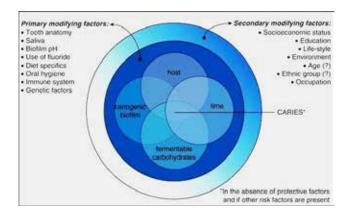
Source: Managing dental trauma in regular practice; Jake A. Campbell, Weber Huang

ETIOLOGY

A: Causes Of Tooth Decay3

- 1. Poor oral hygiene.
- 2. Cavities are formed by plaque, a sticky film of germs that forms on our teeth when we don't brush and floss regularly.
- 3. Sugar and carbohydrate rich diets.
- 4. Oral bacteria use sugars and starch from our food, to make acids that erode at our tooth enamel.
- 5. Lack of Fluoride. Fluoride is a crucial element for avoiding cavities and strengthening our teeth
- 6. Frequent snacking. Especially on sugars and acidic foods does not give enough time for our teeth to recover from acidic attacks.

Fig.4 - Risk factors for caries



Source: Pocket dentistry - Dental Caries, Etiology, Clinical Characteristics, Risk Assessment, and Management

B: Causes Of Trauma Related Dental Pain⁴

- Sports related injuries: Maximum dental injuries occur mainly while playing sports, particularly contact sports.
- 2. Vehicular Accidents.
- 3. Falls.
- 4. Baby walkers.
- 5. Other causes include physical altercations, like fighting or domestic abuse.

Dental Trauma Risk Factors⁴

Fig. 5



Source :Soccer & Tooth Injuries | Advanced Family Dentistry, Reston

- 1. Playing contact sports. (Fig.5)
- 2. Having an exessive overjet (when your upper teeth stick out over your lower teeth).
- 3. In case you have extensive tooth decay (cavities).
- 4. If you have, lip and tongue piercings.
- 5. Dental injures are more common among children and adolescents.

COMPLICATIONS

A: Cavities

Complications of having cavities may include²

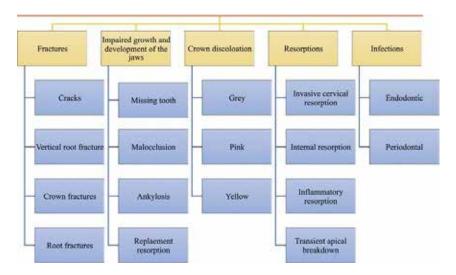
- Pain
- Abscess A bacterial infection that causes a pocket of pus to form in a tooth.
- Swelling or pus around a tooth.
- Damage or broken teeth.
- · Chewing problems.
- Tooth loss, which may lead to positioning shift of other teeth.

When cavities and decay become serious, you may have.

- · Pain that makes it hard to live your daily life.
- Weight loss or nutrition problems because it's painful or difficult to eat or chew.



B: Traumatic Dental Injuries; Complications - Fig.6



MANAGEMENT

A: Cavities

For immediate relief from pain due to cavities - Fig.7



Source: How to Manage Your Cavity Pain by Shawn Watson

Treatment of tooth decay depends on how advanced the decay is (Fig.8).

For early-stage tooth decay, your dentist will talk to you about the amount of sugar in your diet and the times you eat. They may apply a fluoride gel, varnish or paste to the area. Fluoride helps to protect teeth by strengthening the enamel, making teeth more resistant to the acids from plaque that can cause tooth decay.

Your dentist may discuss a filling or crown with you. This involves removing the dental decay, offering local anesthetic to numb the tooth and filling the hole.

If tooth decay has spread to the pulp (the center of the tooth, containing blood and nerves) - this may be removed in a procedure known as root canal treatment.

Cavity location	Symptoms	Management
Caries in enamel	No symptoms	Filling or crowns
Caries in dentin	Sensitivity, sharp, shooting type pain	Filling or crown
Caries in pulp	Continuous pain	Root canal treatment and crown
Caries extending deeply up to the root surface	Continuous pain and swelling	Extraction



Fig. 8



If the tooth is so badly damaged that it can't be restored - it may need to be removed. Your dentist may be able to replace the tooth with a partial denture, bridge or implant.

B: Traumatic Dental Injuries

The common dental trauma management includes-

- · Dental fillings.
- Re-stabilization (Splinting of traumatic areas and teeth).
- · Replantation.
- · Root canal therapy.
- Extraction.
- Tooth replacement.

PREVENTION

A: Cavities

To help prevent toothaches-2

- Brush your teeth twice a day with fluoride toothpaste.
- Floss your teeth at least twice a day.
- Rinse with a nonalcoholic mouthwash and clean your tongue and get dental check-ups and cleanings twice a year, or as often as recommended by your dentist.

- Reduce your intake of sugary foods and beverages.
- Hydrate and eat healthy food. Drinking plenty
 of water throughout the day cleanses the
 mouth. Avoid food high in sugar to prevent
 cavities and tooth decay.
- Go to the dentist at least twice a year. Regular visits to the dentist ensure your teeth are in good condition. Your dentist checks your teeth and gums for any potential problems and treats them.

B: Dental traumatic injuries

- Wear a mouth guard. (Fig.9).
- · Wear a night guard.
- Wear a special helmet.
- · Avoid eating hard foods or chewing on
- hard objects.
- Take safety measures at home.



Fig.9

Source: Prevention of Sports-related Dental Injuries in Children by Kimiko Yamaguchi-Ueda

SUMMARY

Toothache from cavities or traumatic injuries can be intense but they are treatable.

Although you can try with few home remedies which might provide you relief for some time, it is advisable to have a dental checkup by a professional dentist.

A dentist can treat the pain by addressing to the underlying cause of the pain.

Avoiding any kind of dental pain can undermine overall health.



Caries and Dental Trauma

REFERENCES

- 1. Cavity pain: Everything you need to know. Medically reviewed by Christine Frank, DDS. Zawn Villines on March 5, 2020
- 2. Cavities and tooth decay: symptoms and causes. Mayo clinic .org
- 3. Cavities (Tooth Decay): Symptoms, Causes & Treatment. Cleveland clinic .org
- 4. Dental trauma: types, symptoms and treatment. Cleveland clinic.org
- 5. Dental Injuries. Medical Author: Donna S. Bautista, DDS Medically Reviewed on 6/2/2023.





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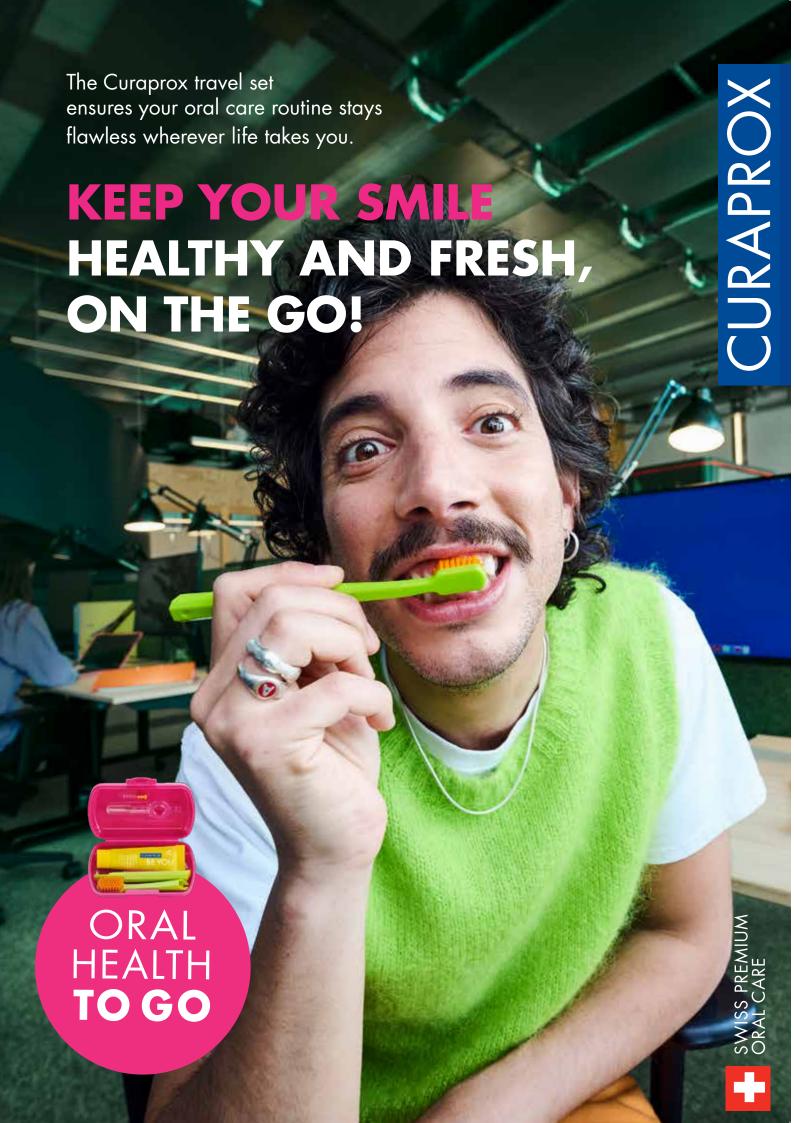
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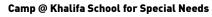
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Life Skills Hackathon

IDAK in the Press & Media - 2023

SPORTS

Football fever meets annual athletic triumphs

From kick-off to photo finish: Dual delight of IDAK-KDD's Sports Championship



IDAK delivers a perfect smile with international cricket victory

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USC beats Louisville 42-28

Dr. Parvathy wins Women of the Match trophy

Panthers beat Mustangs in IDAK-KDD tournament







SSSO Kuwait, IDAK and IDF conduct medical screening camp in Salmiya





IDAK in the Press & Media - 2024

SPORTS

ARAB TIMES, WEDNESDAY, MARCH 13, 2024

15

Dr. Eldho George heads sports committee

IDAK inaugurates IDAK-KDD Sports Championship 2024-'25 with throwball and volleyball



Participants pose for a group photo before the inauguration of the sports championship

What's On

NAME OF REPORT ASSESSMENT ASSESSMENT TO ADD

liew council outlines upcoming events for the next two years

IDAK conducts art & craft exhibition along with meet & greet 2024



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Photos from the event

IDAK inaugurates scientific activities with study club

IDAK hosts 'Basic Life Hackathon' empowering children with essential skills

KUWAT CITY. Again 20: The Budian Dennish, Allancia in Kraisa (DAK), recently specthosised as engaging attainment. But Base Life than Later and the Company of the thanks about 10 years sid with recent life skills. The event, organism by the Chilman's committee under the tankings of Co. Ayaka Jaho, garnessed withousement from participation, pursons and organisms falls. Inoquanting the MacAnhori.

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The event witnessed active parts

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mat and Dr. Antilla Georgephon. In a gentine of appenciation, Cultural Committee Co-Clair Dr. Pasted Mount extended function thanks to all participants, passets and

EDAK sodiunteers Dr Schauth Rad dy, Dr. Sadhar Karten, Dr. Jysshy Kartakaner, Dr. Sempa Muttern at Mrs. Region Thomas whose some features study the seyest a retended any seasons. He aint sharehal Mong Rypes and Al Malla Tarbungs Compuny for their francial support in

The Basic Lefe Hackarbon' stand on a tenteriors to EDAK's compete stand to martering the holicity shreet

'IDAK' successfully hosts 21st Scientific Study Club

KUWAIT CITY, Sept 24: The Indian Dentists' Alliance in Kuwait (IDAK), in collaboration with the Kuwait Dential Association (KDA), successfully hosted the 21st Scientific Study Club on Friday at the Dasman Ballroom, Radisson Blu Hotel. The event, tited "DENTOPEDIA – Decoding Multi-faceted Dentistry," served as a vital platform for exploring the latest advancements in dentistry and oral healthcare. Over 200 dentists practicing in Kuwait attended the event which was accredited with 5 CME credits by Kuwait Institute of Medical Specialization (KIMS).

The program commenced with a welcome address by Dr. Jagan Baskaradoss, Chair of the Scientific Committee, who introduced the speakers and highlighted the growing interest in IDAK's study club among dental professionals in Kuwait.

The 'Keynote Address' was delivered by Dr. Hessa AlBader, Pedodontist at Farwaniya Dental Center, Ministry of Health, Dr. AlBader discussed the management of dental trauma in children, providing an insightful overview of current practices and innovations in identifying and treating trauma

in young patients.

A 'Distinguished Lecture' was presented by Dr. Kawther Ali from the College of Dentistry, Kuwait University, who covered 'Digital Workflow in Dentistry,' Dr. Ali highlited the latest technology in prosthetic dentistry, including the use of artificial intelligence to enhance patient care and dental practice efficiency.

to enhance patient care and dental practice efficiency.

The IDAK Lecture Series featured
three prominent speakers. Dr. Inamdar Saquib Ahmed, Endodontist at
the Kuwait National Guards Specialized Dental Center, discussed the use
of lasers in managing chronic periapical lesions, showcasing successful cases from his practice. Dr. Jacob
Lonappan, an Orthodomist from Adan
Dental Center, focused on the use of
extra-oral devices to treat patients
with irregular occlusion, presenting
cases tracked over five years. Dr. Ranjitha R S, Oral Surgeon at Smile Inn
Dental Center, Sharu, stood out with
her presentation on the use of Botox in
facial esthetics and dental procedures,
which was especially well-received by
the attendees.



IDAK Study Club



Scientific Activities - 2023



IDAK Stays Updated

4th IDAK International Scientific Symposium





Scientific Activities - 2023



IDAK Members' Congress







Scientific Activities - 2024

1st Study Club - Aesthetic Kaleidoscope





2nd Study Club - Dentopedia













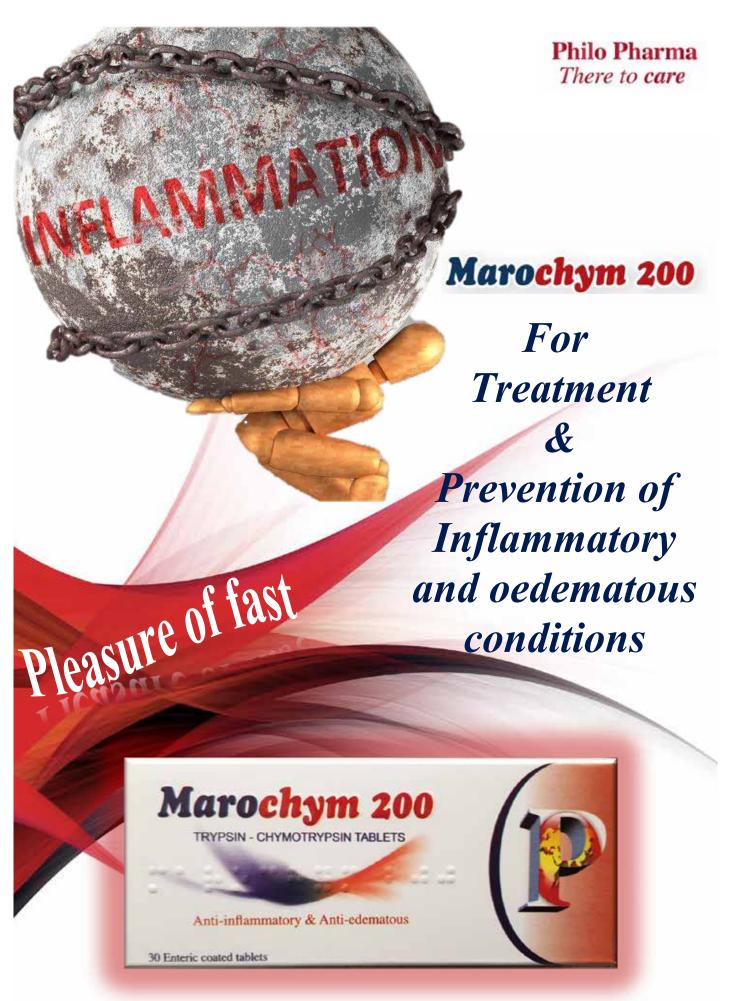


Farewell - 2023 & 2024





IDAK bids farewell to our founder President Dr. David Gnanasekhar







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DENTURE STOMATITIS (DENTURE SORE MOUTH)

Dr. Manojkumar Yasangi BDS, MDS (Prosthodontist)
Work affiliation: Working at Afnan Dental Centre, Salmiya, Kuwait
Dr. Dhanalakshmi Mannem BDS, MDS (Prosthodontist)
Work affiliation: Fellow ALD, working at New Abha Dental Centre
Farwaniya, Kuwait

Denture stomatitis is a very common condition, affecting denture wearers, where there is mild inflammation and redness of the oral mucous membrane beneath the denture¹. Most **commonly appearing on the roof of the mouth or the palate**. It is primarily caused by poor oral hygiene, poor denture maintenance and full-time (mainly night-time) denture wearing. The condition is usually asymptomatic and is often noted by clinicians rather than by their patients. Denture stomatitis can affect all denture wearers, including those who wear removable partial dentures, conventional complete dentures, conventional over dentures, and implant over dentures as well as those wearing dentures with and without metal framework².

Candida albicans is the fungal microorganism commonly associated with denture stomatitis. Although this is a microorganism commonly present in the oral cavity, its presence increases by about 60-100% in denture wearers³.

COMMON FACTORS

1. Systemic Factors

- Physiological (advanced age).
- Endocrine dysfunctions.
- Nutritional deficiencies.
- Immune suppression.
- Patients under certain medications like broad spectrum antibiotics & corticosteroids.

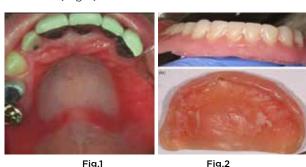
2. Local Factors

- Wearing dentures (especially during the night).
- Increased height of dentures and dentures that does not fit properly.
- Irregular and sharp borders of the dentures
- Less saliva in the mouth.

CLINICAL FEATURES

Reddish, swollen mucosa below the fitting surface of the upper denture (Fig.1). Some cases, it looks like light colored patches that may appear on the gums, lips, inner cheeks, tongue & palate¹. Some people develop cracking at the corners of the mouth. Bad breath, slight bleeding, swelling in the involved area, burning sensation, lack of saliva and taste alterations (dysgeusia) are the other symptoms of the denture stomatitis.

Poor denture hygiene can **result in appearance of a whitish film** (Candida containing) on the denture surfaces (Fig.2)



Source Fig.2: Mamdouh O Kachlan, DMD, Prosthodontic resident, University of Maryland. School of Dentistry

DIAGNOSIS

Generally, denture stomatitis is diagnosed during a clinical dental examination, dentist can identify the condition based on the pattern of redness in the mouth (Fig.3). The dentist may also take a swab and submit the sample to pathology lab to confirm the diagnosis².

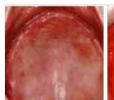






Fig.3

MANAGEMENT

Proper denture care at home is essential for long term oral health. Here are some recommendations for managing your symptoms:

- Management of underlying systemic disease, dietary advice, salivary substitutes.
- Improve fit of poorly fitting dentures by smoothening the rough areas, by using tissue conditioners, such as Viscogel (Dentsply) (Fig. 4).
- Remove your dentures while sleeping during night which improves adequate blood supply to underlying soft tissue¹.
- Clean your dentures before wearing and after eating. Chlorhexidine mouthwash is widely available and exhibits good antibacterial and antifungal properties. Acrylic dentures that are soaked in 2% chlorhexidine solution can inhibit candida growth.
- Place the dentures in a container and cover with slightly warm water, drop one denture cleansing tablet (Fig.5) into it, allow it to soak for the time as directed on the package instructions (3-5 min to 1 hour), later brush the denture with the cleansing solution using a soft brush 4.
- Microwave disinfection is a relatively cheap and safe method for cleaning dentures, and full sterilization of complete dentures achieved using a setting of 650W for 3 min. This process has been shown to be effective as the use of topical antifungal agents for treating denture stomatitis 5. However, this method of denture cleaning should be used with caution as the heat generated can alter the dimensional stability of the dentures.
- Keep your mouth as clean as possible, by practicing good oral hygiene habits.





Fig. 4

Fig. 5

TREATMENT

period of 7 days;

The benefits of using an antifungal medication are enhanced if used in conjunction with improved denture hygiene. Antifungal agents should not be used as a sole treatment modality, if they are prescribed alone without assessment of underlying causes, relapse occurs within 2-4 weeks of stopping treatment. If antifungal medication is used, one of the following drugs is

· Use of topical and systemic antifungal agents:

 a). Miconazole 24 mg/ml gel - applied to the fitting surface of the denture four times daily.

recommended to be prescribed for a treatment

- b). Fluconazole 50 mg capsules one to be taken daily.
- c). Nystatin 100,000 units/ml oral suspension - 1 ml oral rinse four times daily after food for five minutes, and then swallowed.
- Laser Therapy- Low level laser therapy to treat oral stomatitis especially when antifungal medications don't work⁶.
- Surgical removal- Some patients develop small nodules on the roof of the mouth which can interfere with your denture & prevent it from fitting properly. In this case dentist performs minor surgeries to remove those nodules¹. The surgeon can use a scalpel, high-frequency electrical currents (electrosurgery) or extreme cold (cryosurgery) to remove the lesion.

PREVENTION

Best way to prevent oral stomatitis is to:

- Practice good oral hygiene.
- Regular denture cleaning.
- Using denture cleansing tablets and solutions weekly once.
- Using anti-fungal mouthwash.
- Should avoid smoking.
- Take your dentures out for at least 8hrs/day, this will give rest to tissues and prevent from developing sores.
- Ask your dentist for more information about teeth and gum care.

RECENT DEVELOPMENTS

Further proposed ideas to prevent the recurrence of denture stomatitis are;

- a). The use of polymerized coatings on the denture surface to reduce the adherence of candida albicans⁷.
- b). Incorporating candida-specific antibodies within the denture material.
- c). The use of antifungal agents within the denture material.

REFERENCES

- 1. Boucher's Prosthodontics treatment for edentulous patients, 11th edition.
- 2. Neppelenbroek K.H., Falcão Procópio A.L., Gurgel Gomes A.C., Campos Sugio C.Y., Maia Neves Garcia A.A., Porto V.C., Urban V.M. A modified Newton classification for denture stomatitis. Prim. Dent. J. 2022;11:55–58. doi: 10.1177/20501684221101095. [PubMed].
- 3. Sampaio-Maia B., Figueiral M. H., Sousa-Rodrigues P., Fernandes M. H., Scully C. The effect of denture adhesives on Candida albicans growth in vitro. Gerodontology . 2012;29(2):e348–e356.doi: 10.1111/j.1741-2358.2011.00478.x. [PubMed][CrossRef] [GoogleScholar].
- 4. Hilgert J.B., Giordani J.M., de Souza R.F., Wendland E.M., D'Avila O.P., Hugo F.N. Interventions for the Management of Denture Stomatitis: A Systematic Review and Meta-Analysis. J.Am.Geriatr.Soc. 2016;64:2539–2545. doi: 10.1111/jgs.14399. [PubMed] .
- 5. Inácio Silveira D.Q., Lia E.N., Massignan C., Stefani C.M. Natural products for the treatment of denture stomatitis: Asystematic review. J. Prosthet. Dent. 2021 doi: 10.1016/j.prosdent.2021.05.022. [PubMed].
- 6. Davoudi A., Ebadian B., Nosouhian S. Role of laser or photodynamic therapy in treatment of denture stomatitis: A systematic review. J. Prosthet. Dent. 2018;120:498–505.doi: 10.1016/j.prosdent.2018.01.003. [PubMed].
- 7. Skupien J.A., Valentini F., Boscato N., Pereira-Cenci T. Prevention and treatment of Candida colonization on denture liners: A systematic review. J. Prosthet. Dent. 2013; 110:356–362. doi: 10.1016/j.prosdent.2013.07.003. [PubMed].

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CURRENT ADVANCES IN ORTHODONTIC PAIN: FROM CAUSE TO MANAGEMENT- A REVIEW

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Orthodontic pain, the most cited negative effect arising from orthodontic force application, is a major concern for parents, patients, and clinicians. Studies have reported this reaction to be a major deterrent to orthodontic treatment and an important reason for discontinuing treatment.

DEFINITION

Orthodontic pain is an inflammatory pain that is initiated by orthodontic force-induced vascular occlusion followed by a cascade of inflammatory responses (Figure 1), including vascular changes, the recruitment of inflammatory and immune cells, and the release of neurogenic and pro-inflammatory mediators. Ultimately, endogenous analgesic mechanisms check the inflammatory response and the sensation of pain subsides.

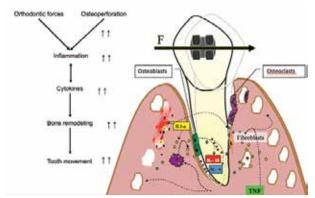


Fig. 1 Tooth Movement

Orthodontic pain is commonly referred to as tooth discomfort induced by orthodontic tooth movement, whereas a broader definition of orthodontic pain refers to any painful sensation, for example, mucosal ulcer, tongue discomfort and gingival lesion, caused by orthodontic appliances.

CLASSIFICATION OF PAIN

Burstone (1962)¹ classified a painful response to orthodontic mechanics in two ways:

A. Depends on the **relationship of force application** with pain .

- B. According to the time of onset.
- A. According to that author, the degree of pain perceived in response to the amount of force application can be divided into three:
- 1. First degree: the patient is not aware of pain unless the orthodontist manipulates the teeth to be moved by the appliance, e.g. using instruments such as a band pusher or force gauge.
- 2. Second degree: pain or discomfort caused during clenching or heavy biting usually occurs within the first week of appliance placement. The patient will be able to masticate a normal diet with this type of pain.
- **3. Third degree:** if this type of pain appears, the patient might be **unable to masticate food** of normal consistency.
- B. Based on **time of onset,** Burstone (1962) further classified pain as follows:
 - Immediate: which is associated with sudden placement of heavy forces on the tooth, e.g. hard figure of eight tie between the central incisors to close a midline diastema.
 - 2. Delayed: produced by variety of force values from light to heavy and representing an enlargement of the periodontal membrane. This type of pain response decreases with time i.e. the pain reaction might start as third degree but become second or a first degree with the passage of time.

ORTHODONTIC CAUSES OF PAIN — WHAT ARE THEY?

Clinicians usually respond to the most frequently asked question 'Will it hurt?' (Figure 2) with the answer 'There may be some discomfort associated with all orthodontic procedures such as placement of separators, archwire placement and activations, elastic wear and debonding'.



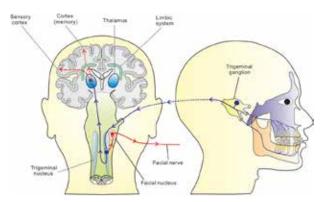


Fig. 2 Pain transmission pathways for orthodontic pain Source: International Journal of Oral Science advance online publication; doi:10.1038/ijos.2016.24

It is known that the above-mentioned procedures will cause pain but what is not known is 'why they cause pain?'. It is reported that orthodontic procedures will reduce the proprioceptive and discriminating abilities of the patients for up to 4 days, which result in lowering of the pain threshold and disruption of normal mechanisms associated with proprioception input from nerve endings in the periodontal ligament. At the same time, there will be pressure, ischaemia, inflammation, and oedema in the periodontal ligament space.

DOES ORTHODONTIC PAIN HAVE ANY EFFECT ON PATIENT COMPLIANCE AND DAILY ACTIVITIES?

The literature supports the fact that orthodontic pain has a definite influence on

- · Compliance and
- · Daily activities of patients.

PATIENT COMPLIANCE

The major reasons affecting patient compliance are the **functional and aesthetic impairment produced by the appliance.** This has even resulted in a discontinuation of treatment or its early termination.

Many patients as well as parents consider initial lack of information about possible discomfort during treatment to be a major cause of the poor compliance exhibited.

Few study suggests that the patients' initial attitude towards orthodontics should be understood during the diagnostic phase itself and should be discussed with the patients in

all its reality. This procedure, termed as 'rational restructuring' in psychology will prepare the patients to encounter discomfort during treatment through their own methods and also with the help of a specialist.

DAILY ACTIVITIES

It is reported that pain from orthodontic treatment has a **definite influence on daily activities of patients.** The pain appearing within the **first 48 hours** is considered to be so disturbing that it causes **wakeful nights and consumption of medication.**

Almost all patients from various studies reported moderate to extreme difficulty in chewing and biting foods of a firm to hard consistency, which caused them to change the consistency of their diet.

Study show that approximately **50 per cent of their patients** had problems with their daily activities at **6 hours and on days 1 and 2.** There was a **decrease** in the severity of discomfort and the number of patients experiencing it from **day 3** onwards².

MANAGEMENT OF ORTHODONTIC PAIN

Orthodontic pain is inevitably an adverse effect of orthodontic treatment.

To date, numerous modalities have been invented to alleviate orthodontic pain in clinical practice, including -

- Pharmacological Approaches.3,4
- Mechanical Approaches.^{5,6}
- Laser Irradiation Therapy.⁷
- Behavioural Approaches.8
- Furthermore, a novel modality for pain relief— Gene therapy—is gaining popularity and may be promising in future pain relief among orthodontic patients.

Pharmacological Approach

Nonsteroidal anti-inflammatory drugs (NSAIDs)

have been used for the relief of orthodontic pain for decades. Their effectiveness in orthodontic pain relief has been validated, but their by-product—reducing the rate of tooth movement—is still being debated, making NSAIDs not routinely applied for pain control in orthodontic practice. As mentioned

above, prostaglandin is a pro-inflammatory mediator that causes painful sensations by binding to sensory endings and promotes tooth movement by stimulating bone remodelling. It has been well documented that the synthesis of prostaglandin is mediated by COX enzymes and that NSAIDs inhibit the activity of COX enzymes. Therefore, NSAIDs could relieve orthodontic pain by inhibiting the release of prostaglandin. Because prostaglandin promotes local inflammation and bone remodelling, decreased levels of prostaglandin following NSAID intake could inhibit osteoclasts and reduce the rate of tooth movement. Various types of NASIDs are now available for orthodontic patients, for example, acetaminophen, ibuprofen and celecoxib. Their individual superiority in pain control and efficacy in avoiding impeding tooth movement vary among different studies. However, regardless of each NSAID's superiority, it has been verified that almost all NSAIDs are effective in alleviating orthodontic pain, but their effects on the rate of tooth movement need to be validated in further studies.

Mechanical Approach

Mechanical approaches have been proposed to relieve orthodontic pain, including

• **Vibration-** Vibration is applied to patients' teeth through a vibrating device that is placed in their mouths⁹ (Fig.3).





Fig.3 Soft Pulse Technology Illustration

Source: Acceladent.com

• Chewing gums and biting wafers- Patients are instructed to chew gum and bite wafers to alleviate orthodontic pain.

The proposed mechanism for vibration, chewing gum and biting wafers

» Lies in the fact that mechanical stimuli activate mechanoreceptors that transmit tactile signals while suppressing the transmission of painful signals. This process

- could explain the phenomenon that rubbing the skin of a painful site can relieve pain.
- » In addition, as mentioned above, orthodontic forces squeeze periodontal vascular vessels and cause local ischaemia and subsequent local inflammation. Vibrations restore normal circulation and thus reduce pain.
- Acupuncture-Acupuncture is performed through inserting systemic needles at Hegu (LI4), which is located at the dorsum of the hand between the first and second metacarpal bones. Although acupuncture has been revealed to be effective for orthodontic pain relief, the mechanisms by which acupuncture relieves orthodontic pain remain largely unknown. Therefore, the effectiveness of the mechanical approach in relieving orthodontic pain necessitates further validation.

Low-Level Laser Therapy

Low-level laser therapy has been extensively applied for pain relief in both medical and dental practice. Its applications has also been extended for the relief of orthodontic pain. Low-level laser therapy is accomplished through applying laser irradiation to the whole dental arch⁷. Some inconsistencies in the effectiveness of laser therapy may be attributed to different irradiation durations and dosages. Thus, irradiation protocols need clarification, and their effectiveness necessitates further verification.

Behavioural Approach

Behavioural approaches that are applied to relieve orthodontic pain include

- Cognitive Behaviour Therapy (CBT)
- · Physical activity and
- · Music therapy.

These behavioural modalities share a common feature:

- » Reassurance and
- » Attention distraction.

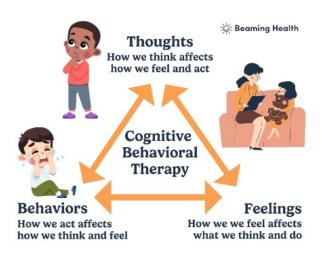
It has been well documented that orthodontic patients feel anxiety and stress following orthodontic pain, and an **immediate follow-up** could significantly reduce their orthodontic pain levels, justifying that reassuring orthodontic patients may be a viable approach for controlling orthodontic pain.



Orthodontic Pain

CBT, a form of psychotherapy, uses several treatment sessions to correct patients' negative altitudes and decrease their anxiety. Elevated anxiety increases patients' pain sensations through limbic system- mediated neural pathways.

CBT, through reducing patients' anxiety, has been revealed to be effective in relieving orthodontic pain in clinical practice (Figure 4).



Furthermore, music therapy and physical activity, through distracting patients' attention via the insular cortexmediated neural pathways, have been revealed to alleviate orthodontic pain in clinical practice.

Gene Therapy

Gene therapy is defined as a method that delivers genes or DNA sequences to target cells that can transiently or stably express those genes or DNA sequences to alter the biological functions of those cells. At present, the application of gene therapy in clinical practice is limited by its biosafety concerns.

Nevertheless, its potential biosafety concerns may be addressed in the near future, and it may become a viable and mainstream treatment strategy for orthodontic pain relief.

Fig. 4 CBT Source - Beaming Health

CONCLUSION

Orthodontists must use their best professional judgment to assess the pain threshold level of each patient individually. Effective orthodontist-patient communication may help in preventing pain and discomfort experienced by the patients to some extent.

With increased apprehension from patients as well as parents and more application of common sense by orthodontists in managing these conditions, the need to streamline research in this area has become a necessity.

REFERENCES

- 1. Burstone C J 1962. The biomechanics of tooth movement. In: Kraus B S, Riedel R A (eds). Vistas in orthodontics. Lea & Febiger, Philadelphia. pp. 197 213.
- 2. Brown D F, Moerenhout R G 1991 The pain experience and psychological adjustments to orthodontic treatment of preadolescents, adolescents and adults. American Journal of Orthodontics and Dentofacial Orthopedics 100: 349 356.
- 3. Gupta M, Kandula S, Laxmikanth SM et al. Controlling pain during orthodontic fixed appliance therapy with non-steroidal anti-inflammatory drugs (NSAID): a randomized, double-blinded, placebo-controlled study. J Orofac Orthop 2014; 75(6): 471–476.
- 4. Angelopoulou MV, Vlachou V, Halazonetis DJ. Pharmacological management of pain during orthodontic treatment: a meta-analysis. Orthod Craniofac Res 2012; 15(2): 71–83.
- 5. Xiaoting L, Yin T, Yangxi C. Interventions for pain during fixed orthodontic appliance therapy. A systematic review. Angle Orthod 2010; 80(5): 925–932.
- 6. Woodhouse NR, DiBiase AT, Papageorgiou SN et al. Supplemental vibrational force does not reduce pain experience during initial alignment with fixed orthodontic appliances: a multicenter randomized clinical trial. Sci Rep 2015; 5: 17224.
- 7. Landucci A, Wosny AC, Uetanabaro LC et al. Efficacy of a single dose of low-level laser therapy in reducing pain, swelling, and trismus following third molar extraction surgery. Int J Oral Maxillofac Surg 2016; 45(3): 392–398.
- 8. Dubner R 1968 Neurophysiology of pain. Dental Clinics of North America 22: 11 30.
- 9. Miles P, Smith H, Weyant R, Rinchuse DJ. The effects of a vibrational appliance on tooth movement and patient discomfort: a prospective randomised clinical trial. Aust Orthod J 2012;28(2):213.





CRACKED AND CROWDED: JAW FRACTURES AND IMPACTED TEETH

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The human jaw is a robust and essential structure needed for vital functions such as chewing, speaking and facial aesthetics. Its evolutionary changes can be traced back to changes in diet and the development of tools for food processing.

In early humans the jaw was larger and stronger to chew on fibrous vegetation and raw meat (Fig. 1). The functional adaptation resulted in the reduction of the size of the jaws and the number of the teeth. This can be seen in the decrease in the size of the third molar (wisdom tooth), which is often missing in modern humans. In addition, morphological changes occurred to accommodate speech. The role of teeth as the primary defensive mechanism diminished with evolution. Modern humans are bipedal and fight hand to hand, rather than by biting. The face became the primary target during fights. The skull and the jaw bones exhibit areas of increased strength to protect vital structures such as the eyes1. Similarly, there are areas of decreased strength that fracture easily to prevent the force of the impact to be transferred to vital structures such as the brain. These areas acted as natural "crumple zones"2.

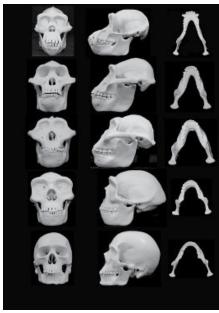


Fig. 1: Evolution of the human skull.

Our species also exhibit pronounced sexual dimorphism in the strength and shape of the jaws. The form of the male and female jaw has evolved to accommodate gender specific functions such as in protection, phonation and procreation (Fig. 2). It's a puzzling observation that a human's strength and fighting ability can be assessed from the facial shape and quality of the voice³.



Fig. 2: Evolutionary dimorphism

However, evolution in its pursuit of perfection is not infallible as is evident from the presence of vestigial structures such as the appendix and wisdom teeth⁴ (Fig. 3).

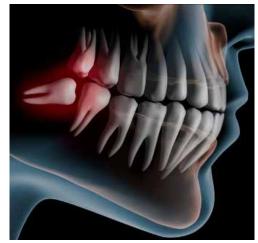


Fig. 3: Impacted third molar tooth - wisdom tooth.

IMPACTED TEETH

This brings us to the subject of the article, pain due to impacted teeth. Impacted teeth are teeth that fail to emerge fully from the gumline, often leading to pain and potential complications. These are teeth that fail to erupt from a non-functional position in the jaw bones into the functional occlusal position within a normal developmental period. The most common teeth that become impacted are the third molars, commonly known as wisdom teeth. These are followed by maxillary (upper jaw) canines, maxillary second molar, mandibular (lower jaw) second premolar and mandibular molar⁵.

CAUSES

Understanding the causes & the signs and symptoms of impacted teeth is essential in managing the associated pain and discomfort. The most common cause of impacted teeth is a lack of sufficient space within the jaw to accommodate the teeth.

This often occurs with third molars, as they are the last set of teeth to emerge and may not have adequate space to fully erupt. Inadequate jaw space can lead to the teeth becoming trapped, tilted, or only partially emerging, resulting in impaction.

SIGNS AND SYMPTOMS

Impacted teeth may present with various signs and symptoms, including

- Pain and tenderness around the impacted area.
- Swelling.
- Difficulty in opening the mouth fully.
- Bad breath.
- · Difficulty chewing.
- Redness or inflammation of the gums. surrounding the impacted tooth (Fig. 4).
- In some cases, impacted teeth can also lead to the development of cysts or infections in the surrounding tissues.



Fig. 4: Pericoronitis around an impacted third molar tooth

PAIN MANAGEMENT FOR IMPACTED TEETH

Pain due to impacted teeth can often be managed using **over-the-counter pain medications and topical oral analgesics.** These medications can help alleviate pain and reduce inflammation in the affected area.

Additionally, **rinsing the mouth with warm salt water** may provide temporary relief by reducing irritation and swelling around the impacted tooth.

Ayurvedic drugs have been used since ancient times to treat oral diseases. Sushruta Samhita in his 20th shloka has stated that Triphala can be used as a gargling agent in dental diseases as it has antibacterial, antiseptic, and anti-inflammatory properties⁶.

TREATMENT OF IMPACTED TEETH

Let's take a fictitious case study for better comprehension.

Dr.Lal, a dental surgeon ,who is aged about 50 has been suffering with recurrent tenderness and pain in his lower Jaw for many years. His radiograph confirms that he has an impacted right wisdom tooth (Fig.5 and Fig.6). He has been managing his pain with analgesic medications and mouth washes. However now his pain has worsened, and his recent radiographs show decay in the adjacent teeth and periodontal bone loss. So he visits his junior colleague, Dr. Rai for surgical extraction of his wisdom tooth.





Fig. 5 & Fig. 6: Illustration of clinical & radiographic evaluation

Surgical extraction is indicated in cases when the impacted tooth is causing significant pain and the risk of complications such as infection are apparent. The surgical technique for the removal of impacted teeth depends on the position and severity of impaction. The surgeon will explain all possible complications associated with the surgery

and take an informed consent from the patient before the procedure.

In some instances, such as impacted canine teeth, orthodontic treatment may be utilized to create adequate space for the impacted tooth to emerge properly.

FRACTURES OF THE JAWS

Now let's move on to fractures of the jaws.

As described earlier evolution has given us highly functional jaws. However, like any bone in the body, the jaw is susceptible to fractures. Jaw fractures can result from various causes and may lead to significant pain and discomfort.

CAUSES

Jaw fractures can occur due to traumatic injuries such as

- Motor vehicle accidents.
- Falls.
- Assaults.
- · Sports injuries.
- Or workplace incidents.
- In some cases, medical conditions that weaken the bones, such as osteoporosis or certain tumours, can also contribute to jaw fractures⁷ (Fig. 7).



Fig. 7: Etiology of Maxillofacial Injuries

MAXILLOFACIAL TRAUMA IN ADULTS

Maxillofacial trauma can involve any of the facial bones. The **site of the factures** seems to show geographical variations. Reasons for this are varied **including socioeconomic conditions, political climate and sociocultural behaviour** such as adherence to traffic rules and abuse of intoxicating agents^{8,9} (Fig. 8).

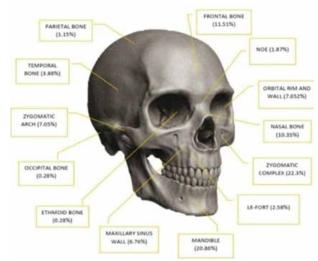


Fig. 8: Incidence of maxillofacial trauma in India

Multiple bones may be involved in some instances and such pan facial fractures will require a **multidisciplinary approach for management.**Maxillofacial fractures have been reported to represent about 9% of medical care provided in emergency centres. Advanced Trauma Life Support (ATLS) principles should be applied in the initial assessment and managed accordingly.

Minor trauma involving only the jaws, teeth and supporting bones can be assessed and managed in dental emergency clinics and maxillofacial consultation can be sought if indicated. In the State of Kuwait, dental casualty clinics are present in most Ministry of Health dental centres.

MAXILLOFACIAL TRAUMA IN CHILDREN

Maxillofacial fractures are uncommon in children, accounting for 1.5% to 8% of injuries in children less than 12 years and less than 1% in children less than 5 years.¹⁰



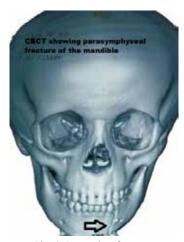


Fig. 9: Lower jaw fracture

Lower jaw fractures are the most **common** major maxillofacial fractures (Fig. 9).

Temporomandibular joint (TMJ, Jaw joint) injuries are of particular concern as it may lead complications such as ankylosis (fusion). Such complications may lead to functional impairment and aesthetically unacceptable appearance due to asymmetrical growth.

Early maxillofacial consultation is mandatory.

Incidence of minor dentoalveolar trauma such as fractured teeth, displaced or avulsed teeth and intraoral and perioral injury of soft tissues are significantly higher. High velocity/energy injuries in children between the ages of 6 to 12 are more common than younger children. Most common causes for trauma are accidental falls, sporting injuries, motor vehicle accidents, assault and foreign body injuries. The importance of proper use of protective gear during sporting activities such as skating, bicycling, horse riding and cricket cannot be overemphasised.

Younger children are prone to sustain injuries though low velocity/energy traumas such as falls because their motor skills are not well developed.

Lip injuries, minor mucosal injuries such as frenal tears, injuries to the anterior deciduous teeth and tongue bite injuries are the most commonly seen traumas in our dental casualty. Conservative management with measures to arrest bleeding and prevent infection is usually all that's needed. Suturing of lacerations and extraction of grossly displaced deciduous teeth may be necessary if indicated.

SIGNS AND SYMPTOMS

The signs and symptoms of a jaw fracture can vary depending on the location and severity of the injury. Common indications of a jaw fracture include

- Pain and tenderness in the affected area.
- Swelling.
- · Bruising.
- Difficulty or inability to open or close the mouth fully.
- Misalignment of the teeth.
- Numbness or tingling in the lower lip or chin.
- And difficulty in speaking or chewing (Fig. 10 & 11).

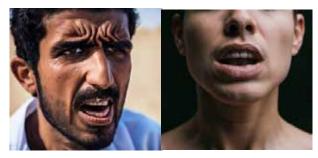


Fig. 10 & 11: Illustration of patients in pain with malocclusion caused by fractured jaws.

PAIN MANAGEMENT FOR JAW FRACTURES

Effective pain management is crucial to alleviate discomfort and promote healing following a jaw fracture. **Over-the-counter pain medications** such as ibuprofen or acetaminophen can help reduce pain and inflammation. If the pain is **severe**, healthcare professionals may prescribe **stronger pain medications** to manage the discomfort.

Furthermore, using **ice packs** on the affected area can help reduce swelling and dull the pain. Eating **soft foods and avoiding excessive jaw movement** can also aid in pain management by minimizing strain on the fractured bone. Additionally, **relaxation techniques** such as deep breathing or meditation may help reduce stress and tension in the jaw muscles, contributing to improved pain management.

Let's take another fictitious case to understand jaw fractures. Mr. Lean went on a desert safari and suffered an accident. Unfortunately, he bumped his chin on the steering wheel and experienced severe pain in the angle of his jaw and was unable to close his mouth properly. Mr. Lean was taken to Dr. Kia's surgery where he was diagnosed with a fractured

lower jaw (mandible). He was treated surgically under general anaesthesia where his displaced fractured mandible was repositioned and stabilized using mini bone plates (Fig. 12, 13 & 14).



Fig. 12 to 14: Illustration of Mr.Lean's case study.

TREATMENT OF JAW FRACTURES

The treatment of jaw fractures depends on the severity and location of the injury.

In less severe cases, **simple jaw fractures** may heal with **conservative measures**. Reestablishing form and function of the fractured bones and teeth are the goals of treatment. To achieve this **reduction of the fractured bones**, **immobilization of the fractured jaw fragments and ensuring normal occlusion** is neccessary.

However, more **complex** fractures may require **surgical intervention** to debride and repair soft tissue injuries, stabilize the bone fragments using miniplates, screws and interdental wiring (Fig. 15). **Post-surgical pain management,** prevention of infections and rehabilitation may be necessary to aid the healing process.



Fig. 15: 3d CBCT illustrating a patient with multiple fractures surgically treated by miniplates and intermaxillary fixation.

CONCLUSION

In conclusion, jaw fractures and impacted teeth are significant sources of pain and discomfort. It is essential to understand their causes, signs, symptoms to manage and treat these conditions effectively. By addressing the pain and promoting timely healing of these conditions, individuals can maintain good oral health and overall well-being. Hence, seeking timely professional dental and maxillofacial surgeon attention is crucial in managing and alleviating pain and prevention of complications associated with jaw fractures and impacted teeth.

REFERENCES

- 1. Protective buttressing in the human face. Carrier DR, Morgan MH. 2015 Feb(1), Biol Rev Camb Philos Soc, pp. 330-46.
- 2. The Crumple Zone hypothesis. Cai SS, Mossop C. 7, s.l.: J Craniomaxillofacial surgery, Vol. 2017 Jul, pp. 1094-1098.
- 3. Interrelaship among men's threat potential, facial dominance and vocal dominance. Han C, Kandrik M,. Jan, s.l.: Evol Psycol, 2017, Vol. 15(1).
- 4. Vestigiality of wisdom teeth in relation to human evolution and lifestyle modification. Algu rathi, Yuvaraj Babu, Karthik Ganesh. Jan, s.l.: Drug invention today, 2018, Vol. 10, pp. 1899-1902.
- 5. Impacted teeth: A radiographic Pictorial essay. Beena Verma, Nidhin J Valappila. s.l.: J Clin Diagn Res, 2014, Vol. oct:8(10).
- 6. Efficacy of ayurvedic drugs as compared to chlorhexidine. Mittal N, Joshi Vk. s.l.: J Indian soc periodontol.2018, Vols. Jan-Feb.(22).
- 7. Aeitiology, prevalence, fracture site and management of maxillofacial trauma. S.Kannla, S.Gudipalli, S.Perumalla. s.l.: Ann R Coll Surg Engl, Vol. 103, pp. 18-22.
- $8. \ \ Review of maxillofacial injuries in Chennai, India \ . \ K Suhashraj, N Kumar, C Ravindran. \ 8, s.l. : Br \ J \ Oral \ Maxillofac Surg, 2007 \ Dec, Vol. \ 45.$
- 9. The pattern of maxillofacial fractures in Sharjah, UAE. Hamad Ebrahim A, Mohammed A Jaber. 2, s.l.: J Oral Surg Oral med Oral Path Oral Radio Endod, 2004 Aug, Vol. 98.
- 10. Oral and maxillofacial injuries in children: A retrospective study. Santanu M, Sauvik G, Raju B, Subatra S. 3, s.l.: J Korean Asso Oral Maxillofac surg, 2020 Jun, Vol. 46.
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AN OVERVIEW ON MANAGEMENT OF TEMPOROMANDIBULAR JOINT PAIN: WITH EMPHASIS ON PHYSIOTHERAPY

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WHAT IS THE TEMPOROMANDIBULAR JOINT?

The temporomandibular joint or TMJ, is the joint that joins your jaw bone to the rest of your skull. You can feel it just in front of your ear hole. It can be painful for many reasons including poor posture, bad habits, growth disorder or injury and inflammation.

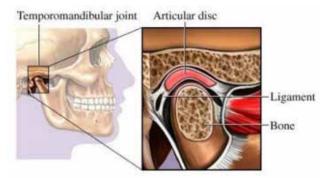


Fig. 1-ANATOMY OF TMJ

The TMJ is made up of the lower jaw bone (mandible) and the socket on the skull (temporal bone). There is a disc in between these two parts to allow the joint to open and close smoothly. This is held in place with muscles and ligaments. The fluid in the joint is called synovial fluid which acts as lubricant and shock absorber.

WHAT ARE THE SIGNS AND SYMPTOMS OF TMJ DYSFUNCTION?

- Pain in the jaw joint or facial muscles.
- Clicking / grinding / locking in the jaw.
- Headaches and dizziness.
- Difficulty opening and closing the mouth.
- Pain when chewing on hard food or yawning.

WHAT CAUSES TMJ PAIN?

There is normally a combination of causes which can lead to pain or symptoms:

- Over activity of the jaw muscles sometimes from continuous grinding of the teeth.
- Trauma a blow to either the joint or the jaw bone.
- Arthritis.
- Stiffness or dysfunction in the neck.

- Sensitivity to stress-related pain .
- Poor posture.
- Autoimmune diseases.
- · Infections.

DIFFERENT TREATMENT MODALITIES FOR PAIN MANAGEMENT

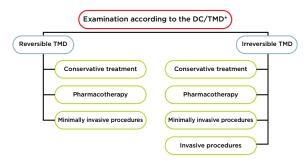


Fig. 2- TREATMENT ALGORITHM FOR MANAGEMENT OF TMD-RELATED PAIN

Source: The Diagnostic Criteria for Temporomandibular Disorders by Schiffman et al. 1

The goals of treatment for Temporomandibular disorders (TMD) are to decrease pain, and to restore normal function. Since TMJ disorders have a variety of causes, there are also various treatment options for the condition. In most cases, symptoms resolve over time.

Depending on the causes TMD are classified as reversible and irreversible.

Studies recommend using conservative treatments as they are less invasive, and reversible treatments involve making only temporary changes to the structure or position of the jaw or teeth and only offer surgery as a last option.²

PHYSIOTHERAPY

Physiotherapy can be highly effective in treating TMJ pain dysfunction and it typically includes hands on manual therapy, jaw exercises and stretches for the jaw and neck.^{3,4}

AIM OF PHYSIOTHERAPY

- To reduce pain.
- To minimize stiffness.
- To restore function.



• To teach management strategies.

DO'S

- Massage the muscles around the joint.
- Use heat or ice for 10 minutes to reduce pain.
- Complete the course of medications prescribed.
- Exercise your jaw regularly with guidance.
- Consult your dentist to check if you are grinding your teeth at night.
- Cut up food into smaller pieces.

DONT'S

- Hard, crunchy and chewy foods such as apples or whole fruits, carrots or corn on the cob.
- Chewing gum, pencils or your nails.
- Opening your mouth widely stifle yawns or use your fist to support your chin as you yawn.
- Resting your mobile/telephone handset between your shoulder and ear.

POSTURE AND NECK MOVEMENT

Sometimes the pain can be made worse by sitting or lying badly, holding your jaw in a bad position or by straining/craning your neck. A stiff neck can also cause pain to be felt in the TMJ. Having an awareness of correcting this posture and keeping your neck mobile and strong can help with your symptoms. Ask your dentist for further information.

EXERCISES

The following exercises may be supported by further specific management techniques advised by your dentist.

Chin tucks (Pic 3A,3B)

- Standing or sitting with upright posture.
- Create a double chin by drawing your chin backwards.
- Try and keep your head straight as you do this.
- Hold max 5 seconds, repeating 8-10 times.





Relaxed jaw

- Place the tongue lightly on the top of the mouth.
- Allow the teeth to come apart and relax the jaw muscles.

Goldfish exercise (Pic: 4)

- Place the tongue lightly on the top of the mouth.
- Place one index finger on the TMJ.
- Place the other on your chin.
- Allow the jaw to drop down and raise back up with the help of your index finger: a) partially open, b) fully open.
- Monitor this exercise in the mirror to make sure the movement is straight.
- Repeat 6-8 times, 4-6 times daily.



Unsupported goldfish (Pic: 5A, 5B)

- Place the tongue lightly on the top of the mouth.
- Place an index finger on each TMJ.
- Allow your mouth to open and bring back closed:
- a) partially open, b) fully open.
 - Monitor this exercise in the mirror to make sure the movement is straight.
- Repeat 6-8 times, 4-6 times daily.





Stabilisation exercises (Pic: 6A, 6B, 6C)

- · Maintain the jaw in a neutral position: a) partially open, b) knuckle width apart.
- Apply gentle pressure with your thumb.







CONCLUSION

TMD should be treated with multidisciplinary approach as any other musculoskeletal complaint. If TMD is left untreated, symptoms can worsen and extend far beyond the jaw and mouth area. Treatment goals in patients with TMD are pain relief and return of function. These goals will be achieved only if diagnosed properly and the treatment plan is taken with consideration of mental and physical problems with predisposing factors. Conservative therapy is best as a first-line approach for treating the patient and physiotherapy can be an effective treatment option.

REFERENCES

- Schiffman E, Ohrbach R, Truelove E, Look J, Anderson G, Goulet JP et al (2014) Diagnostic Criteria for Temporomandibular Disorders (DC/TMD) for Clinical and Research Applications: recommendations of the International RDC/TMD Consortium Network and Orofacial Pain Special Interest Group. J Oral Facial Pain Headache 28:6–27.
- 2. Okeson JP, de Leeuw R (2011) Differential diagnosis of temporomandibular disorders and other orofacial pain disorders. Dent Clin North Am 55:105–120.
- 3. Bhargava D (2021) Tempromandibular joint Disorders. Principles and current Practice.
- 4. Crăciun MD, Geman O, Leuciuc FV, Holubiac IŞ, Gheorghiță D, Filip F. Effectiveness of Physiotherapy in the Treatment of Temporomandibular Joint Dysfunction and the Relationship with Cervical Spine. Biomedicines. 2022 Nov 17;10(11):2962.







TOWARDS AN OROFACIAL PAIN FREE **WORLD- A GLOBAL NEED**

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INTRODUCTION

Orofacial pain is a general term referring to any pain felt in the mouth, jaws and face. Orofacial pain is most commonly caused by the disease of the teeth (odontogenic pain)1.

Apart from tooth decay and gum diseases; musculoskeletal (disease of muscle, bone, joint, cartilage) and neuropathological (diseases of eyes and nervous system) are the most common cause of orofacial pain.

It is most important to differentiate whether pain is odontogenic (tooth specific) or not, since teeth involvement with neuropathic pains is dominant. Any oversight in initial dental diagnosis may result either in excessive treatments of teeth or removal of the susceptible tooth without solving the underlying problem of severe neuropathic pain.

WHAT IS OROFACIAL PAIN?

Pain localized to the region above the neck in front of the ears, and below the orbitomeatal line as well as within the oral cavity (Figure 1).

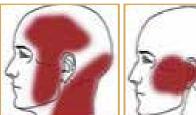




Fig. 1: Region of orofacial pain Source: https://onlinelibrary.wiley.com

CAUSES OF OROFACIAL PAIN

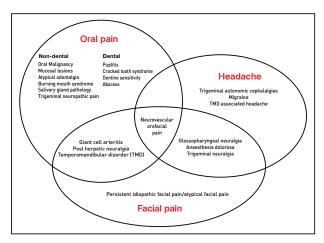
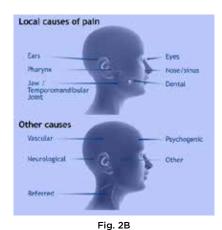


Fig. 2A: Etiology of orofacial pain





1 19. 21

Source: https://www.oralpathmed.com

Causes of orofacial pain:

- a). **Dental:** gum disease or tooth decay that leads to bone loss, cracked tooth syndrome, missing teeth or grinding of teeth (bruxism).
- b). Face injury or Jaw injury.
- c). **Muscle spasms** in the jaw, head or neck that occur involuntarily.
- d). Salivary gland issues.
- e). Ulceration of facial soft tissues.
- f). TMJ pain.
- g). Maxillary sinusitis.
- h). Malignancy.
- i). Nerve pain.
- j). Psychogenic causes: Atypical facial pain, atypical odontalgia.
- k). **Vascular causes:** Migraine, cluster headache, chronic paroxysmal hemicrania.
- 1). Referred pain: Cardiac pain.

DIAGNOSIS

The most important factors to facilitate reaching an accurate diagnosis are

- Proper history taking.
- Careful **examination** [status of teeth, oral mucosa, muscles of mastication, sinuses, nerve function etc].
- The objective of diagnosis is to identify WHAT, WHERE, HOW and WHY the patient complains.

Let us discuss some commonly encountered types of orofacial pain like

- · Dental Pain
- · Nerve Pain
- Muscle Pain

DENTAL PAIN OR TOOTH PAIN

- Pulpal
 - Dentinal hypersensitivity resulting from
 - · Caries.
 - Tooth wear.
 - Pulp disease (reversible and irreversible pulpitis) resulting from
 - Caries.
 - Trauma.
- Periapical pathology and periapical acute abscess
- Periodontal
 - · Periodontal abscess.
 - Pericoronitis and pericoronal abscess.
- · Cracked tooth syndrome

(Figure 3)



Fig. 3
Source: https://dantkritidentalclinic.com

NEURALGIA (NERVE PAIN)

Neuralgic pain is episodic or continuous:

EPISODIC PAIN			
	Trigeminal neuralgia ⁷	Glossopharyngeal neuralgia	Giant cell arteritis
Site	Face	Throat, tonsillar region	Temple
Nature	Sharp, stabbing and shooting	Sharp, stabbing and shooting	Dull ache
Severity	Worst pain experienced	Worst pain experienced	Severe
Initiating factors	Light touch, washing the face	Swallowing and chewing	Eating
Relieving factors	None	None	None

CONTINUOUS			
	Burning mouth syndrome ^{4,5,9}	Atypical facial pain	Atypical odontalgia
Site	Mouth	Face	Tooth
Nature	Burning	Dull, boring ache	Dull, boring toothache
Severity	Moderate to severe	Moderate to severe	Moderate to severe
Initiating factors	None	None	None
Relieving factors	None	None	None

A. TRIGEMINAL NEURALGIA

Definition: Unilateral, severe, brief [few seconds to 1 minute], sudden, stabbing recurrent pain in distribution of one or more of branches of trigeminal nerve (Fig.4).

Causes:

- Demyelination.
- Vascular compression of trigeminal ganglion.
- Trauma or infection of nerve, idiopathic.

Diagnostic Aids: CT and MRI

Treatment:

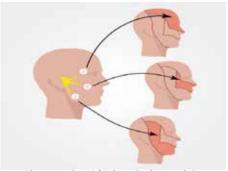


Fig.4: Region Of Trigeminal Neuralgia Source: https://www.clinicaladvisor.com

CARBAMAZEPINE, USUALLY BEGINS WITH 200MG, 2 TIMES DAILY IF PATIENT IS UNABLE
TO TOLERATE
CARBAMAZEPINE OR
DRUG IS NOT
WORKING; SECOND
LINE DRUGS WILL
COME INTO ACTION
[ANTIEPILEPTIC
MEDICINES AND
TRICYCLIC
ANTIDEPRESSANTS]

PERIPHERAL
PROCEDURES:
1.LOCAL ANESTHETIC
INJECTION
2.PERIPHERAL NERVE
DESTRUCTION BY
CRYOPTHERAPY,
ALCOHOL INJECTION
OR NERVE AVULSION

GANGLIONIC
PROCEDURES:

1. RADIOFREQUENCY
THERMOCOAGULATION
2. GLYCEROL INJECTION
3. BALLOON
COMPRESSION
4. RADIOSURGERY
[GAMMA KNIFE]

SURGICAL:
1. ROOT RESECTION
2. MICROVASCULAR
NERVE DECOMPRESSION

B. BURNING MOUTH SYNDROME: [ORAL DYSAESTHESIA]⁵

It is an unpleasant abnormal sensation affecting the oral mucosa in the absence of clinically evident disease. More seen in females of age 40-50 years^{1,4}.

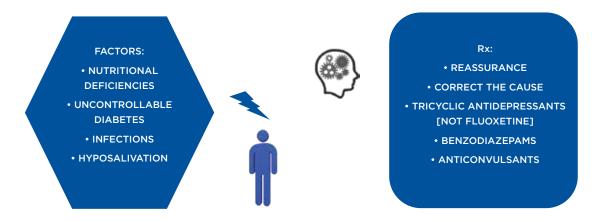
Types:

- Type-1: asymptomatic on waking, but symptoms increase during the day. Good prognosis.
- Type-2: symptomatic on waking, continues throughout the day often associated with anxiety and depression. Poor prognosis when compared to type-16.
- Type-3: intermittent symptoms, may be associated with etiological factors and often involves unusual sites. E.g. floor of the mouth.

Symptoms Of Burning Mouth Syndrome



Source: https://www.repcdubai.com



MYALGIA (MUSCLE PAIN)

A: TEMPOROMANDIBULAR DISORDER (TMD)2:

The term Temporomandibular disorder (TMD) is derived from anatomical structures. The connection between the temporal bone and the c-shaped mandible forms the two jaw joints, i.e. the temporomandibular joints or TMJ (Figure 5).

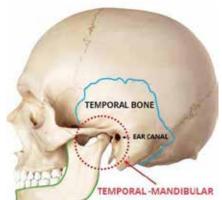


Fig. 5: TMJ

Source: https://www.cosmeticdentistsnewyorkcity.com



Prospective evaluation and risk assessment suggest that TMD is a complex disease with a number of risk factors in many domains that may contribute to TMD development².

- · Genetics.
- Environment.
- · Behavior.
- Medication.
- Psychological Stress.
- · Anxiety.
- Obsessive-Compulsive Feelings.
- Pain-Coping Strategies.
- · Sleep Quality.

Symptoms include:

- Pain around your jaw, ear and temple.
- Clicking, popping or grinding noises when you move your jaw.
- A headache around your temples.
- Difficulty opening your mouth fully.
- Your jaw locking when you open your mouth.
- The pain may be worse when chewing and when you feel stressed.
- TMD can also stop you getting a good night's sleep.

Clinical Features

Involves:

- 1. Muscles of mastication: myofascial pain.
- 2. TMJ: Limited mouth opening, jaw locking, clicking sounds.
- 3. Others: Headaches, ear aches, pain radiating to neck/shoulders, dizziness, tinnitus.

Causes of Temporomandibular Disorder

- · Teeth grinding.
- Wear and tear of the joint.
- A blow to the head or face.
- Stress.

Check If You Have Temporomandibular Disorder³

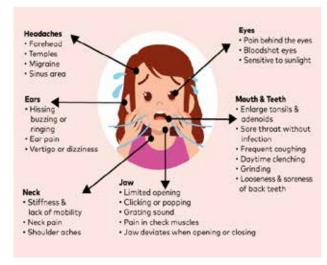


Fig. 6: Causes of TMD
Source: https://www.dpdental.com

How To Ease Temporomandibular Disorders Yourself³



 Temporomandibular disorder (TMD) usually gets better without treatment.

Treatment may include

- · Splint therapy.
- Psychogenic therapies [like clonazepam, TCA, SSRI].
- Surgery.

B: TEMPOROMANDIBULAR MYOFASCIAL PAIN8:

Pain and tenderness of the masticatory muscles, painful limitation of jaw excursion and sometimes headache (Figure 7).

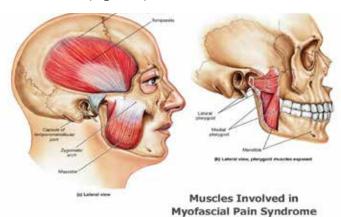


Fig. 7
Source: https://mhnpc.com

Causes of temporomandibular myofascial pain

Tension, fatigue and spasm of the masticatory muscles may result from parafunctional habits, which in turn leads to myofascial pain.

Treatment

- Use of oral appliances.
- Benzodiazepines or muscle relaxants during sleep may help, along with non opioid analgesics.
- Behavioral modalities and physical therapy are sometimes appropriate.

TAKE HOME MESSAGE

- Orofacial pains are common cause of morbidity (state of being unhealthy).
- No definitive diagnostic criteria are available and despite many investigation tools, misdiagnosis is common.
- Many treatment modalities are in use, but no one is definitive.

REFERENCES

- 1. https://www.ncbi.nlm.nih.gov/pmc/articles/pmc4590084/-dental pain.
- 2. >>> dpd ental.com/TMD-pain-management-gnm-orthotic.
- 3. Shivpuri A, Sharma S, Trehan M, Gupta N. Burning mouth syndrome: A comprehensive review of literature. Asian Journal of Oral and Maxillofacial Surgery 2011; 23: 161-166.
- 4. BA Lawrence. Burning Mouth Syndrome and mast cell activation disorder. Oral Surg Oral Med Oral Pathol Oral Radiol Endod 2011; 111: 465-472.
- 5. deSouza F, Teixeira AL, Amaral T, dos Santos T et al. Psychiatric disorders in burning mouth syndrome. Journal of Psychosomatic Research, 2012; 72:
- 6. https://www.clinicaladvisor.com/home/topics/pain-information-center/trigeminal-neuralgia-differential-diagnosis-treatment-strategies.
- 7. Dr.Bhatia medical coaching institute. Myofacial pain dysfunction syndrome.
- 8. https://www.ncbi.nlm.nih.gov/pmc/articles/pmc4590084/-dentalDental excellence at its finest: Modern technology meets exceptional care:pulse/debunking-tmj-myths-dispelling-common-misunderstandings.American Dental Clinic.
- 1. R. McMillan et al. 2016 database syst rev11 CD002779. Conchrane Library.

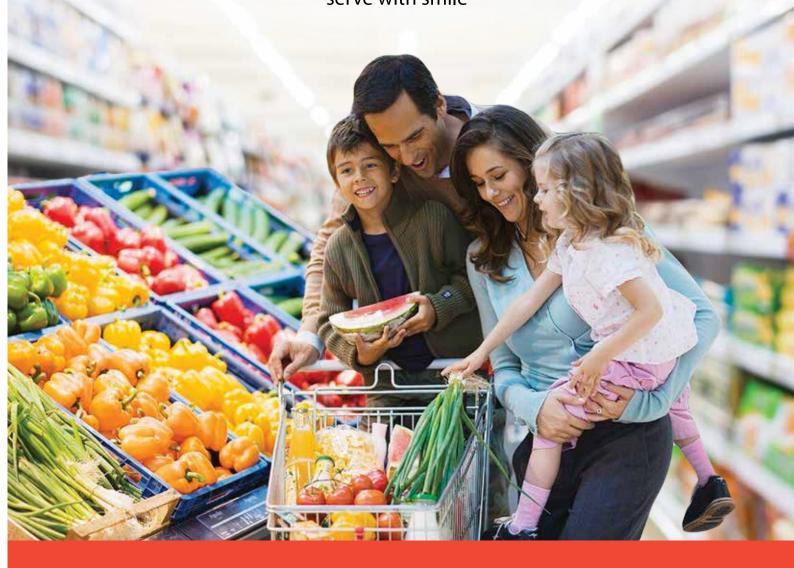
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