



Inderprastha Dental College and Hospital

46/1, Site IV, Industrial Area, Sahibabad,
Ghaziabad- 201010 (UP)



An IQAC initiative

IP Dental Insights

April - June 2024

Inderprastha Dental College, Sahibabad, Ghaziabad, India, is a distinguished institution known for its excellence in dental education and healthcare.

The mission of the institution is to deliver comprehensive dental education and drive innovation in oral healthcare. The college features state-of-the-art facilities and a dedicated faculty.

Students at Inderprastha Dental College undergo a transformative learning experience, guided by experienced professionals and enriched with hands-on training.

The curriculum integrates theoretical knowledge with practical application, ensuring that graduates are fully prepared to meet the dynamic challenges of the dental profession.

Beyond academics, the college fosters a robust culture of research and community involvement. This motivates students to explore new advancements in dentistry and contribute meaningfully to society.

With its unwavering commitment to excellence and a strong dedication to improving oral health, Inderprastha Dental College remains a leading institution shaping the future of dentistry in India and beyond.



The Vital Role of Research and Copyrights in Dental Education

*By Prof (Dr.) Rahul Paul, Principal-Director
Inderprastha Dental College and Hospital*



Research is the engine of progress in dentistry. At Inderprastha Dental College, we prioritize research to push the boundaries of dental science, improve patient care, and enhance our educational programs. Involving students and faculty in research fosters critical thinking, sharpens problem-solving abilities, and ensures we remain at the forefront of dental innovation.

Through research, students gain exposure to the latest technologies and methodologies, ensuring they are well-prepared for the evolving demands of the profession. Each study, whether it yields groundbreaking discoveries or incremental improvements, adds valuable knowledge to the field, ultimately leading to better patient outcomes.

While research fuels innovation, protecting these innovations through copyrights is equally important. Copyrights safeguard the original works of researchers, ensuring that their contributions receive proper recognition and protection from unauthorized use.

Understanding copyrights is essential for several reasons:

- 1. Recognition and Credit:** Copyrights ensure that creators are properly acknowledged, which is vital for building academic and professional reputations.
- 2. Encouragement of Innovation:** Knowing their work is protected, researchers are more likely to pursue bold and creative ideas, driving further advancements in dentistry.
- 3. Prevention of Misuse:** Copyrights prevent unauthorized use and distribution, preserving the integrity of research findings.
- 4. Economic Benefits:** Protecting intellectual property can also secure financial rewards from commercially viable innovations, funding further research.

At Inderprastha Dental College and Hospital, we are dedicated to promoting a culture of research excellence and protecting the intellectual property generated by our community. By emphasizing the importance of research and understanding the value of copyrights, we advance the field of dentistry while upholding the highest standards of academic integrity. Together, let us continue to explore new frontiers in dental science and make meaningful contributions to oral healthcare and society.

April - June 2024

Registered Copyright by Inderprastha Dental College

FABLS Program : Training in Emergency Medical Care



Inderprastha Dental College and Hospital has introduced a unique FABLS program, which has been registered with the Copyright Office, Government of India.

This innovative program is specifically designed to equip students with comprehensive skills in managing medical emergencies. The acronym FABLS stands for First Aid, Allied Health Services, and Basic Life Support, reflecting the core components of the program.

First Aid (F): The first module focuses on First Aid, providing students with crucial knowledge and practical skills to handle immediate medical situations. This includes choking, bleeding, and allergic reactions, with proper bandaging and pressure application.

Allied Health Services (A):

The Allied Health Services module introduces students to various supportive health care roles. Through this module, students engage in research to understand the responsibilities and collaborative efforts required in these essential positions.

Basic Life Support (BLS):

The Basic Life Support component trains students in life-saving techniques such as CPR (Cardiopulmonary Resuscitation) and the use of AEDs (Automated External Defibrillators), crucial for cardiac and respiratory emergencies.

The FABLS program by Inderprastha Dental College and Hospital enhances student's readiness to handle real-world medical emergencies, making them invaluable assets in any healthcare setting.

April - June 2024

White Coat Ceremony



The White Coat Ceremony at Inderprastha Dental College and Hospital on April 8, 2024, was a memorable and inspiring event, symbolizing the transition of BDS 3rd year students from academic study to clinical practice. Chief Guest for the event was renowned lawyer, Mr Manav Vohra. The event was also graced by the presence of Dr Rahul Paul, Director -Principal of Inderprastha Dental College. The ceremony commenced with a welcome address highlighting the significance of the white coat as a symbol of responsibility, trust, and dedication to patient care.

Dr Nikhil Puri (Head, Department of Conservative Dentistry and Endodontics-UG) gave the hypocritic oath to the students. He also emphasized the importance of empathy, continuous learning, and ethical practices in the dental profession, motivating students to strive for excellence in their future careers.

As the highlight of the ceremony, each student was called to the stage to receive their white coat, signifying their readiness to enter the clinical phase of their education. The coats were presented by senior faculty members, symbolizing the passing of knowledge and responsibilities to the next generation of dental professionals. The students pledged to uphold the highest standards of ethics and patient care.

The ceremony concluded with a heartfelt vote of thanks, followed by a reception where students, faculty, and guests mingled, sharing their experiences and aspirations. This momentous occasion not only celebrated the achievements of the students but also reinforced the values of professionalism and compassion that are essential in the field of dentistry.



April - June 2024

Value Added Course

Oral Implantology Program



On May 15-16, 2024, Department of Oral Surgery, Inderprastha Dental College hosted a comprehensive Implantology Program tailored for BDS students. This educational event aimed to enhance students' practical skills and theoretical knowledge in implantology, featuring a blend of lectures, hands-on training, and live demonstrations.

The program's highlight was **Dr. Akash Sachdeva**, a renowned Oral and Maxillofacial Surgeon with over 25 years of experience. Dr. Sachdeva delivered insightful lectures on dental implants, surgical advancements, and techniques, sharing his extensive knowledge and expertise. His engaging teaching style made complex concepts accessible and understandable for the students.

A significant part of the program was the hands-on training sessions. Students practiced on typhodont mandibles, goat heads, and suturing models, allowing them to develop their skills in a controlled environment under expert supervision. This practical approach helped students gain confidence and competence in performing implant procedures.

The event also included live demonstrations of real-time surgical procedures, led by Dr. Sachdeva and other experienced oral surgeons. These demonstrations provided students with a unique opportunity to observe the application of theoretical knowledge in practical situations, enhancing their learning experience.

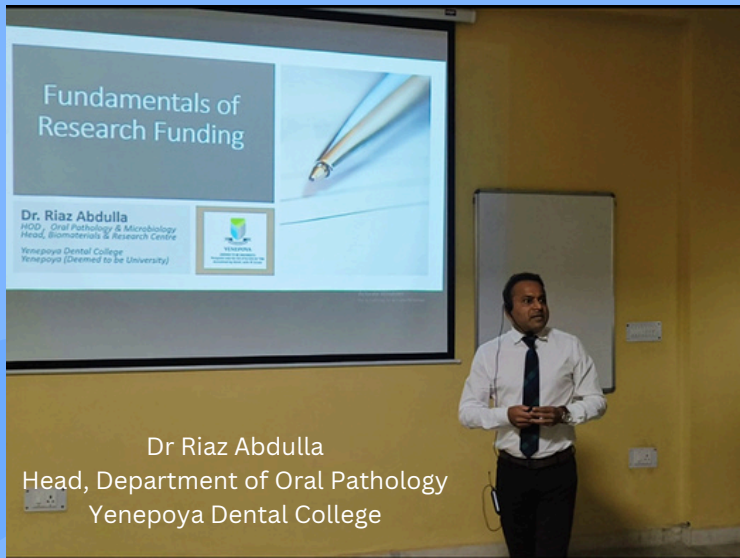


April - June 2024

CDE Program

A ROADMAP TO RESEARCH

SEAL IT BEFORE OTHERS STEAL IT



Dr Riaz Abdulla

Head, Department of Oral Pathology
Yenepoya Dental College



Inderprastha Dental College and Hospital, Ghaziabad, successfully hosted an enlightening program titled "A Roadmap to Research - Seal it before others Steal it" on May 31, 2024. The event aimed to provide attendees with essential insights into the intricacies of research funding, patent filing, and intellectual property rights in the field of dentistry. Esteemed Speakers of the event were:

1 Dr. Riaz Abdulla is Prof and Head, Department of Oral Pathology and Microbiology, and Head of Biomaterials & Research Centre at Yenepoya Dental College, Mangalore. Dr. Riaz Abdulla delivered a comprehensive session on the fundamentals of research funding. His expertise in oral pathology and microbiology, combined with his leadership in biomaterials research, provided attendees with a solid understanding of how to secure funding for their research projects.

2 Ms. Isha Sharma [B.Tech, M.Tech, LLB, PG Diploma in IPR, Founder of Trayambak and Viadroit] with her diverse academic background and extensive experience in intellectual property rights, guided the audience through the complex process of filing dental patents. Her practical tips and legal insights were invaluable for dental professionals looking to protect their innovations.

3 Mr. Vivek Srivastava [B.Tech (Hons), Head of Patents at United & United, Patent and Trademark Attorney], a seasoned patent and trademark attorney, discussed the nuances of copyright and trademark filing specifically for the dental profession. His session equipped attendees with the knowledge to safeguard their intellectual property effectively. The program was a resounding success, with attendees gaining crucial knowledge from industry experts.



Mr Vivek Srivastava
Patent and Trademark Attorney



Ms Isha Sharma
IPR Specialist

April - June 2024

Value Added Course In and Out of Smile Designing

A lecture and Hands-on workshop was conducted by Department of Conservative Dentistry and Endodontics on the topic “In and Out of Smile Designing” on 27th and 28th May, 2024. The event was conducted by the renowned endodontist, **Dr Deepak Mehta** (BDS, MDS, PhD in Dental Materials).

Dr Mehta is an accredited & board member of the Indian Academy of Esthetic & Cosmetic Dentistry (IAACD) and founding member of the International Association of General Dentistry (IAGD). Presently, he is an adjunct faculty in the Department of Dental Materials at Yenepoya Dental College & Hospital, Mangalore.

The workshop commenced with an insightful introduction to smile designing, where the principles and importance of aesthetic dentistry were elucidated along with an engaging live demonstration on advanced smile designing techniques, using latest tools and materials. Hands-on experience under expert supervision allowed attendees to gain practical insights and how to apply cutting-edge methods in real time.

This Practical exposure significantly enhanced the understanding and confidence of participants in applying smile designing techniques in their practice.



April - June 2024

Course on Basic Life Support and emergency management For Post Graduate students

On April 16th 2024, Inderprastha Dental College and Hospital organised an innovative course on Basic Life Support and Medical Emergency management under the 'FABLS Program'. This initiative empowered its postgraduate students (MDS, 2023-26) to become Basic Life Support (BLS) course providers, equipping them with essential CPR and first aid skills. This initiative extends beyond dentistry, fostering a culture of preparedness within the institution and the wider community.

The program featured a two-part structure, combining theoretical knowledge with practical application. In the BLS Course Provider Training, participants are trained to become BLS course providers, gaining expertise in curriculum delivery, teaching methods, and assessment techniques for CPR and AED use. The Hands-on CPR & First Aid Training involves postgraduate students engaging in practical exercises covering various critical interventions. Each student was taught using real-life emergency scenarios and provided with individual mannequins to depict these situations.

The training covered airway management techniques, including the insertion of medical tubes such as endotracheal tubes and oropharyngeal airways for maintaining an open airway in unconscious patients. Additionally, students practiced proper chest compressions and rescue breaths for adults, infants, and children, using mannequins with real-time feedback.

They also learned the safe use of AEDs, including pad application and voice command interpretation, and were taught how to handle cardiac emergencies.

Furthermore, the training included first aid management of common emergencies such as choking, bleeding, and allergic reactions, with proper bandaging and pressure application techniques. Each student practiced these skills through real-life scenarios, following the exact order of resuscitation steps to ensure a thorough and realistic training experience.



By offering this program annually, the institution ensures that each graduating class is proficient in emergency response, reinforcing its dedication to continuous education and community safety.

April - June 2024

🌟🧘 A Revitalizing Pilates Session at Inderprastha Dental College! 🧘🌟



On May 24, 2024, Inderprastha Dental College and Hospital organized a rejuvenating Pilates session for its faculty and students. This special event aimed to alleviate the daily stress and posture-related challenges faced by dental professionals while working on patients.

The session was led by the renowned Pilates instructor from Mangalore, **Mrs. Shafana**. Known for her expertise and holistic approach to fitness, Mrs. Shafana guided participants through a series of exercises focused on enhancing core strength, flexibility, and overall stress relief. Her instructions were tailored to address the specific needs of dental professionals, making it an especially beneficial experience.

This Pilates class served as a fantastic stress buster for everyone involved. The participants, including both faculty members and students, appreciated the opportunity to unwind and focus on their well-being. By incorporating such wellness activities, Inderprastha Dental College demonstrates its commitment to the health and balance of its community.

We are grateful to Mrs. Shafana for leading this invigorating session and promoting a healthier lifestyle within our community. Her guidance and expertise made a significant impact on all participants. The positive feedback from attendees highlights the importance of integrating physical wellness programs in academic institutions.



April - June 2024

World No Tobacco Day Celebrations

May 20th to June 5th, 2024



From May 20th to June 5th, 2024, Inderprastha Dental College and Hospital in Sahibabad, Ghaziabad, organized a series of impactful events to celebrate World No Tobacco Day. These activities showcased our commitment to creating a healthier, tobacco-free future. A Series of Impactful Initiatives

1. Educational Workshops: Informative sessions were conducted to educate participants about the dangers of tobacco use and the benefits of quitting. These workshops aimed to equip attendees with knowledge and resources to help them make healthier choices.
2. Awareness Rallies: Enthusiastic participants took to the streets in rallies to spread awareness about the harmful effects of tobacco. The rallies drew significant attention and served as a powerful reminder of the need for collective action against tobacco use.
3. Nukkad Natak: Engaging street plays, or 'Nukkad Natak', were performed to deliver strong anti-tobacco messages. These performances were well-received and resonated deeply with the audience, emphasizing the real-life consequences of tobacco addiction.
4. Outreach Programs were organised at Lajpat Nagar, Kaushambi, Bridge Vihar and Sahibabad. Our outreach programs extended the message of tobacco cessation to rural areas and factories, where tobacco use is often prevalent. These programs aimed to reach underserved communities and provide them with vital information and support.



April - June 2024

World No Tobacco Day Celebrations

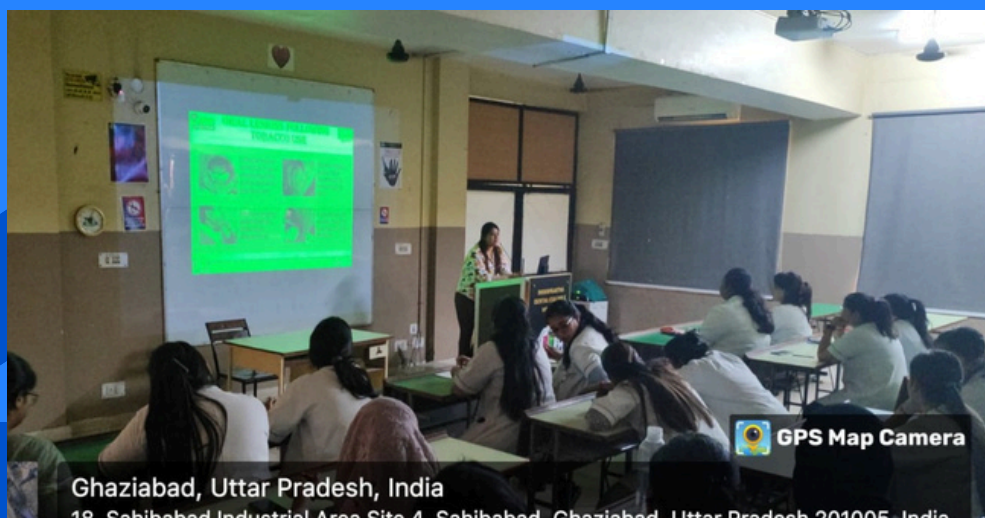
May 20th to June 5th, 2024



Pledge Ceremony (31st May): On World No Tobacco Day, dental and medical staff, along with patients, took a solemn pledge to combat tobacco use. This ceremony highlighted our collective dedication to a tobacco-free future.

Lecture by Dr. Anshika Pandey: Our esteemed alumna, Dr. Anshika, is currently working as Tobacco Cessation Specialist at Max Hospital, Vaishali. She delivered an insightful lecture on various aspects of tobacco addiction and cessation. Her expertise and passion for the cause inspired many to consider quitting tobacco and seek help.

IEC Competition: To add a creative twist, we held an exciting IEC (Information, Education, and Communication) competition where students made captivating reels to promote tobacco cessation. The competition encouraged innovative ways to spread awareness and engage a wider audience.



April - June 2024

Program & Workshop

RECENT ADVANCEMENTS IN THE MANAGEMENT OF TMD'S



Department of Oral Medicine and Radiology at Inderprastha Dental College and Hospital, Sahibabad, Ghaziabad, successfully conducted an insightful program and workshop on "Recent Advancements in the Management of TMDs" on May 21st and 23rd, 2024. This event marked a significant milestone in our continuous efforts to advance dental education and practice, particularly in the management of temporomandibular disorders (TMDs). The program aimed to equip dental professionals with the latest knowledge and skills, thereby improving patient care and outcomes.

The event featured two esteemed experts who brought a wealth of knowledge and experience to the program. **Dr. Krishna Garg**, an accomplished medical professional with qualifications including MBBS, MS, PhD, FIMSA, FAMS, and FASI, shared her extensive insights into the field. Dr. Garg is renowned for her contributions to medical science and his expertise in various surgical techniques, making her sessions particularly enlightening for the attendees. Her presentations covered the latest diagnostic advancements and therapeutic approaches in TMD management, offering a deep dive into contemporary treatment modalities.

Dr. Deepankar Misra, holding degrees of BDS and MDS, also graced the event with his expertise. As a distinguished figure in dental surgery, Dr. Misra provided a comprehensive overview of the latest techniques and treatments for TMDs. His sessions emphasized practical applications and innovative solutions, drawing from his extensive clinical experience. Attendees benefited greatly from Dr. Misra's ability to translate complex concepts into actionable knowledge, enhancing their understanding and skills in managing temporomandibular disorders.

Attendees had the unique opportunity to engage in interactive sessions, where they could directly interact with the experts, ask questions, and discuss real-world cases. These sessions were designed to be highly participatory, encouraging active learning and skill enhancement. Participants left with not only a deeper understanding of TMDs but also practical knowledge that could be immediately applied in their practice. The hands-on workshops were particularly beneficial, offering a platform for attendees to practice new techniques under expert supervision.



Industrial Area site 4 Sahibabad, Ghaziabad, Uttar Pradesh, India
Inderprastha Dental college and Hospital
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Note : Captured by GPS Map Camera

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Industrial Area site 4 Sahibabad, Ghaziabad, Uttar Pradesh, India
Inderprastha Dental college and Hospital
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Inderprastha Dental college and Hospital
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April - June 2024

Student Awards



It gives us great pleasure to announce the remarkable achievements of our students who participated in many Inter College cultural fests from April to June 2024 and showed remarkable talent, commitment, and hard effort.

Through their participation in the Xuberance 2024 Fest at Manav Rachna Dental College in Faridabad, the Zest Sports Fest at Jamia Millia Islamia in New Delhi, and Impressions 2024 at Maulana Azad in Delhi, students have demonstrated significant strides.

Zest Sports Fest at Jamia Millia Islamia, New Delhi:

- Dr. Debarghya & Dr. Aditya (MDS), bagged the First Position in Table Tennis Doubles.
- Dr. Debarghya Bhattacharyya (MDS), Department of Prosthodontics and Crown & Bridge bagged the First Position in Table Tennis Singles.

Impressions 2024 at Maulana Azad, Delhi:

- Dr. Debarghya & Dr. Aditya (MDS), bagged the Gold Medal in Table Tennis Doubles
- Dr. Debarghya Bhattacharyya (MDS), secured a Gold Medal in Table Tennis Singles (Boys).
- Dr. Jayati Pandey (MDS) bagged Gold Medal in Table tennis Singles (Girls).



Zest Sports Fest at Jamia Millia Islamia, New Delhi

Impressions 2024 at Maulana Azad, New Delhi



April - June 2024

Student Awards



We , are incredibly proud of all our students' achievements and grateful for the faculty and staff, who support and encourage their success.

We extend our heartfelt congratulations to all the winners and participants. Your hard work and passion have not only earned you these accolades but also inspired your peers and brought immense pride to our institution.

Let's continue to foster an environment where every student can thrive and reach their full potential.

Xuberance 2024 at Manav Rachna Dental College, Faridabad:

- Khushi Aneja (BDS): Secured Gold Medal in Reels Making
- Tirthankar Chaudhary (BDS): Secured a Gold Medal in the Solo Singing Category
- BDS Students won the Second Prize for showcasing exceptional acting in Nukkad Natak
- Tirthankar, Debashish & Maulik (BDS): Won Silver Medal in the Group Singing Category



April - June 2024

Student Awards



SLEEPCON 2024

Organized by: Indian Sleep Disorders Association &
Department of Pulmonary, Critical Care & Sleep Medicine,
VMMC & Safdarjung Hospital, New Delhi
Workshop - 14th JUNE 2024: Conference - 15th, 16th JUNE 2024



Our students continue to thrive in the field of research. They have demonstrated exemplary dedication and scholarly rigor in their academic pursuits at SLEEPCON 2024, organized by Indian Sleep Disorders Association and Department of Pulmonary, Critical Care & Sleep Medicine, VMMC & Safdarjung Hospital, New Delhi between 14th-16th June 2024.

We are delighted to announce the exceptional achievements of our students who have been recognized for their outstanding contributions to academia under the able guidance of Dr. Rahul Paul, Director-Principal, Inderprastha Dental College and Hospital.

- Dr. Ratika Sawhney & Dr. Uchit Gupta (MDS), Department of Orthodontics & Dentofacial Orthopaedics- Secured the First Prize for Table Clinic.
- Dr. Mainak Halder (MDS), Department of Orthodontics & Dentofacial Orthopaedics- Secured the First Prize for Poster Presentation
- Dr. Sanjeev Shokeen (MDS), Department of Orthodontics & Dentofacial Orthopaedics- Secured the Third Prize for Poster Presentation.



Dr Sanjeev Shokeen
3rd Prize
Poster Presentation



Dr Uchit Gupta
1st Prize
Table Clinic



Dr Mainak Halder
1st Prize
Poster Presentation

Department of Orthodontic and Dento Facial Orthopaedics



Dr Ratika Sawhney
1st Prize
Table Clinic

Department of Orthodontics & Dentofacial Orthopaedics

Expansion Using Quadhelix Appliance



Pre-Treatment Photographs



Expansion achieved after Quad Helix



After Space Closure Following upper 4 lower 5 extraction.

Background: Slow maxillary expansion (SME) has become a popular method for correcting transverse irregularities. Adkins et al. showed that a 1 mm increase in trans-palatal width in the premolar region results in a 0.7 mm increase in maxillary arch perimeter. McNamara et al. found that patients treated with rapid maxillary expansion (RME) and fixed appliances had a net gain of 6 mm in maxillary arch perimeter compared to untreated subjects. Early techniques for maxillary transverse deficiency, once discredited, are now reliable and straightforward. RME, SME, and surgical expansions are common treatments for maxillary expansion, addressing crossbites and crowding issues.

Treatment Plan: A quad-helix appliance was used to expand the arch and create space, followed by four extractions to reduce overjet.

Treatment Done: The quad-helix appliance was used for 6 months, with 3 months of retention. Crowding was resolved, and extractions were necessary for overjet correction and to correct anterior proclination. An expansion of 3 mm was achieved.

Conclusion: In this case study, we outline the treatment of a 14-year-old male patient diagnosed with Angle's Class I malocclusion and upper lower anterior space deficiency. The treatment approach involved a combination of extraction therapy and expansion of the maxillary arch. Despite the patient being beyond the stage of mid-palatal suture ossification, expanding the transverse arch still resulted in favorable treatment outcomes primarily through dental effects.

Special Case

Department of Periodontology

GINGIVAL DEPIGMENTATION BY LASER THERAPY



PRE-OPERATIVE

AFTER
15 DAYS



POST-OPERATIVE

DIODE
LASER APPLICATION



Background: A patient presented to Department of Periodontology at Inderprastha Dental College, Sahibabad, with a chief complaint of blackish gingiva in upper and lower arches since 2 years. Upon clinical examination, Dummet's Grade 2 pigmentation was observed.

Treatment plan: A comprehensive treatment plan was formulated for patient, which included phase 1 therapy and subsequent de- pigmentation using laser.

Phase I therapy: The initial phase of treatment involved full mouth supra and sub-gingival scaling to remove calculus and plaque deposits to reduce microbial load for better post-operative healing.

De-pigmentation procedure: The depigmentation was performed using diode laser under local anesthesia. This procedure aimed to remove pigment containing cells, (melanocytes) by the ability of laser light to get absorb and penetrate tissues.

Post-operative evaluation: After 15 days the patient was evaluated to assess the outcome of the procedure. The evaluation revealed an excellent result of pink gingival aesthetics.

Special Case

Department of Conservative Dentistry and Endodontics

REGENERATIVE ENDODONTIC THERAPY

Background: A 15-year-old girl reported to the Department of Conservative Dentistry and Endodontics with a chief complain of broken upper left front tooth, having history of trauma wrt upper anterior 7 year back. On Clinical Examination Elli's class II fracture was seen wrt left lateral incisor. On Radiographic Examination incomplete root formation with open apex was seen. After doing pulp vitality test it was observed that the tooth was non-vital.

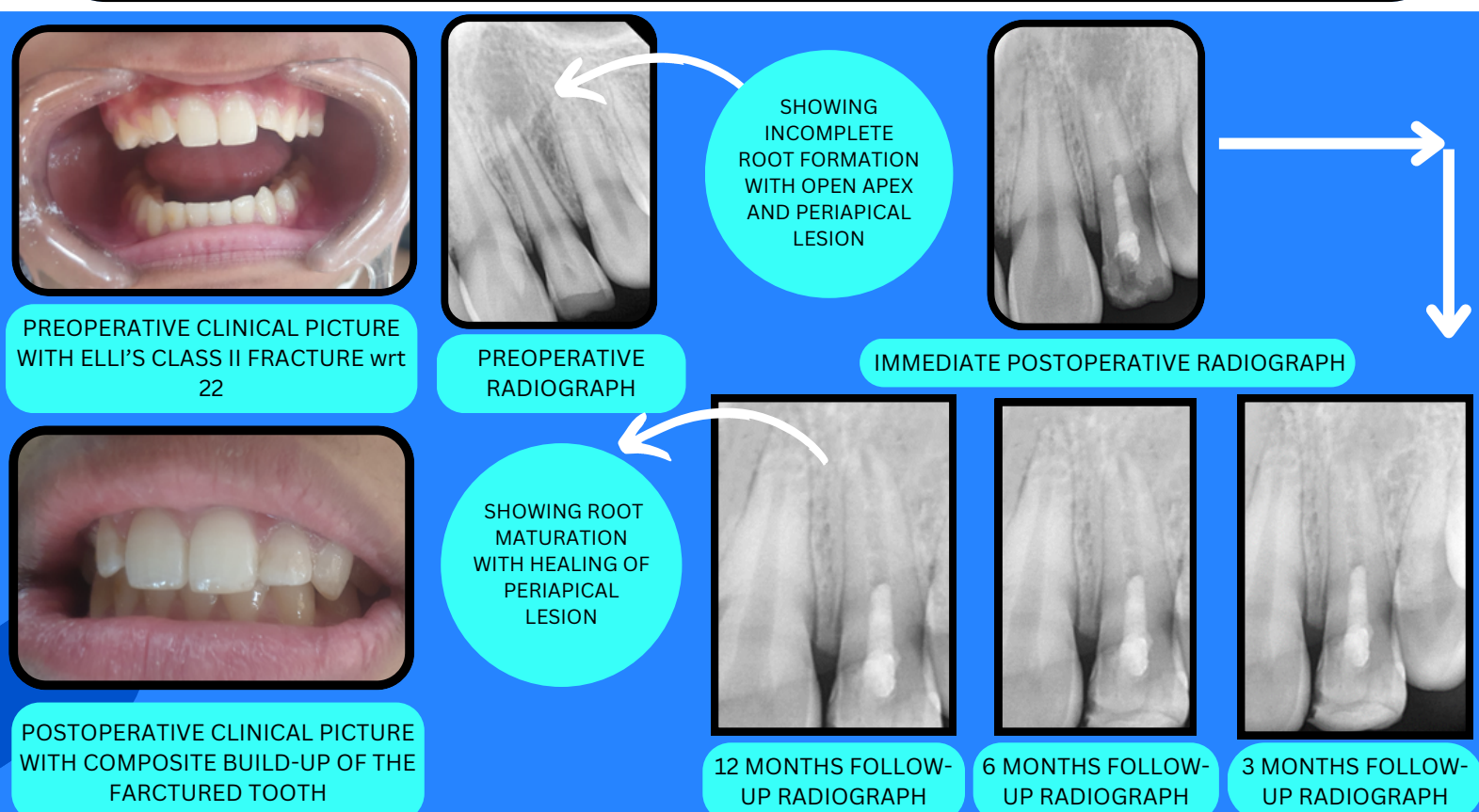
Treatment plan: Several studies have reported the potential of Regenerative Endodontic Therapy (RET) in stimulating the continuous formation of root length and width and preserving the structural integrity of immature necrotic teeth. Regenerative Endodontic Therapy was planned w.r.t 22

Treatment Done:

First appointment: Debridement of the canal followed by calcium hydroxide dressing.

Second Appointment: Formation of a blood clot by introducing a K-file into periapical space, followed by placement of PRF membrane and MTA, restoring it by composite restoration.

Conclusion: Endodontic rehabilitation with PRF of "necrotic teeth with open apices & apical periodontitis", as well as "nonsurgical endodontic treatment", seems to be anticipated & a promising alternative for periapical tissue restoration. Also, the use of PRF can assist in managing the level of MTA placement. The 12-month follow-up visit revealed evidence of maturation in the apical third of the root and the periapical lesion's healing.



Special Case

Laser-Assisted Frenectomy in a Pediatric Patient

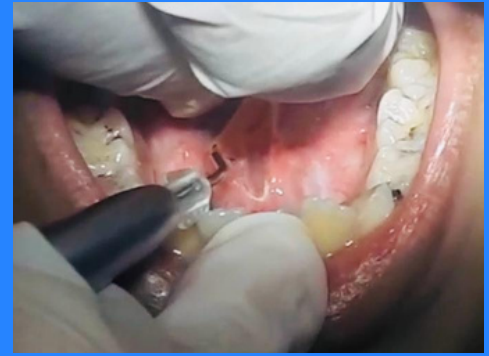
Department of Pediatric and Preventive Dentistry



Preoperative Picture



Preoperative Picture



During frenectomy with LASER



Immediate Post Operative Picture



1 week Post Operative Picture



1 month Post Operative Picture

Background: A 6-year-old boy presented with speech difficulties and restricted tongue movement. Clinical examination revealed ankyloglossia (tongue-tie), characterized by a short lingual frenulum limiting tongue mobility.

Treatment Plan: The treatment plan involved performing a lingual frenectomy using a diode LASER, chosen for its precision, reduced intraoperative bleeding, and minimal post-operative discomfort.

Treatment Done: Local anesthesia was administered for pain management. A diode LASER was used to precisely incise the frenulum, ensuring excellent hemostasis. The entire procedure was completed in 15 minutes. Post-operative care included maintaining oral hygiene and dietary precautions, with analgesics prescribed as needed.

Conclusion: The patient exhibited immediate improvement in tongue mobility and significant progress in speech articulation during follow-up visits. Healing was complication-free, demonstrating the effectiveness of LASER technology in lingual frenectomy. This minimally invasive approach offers reduced operative time, minimal bleeding, and quick recovery, enhancing patient care at Inderprastha Dental College and Hospital.

SURGICAL EXCISION OF NON- MALIGNANT LESION

Department of Oral Surgery



Lesion of the Right Buccal Mucosa



Surgical Excision of the Lesion



Tissue Bed after Extraction



Excised lesion Measuring 2 x 3 cm in size

Background: 55 years old male came to the department of Oral and Maxillofacial Surgery with the chief complaint of old swelling in the inner aspect of the cheek since 5 months. On intra oral examination a solitary well defined sessile swelling on the right buccal mucosa. On palpation, the swelling seemed non-tender, mobile, firm consistency, non-reducible and non-pulsatile.

Treatment Plan: The treatment plan involved performing a surgical excision of the lesion under local anesthesia.

Treatment Done: Local anesthesia was administered for pain management. Surgical excision of the lesion. Size of the excise lesion approximately 2 x 3 cm. 3-0mersilk was used for closure and post-op medications and instructions were given.

Conclusion: The primary goal was to completely remove the fibroma from the affected area. Once removed, the tissue was sent for examination to confirm the nature of the fibroma and ensure no malignancy was present. The surgical site was carefully closed to promote healing. Recovery time approximately 14 days and this depends upon wound care and monitoring for any signs of infection or complications. Patient was scheduled for follow-up appointments to assess healing progress and discuss any further treatment or management, if necessary. fibroma surgery was straightforward and associated with a good prognosis, particularly when the fibroma was benign and had been completely excised.

Management of Repeated Midline Fracture of Maxillary Denture Base by Metal denture base with Porcelain Fused to Metal (PFM) Crowns

Department of Prosthodontics and Crowns & Bridges



Frontal View



Metal Framework Design



Metal Framework



PFM Crown Fabrication



Final Processing of the Denture Base with Acrylic Resin



Insertion of the Maxillary Metal Denture Base with PFM Crown

Background: A 68-year-old male patient presented with partial edentulism in the maxillary arch and existing PFM crowns on the mandibular arch. The patient desired a stable, aesthetically pleasing maxillary denture that would complement the existing mandibular PFM crowns

Treatment Plan: The treatment plan involved fabrication of maxillary metal denture base with PFM crowns.

Treatment Done: Custom tray fabrication for final impressions, Border moulding and wash impression with Zinc eugenol impression paste. Jaw relation records obtained using wax rims. Shade selection for the PFM crowns using a shade guide to match existing mandibular crown. Selection of appropriate denture teeth for the metal denture base. Pouring final impressions to create master casts. Articulate the master casts on an articulator. Designing the metal framework to provide structural support and retention. Wax pattern creation for the metal framework, followed by casting in a cobalt-chromium alloy. Waxing up the PFM crowns on the metal framework. Casting the metal substructures, applying opaque porcelain, and layering veneering porcelain to achieve the desired shade and translucency. Glazing and polishing the PFM crowns. Try-in done in patient mouth.

Conclusion: Matching the aesthetics and function of maxillary and mandibular prostheses is crucial for patient satisfaction. The use of PFM crowns on a metal denture base provided a durable and aesthetically pleasing solution that integrated well with the patient's existing mandibular restorations. This approach offers a reliable option for patients requiring comprehensive dental rehabilitation with specific aesthetic demand.

DEPARTMENT OF ORTHODONTIC AND DENTO FACIAL ORTHOPAEDICS

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African Journal of Biological Sciences

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Research Paper

Open Access

ORIGINAL RESEARCH

To evaluate and correlate nasolabial angle, mentolabial sulcus angle and throat angle using cephalometric and photographic measurement

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ABSTRACT

Background: This study was conducted to evaluate and correlate nasolabial angle, mentolabial sulcus angle and throat angle using cephalometric and photographic measurement.

Material and methods: A sample size of 30 subjects were included in the study. Lateral cephalograms were taken of all the subjects using CS 8000C (Carestream Health, Inc, France) in the department of Oral Medicine and Radiology, Inderprastha Dental College and Hospital. The lateral cephalograms were manually traced by one investigator. 3 parameters were evaluated in each lateral cephalogram. Similarly lateral profile photographs were taken of all the subjects in NHP (natural head position) was also taken from Canon 1500d DSLR camera. 3 parameters were also evaluated in each lateral profile photographs. All the data were collected and statistically analysed using SPSS statistical software. Comparison was assessed by using Student t-test. Correlation was assessed by Pearson correlation test.

Results: The average value for nasolabial angle, mentolabial sulcus angle and throat angle were found to be $92.46^\circ \pm 9.4^\circ$, $108.1^\circ \pm 2.9^\circ$ and $129.1^\circ \pm 10.61^\circ$ respectively when assessed from cephalogram. The average values for nasolabial angle, mentolabial sulcus angle and throat angle were found to be $93.4^\circ \pm 10.61^\circ$, $108.1^\circ \pm 2.9^\circ$ and $129.1^\circ \pm 10.61^\circ$ respectively when assessed from profile photograph.

Conclusion: The current study came to the conclusion that photographic method enables the recording of significant numbers of photographs for analysis, is a reliable and cost-effective tool for identifying soft tissue features.

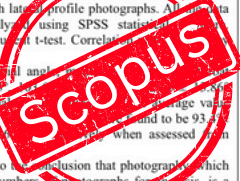
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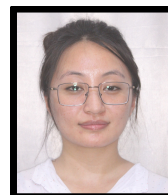
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Effectiveness of New Activated Charcoal Orthodontic Toothbrush on Plaque Removal in Orthodontic Patients Using Orthodontic Plaque Index and Gingival Index: A Randomized Cross-Over Study

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KEYWORDS

charcoal,
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ABSTRACT:

Background: This study was conducted to assess the Effectiveness of New Activated Charcoal Orthodontic Toothbrush On Plaque Removal in Orthodontic Patients Using Orthodontic Plaque Index And Gingival Index: A Randomized Cross-Over Study.

Material and methods: A small-scale study (pilot study) was conducted to assess the practicality of carrying out the main research. This pilot study was designed to address key areas such as the ease of recruiting participants, the effectiveness of data collection methods, and whether participants would follow study guidelines. The pilot study results demonstrated alignment with the main study's intentions and objectives, and proceeded with the full-fledged research.

Results: When intra-brush comparison was made between the observations at 0, 4, 8, 12, 16, 20, 24, 28, 32, 36, 40, 44, 48, 52, 56, 60, 64, 68, 72, 76, 80, 84, 88, 92, 96, 100, 104, 108, 112, 116, 120, 124, 128, 132, 136, 140, 144, 148, 152, 156, 160, 164, 168, 172, 176, 180, 184, 188, 192, 196, 200, 204, 208, 212, 216, 220, 224, 228, 232, 236, 240, 244, 248, 252, 256, 260, 264, 268, 272, 276, 280, 284, 288, 292, 296, 300, 304, 308, 312, 316, 320, 324, 328, 332, 336, 340, 344, 348, 352, 356, 360, 364, 368, 372, 376, 380, 384, 388, 392, 396, 400, 404, 408, 412, 416, 420, 424, 428, 432, 436, 440, 444, 448, 452, 456, 460, 464, 468, 472, 476, 480, 484, 488, 492, 496, 500, 504, 508, 512, 516, 520, 524, 528, 532, 536, 540, 544, 548, 552, 556, 560, 564, 568, 572, 576, 580, 584, 588, 592, 596, 600, 604, 608, 612, 616, 620, 624, 628, 632, 636, 640, 644, 648, 652, 656, 660, 664, 668, 672, 676, 680, 684, 688, 692, 696, 700, 704, 708, 712, 716, 720, 724, 728, 732, 736, 740, 744, 748, 752, 756, 760, 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Effect of Varying Etching Times on the Bond Strength of Ceramic Brackets

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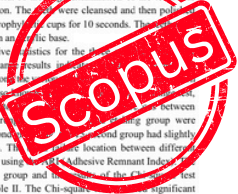
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KEYWORDS
etching, bond
strength,
ceramics,
brackets

ABSTRACT:

Background: This study was conducted to evaluate the effect of varying etching times on the bond strength of ceramic brackets.

Material and methods: Samples of 30 extracted teeth were taken from the Department of Oral and Maxillofacial Surgery, Inderprastha Dental College and Hospital, Ghaziabad, according to the inclusion criteria. A thorough examination of the teeth was done to rule out any damage or malformation. The teeth were cleaned and then polished with non-fluorinated pumice using rubber prophylactic cups for 10 seconds. The teeth were divided into three groups of 10 and placed in an acidic base.

Results: The shear bond strength descriptive statistics for the three groups are outlined in Table I. The analysis of variance results indicated significant differences ($p = 0.000$) in bond strengths among the three groups. The results of Duncan's multiple range test (DMRT), which is a test used in statistical analysis for multiple groups, revealed that the bond strength of the 15-second etching group were significantly lower compared to the 15-second etching group. The second group had slightly lower bond strength than 30-second group. The location between different samples and etching groups was determined using the Adhesive Remnant Index (ARI) frequency of ARI scores for each etching group and the results of the Chi-square test comparing the groups are presented in Table II. The Chi-square test results were significant.

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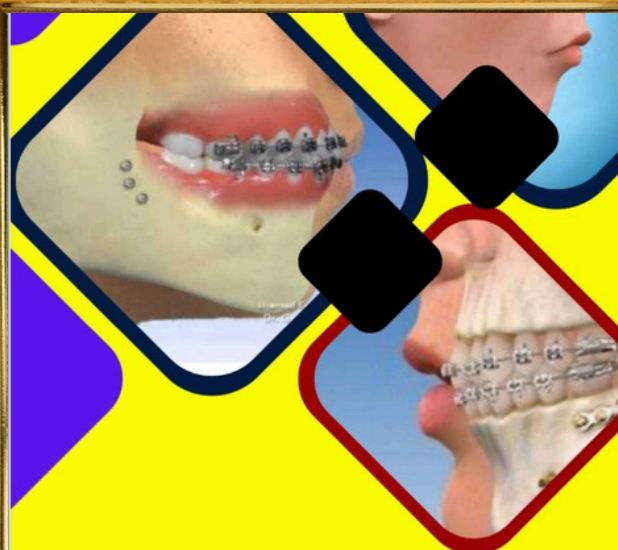
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DEPARTMENT OF ORTHODONTIC AND DENTO FACIAL ORTHOPAEDICS

"Mini-implants- Uses and Application"



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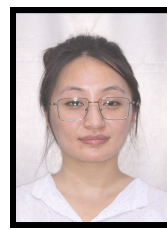
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Minor Cosmetic Surgeries

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DEPARTMENT OF ORTHODONTIC AND DENTO FACIAL ORTHOPAEDICS

History, Design and Evolution of Mini Implants



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Publications

DEPARTMENT OF PERIODONTOLOGY

Case Study

Piezosurgery: Advancing Dentistry With Cutting-Edge Technology

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Abstract

Dentistry, an amalgamation of art and science and a calming force in medicine, has undergone substantial conceptual changes in the past decade. One noteworthy innovation in this field is piezosurgery, marking a genuine revolution in bone surgery by satisfying both biological and technical criteria. Piezosurgery finds diverse applications, ranging from minor surgical procedures to intricate tasks such as implantology, plastic surgery, and reconstructive surgeries. Operating with a low-frequency modulated ultrasonic insert, it generates microvibrations within the range of 60-200 micrometers per second. This technique enables safe and precise bony incisions without causing harm to essential structures like nerves, mucosa, and vessels. Noteworthy advantages of piezosurgery include overcoming technical challenges like visibility by establishing a bloodless field during surgery and simultaneously removing debris through an internal irrigation mechanism. This method ensures the safety of soft tissues, and the biological factors, including the release of certain cytokines, contribute to promoting bone healing and expediting patient recovery. This in-depth evaluation favors piezosurgery over conventional tools, underscoring its clinical and biological attributes that contribute to the advancement of dental health.

Keywords: Cavitation, Implants, Osteotomy, Piezosurgery.

Introduction

In recent years, dentistry has experienced significant advancements in its daily practice. Modern diagnostic imaging techniques like Ultrasonography, Cone Beam Computed Tomography, and procedures such as Microsurgery, Implants, Lasers, and Nanotechnology have positioned dentistry at the forefront of the medical field.¹ These innovations have ushered in an era of painless dentistry.

The efficacy of any dental treatment modality hinges on the tools utilized for its execution.² Hard tissue cutting tools, such as micromotor handpieces and aerotors, play a crucial role in removing enamel, dentin, cementum, and bone. The quantity and quality of hard tissue removal significantly impact the post-operative outcome of dental surgical procedures, whether in implantology or periodontology.³

Traditional dental practices involved the use of hand cutting instruments like mallets and chisels, followed by rotary instruments equipped with various burs. These instruments generated considerable heat during bone cutting and necessitated extensive external irrigation. Additionally, they exerted substantial pressure on osseous Surgeries, consequently, posed a threat to the treatment of fractured and brittle bones.⁴

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Comparative evaluation of Instrumentation time and Child's behaviour after using Rotary, Reciprocating and Hand files in primary teeth using Frankel Behaviour rating in 5-10 yrs old patients: An in-vivo study.

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Validation and Comparison of the Demirjian Method and Alqahtani Method in Pediatric Population of Sahibabad Region

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Abstract: Introduction: Age estimation plays a significant role in crime investigation, genetic research, and human identification. It is a vital technique in the field of forensic sciences. Most widely used, Demirjian's technique is a scoring standard based on maturation stages of seven permanent teeth in the lower left quadrant. Alqahtani's approach uses panoramic or lateral oblique radiographs for age estimation. Both these methods have various advantages and disadvantages. In order to reduce the bias amongst different age estimation assessment our study compares the accuracy of dental age assessment by using these two methods.

Materials and methods: This retrospective, cross-sectional study was conducted on selected 100 Orthopantomogram (OPG) radiographs of children between 3 and 13 years of age of Sahibabad region. A set of radiographs were used in the calculation of age using the two methods (Demirjian's method and Alqahtani's method) and the child's chronological age was also calculated.

Statistical analysis: Paired t-test was applied to find out the mean difference between the chronological age and Demirjian age and also between the chronological age and Alqahtani age.

Results: The mean difference between the chronological age and Demirjian age was statistically significant among males ($P=0.001$). The mean difference between the chronological age and Alqahtani age was statistically significant ($P=0.001$). When the mean age estimation methods were compared, there was no significant difference ($P=0.102$).

Conclusion: The Demirjian's method and the Al-Qahtani could accurately estimate the age of the patient. Instead of only using Demirjian method for age estimation, Alqahtani's method must also be given equal importance since it is equally efficient.



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Comparative Evaluation of The Success of Biodentine, Silver Diamine Fluoride and Dycal When Used as An Indirect Pulp Capping Material in Primary Molars – A Clinical and Radiological Assessment.

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Abstract: Introduction: Dental caries is a prevalent disease in primary teeth. The aim of the study was to compare the success of Biodentine, Silver Diamine Fluoride (SDF), and Dycal as indirect pulp capping (IPC) agents in primary molars. Materials and Methods: Forty-five primary molars in children aged 3-6 years were randomly assigned to three groups: Biodentine, SDF, and Dycal. Clinical and radiographic assessments were conducted at baseline and 6 months after treatment. The mean distance between the pulp and the base of the restoration was measured radiographically. Data were analyzed using statistical tests. Results: All three materials showed reparative dentin formation. Biodentine and SDF demonstrated the highest amount of reparative dentin formation, while Dycal showed the least. Biodentine and SDF showed 100% clinical and radiographic success rates, with no adverse effects. Dycal showed positive outcomes, although less favorable compared to Biodentine and SDF. Conclusion: Biodentine, SDF, and Dycal are effective IPC materials for primary molars, with Biodentine demonstrating the highest reparative dentin formation. SDF can be considered an alternative in severe early childhood caries cases and uncooperative children. Further studies with larger sample sizes and histopathological investigations are needed to validate these findings.

Scopus



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Case Report

Tongue Tie: An Overview of Diagnosis Management & Clinical Implication

Priya Sarraf¹, Manish Bhalla², Ritika Malhotra³, Pulkit Jhingan⁴, Anuja Goit⁵, Malvika Agarwal⁶

Abstract

Tongue tie, or ankyloglossia, is a congenital condition characterized by an abnormally short, thick, or tight band of tissue (frenulum) that tethers the tongue to the floor of the mouth. This condition can significantly impact an individual's ability to move their tongue freely, leading to various functional and developmental issues, including difficulties with breastfeeding, speech articulation, and oral hygiene.

Introduction:

The tongue, a remarkably versatile muscular organ located within the oral cavity, plays a crucial role in essential functions such as speech, swallowing, and mastication. Its complex movements are a testament to the intricate interplay of muscles, nerves, and connective tissues. However, for some individuals, the development of the lingual frenulum, the band of tissue beneath the tongue, may pose a limitation to the tongue's range of motion. This congenital condition, known as ankyloglossia or "tongue tie," has been a subject of interest and debate in the fields of pediatrics, dentistry, speech pathology, and lactation consulting.

Ankyloglossia is characterized by an abnormally short, thick, or tight lingual frenulum, which restricts the tongue's ability to move freely within the oral cavity. Historically, the concept of tongue tie has been recognized for centuries. Despite this longstanding awareness, the diagnosis and management of ankyloglossia have evolved over time, with modern advances in medicine shedding new light on its clinical significance.

In recent years, the topic of tongue tie has gained prominence as researchers and healthcare practitioners have sought to better understand its impact on various aspects of an individual's life, from infancy to adulthood. The recognition of tongue tie's potential effects on breastfeeding, speech development, dental health, and overall quality of life has led to increased interest in its assessment and management.

Case Description

A 12-year-old female reported to the Department of Pedodontics and Preventive Dentistry, Inderprastha Dental College and Hospital, Sahibabad, with a chief complaint of dirty teeth and also had difficulty in tongue movement and speaking. Because of limited tongue movement, the patient complained of difficulty in maintaining oral hygiene. Intraoral examination revealed short lingual frenum and restricted tongue movements.

How to cite this article: Sarraf P et al. Tongue Tie: An Overview of Diagnosis Management & Clinical Implication. IJHMOCD-2024



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Department of Pediatric and Preventive Dentistry

A Case Report

Single-Visit MTA Apexification For Young Immatured Tooth Followed By Prosthetic Rehabilitation in a 10-Year-Old: A Case Report

Sunayana Dutta¹, Manish Bhalla², Ritika Malhotra³, Geetika Datta⁴, Jasmine Nanda⁵, Deveshi Nigam⁶

Abstract:

This case report presents the successful management of a 10-year-old patient with pulp necrosis and an open apex using mineral trioxide aggregate (MTA) apexification followed by post and core restoration and porcelain-fused-to-metal (PFM) crown placement. The single visit apexification technique with MTA offers a predictable outcome with minimal appointments and reduced treatment time, making it a favorable option for young patients. This report emphasizes the importance of proper diagnosis, treatment planning, and meticulous execution in achieving favorable outcomes in pediatric endodontics.

Keywords: MTA apexification, pediatric endodontics, pulp necrosis, post and core restoration, porcelain-fused-to-metal crown

Introduction:

Since the teeth in children have immature roots and weak dentinal walls that are prone to breaking and bacterial invasion, pediatric endodontic therapy poses special difficulties. In teeth that have open apices due to trauma or pulp necrosis, apexification is a necessary treatment that is used to induce root-end closure.

In the past, the preferred substance to encourage the development of an apical hard tissue barrier was calcium hydroxide. Still, apexification with calcium hydroxide has a number of drawbacks involving several appointments. Several dressings must be applied in order to achieve complete closure, and the results could include uneven calcification of the bridge, an increased risk of fracture following long-term calcium hydroxide application, aesthetic concerns, and coronal microleakage.^[1,2]

The use of mineral trioxide aggregate (MTA) for apexification has grown favorable because of its superior biocompatibility, capacity to seal, and to encourage hard tissue regeneration. It

offers several benefits, including the ability to be placed in a single visit due to its 3- to 4-hour setting time and nonmutagenic and non-neurotoxic nature.^[3,4]

A post and core restoration is a dental procedure used to rebuild a severely damaged tooth that cannot support a traditional filling or crown. It involves placing a post (usually made of metal or fiber) into the root canal of the tooth to provide stability, then adding a core material (such as composite resin) to build up the tooth structure. This creates a stable foundation for attaching a crown, restoring function and appearance.^[5]

A dental restoration known as a PFM (Porcelain-Fused-to-Metal) crown combines the cosmetic appeal of porcelain with the durability of a metal alloy. Durability and stability are provided by the metal substructure,

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A Case Report

Management of Decayed Permanent Molar With Short Clinical Crown Height

Anisha Jain¹, Ritika Malhotra², Manish Bhalla³, Saumya Taneja⁴, Rachita Mehlawat⁵, Anant Singh⁶

Abstract:

Decayed permanent molars with short clinical crown height present a challenge for restoration. This case report presents the successful management of a decayed permanent molar with a short clinical crown height using a combination of gingivectomy, crown modification, and placement of a stainless steel crown (SSC). A 15-year-old female, presented with a decayed permanent molar with insufficient clinical crown height for a traditional restoration. After thorough evaluation and treatment planning, a multidisciplinary approach was employed to restore the tooth. Gingivectomy was performed to expose more tooth structure, followed by crown modification to enhance the crown fitting over the tooth. Finally, SSC was placed to provide a durable and functional restoration. The patient experienced significant improvement in function and aesthetics, highlighting the effectiveness of this comprehensive approach.

Introduction

The measurement from the gingival margin to the incisal edge or occlusal surface is known as the clinical crown of a tooth.^[1] Following occlusal and axial reduction, a short clinical crown is defined as having opposing parallel sides and less than 2 mm of sound tooth structure.^[2] Subgingival caries, subgingival crown fractures, anatomical tooth crowns that are partially erupted, excessive gingiva, and dental crowns that are too short for restoration retention are some of the possible causes of this condition.^[3] A comprehensive treatment plan and appropriate sequencing of therapy are necessary to address the challenges posed by a short clinical crown. Prior to commencing any treatment on a tooth with a short clinical crown, it is essential to determine its restorability. The restorative assessment should encompass several factors, including the tooth's arch position, strategic value, periodontal health, crown-to-root ratio,

interarch space, feasibility of endodontic treatment, and esthetic considerations.^[4] Techniques that are employed for restoring teeth with short clinical crowns (scc) are tooth preparation design modification, foundation restorations placements, surgical crown lengthening etc.^[5] The purpose of crown lengthening is to increase the amount of tooth structure available for restorative work, ensuring proper mechanical support and for preserving the biologic width and preventing future attachment loss around the restored tooth.^[6] However, it is not appropriate for teeth with profound carious diseases, unfavorable crown-to-root ratio and teeth with furcation involvement.^[7]

During crown lengthening procedures, biological width plays a

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Optimizing Rehabilitation Outcomes with Maxillary Obturators: A Clinical Perspective

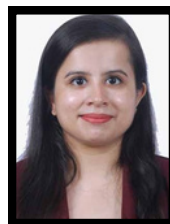
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Abstract

The obturator stands as an essential component in dental restoration and rehabilitation protocols. It is primarily applied in the treatment of maxillofacial imperfections, with a particular focus on palatal deficiencies. Such conditions may emerge following surgical procedures, be inherent from birth, or occur as a result of physical trauma, profoundly affecting vital functions including articulation and deglutition, in addition to facial aesthetics. This detailed case report describes the process of rehabilitating a patient with a maxillary defect through the use of a maxillary obturator. Highlighting the collaborative efforts in prosthodontics, this report elaborates on the clinical procedures undertaken, the challenges faced, and the patient outcomes.



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Dr Mukesh Kumar Goyal



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Dr Surbhi Vashishtha



Dr Supriya Shukla

ENHANCING DENTAL IMPLANT BEAUTY A GUIDE AESTHETIC EXCELLENCE

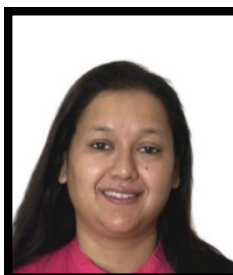
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April - June 2024

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Department of Conservative Dentistry & Endodontics



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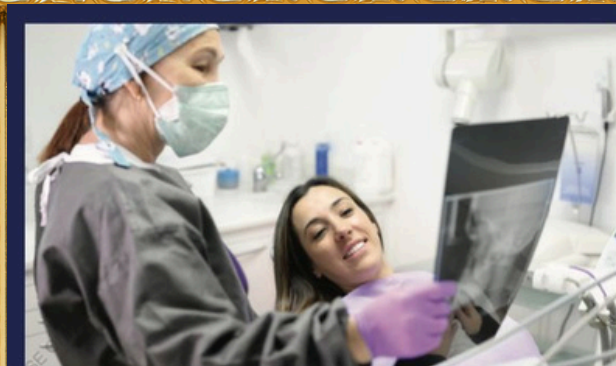
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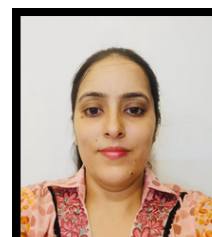
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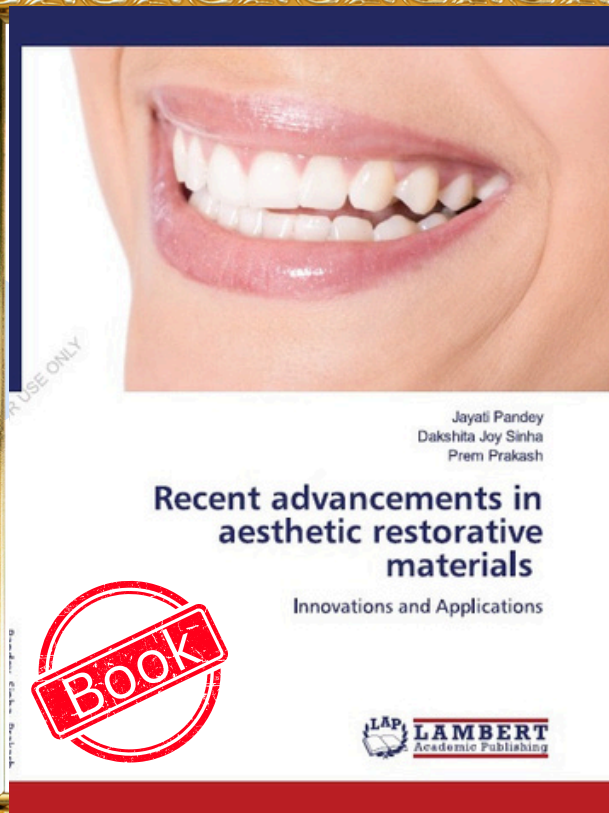
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Case Report

Advancing Dentistry: Exploring Deep Margin Elevation in Post-Endodontic Buildup of a Mandibular Molar

Rashmeet Nagpal¹, Dakshita Joy Sinha², Shreya Dharni³, Aditya Gupta⁴

Abstract

Clinically treating subgingival deep carious lesions might be difficult because of the difficulties in obtaining adequate accessibility and a dry environment for proper bonding. Conventional restorative and surgical methods are invasive. Using contemporary restorative resources and methods, the deep margin elevation technique has developed into an easy and practical way to handle otherwise challenging cases. The sequential process for deep margin elevation has been outlined using a clinical example that has been stated with focus on isolation as the key to success.

Key words: Bioclear, Deep margin elevation, Snow-plow technique

Introduction

In the realm of modern dentistry, preserving tooth structure while ensuring optimal restoration is paramount. The dental clinician has been consistently challenged by restoration of deep proximal lesions since they are usually associated with significant defects with subgingival margins exceeding cemento-enamel junction. Mandibular molars, owing to their complex anatomy and functional demands, often require endodontic treatment followed by a buildup procedure for long-term success. However, achieving ideal marginal adaptation in these cases can be challenging. Deep margin elevation emerges as a promising technique to address this challenge, enhancing the longevity and functionality of post-endodontic restorations. Advances in the material science, adhesive systems and improved isolation techniques have greatly expanded the clinical use and applications of restorative materials.⁽¹⁾

With the help of minimally invasive techniques, even extensive and

undermining defects can be restored, thereby preserving the sound tooth structure and providing long-lasting durability to the tooth.⁽²⁾

One of the most common yet challenging experiences faced in daily practice are, achieving durable restorations in the moist deep subgingival areas of Class 2 and Class 5 cavities because of difficulty in obtaining a well isolated operator field, weaker bond strengths in cervical areas, difficulty in recording a proper impression and providing good contact and contours especially in restorations beyond the cemento-enamel-junction.⁽³⁾ However, recently it has been shown that if moisture control is possible, these problems can also be overcome using newer materials alongside modified techniques even in deeper cavities.⁽⁴⁾

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Dr Rashmeet Nagpal



Dr Dakshita Joy



Dr Shreya Dharni



Dr Aditya Gupta

Case Report

Mandibular Incisor With Two Canals: A Case Report

Tushar Tyagi¹, Shreya Dharni², Aditya Gupta³, Anjali Meena⁴

Abstract

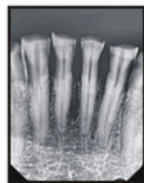
Root canal treatment is a technically demanding procedure especially in the case of mandibular incisors where the anatomy is extremely variable. The prevalence of second canal in mandibular incisors is as follows: right central incisor - 33.5%, left central incisor - 30%, right lateral incisors - 33.5%, left lateral incisor - 36.5%. Type 1 Vertucci configuration was most prevalent, followed by type 3, type 2, type 5 and type 4 in that order.

Keywords: Lower lateral incisor, Two canals, Unusual anatomy.

Introduction

A thorough understanding of root canal anatomy and morphology is required to achieve high levels of success in endodontic treatment.¹ Failure to recognize variations in root or root canal anatomy can result in unsuccessful endodontic treatment.² Hence, it is imperative that the clinician should be well informed and alerted to the commonest possible variation.³ The morphology of mandibular central and lateral incisors is very similar and is not as simple as it may appear to be on standard periapical radiographs. It may be complicated by the presence of bifurcated and lateral canals; in some cases, these canals may rejoin to form a single canal again. Undetected canals are the major cause of failure of this treatment. Incomplete removal of all the irritants from the pulp space may increase the possibility of treatment failure.⁴

since last 15 days. Clinically attrition involving pulp was present w.r.t 32, with no sinus tract opening. Patient had no relevant dental history. Radiographically attrition approaching pulp and periodontal ligament widening w.r.t 32 was seen. Tender on percussion was positive w.r.t 32. Diagnosis- Asymptomatic irreversible pulpitis and symptomatic apical periodontitis w.r.t 32. RCT was advised to the patient w.r.t 32 and her consent was taken.



Case Report

46 years old female patient reported in the Department of Conservative Dentistry and Endodontics, Indraprastha Dental College and Hospital with a chief complaint of pain on biting in the lower left front tooth region

How to cite this article: Tyagi T et al.: Mandibular Incisor With Two Canals: A Case Report. *ITAJOCD*;2024; March-April(1): 35-37.



Dr Tushar Tyagi



Dr Shreya Dharni



Dr Aditya Gupta



Dr Anjali Meena

Case Report

Mandibular Premolars With Concealed Canals Demand Caution: A Case Report

Shreya Dharni¹, Dakshita Joy Sinha², Rashmeet³, Tushar Tyagi⁴

Abstract

The main causes of endodontic failure are incomplete obturation, insufficient instrumentation in the canal, and distinctions in the anatomy of the canal. Mandibular premolars have complex architecture, which makes endodontic treatment quite challenging. The present case report shows a rare occurrence of the extra canal in the first premolar in which endodontic treatment was performed intentionally to replace the missing 35.

The present case contributes an important perspective to the reservoir of knowledge concerning distinct canal configurations in lower premolars.

Keywords: Aberrant anatomy, Lower first premolar, Missed canal, Rare occurrence, Two Canals.

Introduction

Endodontics demands complete debridement and obturation of the root canal, leading to a three dimensional seal. This is hard to accomplish without extensive knowledge of the anatomy of the root and the root canal, from a precise diagnosis to canal negotiation, especially concerning the broad range of root canal anatomy encountered in human teeth. The most significant factors contributing to endodontic failure consist of variations in the anatomy of the canal, inadequate instrumentation in the canal, and obturation. According to Ingle, mandibular premolars are extremely difficult to treat endodontically as a result of their intricate anatomy.¹

In a study by Slowey, with all the teeth, the mandibular premolars may prove the most challenging to efficiently treat with endodontic therapy. The rate of failure of Non-²

Case Report

A 42 year old male patient (OPD no.: 200752158) was referred to the Department of Conservative Dentistry and Endodontics, Indraprastha Dental College and Hospital for intentional RCT L.1.34 since the patient wanted a replacement of missing 35. Clinically attrition was present L.1.34 and the patient reported no sensitivity or pain. The patient had undergone extraction w.r.t 35 about 5-6 years back.

Radiographic Findings

Radiographically attrition was seen w.r.t 34 with slight periodontal widening w.r.t 34.

There was no tender on percussion w.r.t 34. Diagnosis of Asymptomatic irreversible pulpitis was made. Non-³ surgical endodontic therapy was initiated after obtaining consent from the patient.

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Dr Dakshita Joy



Dr Rashmeet Nagpal



Dr Tushar Tyagi

Case Report

Management of Maxillary Canine With Two Canals: A Case Report

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Introduction
Thorough knowledge and understanding of pulp chamber and root canal system anatomy are essential for successful root canal therapy. Familiarity with variations in tooth anatomy and characteristic features in various racial groups can aid location and negotiation of canals. Missed extra root canals are major reason for endodontic failure.¹

According to the previous study the various canal configurations reported in maxillary canines were Type I (81.6%), Type II (2.8%), Type III (11.6%), Type IV (0.8%), and Type V (2%) based on Vertucci's classification. Pulp canal system is complex with branching and divisions throughout the root length.²

Vertucci (1984) classified the root canal configurations of human permanent teeth into various types ranging from single to three separate distinct canals. Permanent maxillary canines are more commonly single rooted, single canal teeth. Presence of two root canals is a rarity. Majority of them join in apical third and exit as single apical foramen.³

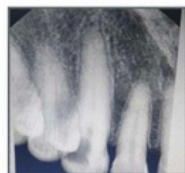
Case Report

A 45 year old female patient reported to Department of Conservative Dentistry and Endodontics, Indraprastha Dental College with chief complaint of food lodgement and spontaneous pain from five days in maxillary left anterior region.

The pain was sharp, severe,

continuous, throbbing pain and is aggravated by taking hot foods and relieved by medication. Past medical history was non contributory. Tender on percussion was positive i.e. 13. From clinical examination it revealed a deep carious lesion involving maxillary right canine. No mobility was seen. Radiographic examination revealed abnormal root canal morphology.

A diagnosis of acute irreversible pulpitis with symptomatic apical periodontitis i.e. 13 was established and endodontic treatment was planned after taking informed consent from patient.



Pre-OP Image

Following local anesthesia with 2% lidocaine, the tooth was isolated with rubber dam [Hygienic; Coltene Whaledent], and an endodontic access

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Case Report

Management of Wide Canal With Roll Cone Technique - A Case Report

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Abstract

Maxillary anterior are the most trauma prone teeth in the oral cavity. Endodontic therapy for the maxillary anterior teeth is generally done due to trauma. Challenge arises when the root formation of the tooth is not complete and it under goes trauma, which causes tooth to become non vital. When the tooth becomes non vital and the root formation is not complete, it becomes a case of open apex. Open apex generally poses the challenge of endodontic therapy due to absence of an apical stop against which the operator can pack the obturating and material without pushing it beyond the apex in the peri radicular tissue.

Thus different techniques are used to over it is challenge, one of the technique is discussed in this case report.

Keywords: Blunderbuss canal, maxillary anterior, Open apex, Roll cone technique, Trauma

Introduction

The most important factor in endodontics is proper debridement of the canal, to obturate it effectively and three dimensionally as possible.

This leads to a proper apical seal with a "fluid tight" obturation which prevents bacterial ingress and ensures a favorable outcome.

However, having a proper apical seal becomes difficult in patients with open apices. Obturation becomes a challenge due to the large open apex, diverging walls, thin dentinal walls that are susceptible to fracture and associated frequent periapical lesion.

The most common teeth with open apex are maxillary anterior. This is due to its position in the jaw which is more prone to trauma and less due to caries.

There are two types of open apex:

1. Non blunderbuss type.
2. Blunderbuss type.

Non-blunderbuss type: Walls are parallel or slightly convergent as the canal exits the root. Apex can be broad (cylinder shape) or slightly tapered (convergent).

Blunderbuss type: Walls of the canal are divergent, and flaring, especially in a buccolingual direction. Mostly, the apex is funnel shaped, wider than the coronal aspect.

Absence of sufficient root development to provide a conical taper to the canal and is also referred to as a blunderbuss canal. (Franklin S. Weine 1972)

"Blunderbuss" is referred to as the 18th century weapon which has a short and wide barrel. It derives its origin from the Dutch word "DONDER" BUS" which means "thunder gun."

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Futuristic Trends in Medical Sciences
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MAGIC WAND IN THE HANDS OF ENDODONTISTS: GUIDED ENDODONTICS

MAGIC WAND IN THE HANDS OF ENDODONTISTS: GUIDED ENDODONTICS

Abstract

Guided endodontics is a cutting-edge technology that revolutionizes the precision and accuracy of root canal procedures. The importance and benefits of using guided endodontics in practice are examined in this chapter. In contrast to conventional techniques, guided endodontics combines accurate instrument tracking, computer-assisted technology, and real-time imaging to improve procedural results. Cone-beam computed tomography (CBCT) is employed to provide three-dimensional imagery. This allows for accurate navigation through intricate root canal systems and a detailed view of the anatomy of the tooth. Continuous feedback is provided via guided endodontics, which enables endodontists to track the process in real time and guarantee ideal irrigation and instrumentation. This technology improves total treatment efficiency, lowers radiation exposure for practitioners and patients, and lessens the possibility of operational errors. Because guided endodontics is interactive, it facilitates educated decision-making and individualized treatment plans, which supports a more patient-centric approach. Because of this, endodontists are able to navigate complex canal architecture with remarkable accuracy, which eventually improves endodontic therapies' success rates and long-term results. The adoption of guided endodontics into endodontic practice is a revolutionary step that gives a viable path toward improving the accuracy and effectiveness of root canal therapy.

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MICROSURGERY: PRECISION IN ACTION

MICROSURGERY: PRECISION IN ACTION

Abstract

Microsurgical approach is a minimally invasive process that leads in faster healing and a better patient response. Inspection is a critical element of microsurgery that is completely lacking in the earlier surgical procedure. Isthmuses frequently cause treatments to fail; consequently, they must be found, cleaned, shaped, and filled with the same care as root canals. Almost all endodontic lesions can be successfully treated by adhering to a precise microsurgical regimen and carefully selecting patients. Endodontic surgery has evolved into microsurgery with strong illumination and magnification under the operating microscope, as well as the addition of several microinstruments. Endodontic surgery using microsurgical methods allows doctors to perform endodontic surgery with smaller osteotomies, shallow bevels, isthmus preparation, assessment of resected root surfaces, retropreparation in line with root canal, and precision in placement of new filling materials. Each patient's circumstance is unique, and they must be carefully evaluated to see if they are candidates for surgical intervention. The severity of the infection, the state of the surrounding tissues, and the patient's age are all factors to consider. Adopting the latest developments in endodontic microsurgery allows dentists to handle difficult cases and give their patients the best care possible.

Keywords: Endodontics, Microsurgery, Minimally invasive, Precision

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UPSURGING NANOTECHNOLOGY IN DENTISTRY

Abstract

Nanotechnology has emerged as a groundbreaking field in dentistry, offering novel solutions to traditional challenges in oral healthcare. Nano-sized particles, often referred to as nanoparticles, have demonstrated unique properties that make them exceptionally well-suited for applications in dental medicine. This abstract provides an overview of the key roles played by nanoparticles in dentistry, emphasizing their diverse applications in diagnosis, treatment, and prevention.

Nanoparticles have revolutionized diagnostic imaging in dentistry, enabling more precise and early detection of dental diseases through advanced imaging techniques. Moreover, their antimicrobial properties have paved the way for innovative approaches in combating oral infections, while targeted drug delivery systems utilizing nanoparticles enhance the efficiency of therapeutic interventions.

This abstract explores the integration of nanoparticles in restorative dentistry, demonstrating their potential in improving the mechanical properties of dental materials and promoting tissue regeneration. Additionally, the use of nanomaterials in preventive dentistry, such as the development of nano-based oral care products, underscores their role in maintaining optimal oral health.

In conclusion, nanoparticles have ushered in a new era in dentistry, offering unparalleled opportunities for diagnosis, treatment, and prevention. As research in this field progresses, the potential for further innovations and applications continues to grow, promising a brighter future for oral healthcare.

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EXPLORING THE FRONTIERS OF REGENERATIVE ENDODONTICS

EXPLORING THE FRONTIERS OF REGENERATIVE ENDODONTICS

Abstract

Root canal treatment is one of the most common dental procedures, however it does not restore the vitality of the tooth. As the technology and scientific research in the dental field is booming, newer dental procedures to replace conventional root canal treatment are emerging, one of them being regeneration of the pulpal tissue. Techniques like pulp autotransplantation and cell homing technique have also been attempted to regenerate lost vital pulpal tissue.

This chapter briefly discusses scaffold, stem cells, clinical considerations for regenerative endodontic treatment and its histological aspects.

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IJP Series, Volume 3, Book 15, Part 1, Chapter 12
THE LASER RENAISSANCE: REVOLUTIONIZING DENTISTRY FOR THE MODERN AGE

THE LASER RENAISSANCE: REVOLUTIONIZING DENTISTRY FOR THE MODERN AGE

Abstract

Traditional dental procedures have been transformed by lasers in dentistry, which provide accurate and minimally invasive solutions for a variety of applications. This chapter examines the various applications of lasers in dentistry, highlighting its effectiveness in managing both soft and hard tissues. Lasers are particularly good at preventing bleeding and improving vision during soft tissue treatments such as frenectomies and gingivectomies. Furthermore, periodontal therapy makes considerable use of lasers, which effectively disinfect periodontal pockets and stimulate tissue regeneration. Lasers are used in hard tissue applications to precisely ablate enamel, allowing cavities to be prepared with the least amount of harm to the neighboring good tooth structure. They are useful in caries removal because of their capacity to target carious lesions specifically, providing a cautious substitute for conventional drills. Additionally, lasers play a pivotal role in endodontic therapy, disinfecting root canals effectively and enhancing the success of root canal treatments. Beyond clinical applications, lasers in dentistry contribute to patient comfort by minimizing postoperative pain and reducing the need for anesthesia in certain procedures. While challenges such as cost and operator training persist, the continued integration of lasers into dental practice holds promise for advancing patient care, promoting faster healing, and shaping the future of dentistry towards more patient-

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Original Article

Cone-beam computed tomographic evaluation and fracture resistance of endodontically retreated teeth using hyflex remover, Mtwo, and ProTaper retreatment file systems: An *in vitro* study

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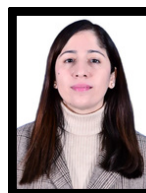
Abstract Introduction: One of the important factors contributing to the success of nonsurgical endodontic retreatment is the efficient removal of the obturating material from the root canal space. However, the fracture resistance of the tooth is likely to be affected by this procedure. Therefore, the study envisages assessing residual filling material in the root canals and the tooth's resistance to fracture postretreatment using different retreatment files.

Materials and Methods: Ninety extracted mandibular premolars with one root and a single canal were decoronated, followed by chemo-mechanical preparation, and thereafter, using the lateral compaction method, root canals were obturated. The samples were divided into three groups ($n = 30$) in accordance with retreatment file systems, namely Hyflex Remover, Mtwo, and ProTaper. All three groups were subjected to the cone-beam computed tomography evaluation to assess remnants of obturating material inside the canals postretreatment, and the same samples were further assessed for fracture resistance, respectively. The collected data were evaluated using the statistical analysis using the Kruskal-Wallis and post hoc Bonferroni tests.

Results: There were significant differences in the volume of residual filling among the tested groups in the cervical thirds ($P < 0.05$). The Hyflex remover file showed the highest fracture resistance (427.30 ± 33.53 N), followed by the Mtwo R (396.90 ± 27.17 N) and ProTaper R (378.50 ± 36.82 N).

Conclusion: All the tested nickel-titanium retreatment files performed satisfactorily. Hyflex remover left the least amount of filling material in the cervical third and displayed the highest fracture resistance among the respective groups.

Keywords: Cone-beam computed tomography, hyflex remover, retreatment Mtwo files, retreatment ProTaper files, tooth fracture resistance



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