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# PINS & POSTS



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**JUL'23 – OCT'23**

The background features a dark, textured surface with intricate, golden floral and geometric patterns. A vertical line runs down the center, and a lit diya (oil lamp) is positioned on the left side, casting a warm glow. The title 'Contents' is written in a large, elegant, orange-brown cursive font at the top right.

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## From Editor's Desk

Earlier this month, the death of a 4-year-old boy in Kerala who underwent root canal therapy created ripples .... Prior to that it was a 3-year-old girl at Pune.... And the one we most definitely cannot forget is the Kannada actress Swathi Sathish, whose face had swollen following root canal therapy and the photo pasted all over social media. So it's not just the children but even adults that face the adversities of dental treatment.



**Dr. Rashmi Nair**

Although it is rare, these unfortunate incidences do occur. From the death of the patient to any of the unintentional or catastrophic after-effects caused by treatment tends to increase the stress levels of the dentists, cause a loss of self confidence, a fear of litigation and most importantly let's not forget the fact that society does not forget or forgive.... so add public outrage too to the earlier mix....

Reading these incidents, I realized that simply doing a BLS course does not help... then what will?????

How does a dentist protect herself? (Don't think much here... majority of the dentists are females)

*What else do we need to know?*

Any thoughts here IACDEians.....



# Our Team

## EDITOR



**Dr Rashmi Nair**

Professor, HOD  
CDCRI  
Rajnandgaon

## ASSOCIATE EDITOR



**Dr Kanwalpreet Kaur  
Bhullar**

HOD  
SGRD Dental College  
Amritsar



**Dr K Rajeswari Gopal**

Reader  
SRMC Dental College  
Porur, Chennai

## SECTION HEADS

### ENTERTAINMENT



**Dr Neetu Maurya**

Senior Lecturer  
CDCRI  
CG

### DESIGN & LAYOUT



**Dr Hemal Bajaj**



# STUDENT EXCHANGE PROGRAM

## TERNA DENTAL COLLEGE AND HOSPITAL

21 – 25 Aug 2023: A Student exchange program was organized by the Department of Conservative dentistry and Endodontics, Terna Dental College in association with IACDE. Post graduate students from K. M. Shah dental College (Vadodara), AMC (Ahmedabad) and ACDS (Hyderabad) participated in the same. The five-day program was packed with academic and practical (patient demonstration) sessions. Each morning began with a seminar / journal club presentation by a post graduate student that was critically evaluated by the faculty. The presentations were followed by patient demos on a variety of cases which included ceramic laminate preparation and cementation, endodontic surgery, bleaching, single visit root canal and aesthetic direct composite restorations. A valedictory function followed by lunch was organized on the last day to felicitate the participants and the organizers. The program served as a good platform for exchange of thoughts, ideas and work culture between the organizers and the participants. The success of the program lay in the teamwork of all the faculty, staff and the enthusiastic, eager to learn and receptive post graduate students





# ARMY DENTAL COLLEGE

A Student Exchange Program was held from 19<sup>th</sup> Sept 2023 to 24<sup>th</sup> Sept 2023, by Department of Conservative Dentistry and Endodontics, Army College of Dental Sciences for the post graduate students under the aegis of IACDE. The programme was joined by students from HKJE Dental College, Kalaburagi, Rau Dental College, Indore and Rajasthan Dental College, Jaipur.

The program was scheduled for 5 days with an amalgamation of various lectures, demonstrations and hands on programs. The schedule also included a visit to Military Dental Centre, Secunderabad.

The programme ensued with a lecture on CBCT and hands on – ITK snap and Mesh Matrix by Dr. Mamta Kaushik (Prof & Head). There were lectures on Root Resorption, Occlusion, GTR- PRF and demonstrations on Bleaching Techniques, Dental Photography, Facebow Transfer, Obturation with Thermoplasticized Gutta Percha, Basic Life Support and Periapical Surgery. The 5 day programme concluded with a panel discussion on exam exercises and valedictory function.

The students recommended organizing more such programs in future.





# SAVEETHA DENTAL COLLEGE

Department of Conservative Dentistry and Endodontics, Saveetha Dental College conducted a week long IACDE STUDENT EXCHANGE PROGRAM Workshops on Innovative Concepts and Practices in Restorative dentistry and Endodontics from 04.09.23 – 09.09.23 under the aegis of IACDE Indian Association of Conservative Dentistry and Endodontics. The theme of the conference was Innovations in Restorative Dentistry and Endodontics. Twenty postgraduate



students from different college pan India registered for the student exchange program. The exchange program had 8 multi-pronged curated workshops that included lectures, demonstrations and

hands-on on different aspects of innovative concepts and strategies which traversed Avant Garde domains of Micro Endodontics, Esthetics, Research Realms, Referencing. Dynamic Guided Navigation, Innovative concept in regeneration of pulp dentin complex, Digital Dentistry and Laser-Assisted Restorative dentistry and Endodontics. The valedictory function was graced by Dr R Mohan Vice



President IACDE. The speakers showcased innovative concepts, strategies, and innovative treatment modalities by way of lectures, demonstrations and

hands-on. The workshops opened new vistas of path-breaking indigenous and innovative strategies in Micro Endodontics, Esthetics, Research Domains, Reference strategies, Dyanamic guided Navigation, Innovative concept in pulpo-dentin complex regeneration i.e Dentin Matrix-Dentin Coagulum, Advances

in Digital Dentistry and Innovations in Laser-Assisted Restorative dentistry and Endodontics. The innovators and astral luminaries who shared their innovative strategies included Dr. Pradeep S, Dr.Surender, Dr.Subash, Dr.Jayalakshmi, Dr. Delphine, Dr.Manish, Dr.Sandeep, and Col Dr Sonali Sharma.





# KM SHAH DENTAL COLLEGE

Department of Conservative Dentistry & Endodontics, K.M. Shah Dental College & Hospital organized the 4th IACDE Student Exchange Program 2023 from 11th Sep to 15th Sep 2023. It was in collaboration with the Indian Association of Conservative Dentistry & Endodontics. Six Post Graduate students were allotted to our college: 2 from Army Dental College, Secunderabad, 2 students from Rau Dental College, Indore, one student from Kaminini Dental College Nalgonda, and one student from College of Dental Sciences Amargarh. It was a 5-day program. During the inauguration ceremony the introductory speech was given by our respected Dean sir Dr. R. V. Subramanyam, followed by Professor & Head, Department of Conservative Dentistry & Endodontics, Dr. Nimisha Shah, and Director, Student & Staff Welfare Committee, Professor & Head, Department of Oral Pathology & Microbiology, Dr. Vandana Shah. On each day, students were taught different topics by every faculty member of the department.

A full-day workshop on 'The Art of Dental Photography' was conducted and an extensive hands-on workshop for different types of photography such as lab models photography, live demo on patient photography both close-up and portrait types was done.

Lectures on "Principles of CBCT" and CBCT use in Endodontic treatment planning was conducted by Dr. Rashmi Venkatesh (Professor and Head, Oral Medicine, Diagnosis, and Radiology) and Dr Nimisha Shah.

Other lectures were on the Rubber Dam by Dr Namrata Bajpai and Dr Riddhi Thakkar, Micro-esthetics by Dr. Nimisha Shah, Dr. Vishnu Rathore, and Dr. Dexter Brave, Dental Operating Microscope by Dr. Meetkumar Dedania and Dr. Sankalp Mahajan and a workshop on LASERS was conducted by Dr. Renu Batra and Dr. Namish Batra.

There was a live patient demonstration by Dr Nimisha Shah on how to restore class 3 composite restoration with anterior quadrant isolation, floss tie, Dental photography, Dental operating microscope with different shades of composites along finishing and polishing protocols.

The valedictory function was held and lastly fun game activities were organized after this function.





# RANJEET DESHMUKH DENTAL COLLEGE AND RESEARCH CENTRE



Department of Conservative Dentistry and Endodontics, Ranjeet Deshmukh Dental College and Research Centre, Nagpur (formerly known as VSPMs Dental College) had successfully applied and was selected amongst top colleges across India to conduct the prestigious four-day National Level Student Exchange Program from 11th-14th September 2023 in



collaboration with the Indian Association of Conservative Dentistry and Endodontics (IACDE).

Students from various colleges including R.K.D.F Dental College and Research Centre, Bhopal, P.D.U Dental College, Solapur, Srinivas Institute of Dental Sciences, Mangalore and H.S.R.S.M Dental College and Hospital, Hingoli participated in the program. The workshop focused on imparting knowledge on varied aspects of clinical dentistry. The resource persons for the workshop included stalwarts in field of dentistry. Expertise on Comprehensive Guide to CBCT- an Endo Cons Approach was shared by Dr. Tapasya Karemore, Clinical Dental Photography by Dr. Devendra Nagpal, Aesthetic Restorative Dentistry by Dr. Rahul Atara and LASER Dentistry by Dr. Sucheta Sathe. The workshop enabled sharing of knowledge on advancements in the field of endodontics and restorative dentistry. Apart from the educational perspective, the program also involved exchange of cultural ideas and thoughts. The participants enthusiastically explored the rich cultural heritage of Nagpur region and toured around to experience various local delicacies, artworks and symbolic landmarks of the city. Dr. Ashish Deshmukh, Hon'ble Vice-Chairman VSPM Academy of Higher Education (VSPM AHE), was the Chief Guest for the Valedictory function. Dr. Rajeev Yashroy project director VSPM AHE also graced the occasion. Head of Department Dr. Pratima Shenoj delivered the welcome address. Dean Dr. Usha Radke and Vice-dean Dr. Ramakrishna Shenoj addressed the gathering. Vote of thanks was proposed by Dr. Rajesh Kubde.



## ITS DENTAL COLLEGE

The Dept of Conservative Dentistry and Endodontics at ITS dental college, Greater Noida conducted the student exchange program from November 6th to November 10<sup>th</sup>. We had the opportunity to host the students from Army college of Dental Sciences, Secundrabad. The 5 day program revolved around Microendodontics, Smile Design using veneers, Deep margin elevation(DME) using lasers, periapical surgery and Intentional Reimplantation procedure in a tooth with failed Endodontic treatment with CBCT workflow to understand the diagnosis.

Microendodontics was conducted Hands On everyday for two hours for the students to have a hang of working under microscope.

Hopefully the students enjoyed the program and looking forward for more participation in future



*The Head Office appreciates the efforts taken by these colleges for conducting student exchange*



# IGNORANCE IS NOT AN EXCUSE

## (Dento-Legal Series PART - I)



**Dr. Manoj Mahadeo  
Ramugade**

**BDS, MDS, MA, LL.B., LL.M.,  
Ph.D. (Scholar)  
Associate Professor,  
Government Dental College  
and Hospital, Mumbai**

In this dynamic world of evolution and technology, the medical field has transformed into a modernized and digitalized form. With development, relationships and human values have also changed. Doctors who were once treated as Healers are now being accused of ignorance and negligence. With the changing dynamics of society, the doctor-patient relationship have also mutated into a formal form of service provider and consumer type.

The Latin maxim “*Ignorantia Juris no excusat*” is commonly taught in law schools, which means that every person should know the law of his land where the person resides, and ignorance of the law is no excuse. We are in a profession where we are constantly in touch with humans. We interact with them and we treat them. While doing this, certain principles of medical sciences and law we need to follow as a norm of society and the State. And, if we fail to do so, we invite disciplinary or legal action against ourselves. Even after

knowing the risk of alleged negligence, dental professionals are still ignorant of dental jurisprudence, the Consumer Protection Act, Ethics, and indemnity insurance. Thus, being part of the health care community we must know the ethics and associated laws of our profession.

Nowadays, patients are well aware and literate through the internet and social media. They know their disease, treatment, and available options as well as their rights as ‘Consumers’. They also know the legal breakthrough if treatment goes wrong and how to sue the doctor. Unfortunately, Dentistry being a part of Medical science has not remained isolated by this.

Through the years, cases of negligence against doctors are increasing not only in India but all over the globe. Yadav M. et al. studied the cases of medical negligence reported from 2002 to 2018; 942 cases of medical negligence were decided by the National Consumer Redressal Forum (NCRF).<sup>1</sup>In another study by Yadav M. et al. it was observed that out of 48 cases filed in the District Consumer Forum 4 (8.33%) cases were of dental negligence. In India, these allegations are primarily associated with major surgical fields like obstetrics and orthopedics while in dentistry; negligence is often primarily alleged with dento-facial surgical procedures, Oral Implantology, and Endodontics.

By the law and Code of Ethics of the medical profession, doctors are duty-bound to take care of their patients while any lack of care may lead to negligence. In India, medical negligence is covered under the Consumer Protection Act, of 1986 which was enacted to protect the interest of the consumers i.e. patients in cases of deficiency in medical services. With the pioneer case of the Indian Medical Association (IMA) vs V. P. Shantha, the medical profession was covered within the ambit of the Consumer Protection Act by the Supreme Court (SC) of India. Additionally, to determine the core

Ask the Expert

and quantum of negligence, the 'Bolam Rule' established in the case of 'Bolam v/s Friern Hospital Management Committee' is applied.

In literature, articles by Dhawan R. et al. , Goel K. et al., Acharya et al., and Ramugade M. et al. on medical negligence and liability of dentists affirmed that the best way for any dentist to avoid negligence is to prevent negligence by gaining and updating the dental jurisprudence knowledge related to their profession.

### What we must know as a Dental Professional?

- A. Enactments: Core Laws
  - a) Consumer Protection Act, 1986 and 2019
  - b) Indian Contract Act (1872)
  - c) Indian Penal Code (1860) - Section 304 A
- B. The Dentists (Code of Ethics) Regulations, 1976 and 2014
- C. Legal Terminologies, their meaning and core:
  - a) Consent
  - b) Negligence
  - c) Standard of Care
  - d) Liability: Strict Liability, Absolute Liability and Vicarious Liability
- D. Indemnity insurance - A powerful but unused weapon
- E. Methods to avoid alleged negligence?

Tips and Expert Advice to win the legal battle

*The details of important aspects of each section will be covered in subsequent issues.*

**Conclusion:** Equipped with legal knowledge, the dentists as oral health care providers will be boosted with fearlessness, and self-confidence and it will help them to think of suitable grounds to safeguard themselves against negligence claims.

## In Memoriam ...



**Dr Ranjith Reddy.Y**

MDS Conservative and Endodontics  
Saveetha and CKS Teja dental college alumni  
Leading practitioner in Suryape



 Science City Convention Centre and Complex, Kolkata

 30<sup>th</sup> November – 3<sup>rd</sup> December 2023

# SPEAKERS



**DR. BART VAN MEERBEEK**  
**BELGIUM**



**DR. PAUL ABBOTT**  
**AUSTRALIA**



**DR. SHANKAR IYER**  
**USA**



**DR. JAVIER TAPIA GUADIX**  
**SPAIN**



**DR. ANIL KISHEN**  
**CANADA**



**DR. NAGENDRABABU  
VENKATESHBABU**  
**UAE**



**DR. PRASANNA NEELAKANTAN**  
**USA**



**DR. WONJOONG KIM**  
**SOUTH KOREA**

## Distinguished SPEAKERS



DR. PRASANT DHANAPAL

DR. MOHAN KUMAR

DR. SRINIDHI.V.B

DR. NIMISHA SHAH

DR. YOHAN CHACKO

DR. SHIBU SHREEDHAR

DR. NIRAJ KINARIWALA

DR. ANSHUL MEL

[www.38iacdekolkata2023.com](http://www.38iacdekolkata2023.com)

## IACDE JUMBLE WORDS

1. NEACQUT

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2. LEXYHF

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3. PAREREHOHS

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4. RECCOIPR

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5. FEXTAPTNPOR

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6. SERVO

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# Regenerative Endodontics

## CDE @ REGIONAL DENTAL COLLEGE

The Department of Conservative Dentistry and Endodontics, Regional Dental College, Guwahati under the aegis of IACDE, conducted a CDE programme under the leadership of Dr. Rubi Kataki, Professor and Head of the Department of Conservative Dentistry and Endodontics, Regional Dental College, Guwahati. The Guest speaker for the programme was Dr. Diganta Kumar Borah, Lecturer of Department of Conservative Dentistry and Endodontics, Regional Dental College, Guwahati on the topic of “Regenerative Endodontics” which was held on 19th May, 2023. This programme was successfully attended by more than 35 participants from various part of Guwahati.



Activities @ IACDE



# Tooth Prints

## CDE @ SAVEETHA DENTAL COLLEGE



Department of Conservative Dentistry and Endodontics Saveetha Dental College conducted a 3 Day Conference Tooth Prints – A Kaleidoscope of Innovations from 6th July 2023 - 8th July 2023 under the aegis of IACDE Indian Association of

Conservative Dentistry and Endodontics. The theme of the conference was Innovations in Restorative Dentistry and Endodontics. The pre-conference course had 7 workshops that included hands-on on different aspects of innovations in Endodontics, Esthetics, Regeneration, Artificial Intelligence, Ergonomics, File design, Nano CT, and imaging. The inauguration on 7th July was graced by the IACDE Vice President and the Dean SDC and the Registrar of SIMATS. Internationally renowned Cariologist Dr. Mithra N Hegde was felicitated during the inaugural function. The Conference highlight was one Oration, two International Keynote Address, and six National Keynote addresses. The speakers showcased their innovative concepts, strategies, and innovative treatment modalities. The lectures opened new vistas of path-breaking indigenous and innovative strategies in Infection control, Management of C shaped Canals, Esthetics, Clinical application of Demineralized Dentin Matrix, Multipronged approach in caries prevention, inhibition, and Minimally invasive caries management strategies. The innovators and stellar luminaries included Dr Mithra N Hegde, Dr RS Mohan, Dr Aylin Baysan, Dr Kranthi Raja, Dr Lisha Jain, physicist Dr Dinesh, Scientist from ICMR Dr Suchita Markan, Dr Jaideep Rayapudi, Dr Pradeep, Dr Jasmine, and Col Dr Sonali Sharma. The undergraduate students, interns, and postgraduate students partook in competitive presentations and table clinics and won interesting prizes.

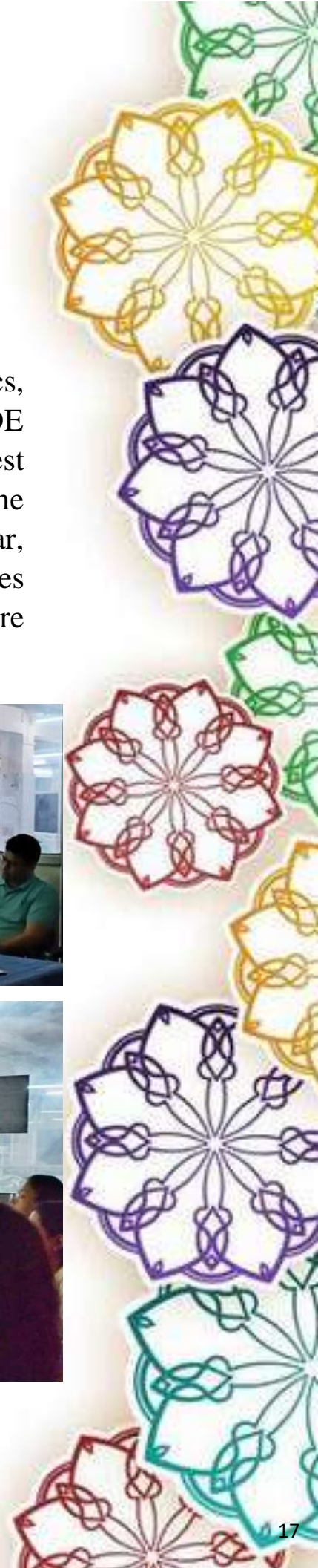




# *Current Clinical Trends in Caries Management*

## **CDE @ REGIONAL DENTAL COLLEGE**

The Department of Conservative Dentistry and Endodontics, Regional Dental College, Guwahati under the aegis of IACDE conducted a CDE programme on 20<sup>th</sup> August, 2023. The Guest speaker was Dr. Shashirekha Govind, Professor and Head of the Department of Institute of Dental Sciences, Bhubaneswar, Odisha on the topic of “Current Clinical Trends in Caries Management”. The programme was successfully attended by more than 25 participants.





# THE OTHER

## CDE @ MADHA DENTAL COLLEGE



The Department of Conservative Dentistry and Endodontics, Madha Dental College conducted the annual CDE program “THE OTHER” (Out of The box solutions for Everyday routine practice and Research challenges)-



“OVERTLY OVERLAYS”-Learn how to do digital overlays on 11th and 12th October 2023.



The program started with the inauguration function where the Dean Dr.M.C.Sainath felicitated the guest speaker Dr.Veni Ashok. Principal Dr.Bagavad Gita mam felicitated the guest speaker Dr.KrithikaDatta. The welcome address was delivered by the Head of the Department Prof.Dr.V.Susila Anand. Prof.Dr.Veronica Aruna Kumari proposed the vote of thanks.

The first guest lecture was delivered by Prof.Dr.KrithikaDatta on ‘Recent digital advancements in caries’ with an emphasis on using an indigenous artificial intelligence based app in detecting carious lesions. The second guest lecture was delivered by Prof. Dr.Veni Ashok on ‘Digital advancements in dental restorations’ with an emphasis on CAD based designing and milling.



A hands-on course was conducted in PG clinic in Department of Conservative Dentistry and Endodontics. The overlay preparation was started with the demonstration for the same by Prof.Dr.V.Susila Anand. Following this case selection for the hands-on course was done. The pre-operative photographs were taken, tooth preparation for overlay was done by hands-on participants. Intraoral digital scanning with the help of Prime Scan 3rd generation of Dentsply Sirona was done for digital impression of the overlay preparation. The scans were sent to the milling lab for CAD-CAM milling for restorations by e-mail.

On Day 2, the CAD-CAM milled, sintered and glazed monolithic zirconia overlays were collected from the milling lab. The restorations were tried in the patient’s mouth and after appropriate cleansing protocol, cemented using resin cement. Occlusion and any premature contacts were appropriately adjusted and the restorations were polished using Ceramic polishing systems.



The guest lectures were attended by 98 participants from our college and other colleges. The hands-on was attended by 20 participants from our college and other colleges.

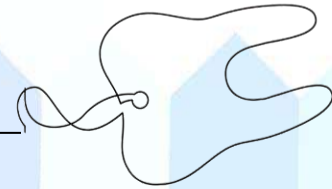


# Cons-Endo Day 2023





# Chronicles of Hand piece



**DR. H. D. Adhikari**

I passed my MDS in 1984 from BHU, U. P. I got an air rotor hand piece from dept. and was very fascinated using it for access cavity preparation because after BDS (from DR. R. Ahmed Dental College & Hospital) in Intern ship we did RCT in anterior teeth with only slow speed rotaries such as hanging motor, table top motor with triple section arm, cord & pulley system having 3000--12000rpm were available only. I have also seen sewing machine pedaling system rotary tool.

It is still fresh in my memories in 1983 when my seniors were appearing final MDS Exam, there was massive damage to the transformer and other devices for which entire BHU came to a halt due to load shedding during 2 days of exam. That very age old primitive device saved the faces though my leg muscles got badly fatigued which I would never forget. I must confess that a party was thrown by my seniors for this. During our PG time there was no microscopes, loupes, ultra sonic endodontic tips, phosphor imaging system, RVG, CBCT, etc. Only Intra oral peri apical x ray and our dexterity of fingers/tactile sensation was our asset. Endodontic explorer was like 'stethoscope of physician' to us. With the passage of time I got all the equipments one after another soon after I joined Dr. RADC&H as clinical tutor in 1986 completing my rural service. Out of 37 yrs of my teaching life I served this institution for 31 years, with the rest in another 2 Government dental colleges of the state. I realize I learnt endodontics a lot through the teaching of my students. The advanced equipment-- hard tissue laser, Er. Cr:YSGG Laser was way better than a knife cutting butter when I prepared access cavity in my PG section through non cutting mode. The evolution of flexible NI-TI instrument has revolutionized the concept of endodontics. Micro access cavity with the use of these instruments and microscope have given birth to Micro Invasive Endodontics which we all should adopt and master it without losing much time

## *"Evolutionary Journey of Dental Burs: From Ancient Origins to Modern Marvels"*



**Dr Preethesh Shetty Asst Professor & Asst Dean, Student Welfare A B Shetty Institute Of Dental Sciences, Deralakatte, Mangalore completed in PG in 2017 from the same college.**

Dentistry has changed significantly since G.V. Black's early days due to the rapid advancement of new materials, methods, and knowledge. Precision and technological advancements have led to significant advancements in dental bur manufacturing over the years.

Tungsten carbide materials were one of the most important advances in the development of dental burs. These materials are extremely resilient, which significantly improves the effectiveness and efficiency of dental burs but these burs used to wear when used on enamel. The 1899 catalog of Claudius Ash and Sons Ltd. listed "diamond burs for trimming and polishing enamel margins" and advised lubricating the burs well with water and running them at high speed. The 1913 catalog of the S.S. White Dental Manufacturing Co. described a "diamond starting point" as a narrow diamond wheel for removing enamel when excavating a natural tooth. Carbon steel burs were ineffective in cutting enamel, so before the 1890s, silicon carbide discs and stones were used instead.

The first dental bur is credited to Willman and Schroeder of the University of Berlin in Germany in 1897. German businessman W.H. Drendel invented the modern diamond bur in 1932 when he devised a method for joining diamond points to stainless steel blanks or forms. Diamond burs were in widespread use by 1939. Due to their high cost and the unsuitable shapes and sizes that were initially available, diamond burs did not become widely accepted until 1946. The



advent of higher-speed handpieces, operating at speeds between 200,000 and 300,000 rpm, and enhanced collaboration among dentists, dental educators, and manufacturers, played a crucial role in the development of diamond burs that allowed the dental profession to achieve greater efficiency while applying lighter cutting pressures.

The paradigm shift in dentistry from “extension for prevention” to minimal invasive dentistry with magnification has brought about the introduction of a variety of novel advancements in bur designs and materials. Following are the burs I would recommend for daily clinical practice:

1. Endoguide bur: These are optimal for endodontics that is driven by magnification. It assists in identifying any calcification and obliteration, locating the root canal orifices, reducing the likelihood of procedural errors and preserving more paracervical dentin.



2. LAaxxess bur: Dr.L.Stephen Buchanan designed this bur. The access preparations are optimized with the aid of these burs. Fundamentally, these are safe-ended tips on stainless steel treated with titanium nitride. Compared to traditional drills and files, these burs ensure a safer and more substantial preflaring.



3. Polymer bur: The medical-grade polyether-ketone-ketone used in the manufacturing of polymer burs, minimizes the risk of odontoblast exposure and excavates only the carious portion of the tooth, reducing pain and/or sensitivity during cavity preparation or postoperative procedures. They are intended for single use only due to their operating principle, which reduces the possibility of cross-infection in dentistry.



4. Ceraburs: Entirely of ceramic material, manufactured with zirconia stabilized with alumina and yttria. Ceramic burs have a high excavating efficiency on soft, carious dentin while causing minimal damage to the sound, hard tooth structure. For minimally invasive caries excavation, these burs ought to be a good fit.



5. Transmetal bur: A carbide bur with an extra fine cross cut shape, the Transmetal Bur is designed to cut through porcelain fused to metal crowns without breaking the porcelain or causing damage to the bur. The bur's saw-tooth blade configuration provides efficiency while lowering undesirable vibration, which is particularly crucial when entering pulpitis or "hot teeth."



From their pre historic beginnings to their modern, precision-engineered instruments, dental burs are a testament to human ingenuity and the unwavering quest of absolute perfection in the dental field. The advancement of dental care has been significantly aided by the continued development of their manufacturing processes, with an emphasis on tungsten carbide and diamond-coated burs. Looking forward, it's undisputed that dental burs will continue to evolve, improving the field of dentistry and ensuring brighter smiles for future generations.



# Epilogue



## Air Abrasion

**Dr. Akansha Garg** completed her PG from KD Dental College, Mathura in 2015. She also completed her 1 year mastership program on biomimetic restorative dentistry at Alleman Biomimetic Centre, USA under guidance of Dr. David Alleman and Dr. Davey Alleman

Minimal invasive dentistry is now the ideal way of performing routine dentistry. Air abrasion is truly in line with the minimal intervention concept. It uses abrasive particles such as alumina which are expelled by air pressure at high velocity. The particles abrade the surface without generating any heat or noise.

**DEVICES** To avoid mess for patient and operator, air abrasion units with water is advisable. Examples of air abrasion units with water are PrepStart™ H20, Danville, AquaCare Velopex, RONDOflex™ plus 360 KaVo Kerr, Bioclear Blaster, Bioclear. The devices can be stand alone or can be attached to dental chairs. The advantage for stand alone devices like Aquacare and PrepStart™ is the ability to adjust the pressure, particle flow rate, and water shrouding flow rate.

**ABRASION PARTICLES** Several types of abrasive particles are available for air abrasion that vary based on their abrasivity. Aluminium oxide (alumina) is the main type of particle used to roughen and cut tooth structure. The average particle diameter ranges from around 30 um to 90 um. Other, less abrasive particles (Sodium bicarbonate, Calcium carbonate, aluminium trihydroxide, calcium sodium phosphosilicate, glycine powder air polishing) have been used to clean biofilm or stain from the surface of the tooth. Syle

(containing NovaMin) from AquaCare provides a prophylaxis treatment that reduces dental sensitivity by occluding exposed dentinal tubules blocking nerve access to the affected areas and also encourages the remineralisation.

### CLINICAL APPLICATION

**Cavity Preparation** -Reported advantages of air abrasion include reduced noise, vibration and sensitivity and thus reducing pain perception and increasing patient comfort. The preparations have more rounded internal contours which may increase the longevity of restorations because it reduces the incidence of fractures as a consequence of decreased internal stresses.

Several disadvantages are- the depth of penetration during cavity preparation cannot be controlled, not effective for removal of gross caries because it does not cut substances that are soft or resilient, time taken is more than conventional handpieces.

**Bonding-** The effect of air abrasion on the bond to enamel and dentin has been reported previously with mixed results. The results are dependent on the type of adhesive used, whether self-etch or etch-and-rinse.

Air abrasion improves bond strength with dentin whether self etch or etch rinse but in case of enamel there is not significant improvement in bond strength when using self etch system and slight improvement when using etch and rinse system. It is mandatory to acid etch air abraded enamel and dentin when applying adhesive.



Aquacare device





**Cleaning the preparation and biofilm removal**-It is absolutely necessary to remove biofilm from the tooth structure before restoring the tooth directly or indirectly. Air abrasion is effective in removing remnant restorative materials, stains, temporary cement, plaque, light calculus, undermined enamel, poorly bonded resins or liners, and soft-tissue tags leaving a clean, matte surface for bonding. The rationale of biofilm removal before bonding is to remove any impediments to effective etching of enamel that may lead to reduced bond strength and micro gaps that could contribute to future stain and leakage.

I feel it's a must have unit in clinical practice. Dust control is a challenge, and it necessitates the use of rubber dam, high-volume evacuation, protective masks and safety eyewear for both the patient and the therapist and magnifying devices like microscope lens and loupes

## FIND THE WORDS

C	C	E	L	L	O	P	H	A	N	E	S	W	A	E	X	S
L	E	O	E	L	P	H	N	E	O	M	I	S	S	T	X	R
L	R	N	M	R	O	R	E	S	T	O	R	A	T	I	O	N
O	A	N	A	P	I	W	X	A	T	T	E	N	O	N	O	P
P	M	O	N	T	O	R	E	S	O	O	I	D	R	V	E	P
D	I	T	E	D	I	S	C	S	C	R	D	I	S	E	S	O
I	C	L	A	M	P	S	I	S	T	E	F	L	A	S	K	L
C	L	M	A	N	R	E	T	T	A	P	P	A	C	T	I	I
C	E	R	A	M	F	O	R	C	E	P	S	A	M	I	T	S
S	A	H	A	E	M	O	S	T	A	T	S	T	E	N	S	H
S	N	E	D	E	N	T	U	R	E	L	I	O	N	G	E	E
S	N	A	H	A	N	U	D	E	T	N	G	O	T	S	N	R
A	C	A	E	G	N	I	Z	A	L	G	G	I	B	S	R	S
E	N	T	S	C	A	L	L	P	E	N	A	B	N	O	W	T
T	T	S	I	R	S	C	A	L	P	E	L	U	U	A	X	E
E	E	V	V	C	I	R	C	S	U	L	W	S	O	R	T	S
S	M	H	E	A	T	C	U	R	E	X	E	R	A	W	S	E
W	X	E	N	L	I	T	S	P	H	O	S	P	H	A	T	E
I	M	P	R	E	S	S	I	O	N	E	N	W	A	X	E	S

- Cellophane
- Cotton
- Composite
- Ceramic
- Polisher
- Burs
- Discs
- Denture
- Enamel
- Ceram
- Forceps
- Pattern
- Flask
- Glazing
- Waxes
- Motor
- Investment
- Impression
- Alginate
- Heat Cure
- Phosphate
- Scalpel
- Haemostat
- Adheive
- Restorationq



# DOM..... KNOW JT!!!



**Dr. Mohan Kumar**  
Vice President, IACDE

Across their rich history, Dental Operating Microscope (DOM) faced initial reluctance, beginning with Apothekar's introduction of the pioneering operating microscope and continuing with Dr. Gary Carr's reintroduction with Galilean optics and ergonomic design. The microscope has become a crucial component in dentistry, especially with the emergence of the concept of Minimally Invasive Dentistry, which is closely linked to the use of magnification

In contrast to loupes, which can present challenges for clinicians due to its limited magnification and external light source, dental operating microscopes (DOM) have emerged as champions, showcasing excellence in diverse aspects. These range from enhanced ergonomics to a variety of high magnification options, superior illumination, and advanced features such as photomicrography and live operating views.

The lens system of the microscope consists of 4 main components: Eyepiece Lenses/ Binoculars, Objective Lens, Magnification Changers and Beam Splitter.

**Eyepiece** is that part of the microscope through which the operator sees, it can be adjusted according to operator's interpupillary distance. It has various powers ranging 10X, 12.5X, 15X and 20X. These binoculars are inclinable to an angle of 0 – 210 degrees which provides better ergonomics and postural comfort.

Second is the **Objective Lens** which is placed towards the patient and It governs the working distance of the microscope. The focal length of the objective equals the working distance. It ranges from 100mm to 400mm. However, 250mm is most commonly used.

The latest versions of dental operating microscopes (DOM) feature a variable focal length known as "varioscope." This varioscope allows for an adjustable focal range spanning from 200 to 300 mm, providing a variable working distances for optimal comfort during dental procedures. Its versatility enables the clinician to customize working distances to meet specific application and ergonomic needs.

The lens system of a varioscope comprises two lens groups. Achieving focus at a chosen working distance involves repositioning the upper lens group along the optical axis. The varioscope's second lens system facilitates changes in working distance through internal



displacement. Some varioscopes are motorized, allowing for effortless focusing with the press of a button. This feature enables dentists to adjust focus seamlessly without having to change their seating position

The **Magnification Changer** works basically on the Galilean principle and is available in two types: step magnification and power zoom. Step magnification comes in 3 and 5-step systems, with the latter being more commonly used in dentistry. It consists of a turret housing two telescope systems with different magnification levels. By turning the turret, users can switch between these systems, offering a total of four magnification options plus an empty position for a 1x magnification. The available magnification factors are typically 0.4, 0.6, 1.0, 1.6, and 2.5. However, the drawback is that magnification changes occur in steps, and the view of the treatment area is temporarily blocked during turret adjustments. Additionally, manual effort is required to adjust the magnification factor.

The power zoom system offering a magnification range from 5X to 25X comprises of several optical elements, including two adjustable ones. By changing the position of these adjustable elements along a precisely calculated curve, a smooth transition between various magnification factors is achieved across the entire magnification range. A power zoom changer is incorporated to ensure a seamless and progressive adjustment in magnification, avoiding any sudden visual disruptions or jumps that may occur as the clinician rotates the turret. It can be controlled through a versatile handgrip or a foot switch. Using a foot switch means the dentist can change the zoom without needing to take their hands off the instrument.

The **Beam Splitter** divides the light into two parts, directing one part to the main binoculars and the other to an accessory, such as a camera or an auxiliary observation tube. Positioned between the binoculars and the objective lens, This optical device splits the light beam travelling from the objective lens to the binoculars. The most commonly utilized beam splitter has a ratio of 20:80.

Its primary function is in documentation and can be either single-sided or double-sided. In a double-sided beam splitter, one side can be employed for still photography with a camera, and the other side can be used for video documentation and live display. Alternatively, it can be utilized for attaching another eyepiece for an assistant.

The light source is a critical component of an operating microscope, typically positioned away from the microscope itself to prevent overheating of the optics or the surgical site. Common light sources include xenon, halogen or light-emitting diodes (LED). The light is transmitted to the microscope through a fiber guide, then passes through the objective lens, illuminating the surgical site at a distance determined by the focal length. Then the light from the surgical field is then reflected back through the objective lens, magnification changer lenses, and binoculars before exiting to the eye as two separate beams of light. The intensity of the light can be adjusted by changing the voltage to the light bulbs or LEDs

***In master's, it's more than just what you feel,***

***Its' WHAT YOU SEE...***

## A Super talented doctor who believed in the beauty of her dreams and turned them into reality.

**Dr. Anupama Soni** an Endodontist & Facial Aesthetician by profession and runs private clinic, Medispa Dental & Facial Aesthetic center, Jaipur, Rajasthan. She completed her BDS from Govt. Dental College, Jaipur in 2004 and post-graduation from Dr D.Y Patil University, Mumbai in 2007.



A mother of two, and a private practitioner I followed my passion and won the title of Mrs Asia International for the year 2018-2019 to being a Brand Ambassador for many social causes. I started my journey towards my passion in class tenth, with the title of Miss Tenth, then Miss School & Miss Fresher at college.

With the motivation of my son, I participated in Mrs India Rajasthan in Feb 2018. As I had won the title, I got the chance to participate and win the title Mrs India in July 2018. I went ahead to represent India Internationally in November 2018. At the International Beauty Pageant held at Rayong, Thailand I was crowned Mrs. Asia International



The pageant was hosted by the Thailand. The contestants were welcomed by the Governor of Rayong and the Director of Tourism of Thailand. It was a wonderful journey with many experiences, learning and meeting International contestants with different cultural backgrounds. It was a huge platform to explore and reinvent yourself.

I am also a trained folk dancer of Rajasthan. I performed Bhawai, Chari, Terah Tali, Kalbeliyai dance forms on both National and International platforms. So as part of talent show for this pageant I presented a fusion of Chari and Kalbeliya dance which amazed the audience including the Governor of Rayong and the Director of Tourism. I believe it was this performance that helped me in securing a place in the jury's heart and winning the crown.

For me, it was a great honor and privilege to represent my country on an International platform. A dream came true. I had always wanted to participate in a National Pageant. But there was always a hitch about not being fashion conscious before. My son Divyash not only encouraged me to participate in Mrs. India Rajasthan but kept on motivating me with the words that 'Mummy You can do it'. Just before the pageant I got plantar fasciitis in my right foot. It was difficult to walk, and wearing heels, standing tall and catwalk was a challenge. But there is no alternative to hard work.

After winning the title of Mrs Asia International I was appointed as Goodwill Ambassador of Road Safety, Govt of Rajasthan 2018-2020, Brand Ambassador Cleanliness Campaign, 2020-21, Brand Ambassador Rajasthan Badminton Association, and State Brand Ambassador Beti Bachao Beti Padhao, Govt of Rajasthan 2019-2021.

Presently, I am Member of State Women Policy, Govt of Rajasthan where I help the government in making policy for women upliftment. By connecting with the government. schemes, sponsoring their education, marriage, encouraging vocational training and skill enhancement. I help spread awareness among women about their rights and power.

I believe

*"Dream big, then desire to achieve it with great determination, dedication, devotion and diligence. Destiny and Divine power will formulate their plans towards your destination."*







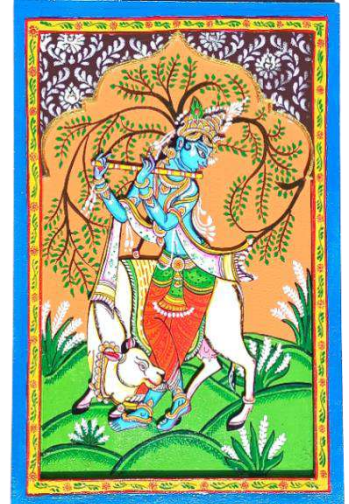
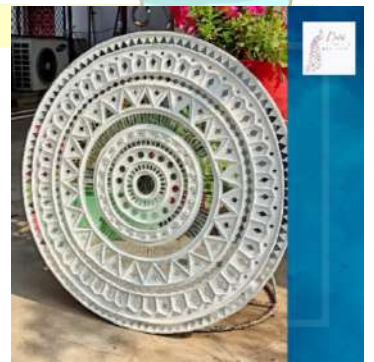
**Dr Niharika Jain** completed her Masters in Dental Science (Endodontics) from RGUHS in 2011. She is working as a Professor, Department of Endodontics, Triveni Institute of Dental Sciences and Research Centre, Bilaspur, India and has a clinical practice since 2011 in Jabalpur, India.

Her bond with brush and colors started at a very young age, in a small town called Agra. Later, what restarted as a de stress hobby slowly transformed into something more passionate. This passion is what you can witness in each of the artworks. As a specialist dental practitioner Dr Niharika discovered her unique skill and started her own brand **Nakshby Niharika**, where artistry meets heritage. This is the gift that she loves, and she wants to utilize it to celebrate and promote the rich tapestry of India's local artforms. Established in 2022, *Naksh by Niharika* is also committed to showcasing and promoting the incredible talents of local artists across India, fostering a community that values and sustains Indian creativity.

Not just limited to contemporary works, Naksh by Niharia also delve into the rich tapestry of Indian vintage products, offering a glimpse into the timeless elegance of our cultural heritage. The mission extends beyond commerce and aspires to revive and celebrate the diverse cultural threads that make up the vibrant mosaic of India.

Through Naksh by Niharika, her aim is to redefine global perceptions of Indian aesthetics, bringing forth the intricate beauty embedded in our art and traditions

*Uncompromising commitment to contributing world-changing value – sounds like the very definition of an Artist.*



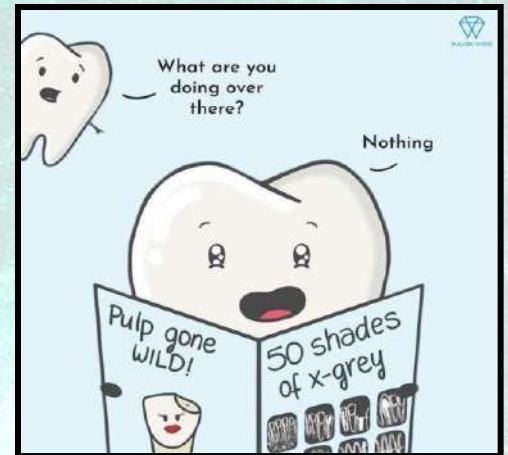


# ENTERTAINMENT

## NEWSLETTER OFFICE

Dr. Rashmi Nair.  
Professor, HOD  
Department of  
Conservative  
Dentistry  
and Endodontics.  
CDCRI,  
Chhattisgarh

IACDE members  
are  
requested to send  
their inputs,  
activities in your  
state, news, views,  
scientific and  
academic  
achievements,  
awards, jokes,  
cartoons &  
questions for the  
newsletter to:  
newsletter@iacde.in



### IACDE JUMBLE WORDS ANSWERS

- |             |                 |               |
|-------------|-----------------|---------------|
| 1. Quantee  | 2. Hyflex       | 3. HeroShaper |
| 4. Reciproc | 5. ProtaperNext | 6. RevoS      |

On the Cover Page - Dot Mandala Painting on a round Wooden panel

Courtesy- Dr Niharika Jain