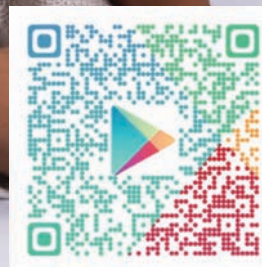


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Editor's Desk



Dr. Parvez A. Khan
Editor

Greeting from team GUIDENT.

The 77th Independence Day of India was celebrated on the 15th of August 2023 to commemorate the birth of a free and democratic nation. 15th August, 1947 is the historic day that marks India's freedom from the stranglehold of the British Raj. This year the Independence Day theme was "Nation First, Always First". On the eve of 15th August 1947, the Indian flag was unfurled proudly by Jawahar Lal Nehru, the first Prime Minister of India, at the Red Fort in Delhi.

Climate change is one of the most significant challenges facing our planet, and it has far-reaching implications for human health. While much attention has been paid to the impact of climate change on physical health, its effect on oral health has received little attention.

Climate change can have a significant impact on oral health in several ways. For instance, changes in temperature and humidity can create ideal conditions for the growth of bacteria and fungi that can cause oral infections. Additionally, extreme weather events such as floods and hurricanes can increase the risk of dental injuries and infections.

Moreover, climate change can also impact access to oral healthcare. Disruptions to healthcare systems due to climate-related disasters can make it difficult for people to receive timely dental care, leading to untreated dental problems.

In conclusion, the impact of climate change on oral health is a growing concern that requires urgent attention. It is crucial to address the root causes of climate change and take proactive measures to mitigate its impact on human health, including oral health.


Dr. Parvez A. Khan
Editor

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Associate Editor's Desk

DENTISTRY AND CARDIOLOGY: A SIMPLE MOUTH RINSE COULD SPOT

EARLY HEART DISEASE RISK

Your oral health is more important than you might realize. It is the entry point to digestive and respiratory tracts. Maintaining proper oral hygiene, including daily brushing and flossing, usually keeps bacteria in check. Yet, neglecting oral health can lead to elevated bacterial levels that result in issues such as cavities and periodontal disease. Certain medications can reduce saliva flow, which normally washes away food particles and neutralizes acid produced by bacteria, aiding in the protection of teeth. Interestingly, a potential connection exists between heart disease, blocked arteries, strokes, and the inflammation and infections that oral bacteria can incite. With sedentary lifestyles contributing to cardiovascular risks in today's generation, awareness of potential diagnostic measures becomes a crucial defense.

Early indicators of cardiovascular disease can emerge from a simple saliva sample. This new approach involves analyzing saliva for specific biomarkers like C-reactive protein and certain enzymes, that indicate inflammation and other heart problems. A basic mouth rinse test can gauge white blood cell levels in saliva, serving as a potential marker for cardiovascular issues. Elevated levels, correlated with compromised arterial health, can provide an early indication of vascular problems.

This development has the potential to revolutionize cardiac diagnosis as it has a noninvasive and cost effective method. A simple mouthwash could be an important tool in the ongoing fight against heart disease, improving early detection and ultimately saving lives. Maintaining good oral hygiene and regular dental check-ups are recommended not only for your dental health but also potentially for your overall cardiovascular health. By identifying these signs, we will be able to intervene earlier, so that more action can be taken and better results can be achieved..



Dr. Manesh Lahori

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AESTHETIC REHABILITATION IN MAXILLARY ANTERIOR REGION:



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Dr. Manesh Lahori
Principal & HOD

A Case Series

Department of Prosthodontics and Crown & Bridge
K.D. Dental College & Hospital, Mathura, UP, India.

INTRODUCTION

The aesthetic enhancement is one of the most frequent reasons for patients to seek prosthetic rehabilitation of the smile, especially when discrepancies are found in maxilloanterior region.^{1,2}

The required harmony and consistency are accomplished when there is a proper link between dental and gingival components, as well as those with individual facial patterns. Thus, characteristics such as: tooth shape and size, interdental proportion, gingival contour, presence of interdental papillae, among others, are essential elements to be evaluated during an aesthetic analysis.³

In the last 30 years, dentistry has undergone a revolution, not only in terms of the introduction of new materials and techniques, but also in terms of the scientific data backing their clinical applications. As ceramic materials for dentistry improve and patient demand for aesthetic restorations grows, practitioners must stay up with both research and patient demand.⁴ Proper practitioner assistance is essential in selecting the optimal system for crowns, as well as understanding of the optical qualities of different ceramic systems, which will allow the clinician to make suitable choices when faced with varied aesthetic issues.

Recent advancements in the strengthening of dental ceramics have resulted in the creation of novel ceramic restorative systems that use porcelain directly on an opaque ceramic foundation rather than a metal framework. The various new ceramic restorative systems generally can withstand relatively high compressive forces and offer a range of flexural strengths.^{5,7}

Full ceramic crowns with opaque cores are superior in strength and aesthetics, and can be used for both posterior and anterior teeth with significant discolouration. For fixed partial dentures, crowns with a zirconia core are advised. Because the colour of the cement has no effect on the shade of the crown, resin or conventional luting agent can be used for cementation. When rebuilding anterior teeth with these crowns, it is best to finish the margin subgingivally to avoid a shade mismatch between the tooth margin and the restoration. The strength of these restorations is dependent on the ceramic

Abstract

Aesthetic rehabilitation is a specialty of dentistry dedicated to the restoration and maintenance of oral functions in terms of chewing, phonetics and aesthetics, through the repair of damaged teeth and the placement of fixed, partial or total dental prostheses. Aesthetic rehabilitation has been glorified with the advent of all ceramic restorations. In order to get increasingly beautiful, harmonic and natural results, the search for development of rehabilitation, indirect materials is constant, such as ceramic crowns (metal free). This article presents variety of cases for Maxillary anterior rehabilitation using All ceramic restorations.

material used, the core- veneer bond strength, the crown thickness, and the design of restoration.⁸

This article presents case series of maxillary anterior region rehabilitation.

CASE REPORT- 1

A 25 yr old man reported to the Department of Prosthodontics, crown and bridge, K. D. Dental College, for dental aesthetics treatment with the chief complaint of spacing in the maxillary anterior region. (Fig 1)



FIGURE: 1

On clinical examination, 4mm of space was found between the maxillary central incisors and 2mm of space between lateral incisor and canine of both sides of maxillary arch. Patient was offered the treatment option of Zirconia crowns on 11.12. 21.22.



FIGURE: 2

Gingival health is of prime importance before beginning with any aesthetic procedure. Hence, oral prophylaxis was carried out before the inception of the prosthodontic treatment.

In order to address the patient's chief esthetic concerns, the plan included the following elements: Development of a simulation or mock-up to evaluate proper tooth morphology and tooth length for better esthetics and proper gingival contours. [Figure 2] This was presented to the patient to assist in determining the course of treatment. It was achieved using composite restorative material. After being satisfied with the mock-up, the patient authorised the final treatment plan.

After 1 week, the patient was recalled for the treatment and composite resin was removed. Teeth preparation was done in relation to 11,12, 21 and 22 for all ceramic restoration. [Figure 3]



FIGURE: 3

For the impression, gingival retraction was achieved using 3M ESPE gingival retraction paste, followed by making impressions using vinyl poly siloxane impression material of putty and light body consistency using double mix impression technique for upper arch. Impression was washed and inspected for any voids, followed by disinfection with 2% glutaraldehyde solution. Shade selection was done with VITA classical shade guide. The final impression,

mock-up, along with pictures of aesthetic pre-evaluative intra oral mock up done with composite resin was sent to the laboratory for the crowns fabrication.



FIGURE: 4

Provisional restorations were fabricated with a tooth colored auto polymerizing acrylic resin and cemented with noneugenol temporary cement.

After one week, temporary crowns were removed and the fit of all-ceramic restorations was evaluated intraorally alongwith occlusion assessment. The crowns were cemented with Glass Ionomer cement (GC) luting consistency. Patient was satisfied with the crown length, width and esthetics which was improved and equal to adjacent natural teeth. [Figure 7]

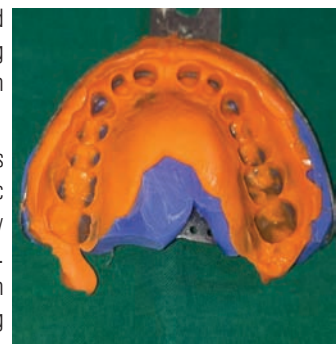


FIGURE: 5



FIGURE: 6



FIGURE: 7

CASE REPORT- 2

A 24 yr old man reported to the Department of Prosthodontics, crown and bridge, K.D.Dental College, for dental aesthetics treatment with the chief complaint of missing teeth in the maxillary anterior region. (Figure 8)



FIGURE: 8



FIGURE: 9

On clinical examination, the teeth missing were 21, and 22, and the patient presented with Siebert's II ridge defect (Maxillary). The teeth were extracted 4 years back along with cleft lip surgery post accident. Patient was educated about all the treatment options available and approved for the treatment option of Fixed dental prosthesis (Zirconia) along with pink porcelain.

Oral prophylaxis was carried out first. Teeth preparation was done in relation to 11, 12 and 23 for all ceramic restoration. [Figure 9]

Final impression was made using vinyl poly siloxane impression material of putty and light body consistency using double mix impression technique for upper arch. Impression was washed and inspected for any voids, followed by disinfection with 2% glutaraldehyde solution. Shade selection was done with VITA classical shade guide.

Provisional restorations were fabricated with a tooth colored auto polymerizing acrylic resin and cemented with noneugenol temporary cement. [Figure 10]

After one week, temporary crowns were removed and the fit of all-ceramic FDP was evaluated intraorally along with occlusion assessment. The crowns were cemented with Glass Ionomer cement GC luting consistency. Patient was satisfied with the smile and esthetics. [Figure 11, 12]



FIGURE: 10



FIGURE: 11



FIGURE: 12

CASE REPORT- 3

A 38 yr old woman reported to the Department of Prosthodontics, crown and bridge, K.D.Dental College, for dental aesthetics treatment with the chief complaint of missing teeth in the maxillary anterior region. On clinical examination, both maxillary central incisors were found to be missing and all ceramic FDP was planned from 12 to 22.

Oral prophylaxis was carried out before the inception of the prosthodontic treatment.

Tooth preparation was done in relation to 12 and 22 for all ceramic restoration. [Figure 14] Final impression was made using vinyl poly siloxane impression material of putty and light body consistency using double mix impression technique for upper arch. Shade selection was done with VITA classical shade guide.



FIGURE: 13



FIGURE: 14

Provisional restorations were fabricated with a tooth colored auto polymerizing acrylic resin and cemented with noneugenol temporary cement.

After one week, temporary restoration was removed and the fit of all-ceramic restorations was evaluated. The crowns were cemented with Glass Ionomer cement

(GC) luting consistency. Patient was satisfied with the aesthetic smile. [Figure 15,16]



FIGURE: 15



FIGURE: 16

DISCUSSION

A good face is a letter of recommendation. For many years, it has been assumed that the initial impression a person creates is due to his appearance, which lasts a long time. The media's projected flawless appearance has a huge influence on our beauty-conscious society's behaviour and thoughts. The dental look is an important aspect of face beauty. Dental appearance can influence an individual's judgements about the personal attributes of others.

This article presents three different cases for aesthetic rehabilitation in maxillary anterior region.

Diastema is a term that simply describes a gap between teeth. It can be the result of a wide range of causes from hereditary reasons to tooth damage.

Regardless of the cause, there are various treatment options available for those who suffer from diastema which include: Dental Veneers, Dental Bonding, Braces and Aligners and Dental crowns. The modality opted here for diastema closure was Dental crowns (All ceramic).

In the second case described here, the patient presents with ridge defect along with missing anterior teeth in maxillary anterior region. Hence, we have used pink porcelain to mask the defect coupled with All-ceramic FDP. From an aesthetic point of view, the dentogingival prosthesis is an important treatment option in cases of previous bone defects associated with tooth loss.

The third case presents maxillary anterior region rehabilitation with All-ceramic FDP.

CONCLUSION

Happiness is a mental state. It is brought about by a sense of wellbeing, security, and self-confidence. The ability of the dentist to replace missing teeth, both in contour and colour, especially for the anterior teeth, is critical for the formation of a good oral and facial expression for the patient.

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PROSTHODONTIC REHABILITATION OF A HEMISECTED MOLAR:



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A Case Report

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INTRODUCTION

The lack of cogent response to endodontic treatment in many instances is primarily attributed to procedural errors, which impede the effective control of endodontic infection.¹ Success in endodontic treatment is often roadblocked by mishaps like separation of instrument in the root canal. The retrieval of the separated instrument may not suffice as in some instances fracture of tooth in future is impediment in successful endodontic therapy.²

The terms hemisection and root amputation are known as root resection. Hemisection is the sectioning of multirooted tooth into two halves which is followed by extraction of pathologic root and coronal half of the tooth. The retained root is endodontically treated and restored prosthetically.³

Tooth resection has been indicated in few conditions according to Weine.⁴

1. Severe bone loss along a single root in multirooted tooth.
2. Furcation involvement which is through and through.
3. Unfavourable root proximity of adjacent teeth.
4. Dehiscence of root.
5. Prosthetic collapse.
6. Irreparable perforation of floor of pulp chamber.
7. Vertical root fracture of one root.

Contraindications:

1. Favourable adjacent abutment teeth for prosthetic restorations
2. Inoperable canals to be retained.
3. Root fusion.
4. Insufficient bone support for remaining root

Thus, this case reports presents prosthetic rehabilitation of a carious hemisected endodontically treated mandibular molar aimed to attain normal structure and functionality.

Abstract

Procedural errors like separation of instrument, canal transportation have been the stumbling blocks for effective and perennial endodontic therapy. There are some distinct circumstances where tooth may be indicated for extraction after an endodontic treatment. In such conditions hemisection and root amputation are the modalities which can be exercised for saving the tooth. This case report presents the rehabilitation of a endodontically treated mandibular first molar in a 28 year old female patient who underwent hemisection procedure. A separated instrument in the root canal of mesial root was addressed during the procedure. After the hemisection the mesial portion of tooth was rehabilitated with specifically designed porcelain fused to metal fixed partial denture. This conservative treatment procedure aimed at preserving maximal original tooth structure and an alternative to extraction of the natural tooth.

Key words: Instrument separation, Mandibular first molar, Hemisection, Prosthetic rehabilitation, Fixed partial denture.

CASE REPORT

A female aged 28 years set forth to the department of prosthodontics and crown & bridge complaining of pain and food lodgement in the lower right back region of the jaw. The pain was dull in nature, intermittent and occurred in short duration. Patient presented with history of endodontic treatment of right mandibular first molar 5 months back. Intraoral examination revealed carious right mandibular first molar with grade 3 furcation involvement. The tooth was tender on vertical and horizontal percussion. Radiographic investigations were suggestive of a separated instrument in the mesial root of the tooth with a periapical radiolucency (Fig 1). Therefore, the final diagnosis was post treatment apical periodontitis.

Considering awareness and young age of the patient, a conservative approach was planned for the tooth rather than extracting it. The treatment plan was as follows:

- ▶ Retreatment of the distal root of #46 (FDI numbering system)
- ▶ Hemisection of mesial root of #46
- ▶ Prosthetic rehabilitation.



Fig. 1: Preoperative radiographic view of mandibular first molar

TREATMENT PROCEDURES

Retreatment of distal root of #46

The preexisting gutta-percha from the distal root canal was done followed by irrigation and shaping and was obturated using lateral condensation method. Following which post endodontic restoration was given.

Hemisection of mesial root of #46

Under local anaesthesia, a crevicular incision was given to reflect a full thickness flap. Vertical cut method was used to resect the crown. (Fig 2).



Fig. 2: Vertical cut towards the bifurcation area.

Separation of mesial and distal halves was checked by passing a probe via the vertical separation. The pathologic root was extracted and the socket was debrided, irrigated and root was planed. Distal root surface was contoured and developmental ridges were removed (Fig 3).



Fig. 3: Hemisection done with mesial root of mandibular first molar.

This was followed by approximation of buccal and lingual flaps which were sutured and dressed with COE pack. This was followed by patient recall after 3 months for prosthetic rehabilitation of hemisected tooth.

Prosthetic rehabilitation

During this phase diagnostic impressions of dentulous maxillary and mandibular arches were made and diagnostic casts were obtained which were then articulated to a semi adjustable articulator following a face bow record. Diagnostic casts were checked for premature occlusal contacts and interferences and were corrected.

This was followed by tooth preparation with 45 followed by distal portion of 46 to receive a porcelain fused to metal prosthesis (Fig 4). After adequate isolation, dual phase impression technique was used to make the impression of preparation. Temporization was done. The master cast was obtained. Wax pattern fabrication was done which was further invested and casted



Fig. 4: Tooth preparation done with 45 and 46.

metal framework was obtained which was tried in patient's mouth. Then the ceramic build up was done followed by cementation of the final prosthesis (Fig 5) on to the prepared teeth using luting glass ionomer cement (GC Fuji II). Post cementation instructions were given and followed by recall periodically was done to constantly assess the rehabilitation.



Fig. 5: Final prosthesis cemented.

DISCUSSION

A multirooted tooth can be effectively saved from extraction by hemisection. Endodontic treatment of remaining tooth structure is done followed by splinting the tooth with adjacent tooth and restoring it with a favourable prosthesis.⁵ Hemisection is a viable alternative to molar extraction in conditions like vertical root fracture of one root, severe vertical bone loss, dehiscence, prosthetic failures of abutments.⁶ According to Kost WJ et al (1991), hemisection is a conservative treatment option before extraction of any multirooted tooth.⁷

Singh M et al (2017) presented a case report of severe caries mandibular first molar resection, treated with endodontic treatment and proximal root restoration with a single piece implant with BCS (Cortical Bi-screw).⁸

Buragohain A et al. (2019) demonstrated management of partial tooth resection and prosthetic rehabilitation in thirty-six patients which followed a conservative approach to preserve maximum tooth structure.⁹

Therefore, in young patients' conservative management of grossly carious multirooted teeth preserves the tooth and also the occlusal dysfunction.

CONCLUSION

A conservative approach of preserving a compromised molar is by hemisection and its functional rehabilitation. Success of hemisected tooth is determined by its periodontal support, planned restorative treatment and oral hygiene practices of the patient. Hemisection is an efficient conservative approach over extraction of endodontically or periodontally compromised tooth.

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A PARADIGM SHIFT IN ORTHODONTIC AND IMPLANT TREATMENT: CASE REPORT OF CORTICAL IMPLANT SOLUTION FOR ANTERIOR GAP MINIMIZATION



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INTRODUCTION

Contemporary orthodontic and implant treatments continually strive to address challenging clinical situations to enhance patient outcomes. Conventional implantology may encounter limitations in cases with narrow labiolingual bone dimensions, necessitating alternative approaches. This case report illustrates the successful management of a complex orthodontic and implant case utilizing a cortical implant solution, resulting in a profound aesthetic and psychological transformation.

CASE PRESENTATION

A 21-year-old female patient presented with a significant anterior gap, which had not only functional implications but had also led to considerable psychological distress. The patient's appearance had negatively impacted her self-esteem to the extent that she abandoned her educational pursuits. Conventional implantologists declined treatment due to the patient's narrowest labiolingual bone parameters, posing a challenge for traditional implant procedures.

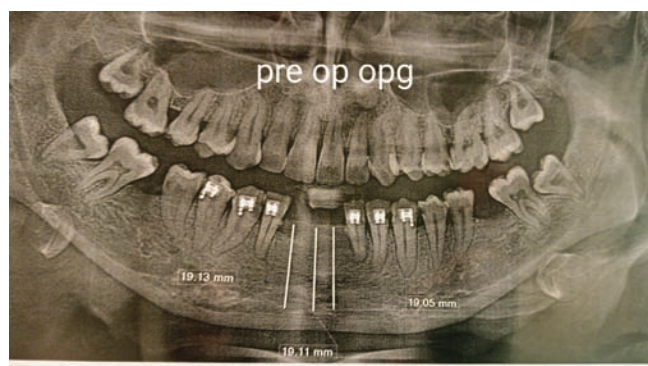


panoramic view

Abstract

Contemporary orthodontics often encounters complex clinical scenarios that demand innovative solutions to achieve optimal outcomes. In this case report, we present a unique orthodontic and implant case involving a 21-year-old female patient with an anterior gap, which posed both functional and psychological challenges. Conventional implant approaches were deemed unfeasible due to narrow labiolingual bone parameters. Consequently, the patient was referred for a cortical implant solution. The utilization of Monoimplants from Switzerland led to a remarkable transformation in a mere 72 hours, alleviating the patient's Unaesthetic concerns and significantly improving her quality of life.

Keywords: Contemporary orthodontics, implantology, cortical implant, anterior gap, aesthetic transformation, quality of life.



pre op opg

TREATMENT APPROACH

Given the limitations of conventional implant options, the patient was referred for a cortical implant solution. Monoimplants, a novel implant system from Switzerland, were chosen for their compatibility with cortical bone and demonstrated success in cases with restricted bone parameters. The treatment plan encompassed both orthodontic and implant components.

Orthodontic Treatment: Comprehensive orthodontic evaluation was conducted, and a customized treatment plan was formulated to minimize the anterior gap. Orthodontic appliances were strategically placed to facilitate controlled tooth movement and optimize the implant site.



Implant Placement: The cortical implant procedure involved careful preoperative planning, including radiographic assessment and 3D modeling. The Monoimplant system allowed for precise implant placement in the cortical bone, circumventing the limitations of conventional implants. A minimally invasive approach was employed, minimizing trauma to the surrounding tissues.

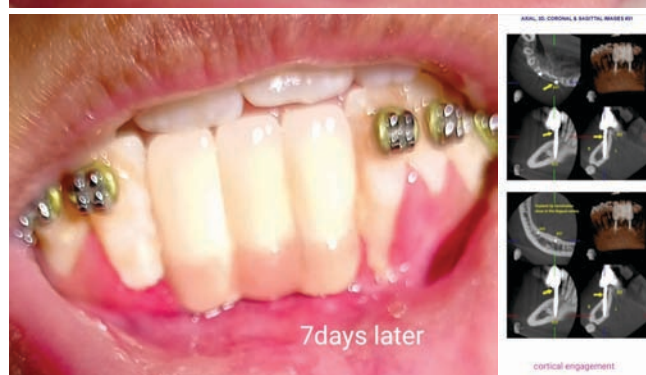
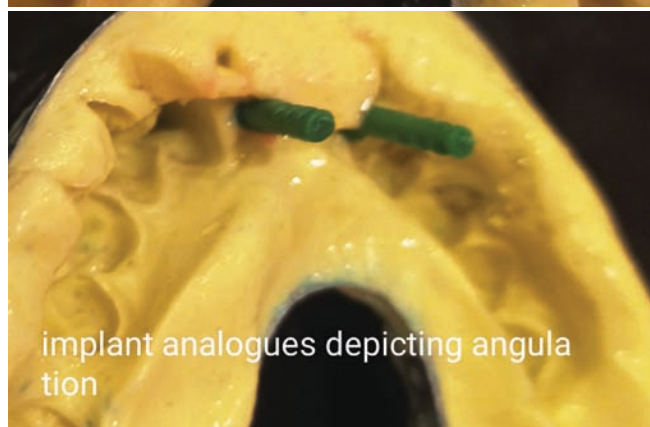
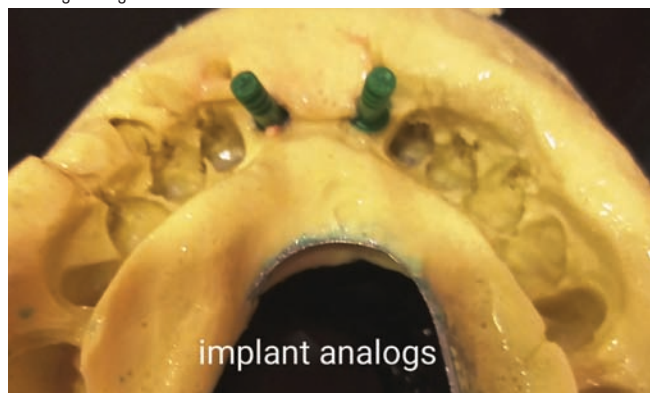




Postoperative Care: The patient received postoperative instructions for optimal healing and integration of the implant. Regular follow-up appointments were scheduled to monitor progress and ensure stability.

Results:

Within a remarkably short timeframe of 72 hours post-treatment, the patient exhibited a remarkable aesthetic transformation. The anterior gap was effectively minimized, leading to a significant enhancement in the patient's smile and facial harmony. Notably, the psychological impact was profound, as the patient reported a surge in self-confidence and a newfound sense of joy. The success of this innovative approach was evident in both the aesthetic and psychological domains, with the patient expressing gratitude for the life-altering change.



DISCUSSION

This case report highlights the pivotal role of innovative solutions in contemporary orthodontics and implantology. The use of a cortical implant solution, such as the Monoimplant system, proved instrumental in circumventing the limitations posed by narrow labiolingual bone parameters. The success of this approach was not only evident in the functional aspects of anterior gap minimization but also in the patient's psychological well-being.

CONCLUSION

The integration of orthodontic and implant treatments through innovative approaches can yield remarkable outcomes in complex clinical scenarios. The paradigm shift achieved in this case, utilizing a cortical implant solution, exemplifies the transformative potential of contemporary orthodontics and implantology. The profound aesthetic and psychological impact observed within a short timeframe underscores the significance of tailored, patient-centric approaches in enhancing overall quality of life.

Acknowledgments:

The authors would like to acknowledge the patient for her cooperation and trust throughout the treatment process. The support of Monoimplants from Switzerland in providing the implant system is also gratefully acknowledged.

Conflict of Interest:

The authors declare no conflicts of interest related to this study.

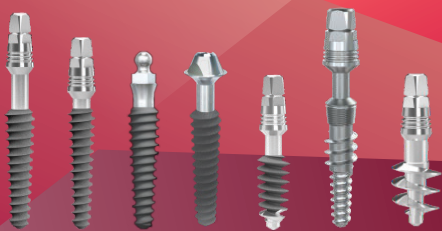
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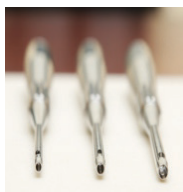
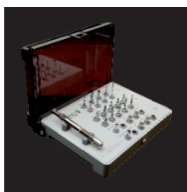
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NON-VITAL BLEACHING: RESTORING RADIANCE TO DISCOLORED TEETH



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Professor & H.O.D.

A Report of Two Cases

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INTRODUCTION

A radiant smile is a universal symbol of confidence and positivity. However, discolored or stained teeth can mask the appearance of an otherwise charming smile. Dental discoloration can occur due to various reasons, including intrinsic factors such as trauma, tetracycline staining, or developmental disorders. Fortunately, non-vital bleaching has emerged as a safe and effective solution to restore the natural brilliance of discolored teeth, helping individuals regain their self-assurance and social ease.⁴

UNDERSTANDING NON-VITAL BLEACHING

Non-vital bleaching, also known as internal bleaching or walking bleach technique, is a dental procedure specifically designed to whiten teeth that have undergone endodontic treatment.²

Endodontic treatments, such as root canal therapy, can sometimes lead to internal discoloration of the tooth due to residual blood pigments or other materials that seep into the dentin. Non-vital bleaching is a conservative and minimally invasive approach that targets the discoloration from within the tooth, offering a non-surgical way to improve aesthetics.¹

THE NON-VITAL BLEACHING PROCEDURE

The procedure typically involves the following steps:

1. **Access Cavity Preparation:** The dentist creates an access cavity through the crown of the tooth, allowing access to the root canal system.
2. **Cleaning and Sealing:** The root canal system is thoroughly cleaned, and any remaining gutta-percha or sealer is removed to ensure the absence of any obstructions.
3. **Placement of Bleaching Agent:** A bleaching agent, often a mixture of sodium perborate or hydrogen peroxide, is placed inside the pulp chamber and sealed with a temporary filling.
4. **Multiple Appointments:** Depending on the severity of discoloration, multiple appointments might be necessary to achieve the desired shade.

Abstract

The single discoloured tooth poses an aesthetic dilemma. While several treatment approaches are available, bleaching offers a minimally invasive, aesthetic treatment modality. Predictability and success with bleaching stems from correct diagnosis, didactic treatment planning and the utilisation of appropriate techniques. Discoloured non-vital teeth are frequently compromised owing to previous trauma, caries, endodontic therapy and failed restorations. Destructive invasive treatment options are likely to weaken the residual structure of the tooth. This paper discusses modern approaches to the treatment of discoloured teeth. The paper will include a detailed technical account on the application of the bleaching technique, with several clinical examples.³

5. **Final Restoration:** Once the desired shade is reached, the access cavity is permanently restored with a composite filling or a dental crown, completing the procedure.¹

CASE REPORTS

Case Report-1

25 year old Patient named Ravi reported to the Department of Conservative dentistry and Endodontics with the chief complaint of discolored tooth in upper left front tooth region since 3 years. On the basis of clinical and radiographic examination Root canal treatment was advised which was followed by non vital bleaching and followed by composite restoration.



PREOPERATIVE IMAGE



POST OPERATIVE IMAGE

Case Report 2

36 year old Patient named Anita reported to the Department of Conservative dentistry and Endodontics with the chief complaint of discolored tooth in upper right front tooth region since 2 years patient also gave history of endodontic treatment 4 years back of the same tooth on the basis of clinical and radiographic examination non vital bleaching was done.



PRE OPERATIVE IMAGE



POST OPERATIVE IMAGE

DISCUSSION

Tooth discoloration varies in etiology, appearance, localization, severity, and adhesion to tooth structure. It can be defined as being extrinsic or intrinsic on the basis of localization and etiology. In the walking bleach technique the root filling should be completed first, and a cervical seal must be established. The bleaching agent should be changed every 3-7 days.⁵

The thermocatalytic technique involves placement of a bleaching agent in the pulp chamber followed by heat application. At the end of each visit the bleaching agent is left in the tooth so that it can function as a walking bleach until the next visit. External bleaching of endodontically treated teeth with an in-office technique requires a high concentration gel.⁷

It might be a supplement to the walking bleach technique, if the results are not satisfactory after 3-4 visits. These treatments require a bonded temporary filling or a bonded resin composite to seal the access cavity.⁸

Bleaching can have adverse effects, both localized and systemic (toxicity, free radical, etc). Possible localized adverse effects are on dental hard tissues and mucosa, tooth sensitivity when the bleaching material is in contact with vital teeth, interaction with adhesive mechanisms, external cervical resorption risk, damage to composite restorations, and dental material solubility.¹⁰

Discolouration of teeth may have a significant social impact on children and adolescents. Intervention should be minimally destructive of tooth tissue and should not compromise future restorative options towards this approach.⁸

CONCLUSION

Non-vital bleaching has emerged as a popular and effective solution to tackle dental discoloration stemming from endodontic treatments. With its conservative approach, natural results, and positive impact on self-confidence, it has become a go-to choice for many patients seeking to restore the brilliance of their smiles. However, as with any dental procedure, it is essential to consult with a qualified dentist to determine the suitability of non-vital bleaching for individual cases.⁶

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MANAGEMENT OF IATROGENIC DISPLACED THIRD MOLAR ROOT WITH LINGUAL PLATE FRACTURE: A CASE REPORT AND A REVIEW OF TREATMENT APPROACHES



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INTRODUCTION

One of the most frequent surgical procedures in oral and maxillofacial surgery is extraction of impacted lower third molar. However, several complications may occur intra-operatively or post-operatively such as: excessive bleeding, tooth fracture, damage to adjacent soft tissues and teeth, bone fracture, displacement of the tooth, paraesthesia of lingual or inferior alveolar nerve, and mandibular dislocation. Accidental displacement of the tooth or its part into adjacent soft tissues is a major complication. Clinically, the individual may observe pain, swelling, trismus, difficulty in swallowing, and respiratory issues.

The most frequent sites of dislodgement are the maxillary sinus and the submandibular space.¹ Iatrogenic displacement of maxillary 3rd molars is a rarely reported complication with an unknown incidence. Maxillary 3rd molars have a thin layer of bone posteriorly separating them from the infratemporal space and anteriorly separating them from the maxillary sinus. The tooth can get displaced in a posterosuperior direction in the infratemporal space.²

In the case of a mandibular third molar, the thinness of the lingual cortical bone predisposes to displacement in a lingual direction. Distolingual angulation of the tooth and excessive or uncontrolled force upon luxation are other causes.³

Injury to tissues, pain, swelling, lockjaw, and foreign body reaction are some of the related complications, along with the medical-legal implication.⁴ Thus, patient history and clinical and radiographic examinations must be rigorously evaluated to establish the best planning of the surgery and avoid the occurrence of accidents and possible surgical complications.

The aim of this current article is to report a case of displaced 3rd molar root with lingual plate fracture and to review the literature on the management of such dental accidents as well as to suggest a rational guideline for its management.

Abstract

The displaced third molar is one of the infrequent but potentially serious complications of extraction. The dental surgeon should localise the tooth fragment by appropriate imaging and should remove it by a technique suited according to the situation. We present diagnosis and management of a case with displaced third molar root in the submandibular space along with lingual plate fracture, root fragment was surgically retrieved without any complications. A review of literature on the present subject is examined and a treatment guideline is suggested for when confronted with such iatrogenic accidents.

Keywords: Iatrogenic displacement of root, lingual plate fracture, third molar, paresthesia

CASE REPORT

A 42-year-old male was referred to the clinic with a displaced root fragment in the left submandibular space; an extraction effort of the impacted lower left third molar was previously attempted elsewhere. Patient's chief complaint was swelling and tenderness on the left submandibular area commencing 2 weeks ago. He did not have any significant medical history, although mentioned for a previous unsuccessful tooth extraction effort i.r.t 3rd third molar few years ago, by his dentist. After doing intraoral examination of the pharyngeal space, a hard tissue mass was palpated below the left medial pterygoid muscle. CBCT computed tomography revealed #38 (a displaced tooth root) at the left parapharyngeal space and fractured lingual plate. (Figure.1)

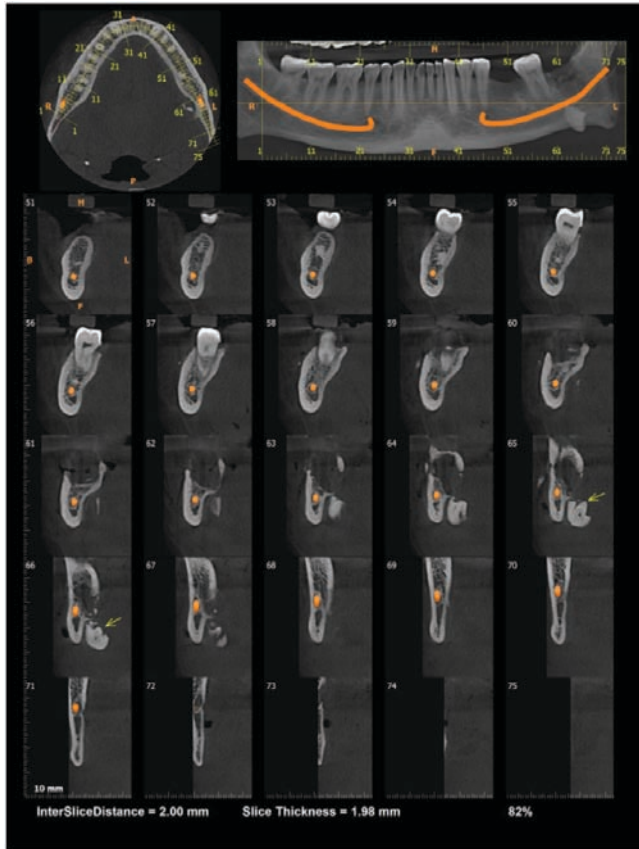


Figure.1 CBCT revealing fractured lingual plate and displaced root i.r.t 38

No clinical symptoms of dysaesthesia of the lip or tongue were present. Informed consent was given to the patient about treatment procedure and patient was prepared for the conservative surgery under local anaesthesia.

A lingual mucoperiosteal flap was raised i.r.t 38 region; an incision was made from the medial aspect of the anterior border of the mandibular ramus, extending up to the lingual gingival sulcus of the mandibular left first premolar. The fractured lingual cortical plate was allowed to remain intact with the lingual mucoperiosteal flap. Blunt dissection was performed medial to the third molar socket area to reach the mylohyoid muscle. The affected tooth was located inferior to the muscle. The tooth was elevated, grasped and removed. Suturing was done to close the elevated flap. (Figure.2)

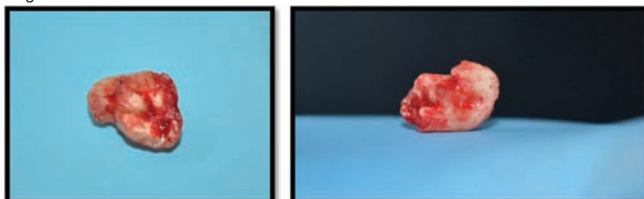


Figure.2a,b Root fragment retrieved during the surgery

The patient was placed on a week course of analgesic and antibiotic. The patient had normal postoperative healing and was being observed in the follow-up with no postoperative complications. (Figure.3)

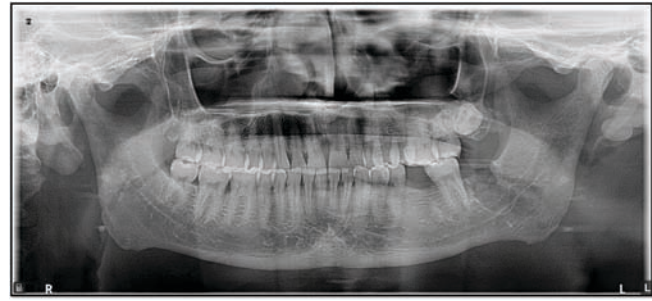


Figure.3 Post-operative OPG

DISCUSSION

Accidental displacement of mandibular third molars or their root fragments into adjacent anatomical spaces is a rare yet one of the possible complications.^{5,6} The estimated incidence rate is <1%. The spaces into which third molars can get displaced are submandibular, sublingual, and lateral pharyngeal spaces.⁷ This complication occurs due to lingual plate fracture or intraoperative perforation.⁶ Possible risk factors contributing are thin lingual plate, unnecessary excessive forces applied, incorrect use of surgical instruments or techniques, inclination, and depth of impaction. In the present case root was displaced along with lingual plate fracture.

Displacement of third molars might lead to local infection.⁶ Furthermore, it is an incidence of great importance due to the proximity of the spaces where the tooth is displaced along with the major anatomic elements of the neck.^{8,9} Life-threatening complications such as airway obstruction, deep neck infections, erosion of internal jugular vein/carotid artery, and cranial nerve implications may appear.¹⁰ Despite of this, it is reported in the literature that many patients are asymptomatic after the tooth displacement. A conservative approach is choice of treatment in such cases.¹¹ Our patient was without symptoms for initial years before he was referred to our department for further management. Thus, we can conclude that there is a wide gap between the time and intensity of symptomatology.

As by our experience gained through this case, it is preferable to retrieve the dislocated teeth/fragments, sooner after the incidence, to avoid the majority of complications. If the patient has symptoms, the immediate removal is of paramount importance.

The efficiency of the treatment relies on the adequate radiographic assessment using OPG imaging / CBCT and CT evaluation when needed which provide a more detailed evaluation of tooth's or fragment's location.⁸ In the present case too CBCT revealed the actual location of the displaced root with fractured lingual plate and removal of root fragment was planned accordingly.

The timing of fragment's extraction is quite controversial as several surgeons insist on an immediate removal of the residual tooth, while others recommend its extraction after 3–4 weeks of the incident.^{12,13} The advocates for delay of extraction state that the established fibrosis will ease the fixation of the tooth at its dislocated site, easing its retrieval. However, there might be possible migration of the tooth in a deeper plane and concomitant infection or even airway obstruction.

The surgical approach of tooth's fragment removal is mostly intraoral, while an extraoral or even a combined intraoral/extraoral technique is preferable

in some of the cases; for example, when the displaced fragment is located in the lateral pharyngeal or deep cervical space.¹⁴ A sagittal split approach is described to the mandibular angle in order to remove a displaced third molar.¹⁵ Here we went on with successful retrieval of residual root intraorally and conservative management was done.

CONCLUSION

Adequate clinical, radiological, sound anatomical knowledge and good surgical skills does minimize the chances of complications. CBCT scan is predominant examination in identifying the exact location of the displaced root segment. Proper knowledge of different surgical approaches for the removal of displaced root from the space helps in making the right treatment plan.

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PALLIATIVE AND SUPPORTIVE CARE IN ORAL CANCER:

A Review

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INTRODUCTION

Palliative care (derived from the Latin root palliare or “to cloak”) is an interdisciplinary medical care giving approach aimed at optimizing quality of life and mitigating suffering among people with serious, complex illness.¹ Within the published literature, many definitions of palliative care exist. The World Health Organization describes palliative care as “an approach that improves the quality of life of patients and their families facing the problems associated with life-threatening illness, through the prevention and relief of suffering by means of early identification and impeccable assessment and treatment of pain and other problems, physical, psychosocial, and spiritual.” An interdisciplinary team that may consist of doctors, nurses, physical and occupational therapists, psychologists, social workers, chaplains, and nutritionists provides it.^{1,2} Hospitals, outpatient settings, skilled nursing facilities, and residential settings are just a few of the venues where palliative care can be offered. Palliative care is not only for those who are approaching the end of life, although being a crucial component of end-of-life care. Whether the goal of treatment is curative or not, patients with head and neck cancer are a group in which both specialist palliative and supportive care is particularly appropriate because the disease and its treatments cause a significant burden of morbidity: short and long term, even lifelong for survivors. These individuals frequently have very major co-morbidities, such as alcohol and tobacco addiction, as well as complicated psychological problems, in addition to the medical symptoms.³

Palliative care strives to enhance the quality of life for patients and those who are caring for them as they deal with the challenges brought on by life-threatening disease. Palliative care is an option when there is little hope of recovery. Palliative care involves both surgical and non-surgical procedures with the goal of symptom relief, life extension, and slowing the progression of the disease.³ Effective medical treatment for neoplastic illnesses has coexisted with the emergence of supportive care for cancer patients. Supportive care for cancer patients has evolved into a paradigm for oncology treatment. Now that we have standards and ongoing research in that area, clinical oncology is a discipline that is authoritative and developing quickly.⁴ A holistic

Abstract

Palliative care is an interdisciplinary approach to medical care that aims to improve quality of life and lessen suffering in patients with life-threatening, complicated illnesses. An interdisciplinary team that may consist of doctors, nurses, physical and occupational therapists, psychologists, social workers, chaplains, and nutritionists provides it. Whether the goal of treatment is curative or not, patients with head and neck cancer are a group in which both specialist palliative and supportive care is particularly appropriate because the disease and its treatments cause a significant burden of morbidity: short and long term, even lifelong for survivors. These individuals frequently have very major co-morbidities, such as alcohol and tobacco addiction, as well as complicated psychological problems, in addition to the medical symptoms. Palliative care strives to enhance the quality of life for patients and those who are caring for them as they deal with the challenges brought on by life-threatening disease. This can be accomplished by preventing and alleviating suffering, providing comfort and dignity, and by managing pain and other medical, psychosocial, and spiritual concerns early on. The urgent need is for widespread palliative care at several facilities/institutions that aims to preserve patient comfort and dignity in cases of oral cancer.

Keywords: Palliative, supportive, oral cancer, chemotherapy, radiotherapy.

approach is used in palliative care to address the patient's, their caregivers', and their family's medical, psychological, social, and spiritual needs. The field of palliative care is interdisciplinary and encompasses medical, dentistry, nursing, social work, psychology, nutrition, and rehabilitation; albeit the level of support provided by each profession differs from facility to facility.^{5,6} When such treatment is suggested, care should be made to ensure that patients understand that palliative care does not provide the possibility of a cure and that the goal is to enhance quality of life. Potential advantages and negative consequences must be carefully weighed in order to reach a treatment decision. The urgent demand therefore is for widespread palliative care at numerous facilities/institutions that aims to preserve patient comfort and dignity under such circumstances.⁷

A THOROUGH APPROACH TO SUPPORTIVE CARE

When the idea of supportive care was first put into writing^{11,12} it was presented as a comprehensive "umbrella" designed to address all of the requirements of cancer patients (in addition to the specialized oncological management) in order to give them the highest possible quality of life. At that time, it was already evident that supportive care addressed all stages of cancer, including curative, palliative, and terminal care—the latter of which quickly evolved into palliative care in and of itself, as was already indicated. Understanding that palliative care (or terminal care) is still a part of supportive care—clearly an essential one—is crucial to understanding the concept of supportive care. Supportive care should be viewed as the internal and psycho-social medicine that applies to the cancer patient throughout the course of the disease.⁸ Because studies using that terminology do not effectively characterize best supporting care, considering supportive care as a type of generic "best supportive care" is unacceptable.⁹ Furthermore, it is ethically required to fully inform a cancer patient before beginning any form of treatment about every aspect of what the oncological and supportive therapy will entail; this is crucial if a particular oncological therapy starts to lose its effectiveness or if the patient agrees to participate in clinical studies that offer a no-treatment alternative. Based on these factors, it would seem that a patient receiving oncological therapy in a curative or palliative setting should be fully informed about both the potential benefits and risks of their specific anti-cancer treatment as well as the options available to them to ensure an optimal quality of life overall. Patients with terminal illnesses must receive the same information, *mutatis mutandis*.⁸

EARLY PALLIATIVE CARE

Early palliative care was likely developed to better inform cancer patients about the true treatment options available to them and to prevent overtreatment that would compromise their ability to maintain their best possible health. Many cancer patients who are in advanced stages of the disease still hold out hope that receiving palliative care can considerably extend their lives or even cure them. As was already said, this misunderstanding is the result of both patients and oncologists, and it must be avoided at all costs. Early palliative care is an idea that moves in that way.¹⁰ According to Temel et al.¹¹, in their prospective randomized study of early palliative care, particular attention was paid to assessing physical and psycho-social symptoms, setting care goals, and coordinating care based on the individual needs of

the patients. Throughout the study period, all patients continued to receive routine oncologic care (specific cancer therapy and general supportive care). Patients who benefited from the early palliative approach lived longer and had a higher quality of life than those who received standard treatment.¹² Once the disease is no longer treatable, several other studies supported the early integration of palliative care, or psychosocial support, into the management of cancer patients.^{13,14} Then, in order to avoid demanding supportive care and protracted hospital stays, it is crucial to balance the cancer treatment's aggressivity against its anticipated advantages and tailor it to a low risk of problems. The lengthy and diverse list of potential side effects following chemoradiotherapy in cancer patients calls for special consideration during a close follow-up. As the awareness of potential sequelae represents a psychological burden for those patients who are cured¹⁵, in addition to the always present fear of a late relapse, specific measures are needed to allow for optimal social adjustment.¹⁶

PALLIATIVE CARE INTERVENTIONS' TARGETS

Palliative care strives to enhance the quality of life (QoL) of patients and those who are caring for them as they deal with the difficulties brought on by life-threatening disease. This can be accomplished by preventing and alleviating suffering, providing comfort and dignity, and by managing pain and other medical, psychosocial, and spiritual concerns early on. These individuals frequently have very major co-morbidities, such as alcohol and tobacco addiction, as well as complicated psychological problems, in addition to the medical symptoms.¹⁶

A holistic approach is used in palliative care to address the patient's, their caregivers', and their family's medical, psychological, social, and spiritual needs. Oncological and surgical techniques, medication management, and psychological support are interventions that may be suitable for palliative care. The following are some of the primary priorities for palliative care therapies in head and neck cancer are medical and surgical care, pain relief, hydration and nourishment, relieving gastrointestinal symptoms, anxiety, agitation, dysphagia, dyspnea, bleeding, airway management, hypercalcaemia, counseling, psychological support, emotional support, breaking terrible news, patient's ambitions and expectations, holistic, psychosocial, and complementary support.¹⁷

MANAGEMENT OF ORAL COMPLICATIONS

Every form of HNC treatment, including surgery (such as mutilation and physiological changes), radiation therapy (such as mucositis, dysphagia, hyposalivation, and osteoradionecrosis), and neoadjuvant, adjuvant, and/or concurrent chemotherapy (such as mucositis, taste changes, and immune suppression), causes oral side effects. Additionally, oral mucosal problems could be a side effect of more recent targeted medicines. These medications' long-term oral side effects necessitate meticulous long-term oral care as well as oral and dental follow-up. In order to effectively manage oral needs, oncologists must understand the significance of preoperative dental care and make use of the resources at their disposal.¹⁸

Oral care for head-and-neck cancer survivors before and after cancer treatment:

Pre-Cancer Therapy

- ▶ Comprehensive head and neck, oral mucosa, dental, and periodontal examinations, radiographs to evaluate dental and periodontal status,
- ▶ Baseline jaw range of motion (interincisal opening), baseline resting and stimulated saliva,
- ▶ Advanced caries, advanced periodontal disease: definitive treatment may require surgery with a goal of 1-2 weeks of healing time,
- ▶ Periodontal debridement maintenance and oral hygiene are all part of the pre-treatment assessment 2-3 weeks prior to cancer therapy.

Throughout Cancer Treatment

- ▶ Individualized care based on cancer type and anticipated treatment outcomes
- ▶ Small carious lesions may be treated with fluoride and/or sealants; daily fluoride treatments for small carious lesions
- ▶ Symptom control: Dry mouth: hydration, oral rinses, and coating agents; lip care; pain: topical analgesic and anesthetic agents; systemic analgesics
- ▶ Patient education can reduce mucositis.
- ▶ Consistent brushing, flossing, and cleaning of prosthetics
- ▶ Water-based lip lubricants, wax, or lanolin; bland mouthwashes; fluoridated toothpaste; or daily use of home fluoridation trays in patients at high risk
- ▶ Soft toothbrushes; ultrasonic or electric brushes for patients who are tolerated
- ▶ If brushing is impossible, use a foam brush with chlorhexidine or a super-soft brush for severe mucositis.
- ▶ Nutritional advice, cigarette and alcohol abstinence, and dietary instruction

After Cancer Therapy

- ▶ Monitoring, preventing, and managing oral problems (such as soft tissue/osteonecrosis, dry mouth, mucosal pain, taste changes, infection, tooth demineralization, dental caries, and periodontal disease).
- ▶ Determine the frequency of dental hygiene follow-up interval based on level of hyposalivation, demineralization/caries rate, and patient's oral hygiene following radiotherapy; patients with dry mouth may need hygiene and recall every three to four months.
- ▶ Checking for cancer recurrence or secondary primary cancer • Dental caries prevention, periodontal maintenance
- ▶ Education for patients
- ▶ Fluoridated toothpaste; daily use of home fluoride trays in high-risk individuals; good oral hygiene practices such as using soft toothbrushes or electric or ultrasonic brushes and flossing; and maintaining mouth and lip lubrication.
- ▶ Promote a non-cariogenic diet and the cessation of alcohol and tobacco use.¹⁸

The utmost levels of assistance in supportive care

A growing number of cancer patients are being cured at this time, and turning cancer into a chronic or curable illness would have significant negative economic and social repercussions. The lengthy and diverse list of potential side effects following chemoradiotherapy in cancer patients calls for special consideration during a close follow-up. The awareness of potential sequelae poses a psychological burden on patients who are cured, in addition to the persistent fear of a late relapse. Sequelae such as metabolic syndrome, growth deficiency, sexual dysfunction, neurocognitive deficits, and many

other aspects require specific measures to permit optimal social adjustment. It is important to note that problems, some of which are potentially fatal, can persist 20 to 30 years following treatment; this necessitates a lengthy follow-up and is inevitably stressful psychologically. The bereavement that follows the patient's death represents the other extreme of supportive care. When dying at home in the presence of receptive family members was the norm, death was viewed as a natural part of life and accepted as such by society (and religion). As a result, the grieving process could be hampered and drawn out. Families of cancer patients may adjust to the fatal outcome more easily, especially if the disease had a protracted course, if the care received and the availability of psychosocial support have been satisfactory. It has been demonstrated that families of patients who suffered from spiritual and psychological suffering were more likely to go through a prolonged and difficult bereavement process and were more susceptible to ill health and mortality. The provision of caregivers with psycho-social, spiritual, and bereavement support is another essential aspect of late-stage palliative care.¹⁹

ASPECTS OF SUPPORTIVE AND PALLIATIVE CARE IN PRACTICE

Supportive treatment for cancer patients is a multidisciplinary endeavor that gives the clinical oncologist a complete strategy to ensure that the patients have the best quality of life possible throughout the course of the disease. Clinical oncologists should not only be knowledgeable about cancer therapy but also capable of providing basic supportive care to manage acute side effects like infection, nausea and vomiting, pain, cancer-related metabolic and ionic disorders, and the widening range of side effects associated with recently developed targeted biological cancer therapy. An active supportive/palliative team with expertise in the management of many chronic and/or recurrent symptoms, such as pain, malnutrition, obstructive syndromes, psychiatric disorders, and neurological disorders to name only the most common ones, should be called upon to assist the oncologist in accordance with each patient's unique needs. The oncologist should ideally continue to be in contact with the patients even if cancer therapy is rendered ineffective, specifically when a very limited survival is anticipated; this clearly demands geographic cohesion. With the ultimate goal of improving the patient, morbid manifestations, and discharging him back home or the place he used to live, the active supportive palliative team ideally assumes a triple role: it is available for consultations aimed at hospitalized patients, it provides out-patient contacts, and finally, it runs a limited in-patient unit for admission of patients with acutization of chronic symptoms (pain, obstruction, depression, malnutrition, etc).¹⁹

CARE FOR THE DYING

Good palliative care must take good care of the dying. Patients who are nearing death may experience severe symptoms that change quickly, as well as the realization that no more active intervention is necessary. These factors make prompt assessment, frequent reassessment, and confident symptom control crucial. Family members also have crucial things going on at this time. It is crucial to have open lines of communication and to be forthright and thoughtful in your decision-making. Consideration should be given to reversible explanations for a patient's decline, and appropriate action may be taken depending on previous talks, professional judgment, and the patient's best interests. The physical changes that occur before death typically include a decline in mobility, a loss of consciousness and

social engagement, a reduction in oral intake, a decline in urine output, a worsening in hemodynamics, and changes in breathing rhythm. Even though nourishment is typically improper for dying patients, receiving medications or intravenous liquids is not automatically disallowed, even though the advantages are sometimes quite limited. For certain patients, enteral tubes offer another option. While individualized care is essential for individuals who are dying, some symptoms are widespread enough to justify "anticipatory prescribing." This is appropriate for the following four main symptoms: pain, nausea, vomiting, agitation, and excessive secretions. Mouth care, tracheostomy and wound care, pressure areas, and continence are examples of places that need constant observation and alertness. At the end of life, the focus of treatment is on providing comfort while providing a personalised and individualized management of the patient's quality of life (QoL) and impending death. Therefore, early palliative and supportive care integration in oncology is crucial. Comfort care emphasizes the interrelationship between physical, psychosocial, and spiritual difficulties and is holistic and person-centered.²⁰

SUMMARY AND CONCLUSION

Due to its recurrence and the aftereffects of treatment, oral cancer is a difficult and enduring disease. Implementing supporting measures is becoming increasingly important for cancer patients. A multidisciplinary approach should be used for management, supportive care, and palliative care, involving professionals from different specialties like oncology, nutrition, speech therapy, and physical therapy as well as maxillofacial surgery, oral medicine, special care dentistry, and restorative dentistry. From diagnosis until the conclusion of the rehabilitation process and any later follow-up, dentists are an important part of this team. Patients with oral cancer should get comprehensive palliative care planning, in which the effects of the entire process on quality of life as well as the physical and functional issues cannot be isolated from their psychological effects, such as guilt and sadness.

These patients' palliative care requires a multidisciplinary approach that should consider the patient's physical, emotional, spiritual, and social statuses. The primary goal of treating cancer patients is to maintain their quality of life. Numerous symptoms were experienced by oral cancer patients receiving radiotherapy, and the majority of these were side effects that might last for several months to a year after the treatment was over. A crucial component of both curative and palliative cancer care is radiotherapy. Family doctors can help cancer patients receive comprehensive primary care by having a basic understanding of radiotherapy's side effects and its primary management of mouth problems. Palliative dental care aids in reducing cancer treatment-related side effects. It underlines the significance of the dentist's contribution to these patients' improved quality of life.

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PERIPHERAL OSSIFYING FIBROMA:

A Case Report

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INTRODUCTION

Oral cavity is constantly subjected to various stimuli resulting in numerous localized growths. Among them, gingiva exhibits overgrowth such as pyogenic granuloma, ossifying fibroma, peripheral giant cell granuloma. One such common focal reactive overgrowth with an indolent behavior is ossifying fibroma.^{1,2} Ossifying fibromas can be central and peripheral. Central type lies in the endosteum or the periodontal ligament adjacent to the apex of the root. Peripheral type arises in relation to the soft tissues in the tooth-bearing areas of the jaws. POF has a peak incidence in young adults, with a predilection for females. Overall, 60% of POFs occur in the maxillary jaw, especially in the incisor-canine region.^{2,3,4}

CASE REPORT

A 18-year-old systemically healthy male reported to the Department of Oral and Medicine and Radiology with complaint of a swelling on the left side of his upper jaw since six months. Patient reports progressively increase in size of the lesion without any other associated symptoms that is pain, discharge, bleeding.

Extraoral examination revealed no gross facial asymmetry (Figure 1). Regional lymph nodes were not palpable. Intraoral examination showed a solitary, dome shaped, pink, sessile, fibrous, exophytic mass extending from 22 to 24



FIGURE 1: Profile of patient : (a) Frontal view; (b) and (c) Lateral view

Abstract

Peripheral ossifying fibroma (POF) is a localized reactive rather than neoplastic enlargement exclusively on the gingiva. POF has females predominance with site predilection of anterior maxilla in young adults. The absolute diagnosis of such proliferation is histopathological examination due to its variable clinical entity and radiographic characteristics. Here, we report a case of POF in the anterior maxilla in an adult male patient. The existence of such lesion indicates the need of periodontal consultation, and treatment include elimination of subgingival pathology and complete excision of the overgrowth. Long term postoperative follow-up is essential considering recurrence rate of 7-20%.

Keywords: Peripheral ossifying fibroma, reactive, overgrowth, excision



FIGURE 2: Intraoral view showing the lesion in the left anterior region of the maxilla.

region. Surface ulceration was present on base of lesion (Figure 2). The growth was non-tender and soft to firm in consistency, measuring 1.8×1.5 cm in size and protruding from the labial gingiva.

Intra oral peri-apical radiograph revealed opacification of the soft tissues in central area of lower third of root of first premolar on the left anterior maxillary region, with no displacement, resorption of the tooth, or any bone loss in the associated region (Figure 3). Based on the history, clinical presentation, and radiological investigation, the lesion was provisionally diagnosed as POF and planned for oral prophylaxis and excision under local anesthesia.



FIGURE 3: Intra oral periapical radiograph showing soft tissue opacification in central area of lower third of root of first premolar on the left anterior maxillary region.



FIGURE 4: Excised specimen from the gingiva.

The excised specimen (Figure 5) was sent for histopathological examination. Histology revealed parakeratinized, hyperplastic stratified squamous epithelium overlying a mass of connective tissue stroma. The underlying connective tissue stroma consists of highly cellular mass composed of large number of proliferating fibroblasts, chronic inflammatory cells and numerous blood vessels interspersed throughout the fibrillar stroma. Also, calcifications in the form of irregular bony trabeculae and giant cells interspersed within collagenous stroma confirmed the diagnosis of POF (Figure 6). The surgical site healed satisfactorily with no reported recurrence during six month follow-up (Figure 7).

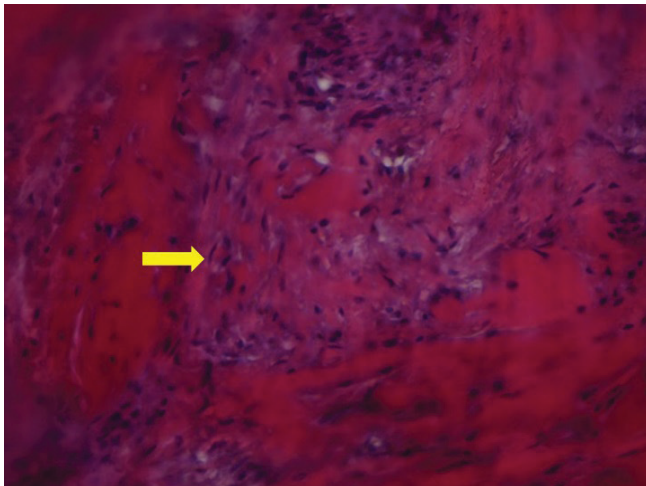


FIGURE 6: Microscopic examination revealing features suggestive of peripheral ossifying fibroma.



FIGURE 7: Post operative photograph after six months of excision of the lesion.

DISCUSSION

Gardner in 1982 coined the term peripheral ossifying fibroma and reinforced as reactive lesion and is not extraosseous complement of central ossifying fibroma of the jaws.^{5,6} In 90% of gingival biopsies, the connective tissue of the periodontium of the oral cavity can show characteristic localized overgrowths.^{2,7} Giant cell fibroma, pyogenic granuloma, POF, and giant-cell granuloma are the lesions common in oral cavity. POFs are frequent gingival overgrowths and are also known as ossifying fibroid epulis, peripheral odontogenic fibroma, peripheral cementifying fibroma.⁸ They occur due to inflammatory hyperplastic reaction rather than neoplastic. The predisposing factors of POF are oral debris, plaque calculus, ill-fitting dentures, sharp restorations, hormonal change.⁹ The occurrence of POF has been attributed to presence of oxytalan fibers in gingival tissue and progression of pre-existing pyogenic granuloma or a peripheral giant cell granuloma with high potential for the formation of bone and cementum-like materials.^{2,4}

POF is predominant in young adults, with a female predilection. The maxillary jaw, particularly the incisor-canine area, is the site of 60% of POFs overall. Clinically, POF appears as a clearly defined gingival overgrowth that is pink to red in colour with an ulcerated surface. The lesions' bases may be sessile or pedunculated. It generally arises from an interdental papilla with a size of less than 2 cm in its largest dimension and typically does not blanch upon probing.¹⁰ Differential diagnosis includes pyogenic granuloma, peripheral odontogenic fibroma, peripheral giant-cell granuloma, fibroma.

These lesions show radiopaque calcifications of soft tissues on radiographic examination, and occasionally there is also accompanying bone damage. The radiographic appearance of tooth migration is only observed in 5% of instances.⁵ In our patient, intra oral periapical radiograph revealed a soft

tissue opacification in the left anterior maxilla; resorption, displacement of the tooth, or any bone loss of involved site is not associated. Histologically, it appears as a mass of connective tissue made up of cellular fibroblasts and stratified squamous epithelium that is not encapsulated. It occasionally displays an arbitrary distribution of calcifications in the connective tissue, which could result in a false positive diagnosis.¹¹

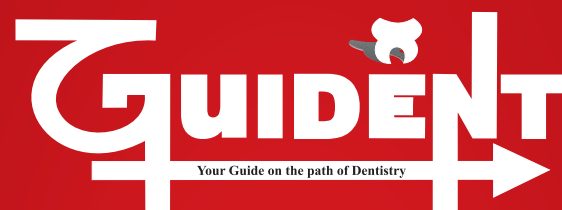
In order to prevent relapse, the lesion must be completely removed as part of the POF treatment together with all local irritants. Rarely is it necessary to remove the teeth next to the lesion.² In circumstances when it is left untreated, the lesion may balloon and destroy the bone around it.¹² There are reports of these lesions developing in edentulous jaws, despite the fact that the periodontal ligament is where the majority of the POF develops.¹³ The likelihood of POF recurrence ranges between 8-20%, with the most common causes being incomplete excision of the lesion and aggravating conditions.¹⁴ Due to the high likelihood of recurrence of these lesions, ongoing assessment and postoperative monitoring are necessary.

CONCLUSIONS

Since POF shares characteristics with other oral illnesses, diagnosing it can be difficult. For an accurate diagnosis, a thorough clinical and radiographic evaluation in correlation with histological results is necessary. POF should also be taken into account while determining the differential diagnosis of large and acute oral cavity lesions. Complete surgical excision, gingival curettage, and ongoing maintenance of proper dental hygiene are used to treat POFs. Due to the high likelihood of relapse, patients should be monitored for a longer period of time.

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INTRODUCTION

It's quite amazing to think about the dentistry performed today as compared to 30 years ago or even 10 years ago. The advances in dentistry state clearly that the dental profession has experienced an exciting amount of technological growth. Yet in comparison to medicine, bio-medical engineering, automotive or aeronautics, electronics and others, dentistry appears to be more than a decade behind in adopting or integrating new technologies on a wide spread basis.¹ The success of incorporating a new technology in the office is dependent on the knowledgebase of not only the dentist but the entire dental team. The knowledge of the digital workflow of the different technologies enhances the confidence and the use of these technologies. As with any other field of study, digital dentistry involves a learning curve to be mastered and used in the clinical routine. Ultimately, the dental professional is responsible for using existing digital tools appropriately for patient treatment.²

In the dental world, it means using any digital technology or device involves computer versus mechanical or electrical stand-alone technology or service. This transformed how people communicate, learn or work. The array of digital equipment available to cosmetic dentist, general dentist and implant dentist etc has increased significantly. Such advancements in dental technology enabled patients to receive modern solutions to traditional dental problem.³

The following list represents the majority of areas, which incorporate some type of digital components.⁴

- | | |
|---|--|
| 1. Shade Matching | 6. Electrical and surgical implant hand pieces. |
| 2. Caries diagnosis | 7. Photography - Extra oral and Intraoral. |
| 3. Occlusion and TMJ analysis and diagnosis | 8. Practice and patient record management-Including digital patient education. |
| 4. Computer-aided implant dentistry- including design and fabrication of surgical guides. | 9. Lasers. |
| 5. Digital radiography-Intraoral and Extra oral including cone beam computed tomography (CBCT). | 10. CAD/CAM and intraoral imaging -both laboratory and clinician controlled. |

Abstract

Digital Dentistry is an emerging technology in dental field, which will enhance patient's treatment modality in future. It provides digital equipment available to cosmetic dentists and implant dentists. Digital dentistry is not a wave of future, its occurring now. Several digital methods have been incorporated to dental practice to replace conventional methods and techniques in order to enhance treatment planning and predictability of execution. Nowadays, digital dentistry is considered a whole field of study within dentistry. The purpose of this article is to examine the concept of digital dentistry, its advantages and limitations and make statements and observations in specific areas of digital dentistry based on research.

Keywords: Digital dentistry, CAD/CAM, Cone beam computed tomography, Caries diagnosis and Digital workflow in Periodontology.

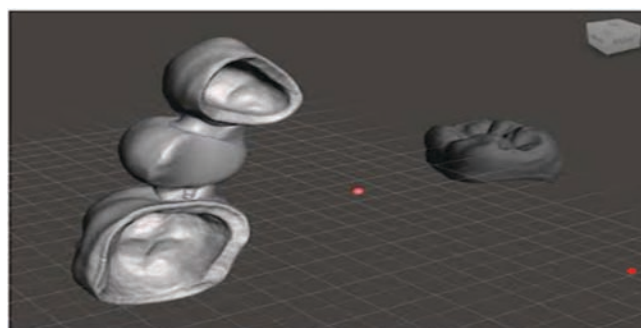


Figure 1.1: Three-dimensional objects imported in different coordinates of the 3D space. Note that the fixed bridge is closer to the screen than the molar crown. The dynamic grid is used to orientate the spatial disposition of the 3D objects.

CAD/CAM

Computer aided design (computer assisted manufacturer) technology enables dental restorations such as crowns, dentures, inlays and onlays to be fabricated using computerized milling technologies. It is faster, more economical, predictable, consistent and relatively accurate. Merging of procedures such as, Implant placement and immediate provisionalization through strategic company alliances and shared technologies allows dentists to do more in less time. CEREC has been available nearly 30 years, and also recent advances with both CEREC as well as E4D clearly demonstrate that the chairside CAD/CAM is uniquely positioned in order to lead our profession in the field of digital dentistry. The future advances in CAD/CAM will better align the dentistry with that most of the other industries are using CAD/CAM for complete predictability of outcomes considering all the extraneous variables. This would include automatic restoration design with no further modifications based on all patient factors such as skeletal and arch classifications wear age, and tooth conditions, excessive movements, TMJ condition, exact inputs of condylar movements in relation to tooth positions, and design based on esthetics and desired looks. This would help dentist to complete tooth restorations on the same day that would otherwise require two or more visits to complete.⁵



Figure 1.2: The TRIOS 4 intraoral scanner (3 shape A/S), which uses confocal technology and enables integration with CAD software programs and CAM devices from other manufacturers.

CONE BEAM COMPUTED TOMOGRAPHY

CBCT is a technique that allows for 3D observation of structures related to the maxillofacial area. CBCT uses a round or rectangular cone-shaped x-ray beam, performing 180-360 degree rotations around the head of the patient.



Figure 2.1: A CBCT device integrated with cephalometric and panoramic radiographic functions (Cranex 3D, Soredex, Tuusula, Finland)

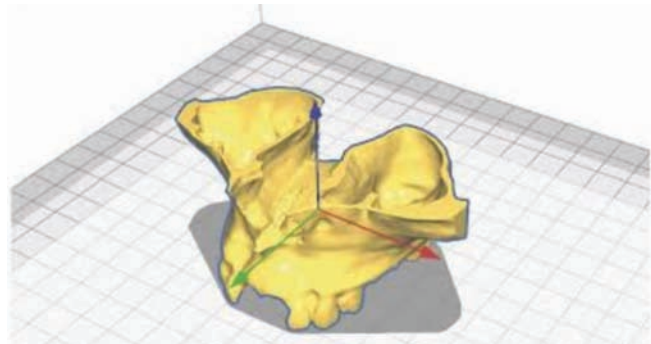


Figure 2.2: A 3D object (reconstructed model of a maxillary CBCT scan) is positioned in the 3D space of a software (Ultimaker Cura) to be 3D printed. Note the three axes depicted by the software in different colors (x-axis in red, y-axis in green, z-axis in blue).

We can zoom through tissues to explore the gums, teeth and vital areas like sinuses. The clarity of the image allows us to measure the thickness of the bone and orientation of the nerves. It act as an implant surgical guides for oral surgeons and periodontists when placing dental implants, which in turn makes the treatment accurate than before. Thus it enables to place implants with greater precession and also to diagnose TMJ problems.⁶

CARIES DIAGNOSIS

Diagnodent is designed to aid in early detection of caries by measuring the increased light induced fluorescence. Visual examination and dental explorers help us to find decay on the surfaces of teeth and x-rays show us advanced decay and decay between the teeth. However, these methods don't find decay that's located inside the tooth. So these digital technologies help us to diagnose the hidden decay were the light probe scans the teeth with laser light. When laser reaches decay under the surface of the tooth, the decay emits the fluorescent light that bounces back to the sensors and it is translated into the digital read out and also as audible signal. Higher the value greater is the amount of decay in the tooth. The advanced technology uses sound, pulse and laser to detect caries earlier than the traditional methods. This in turn allows the dentist to commence the treatment immediately. With this advanced technology, we can more accurately and reliably find the decay in its earlier stages before it causes more damage and helps to preserve the healthy tooth structure.⁷

DIGITAL PATIENT EDUCATION - PRACTICE AND PATIENT RECORD MANAGEMENT

The first and foremost frequent acquisition in the digital dentistry is the implementation of computers into each operatory as well as throughout the practice.³ In most of the developed countries, this has reached the "early majority" stage while the dentists who have not yet acquired this prerequisite for digital dentistry should do so now. The advances and the improved software adapted from other industries allow this technology to be affordable and attain the fastest adoption rate as well as offer a high return on investment. The current highly effective systems include Dentrix, Practice Works, Eaglesoft and Webbased software like Curve Dental. The digital patient education is growing very rapidly.^{2,3} The future in this field will reveal the technologies as well as methods of communication which are already available in the other industries like touch-screen computer and/or

voice-activated software instruction, rapid recall of photos and educational components, live video and 3- D video presentation with and without the tablets or monitors as well as off-site live consultation and education. However, there are many effective options for the digital patient education, such as CAESY, Guru, DDS GP for iPad, Consult-PRO Chairside, etc. A recent CR Foundation (clinicians report) has done a survey of more than 1,000 dentists which revealed that 80% would consider purchasing a tablet or an iPad or tablet for patients' education.⁸

DIGITAL IMAGING/DIGITAL RADIOGRAPHY

Digital radiography is the latest advancement in dental imaging and is slowly being adopted by the dental profession. Digital imaging incorporates computer technology in the capture, display, enhancement and storage of direct radiographic images. Digital imaging offers some distinct advantages over film, but like any emerging technology, it presents new and different challenges for the practitioner to overcome. Today, dental offices have access to digital radiography. The advantages of using a sensor to capture data are immediate viewing, exposure time reduction and storage. The image can be transferred to other rooms such as Dentist Private Office for viewing or even emailed to specialists for consultation using a HIPAA-compliant email service. Images can be enlarged and enhanced to provide a comprehensive diagnosis and evaluation. Digital imaging uses up to 256 shades of grey compared with conventional film. There is 60% reduction in radiation exposure when using digital imaging. It also helps to reduce environmental impact as film packets, which contain lead and processing solution is no longer used. These images can be stored and compared with previous or future images to estimate the dental health of the patient.⁹ The future improvements will use the algorithms based upon thousands of the patient radiographs that accurately diagnose the caries and also make the suggestions for dentist. Complete conversion to the extraoral imaging is the potential possibility for the future. Currently, there are many excellent intraoral digital radiography systems such as Kodak, Schick, Dexis, ScanX, Gendex etc.

IMPLANT TREATMENT PLANNING SOFTWARE

The dental implants has been one of the most important changes in the field of dentistry since 1983. Since then, treatment with dental implants has become one of the most predictable ways to replace lost teeth. There are many brands of implant systems to choose from today. The success of the implant is dependent on correct placement as well as several other factors such as Osseo-integration. Presurgical treatment planning software is designed to increase this efficiency of placing implants. Surgical templates assist in proper placement for esthetics restorative and functional purposes making implant placement faster, easier, safer and more precise. Thus, treatment planning, diagnosis, and placement of implant is easy and more accurate. Treatment planning software incorporates a digital scan either from an intraoral digital scanner or from a 3D image from a CBCT scan.¹⁰

Some implant companies have their own systems.¹¹

- ▶ 3M True Definition • (3m.com/3M/en_US/Dental/)
- ▶ Carestream CS 3500 (carestreamdental.com)
- ▶ iTero by Align Technology (itero.com)

- ▶ The DWIO system from Dental Wings (dentalwings.com)
- ▶ PlanScan from Planmeca (planmecacadcam.com)
- ▶ Trios from 3Shape (www.3shape.com)
- ▶ CEREC (sirona.com)
- ▶ Lythos by Ormco (ormco.com)

DIODE LASER

Lasers are defined as monochromatic electromagnetic energy of one wavelength. Diode lasers are most commonly used soft tissue lasers by dentists. It is used for a variety of procedures such as soft-tissue gingivectomy, biopsy, impression toughing, frenectomy, adjunct periodontal procedures, implantology, in endodontic, and for tooth whitening. The infrared wavelengths of the laser have the ability to precisely and efficiently cut, coagulate, ablate, or vaporize the target tissue. Manufacturers have made the units small, portable, cordless, and low in cost, which make them desirable and easy to add the investment into the practice.¹²

Examples of dental laser companies include:

- ▶ Discus/Philips
- ▶ Ivoclar Vivadent
- ▶ Biolase
- ▶ AMD Lasers



Figure 2.2: Soft tissue dental lasers

DIGITAL WORKFLOW IN PERIODONTOLOGY

Nowadays, the concept of smile and dental esthetics is no longer limited to the teeth. The essential of a smile involve the relationship between the 3 components: the teeth, lip framework and the gingival scaffold. In spite of common notions about facial esthetics being usually based on subjective opinions and being influenced by cultural variants, emerging research shows how the amount of gingival display significantly influences the perception of smile attractiveness, independent of age and sex. Excessive gingival display while smiling, also usually known as "gummy smile" is a common esthetics concern among dental patients and being largely viewed as unesthetics, leads many patients to seek some form of treatment to address the issue.¹³

The planning of the surgical crown lengthening procedures has been broadly affected by the recent advent of the digital workflow in dentistry. CAD-CAM

techniques have helped surgeons perform more precise and predictable surgeries, which contributes to fewer invasive procedures and better esthetic outcomes. Before digital guided surgery techniques, it was possible to use a vacuum-formed or acrylic resin surgical guide, made by diagnostic waxing to establish clinical crown length. The accuracy of these measurements varies according to the periodontal phenotype and site specific characteristics, including buccal bone thickness, gingival recession, root anatomy and tooth morphology.¹⁴

By integrating hard and soft tissue imaging data, obtained through IOS and CBCT methods, a 3D virtual patient can be created to noninvasively stimulate an entire treatment. This data integration, in turn, can predict digital workflow treatments.

By providing precise information and allowing 3D evaluation of the support periodontal tissues, CBCT acquisition is important not only for the diagnosis of the patients condition but also for precise and predictable periodontal planning. Clinical case and technique reports involving the manufacture of digital surgical guides to orient both the osteotomy and gingivectomy procedures during crown lengthening surgeries have used different computer programs to perform the periodontal profile analysis. This software evaluation allows for estimation of the ideal amount of tissue to be resected, by the assessment of the tomography to observe the relationship between biological distances and define the best surgical approach.

A surgical guide can be virtually modeled and 3-D printed to orient both incision and osteotomy related to the crown-lengthening surgical procedure.¹⁵

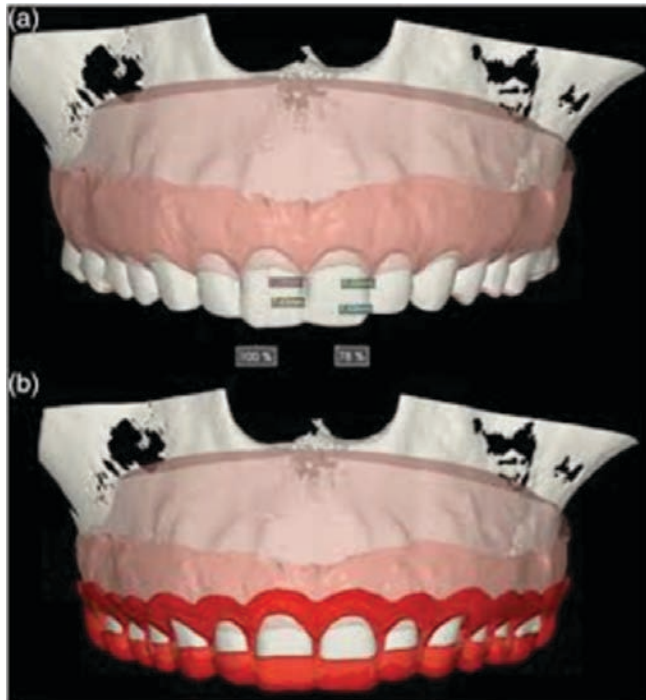


Figure 2.3: Periodontal surgical planning and guide design. The surgical guide is then impressed by a 3-D device using polymerizable resin (thickness of 1.5mm). Following this the printed guide is washed in isopropyl alcohol for 15 minutes to remove unpolymerized resin residues on the surface, then it is



Figure 3.1: Using the periodontal guide for orienting internal bevel incisions on gingival margins.



Figure 3.2: Using the periodontal guide for bone recontour.

ADVANTAGES OF DIGITAL DENTISTRY

- ▶ Improved efficiency-Both cost and time.
- ▶ Less chair side time using digital technology.
- ▶ Improved accuracy in comparison to previous methods.
- ▶ High level of predictability of outcome.
- ▶ Technology will make practice management more efficient.
- ▶ Patient experience tends to be better and more comfortable when using digital treatments, with a sense of quality and a high level of technological innovation.
- ▶ Educational software and intelligent assistants will increasingly support the needs for decision making in clinical practice.¹⁶

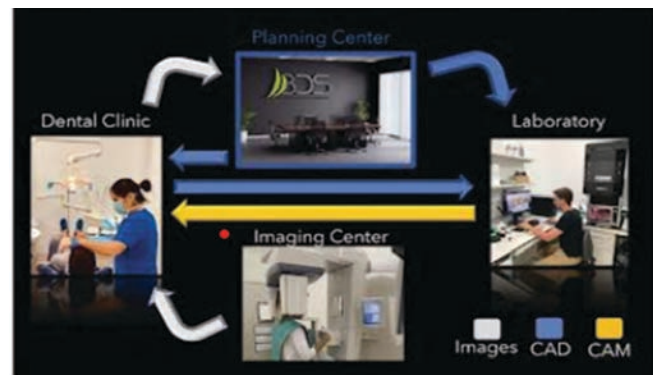


Figure 4.1: Digital workflow involving imaging and planning centers. All treatment plans are ultimately to be approved by the dental clinician responsible for the case.

LIMITATIONS OF DIGITAL DENTISTRY

- ▶ The major limitation of most areas of digital dentistry is cost. To adopt new technology often requires a higher capital investment, especially at the “innovator” or “early adopter” stage.
- ▶ The other main limitation for the clinician to explore these new advancing dental technology is lack of training, knowledge and desire.
- ▶ Misunderstanding the new technology tends to faster slower adoption rates.¹⁷

CONCLUSION

Digital dentistry has transformed the field of dentistry, improving the precision, accuracy and efficiency of dental procedures, as well as patient outcomes. Digital dentistry has revolutionized the way dental professionals provide patient care, allowing for greater precision, efficiency and accessibility. Advancements in imaging, CAD/CAM technology, 3D printing, and regenerative dentistry have transformed the dental industry. Going completely digital is the right decision. There is no doubt in mind that this is the future of dentistry and future of dental education, the future of oral care. When properly implemented and fully educated, return on investment can be excellent, increased joy in practicing dentistry can be experienced, and better care for patients can be delivered.

ACKNOWLEDGEMENT

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ROOT CANAL TREATMENT IN PEDIATRIC DENTISTRY



Dr. Swapnil Rachha
Consultant Pedodontist

Mumbai, India

- ▶ Root Canal Treatment (RCT) is also called as endodontic treatment of a tooth.
- ▶ Tooth has 2 outer layers which are hard, called as Enamel and Dentin.
- ▶ These 2 layers cover an inner most part of a tooth called as PULP.
- ▶ PULP is a soft tissue which is made up of nerves and vessels.
- ▶ Whenever a dental decay affects Enamel and Dentin reaching the PULP chamber one gets pain due to infection and inflammation.

WHEN IS THE ROOT CANAL TREATMENT IS REQUIRED?

RCT is required in the following conditions-

- ▶ Deep decay involving the Pulp chamber.
- ▶ Traumatic/ injured tooth.
- ▶ Sensitive tooth due to severe erosion
- ▶ Tooth with a crack on it.
- ▶ Intentional RCT in some cases of crown and bridge.

WHAT DO WE FEEL ?

- ▶ Food lodgment in decayed tooth.
- ▶ Tooth ache which worsens at night.
- ▶ Swelling associated with painful tooth.
- ▶ Pus discharge.
- ▶ Fever.



WHAT IS RCT?

Although medicines are prescribed sometimes, they will give a temporary relief from pain.

- ▶ RCT method varies in children and adults.
- ▶ It usually requires 2-3 sessions.
- ▶ At first Xray is made to evaluate decay and infection of the tooth.

Steps of RCT in Children (milk teeth):-

- ▶ Anesthesia is injected so that the treatment becomes almost painless.
- ▶ All the decay is removed.
- ▶ Tooth is cleaned and shaped till the end of the roots.
- ▶ Cleaned and disinfected roots are filled with medicinal paste which will not affect the natural exfoliation process of the milk tooth. And crown portion of the tooth is filled with a restorative material.

- ▶ Then preformed Stainless Steel crown or Zirconia Ceramic crown is placed over the tooth.

Steps of RCT in ADULTS (permanent teeth):-

- ▶ First 3 steps of RCT are same as RCT done in children (milk teeth).
- ▶ Cleaned and disinfected roots are filled with inert material called as Gutta Percha.
- ▶ Crown portion of the tooth is filled with restorative material.
- ▶ Then the crown is placed over the tooth (metal, metal-ceramic or full ceramic crown)

WHY CROWN AFTER RCT?

- ▶ Crown gives additional strength and support to the tooth which it has lost due to decay.
- ▶ Improves mastication.
- ▶ Increases longevity of tooth.
- ▶ Decreases chances of reinfection.

POST RCT CARE

- ▶ One should not eat anything hard from the RC treated tooth, until it is secured with a crown.

RCT if done in right time can save a tooth from removal

PREVENTION AT HOME

1. Brushing twice a day with fluoridated tooth paste.
2. Floss in between the teeth to prevent food lodgement.
3. Use of a mouthwash as advised by a dentist.

AT DENTAL CLINIC:-

1. 6 monthly check up.
2. Preventive treatment- sealants.
3. Scaling and polishing.
4. Fluoride application.

However, if possible saving the natural tooth is best because nothing can function as efficiently as a NATURAL TOOTH.

ANTI RAGGING WEEK CELEBRATED IN K.D DENTAL COLLEGE & HOSPITAL, MATHURA

As per notification of UGC, K D Dental College and Hospital celebrated **"Anti Ragging Week"** from 12th to 18th August 2023 in which following events to create awareness against ragging practices were conducted:

1. Anti Ragging Workshop was recently conducted
2. Essay Writing competition was held on 14th August
3. Awareness regarding "ragging free campus" was given to students on 15th August
4. Logo designing competition, T Shirt designing competition and Poster making competition was conducted on 16th August
5. Short documentaries on ragging (by UGC) were shown to college students on 17th August
6. Finally, all the participants and winners of various competitions were awarded certificates on 18th August.

Both undergraduate and post graduate students participated in the events.



PROSTHODONTICS - THE CURVE OF LEARNING

2 DAYS CDE PROGRAM ORGANISED BY K. D. DENTAL COLLEGE & HOSPITAL, MATHURA

Dr. Saloni Mistry, Professor and HOD (Dept of Prosthodontics) of Dr. G. D. Pol Foundation's YMT Dental College and Hospital, Navi Mumbai conducted a two day CDE program organized by **Dr. Manesh Lahori**, Dean and HOD (Dept. of Prosthodontics) at K. D. Dental College and Hospital, Mathura on 21st and 22nd August 2023. Dr. Saloni's achievements in field of Prosthodontics are remarkable. She is a well known Prosthodontist and is also the President elect (2023-24) of IPS Mumbai -Navi Mumbai branch. Ma'am has always been a keen learner and a passionate teacher.

The treatment options in the field of Prosthodontics are vast and it takes deep understanding of the subject to formulate the perfect treatment plan for every single case. Dr. Saloni Mistry conducted a CDE program which aimed at teaching basics of both Removable and Fixed Prosthodontics to both undergraduates and postgraduates.

On day 1, the programme was conducted in the lecture hall 1. It was a huge success with more than **250 participants** including heads and staff of all departments. The programme commenced by the welcome address by Dr. Manesh Lahori which was followed by felicitation of the guest with a floral bouquet and shawl. She began her first lecture by stating DeVan's famous postulate that "Perpetual preservation of what remains is more important rather than meticulous removal of what is missing." For that, one must have thorough knowledge about key principles which guide in diagnosis and treatment planning. Her lecture on impression making in complete denture gave an insight on all the theories and clinical techniques of impression making. Her second lecture was preceded by a tea break and the lecture on diligence in decision making in FDP v/s Implant gave wisdom about the skillful and ethical reasoning behind formulating a perfect treatment plan.

In her opening remarks **Dr. Saloni Mistry** emphasized on the fact that "What you hear, you forget; What you see, you remember: What you do, you understand." With this mindset **on Day 2**, she gave a lecture on conceptual principles and biomechanics of RPD designing and the changing trends from conventional to digital CPD designing in conference room. After lunch, the afternoon session was a workshop on CPD designing only for postgraduates of Dept of Prosthodontics which helped the students understand correct technique behind surveying and RPD designing on 15 dental casts of patients. It only takes someone with great depth of knowledge to teach such vast topics in such limited time with such skills and patience. Ma'am helped each student in RPD designing as well as made them understand the variety of treatment options that one can opt for in each cases.

The programme ended with certificate distribution to all the participants by Dr. Saloni Mistry and she was also felicitated for conducting such a successful and interactive programme on almost all major topics of Prosthodontics.

The CDE programme was highly appreciated by all the students and it was unanimously called one of the best CDE program so far.





2 **संघ की विचारधारा से अधिक से अधिक लोगों को जोड़ें**



आपकी संस्कृत सेवा स्टेशन का सम्मान

संस्कृत सेवा स्टेशन का सम्मान प्राप्त करने वाले बैंड 'द ब्लैक एंड व्हाइट प्रोजेक्ट' के सदस्यों का फोटो।

संस्कृत सेवा स्टेशन का सम्मान

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[illegible]

1. **What is the purpose of the study?**
 The purpose of the study is to determine the effectiveness of the new drug in treating the disease.

2. **What are the objectives of the study?**
 The objectives of the study are to determine the safety, efficacy, and tolerability of the new drug.

3. **What are the study design and methodology?**
 The study is a randomized, controlled, double-blind trial. The methodology involves randomizing patients into two groups: the treatment group and the control group.

4. **What are the results of the study?**
 The results of the study show that the new drug is effective in treating the disease, with a significantly higher response rate compared to the control group.

5. **What are the conclusions of the study?**
 The conclusions of the study are that the new drug is safe, effective, and tolerable, and it is recommended for further clinical trials.

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PARTIAL BONDED RESTORATIONS-A NEW PERSPECTIVE

A CDE PROGRAM ORGANISED BY K. D. DENTAL COLLEGE & HOSPITAL, MATHURA

A CDE Program was organized and hosted by **Dr. Manesh Lahori**, Dean & Principal at K.D. Dental College And Hospital, Mathura on - **"Partial bonded Restorations-A new perspective"** on 16th August 2023 by **Dr. Priyanka Jain Sikka**. She is the clinical specialist for North and East India at 3M Oral Care.

Partial bonded restorations are a type of minimally invasive treatment. It can fully enact the properties of the natural tooth form and deliver a good aesthetic emergence as well, which is one of the major worries of the needful person. The partial bonded restoration also gives patients relief in expenditure in comparison to conventional full crown restoration, making it a better convincing treatment option.

The CDE program was conducted in the college lecture hall. It was a huge success with **more than 100 participants and 20 participants** registered for lecture, live demo and hands on session. The program commenced by the welcome address by **Dr. Manesh Lahori** and felicitation of speaker with a floral bouquet, which was followed by lecture and demonstration of same by **Dr. Priyanka Jain Sikka**.

Dr. Priyanka emphasized on the fact that 'If one is not willing to learn then no one can help him but if one is determined to learn, no one can stop him.' Her lecture and demonstration aimed at mainly focusing on all the basic about principles of tooth preparation for partial bonded restorations and cementation techniques that will help both undergraduates and postgraduates to deepen their expertise and improve patient care.

The speaker explained all concepts of partial bonded restorations which include inlay, onlay, overlay and table top in a very simple manner, by giving many examples which helped the students to relate to. After lunch, students were given live demonstration on direct and semi indirect partial bonded restorations. Since active learning is a forte at K. D. Dental College and Hospital and Dr. Lahori emphasises on the same, therefore hands-on session for 20 students was followed later, which provided students with a greater understanding of all the minor aspects that must be considered throughout these procedures. At the end of the program, Dr. Priyanka also clarified all doubts or questions that were put forward by the participants.

The program ended with certificate distribution to all the participants by Dr. Priyanka Jain Sikka and Dr. Manesh Lahori and she was also felicitated for conducting such a successful and knowledgeable program in such an efficient way.

In the future, such events will undoubtedly aid students in overcoming their doubts and inhibitions, as well as provide them with improved information

and interest towards minimally invasive dentistry, which is gaining a lot of demand with increasing awareness amongst patients.

The CDE programme was highly appreciated by all the delegates as learning new skills and gaining knowledge is a lifetime gig.





सबदेस

आगरा - मुख्य संस्करण

20 Aug 2023

कायिक्रम म शास्त्राय, उपशास्त्राय एव लाकनुत्य आद उपास्थत था।

केडी डेंटल कॉलेज में ओरल केयर
क्लीनिकल विशेषज्ञ ने साझा किए अनुभव

संदेश संवाददाता ■ मथुरा

दंत चिकित्सा के क्षेत्र में हो रहे परिवर्तनों से छात्र-छात्राओं को अभाव कायम के लिए केडी टैटल कॉलेज एंड होस्पिटल में आसिक वंधुअ पुनर्स्थापन एक नया परिप्रेष्य विषय पर कार्यशाला का आयोजन किया गया, जिसमें उत्तर-पूर्वी भारत की ज्ञानी-मानी ओरल कैमन प्रतीतिज्ञ विरोधज्ञ डा. प्रियंका जैन सिक्का ने अपने अनुभव साझा किए। कार्यक्रम की शुरुआत प्राचार्य डा. मनोहर लाली ने स्वागत भाषण से हुई।

महाविद्यालय के व्यवधान कक्ष में आयोजित सीडीई कार्यक्रम में डा. सिका ने छात्र-छात्राओं को बताया कि आंशिक बंधुआ पुनर्स्थापन एक प्रकार का न्यूनतम कष्टदायी उपचार है। यह दांतों के प्राकृतिक स्वरूप के गुणों को पूरी तरह से क्रियान्वित करने



ओरल केयर क्लिनिकल विशेषज्ञ डॉ. प्रियंका जैन सिन्हा और प्राचार्य डॉ. मनेश लाहीरी के साथ प्रतिभागी छात्र-छात्राएं।

के साथ एक अच्छे सौदेबाजों प्रदान कर सकता है, जो हर व्यक्ति की प्रमुख विंताओं में से एक है। उन्होंने बताया कि पार्श्वपल बाई-डेड रिस्टोरेसन से मरीजों को पारंपरिक पुनः काठन रिस्टोरेसन की तुलना में खर्च में भी राहत मिलती है, जिससे यह एक बेहतर उपचार विकल्प बन जाता है।

उन्होंने कहा कि अगर कोई सीखने का इच्छुक नहीं है तो कोई उसकी मदद नहीं कर सकता, लेकिन सीखने के लिए दृढ़ संकल्पित है तो उसे कोई नहीं रोक सकता। उनके व्याख्यान और प्रदर्शन का

मुख्य उद्देश्य आशिक बंधुआ बहाली और सीमेंटेशन तकनीकों के लिए दांतों की तैयारी के सभी बुनियादी सिद्धांतों पर ध्यान केंद्रित करना था। ये बुनियादी सिद्धांत खातक और खातकोत्तर विद्यार्थियों को रोगी देखभाल और सुधार में मदद करेंगे।

उन्होंने आर्थिक बंधन की सभी अवधारणाओं को व्याख्यान और लाइव डेमो के माध्यम से बहुत सरल तरीके से समझाया। साथ ही 20 छात्र-छात्राओं को अलग से व्यावहारिक जानकारी भी दी।

केडी डेंटल कॉलेज में ओरल केयर क्लिनिकल विशेषज्ञ ने साझा किए अनुभव
दंत उपचार में आंशिक बंधुआ पुनर्स्थापन कम खर्चीला: डॉ. प्रियंका



ओरल कैन्सर क्लिनिकल विशेषज्ञ डॉ. प्रियंका जैन सिक्का तथा प्राचार्य डॉ. मनेश लक्ष्मी के साथ प्रतिभागी छात्र-छात्रा शिक्षा संवाददाता

शिक्षा संवाददाता

युनिक समय, मधुसूत। देशी क्षेत्र में हो रहे परिवर्तनों राजाओं को अवगत कराने के लिए डेपुटी कलेक्टर एन.डी. आरिफ के माध्यम से पुनर्स्थापित प्रतिष्ठित विषय पर कार्य आयोजन किया गया। इस कार्य में कर्तव्य निरूपित

जैन सिखा ने अपने अनुभव सा-
किए। सीरीज कार्यक्रम की शुरूआत
प्राचार्य डॉ. मोनेश लाली के स्वा-
भाषन से हुई। महाविद्यालय
याज्ञिक कक्ष में डॉ. प्रियंका जैन
सिखा ने बताया कि आर्थिक बंधु-
पुनर्स्थापन एक प्रकार का न्यून-
कष्टदीर्घ उपचार है। यह डॉ. प्रियंका
प्राकृतिक स्वास्थ्य के गुणों को पूरी

से क्रियान्वित करने के साथ एक अच्छा मोहर्क प्रदान कर सकता है। जैविक हर व्यक्ति को प्रमुख चिंताओं में से एक है। उन्होंने इस बात पर जोर दिया कि अगर कोई सोखने का प्रयत्न नहीं है तो कोई उसकी मदद नहीं कर सकता, लेकिन अगर कोई सोखने का प्रयत्न करता है तो उसे मदद मिल सकती है।

[illegible]



K.D. Dental College & Hospital, Mathura

Dental College
Mathura



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On

PARTIAL BONDED RESTORATIONS- A NEW PERSPECTIVE



Speaker
Dr. Priyanka Jain Sikka

Schedule

10:00 - 11:30 am	- Lecture
11:30 - 12:00 pm	- Tea break
12:00 - 01:00 pm	- Live demo on Direct and indirect
01:00 - 01:30 pm	- Lunch
01:30 - 02:00 pm	- Hands On

Partial bonded restoration Pre-
Impression and Temporization

16 August

Wednesday

Learning Objectives

- History, Indications and Contraindications
- Direct and Indirect- a right case?
- Good bonding to improve Techniques
- Homebased/Continental Training- why not?

- To Recruit or Not
- Impressioning and Temporization
- Choosing the right Impression
- Cementation the A and longer it



K.D. Dental College & Hospital, Mathura

A Tryst with
Dental Education



**Science,
Applied to Life.**

OR

PARTIAL BONDED RESTORATIONS

- A NEW PERSPECTIVE



Schedule

10:00-11:00 am	Lecture
11:00-12:00 pm	Taxi break
12:00-01:00 pm	Refreshment and Interval
01:00-02:00 pm	Lecture
02:00-03:00 pm	Lecture

(Partial BonDED Restorations: Prep, Placement and Temporization)

16 August, Wednesday

Learning Objectives

- Waxes, Onlays and Tablettings
- Waxes to Choose a Right Cast
- Semi Direct Wax Indirect Technique
- Immediate Dental Sealing Way to GO

- To Retract or Not
- Impressioning and Temporization
- Choosing the Right Finishes
- Cementation: Fix it and Forget it

1ST GLOBAL CONFERENCE ON BASAL IMPLANTOLOGY 2023



Lighting the Lamp by Dr MC Sudhakar, Minister for Higher Education, Govt of Karnataka, INDIA

Aim Academy Switzerland, International Foundation for Implant Dentistry (IFFID), Monoimplant, and VK Dental India Pvt Ltd, Hosts its biggest Global conference on Basal Implantology 2023 till date in the world! in Bangalore from June 16th to 18th 2023. More than 400 people were in attendance.

The conference stands out in respect to and the delegates was the level of genuineness of the organisers in ensuring attendees were truly looked after and connected to the right people for their scientific needs and information. I have to say. It was the little personal touches which made the conference an unforgettable experience. So, hats off to the conference team for doing a great job.

The theme of the conference **"Biological Blessing"** is itself a self-explanatory that the whole conference scientific programme is designed for non-invasive, key hole, one stage technology similar to developments we see in the field of medical science like surgery, traditionally waiting time, augmentations were part of the implant therapy which were unpredictable, expensive and painful. Today Dental implantology is more predictable and simpler and can be done routinely like any other procedures in dental practice.

On the speakers front, international speakers came from Italy, Romania, Spain, Iraq, Russia who are masters and authors of various books written in this particular concept. More than 28 National experts presented on various burning topics in the field of Cortico-Basal Implantology.

Conference Endorsed Cortico basal Implantology Technique Has Reached an Extraordinary Degree of Maturity: The technique has reached an extraordinary Degree of Maturity because it has been developed, over decades, outside Academics by practitioners only. Also, the fact that manufacturers have embraced the input from clinical users directly and without delay has greatly accelerated the development of the devices as well as of the method.

One of the delegates mentioned "innovation in Traditional Implantology is ridiculous", because last 40 years of research, did not fasten the speed of osseointegration or helped in faster delivery of results." Cortico Basal implantology – it's old solutions for future problems," and Another participant present for first time declared that "Cortico Basal Technique" is not the future – "It Was the Future a Long Time Ago."

Senior clinician attending the conference mentioned that "conference arrangement, scientific content, detailed program surpassed everyone's expectations".

Conference begins with scientific presentations in Two halls, and inauguration by Dr SUDHAKAR MC, Minister for Higher Education, Govt of Karnataka, INDIA. Guest of Honour, Dr. JAYAKARA S M, Vice-Chancellor of Bangalore University, Dr. RANGANATH V, President of KSDC. Inauguration also witnessed the New Three books release on Cortico-Basal Implantology written by Dr Veerendrakumar sc.



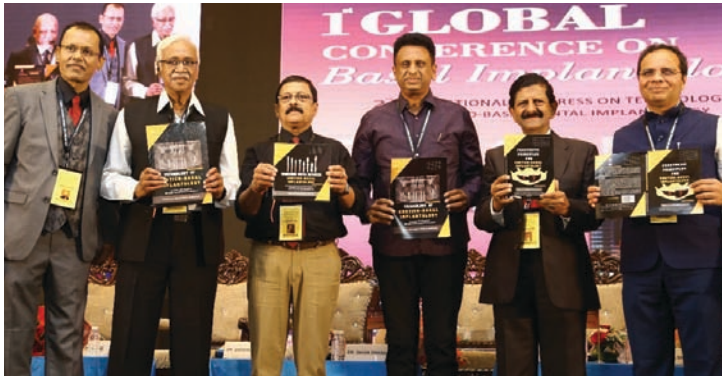
Delegates from various Countries



Ribbon cutting by Dr Pasqualini



Our Chief Guest Dr MC Sudhakar and Guest of Honour Dr Jayakar shetty



Book Release by Dr Faizuddin, Dr Hiremath, Dr Pradeep Raju



Evening Banquet with Dinner and Music



Evening Banquet with Dinner and Music



Evening Banquet with Dinner and Music



Delegates from other countries



Photo spot specially set up for the conference: delegates from Kolkata and Punjab



All Sessions and All days -scientific halls were tightly jam packed with delegates-



One Discussion with Mentors and Experts and Delegates Interaction: Delegates Have to Stand In The Hall to Find the Place



One Discussion with Mentors and Experts and Delegates Interaction: Delegates Have to Stand in The Hall to Find the Place



Pre-Conference Surgical work shop -Live surgeries ,Hands on and One to learning experience were the part of the pre-conference surgical work shop



International Standard presentation Facility's for the Speakers

UPWARD TREND IN PARTICIPATION FOR CLINICAL EDUCATION PROGRAMS AS DENTSPLY SIRONA LAUNCHES NEW ON-DEMAND CURRICULA

High quality clinical education courses are a pillar of Dentsply Sirona's commitment to empower dental professionals for the future. The Company saw an upward trend in the number of dental professionals taking advantage of online training opportunities as well as a return to in-person training throughout 2022. To meet this increased demand, Dentsply Sirona is launching new online curricula through its Dentsply Sirona Academy.

Charlotte, July 14th, 2023. Dentsply Sirona's clinical education programs reached almost half a million dental professionals who participated in a broad range of courses around the globe throughout 2022. This is a five percent increase in pre-pandemic participation levels. Some of the increase in participation comes from the development of a broad portfolio of online and on-demand clinical education programs. Restrictions during the Covid-19 pandemic led to a dramatic increase in online education participation. As these restrictions eased throughout 2022, dental professionals were eager to join in-person trainings and get back in the classroom, but online education remains popular once again.

DENTSPLY SIRONA ACADEMY COURSE STATISTICS 2022

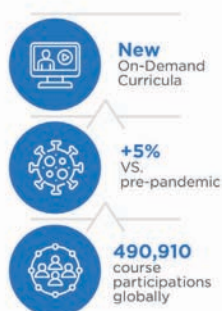


Fig. 1: Dentsply Sirona Academy Course Statistics 2022

expanding its library of online clinical education available through Dentsply Sirona Academy. These evidence-based comprehensive courses are self-paced and interactive, developed and taught by leading experts in their respective areas of dentistry, and are designed to expand skillsets and increase confidence. This is particularly helpful as advances in new technology and techniques rapidly impact.

New On-Demand Workflow Curricula

Building on the successful rollout of the Dental Implants Curriculum available on-demand through the Dentsply Sirona Academy, Dentsply Sirona

launched a new Diagnosis and Treatment Planning Curriculum and an Endodontics Curriculum which is focused on the entire workflow. The curriculum is grouped into three learning tracks – Foundational, Procedure-Based, and Mastery to address each clinician on their individual learning journey and help advance them to the next level in clinical, technical and practice excellence. The courses are created



Fig 3: Dr. Mark A. Latta, DMD, MS, Professor of General Dentistry at Creighton University, Omaha, USA

by a diverse group of globally renowned KOLs and instructional design experts to ensure an engaging experience for participants. Initial feedback is very positive. Dr. Mark A. Latta, DMD, MS, Professor of General Dentistry at Creighton University, Omaha, USA, commented that, "The rapid advances in technology across all the disciplines of dental health care have made it even more essential for clinicians to be committed to life-long learning. Driven by a cadre of global experts, the Dentsply Sirona curriculum provides outstanding opportunities for engaging courses that will provide each learner immediate benefits for the care of their patients."

First Sustainability Educational Curriculum for Dental Professionals

Additionally, Dentsply Sirona developed and launched the first Sustainability Educational Curriculum for Dentistry through the Dentsply Sirona Academy. The curriculum responds to an international study¹ conducted by Dentsply Sirona in 2022 which revealed that three-quarters of all dentists say that there is a knowledge gap on sustainability and want to learn more about this topic. The curriculum addresses this knowledge gap on sustainable dentistry focusing on building deeper understanding of the industry's environmental and social challenges and how to take action for more sustainable practices in their offices or labs.

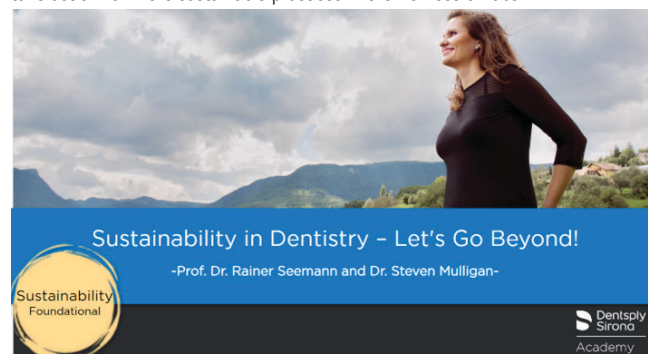


Fig. 2: A first for dentistry: Curriculum for sustainability in practice and lab

Dentsply Sirona World Events 2023

In 2023, Dentsply Sirona will hold DS World events in Las Vegas, US (September 21 – 23), Madrid, Spain (September 22 – 23), and Riccione, Italy (September 29 – 30). Dentsply Sirona Worlds bring dental professionals together for multiple days of high-quality education, engaging expert speakers, enriching networking, and the opportunity to experience first-hand innovations in digital dentistry. Focused on supporting dental professionals to grow their knowledge, practice and connections, these events are a window into the future of digital dentistry.

ABOUT DENTSPLY SIRONA

Dentsply Sirona is the world's largest manufacturer of professional dental products and technologies, with over a century of innovation and service to the dental industry and patients worldwide. Dentsply Sirona develops, manufactures, and markets a comprehensive solution offering, including dental and oral health products as well as other consumable medical devices under a strong portfolio of world class brands. Dentsply Sirona's products provide innovative, high-quality and effective solutions to advance patient care and deliver better and safer dental care. Dentsply Sirona's headquarters are located in Charlotte, North Carolina. The company's shares are listed in the United States on NASDAQ under the symbol XRAY.

¹ Global Sustainability in Dentistry Study organized in 2022, Link to Study Report

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dentsplysirona@edelman.com

EVENT CALENDAR

EXPONENT CHANDIGARH-2023

Date: 9-10 September-2023

Venue: Palm Resorts, Zirakpur, Chandigarh

Contact Person: Mr. Karanbir Suri

Mobile: +91 9810035871

EXPONENT BENGALURU-2023

Date: 23-24 September-2023

Venue: BIEC Tumkur Road, Bangalore

Contact Person: Mr. K. Rajendra

Mobile: +91 9448274585

EXPONENT MUMBAI-2023

Date: 30 Sept.-1 Oct.-2023

Venue: Bombay Exhibition Centre, Goregaon, Mumbai

Contact Person: Mr. Mikhil Bawal

Mobile: +91 9819819198

29th ISOI NATIONAL CONFERENCE-2023

Date: 5-8 October-2023

Venue: Hotel Sahara Star, Mumbai

Contact Person: Dr. Amit Gupta

Email: isoi0050@gmail.com/ dramitvgupta@gmail.com

51st IPS NATIONAL CONFERENCE-2023

Date: 8-10 December-2023

Venue: Dr. Shyama Prasad Mukherjee Indoor Stadium, Goa

Contact Person: Dr. K. Sanketh Reddy

Email: 51stipsconference@gmail.com

6TH INTERNATIONAL DENTAL LAB EXPO-2023

Date: 28-29 October-2023

Venue: Dayal Gateway Convention Centre, Gomti Nagar, Lucknow

Contact Person: Mr. Manzar Naqvi

Mobile: +91 9990922853

EXPONENT INTERNATIONAL DELHI-2023

Date: 22-24 December-2023

Venue: Pragati Maidan, New Delhi

Contact Person: Mr. Shammi Gumbhir

Mobile: +91 9810062366

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CATEGORIES

- | | | | |
|--|---|--|---------------------------------------|
| 1. Most Proactive Dental College of the Year | 8. Best Dept. of Oral & Max. Surgery | 15. Best Student Pg Category (Periodontics) | 22. Best Student Intern Category |
| 2. Most Proactive Sr. Academician of the Year (For All Depts.) | 9. Best Dept. of Oral Pathology | 16. Best Student Pg Category (Endodontics) | 23. Best Student UG Category 1st year |
| 3. Most Proactive Jr. Academician of the Year (For All Depts.) | 10. Best Dept. Oral Medicine & Radiology | 17. Best Student Pg Category (Periodontics) | 24. Best Student UG Category 2nd year |
| 4. Best Dept. of Prosthodontics | 11. Best Dept. of Periodontics | 18. Best Student Pg Category (Oral & Max. Surgery) | 25. Best Student UG Category 3rd year |
| 5. Best Dept. of Orthodontics | 12. Best Dept. of Community Dentistry | 19. Best Student Pg Category (Community Dentistry) | 26. Best Student UG Category 4th year |
| 6. Best Dept. of Endodontics | 13. Best Student Pg Category (Prosthodontics) | 20. Best Student Pg Category (Oral Pathology) | 27. The Most Promising Entrepreneur |
| 7. Best Dept. of Periodontics | 14. Best Student Pg Category (Orthodontics) | 21. Best Student Pg Category (Oral Med. & Radiology) | 28. The Most Proactive Dental Academy |

All the Awards will be judged by a 10 Member Jury of Guide

 Awards Secretariate : F-41B, GF, Shaheen Bagh Abul Fazal Enclave-2, Okhla New Delhi - 110025, Tel : +91 9990922853, Cell: +91 9212582184, Email: awards@guident.net

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- ◆ Meeting with All India's Dental Lab Owners/Technicians
- ◆ Launching India's 1st Dental Lab/Technician Awards
- ◆ Job Fair for Dental Technicians
- ◆ Explore Better Opportunities
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- ❑ Register Here @5000 till 30th Sept-2023
- ❑ After 30th September @8000
- ❑ Spot Registration @10000



For More Detail: Call or WhatsApp@9990922853

Venue: Dayal Gateway Convention Center, Gomti Nagar, Lucknow