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PINS & POSTS

AN OFFICIAL NEWS LETTER OF IACDE

VOLUME - IV

May - August 2018 (12 Pages)

ISSUE - II

IACDE Extends Helping Hand to Kerala

IACDE members donated Rs.1,00,000/- towards Kerala relief fund.

IACDE head office prays for the speedy recovery of Kerala from the natural disaster. We would like to thank the following members for the generous donation.

1. Dr. Dibyendu Mazumdar
2. Dr. Kidiyoor K H
3. Dr. Karunakar
4. Dr. Mohan B
5. Dr. Ratnakar
6. Dr. Mahima Tilakchand
7. Dr. Balaram Naik
8. Dr. Dantyam
9. Dr. Munish
10. Dr. Sonali Taneja
11. Dr. Prasanna V
12. Dr. Shravan Kumar
13. Dr. M.R.Srinivas
14. Dr. Manoj
15. Dr. Kiran K V
16. Dr. Abhishek Laha
17. Dr. Ramesh Bharti
18. Dr. Zubair

1ST ZONAL CONFERENCE

WEST ZONE (Jaipur)

CENTRAL ZONE (Indore)

NORTH ZONE (Delhi)

SOUTH ZONE (Chennai)

EAST ZONE (Kolkata)

We thank the following HOD's for offering 2018 Students Exchange Program

1. K.M.Shah Dental College - Dr. Nimisha Shah
2. The Oxford Dental College - Dr. Srirekha A
3. Army College of Dental Sciences - Dr. Mamta Kaushik
4. Saveetha Dental College - Dr. Nivedhitha M S
5. Terna Dental College - Dr. Shishir Singh
6. Panineeya Institute of Dental Sciences - Dr. Karunakar
7. ITS Dental College - Dr. Sonali Taneja
8. King George Medical University - Dr. Anil Chandra

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IN THE SPOT LIGHT

PRESENTATIONS SELECTED FOR 33RD IACDE NATIONAL CONFERENCE, VIJAYAWADA

WEST ZONE BEST TABLE CLINIC

Sr. No.	TITLE	Student Name	Contact No.	College Name
1	Practice green for globe clean	Dr. Meghna Kothari Dr. Shreya Bhor	9823008220	K.M. Shah Dental College
2	Let the waves clean the hidden caves	Dr. Purnima Saklecha Dr. Anu Cherian	9657275734	K.M. Shah Dental College

WEST ZONE

Sr. No.	TITLE	Student Name	Contact No.	College Name
1	Molar with seven canal root system	Dr. SwetaPurohit	9660483370	Rajasthan Dental College & Hospital, Jaipur
2	Regenerative Endodontic treatment	Dr. AnkitaMahali	8080805695	TERNA Dental College, Navi Mumbai
3	Comparative clinical evaluation of anxiety level of patients undergoing root canal treatment with 432Hz and 440Hz frequency of music therapy-A randomized clinical study: A pilot study	Dr. NamrataBajpai	9601389496	K.M. Shah Dental College & Hospital
4	Endodontic treatment of an unusual germinated mandibular second premolar resulting in premolar molarization: A case report	Dr. SatakshiBatre	9511736371	VYWS dental college, Amrawati
5	A comparative evaluation of efficacy of five different procedures in elimination of biological debris on rotory endodontic instruments before sterilization- an in vitro Steriomicroscopic study.	Dr. Mohit Singh	7987468367	Govt. Dental College, Jaipur
6	Comparative evaluation of effect of bone grafts on the surface microhardness of three endodontic root end filling materials- An in vitro study	Dr. Sanket H Meher	9136529547	YMT Dental College, Navi Mumbai
7	Endodontic Management of Blunderbuss canal with open apex and Ellis Class IV Fracture using MTA and Compo-Post- A case report	Dr. Tanmay Das	8742004400	Jaipur Dental College, Jaipur
8	In vitro comparative evaluation of Sealer penetration on sodium Hypochlorite treated root Dentin using 3 different anti-oxidents	Dr. Urmila B Chauhan	8879538787	Krishna Institute Of Medical Sciences, Karad.
9	Comparative evaluation of Anti Microbial activity of pineapple extract (Bromelain), 2% Chlorhexidine, 5.25% Sodium Hypochlorite alone and in combination with Bromelain as root canal irrigants against Enterococcus FaecalisATCC(29212): An in vitro study.	Dr. SurabhiSantoshParakh	9403158331	SDDCH, Parbhani
10	Effectiveness of various NSAIDS on pre-operative and Post-operative Dental Pain	Dr. ShwetaSantoshLodha	8983034747	MUHS, Pune.
11	Nurturing the Natural	Dr. Charu	9636370039	
12	Reconstruction of pink and white aesthetics: A case series.	Dr. DevikaKalaskar	8446810880	Govt. Dental College, Ahmedabad
13	Knowledge, Attitude and Skills of dental students and practitioners of Ahmedabad on minimally invasive dentistry concepts: A Questionnaire survey	Dr. SagarGajjwalla	9825242932	Govt. Dental college, Ahmedabad
14	Endodontic management of open apex	Dr. Nikita Shah	9819148340	Tema Dental college, Navi Mumbai.
15	MMP Inhibitor's Stewardship on longevity at resin dentin interface	Dr. Ankita Anil Mundada	8669034271	MUHS, Nasik
16	Comparative evaluation of percentage of guttapercha root canal filled areas using cold lateral condensation , continuous wave Obturation And Carrier based root canal Obturation Technique- An In Vitro Study	Dr. PoonamJhakar	9413682922	GDC, Jaipur

CENTRAL ZONE

Sr. No.	Name	Year	College	Topic
1	Dr. Khushboo goyal	2nd year	College of dental Science, Rau, Indore (M.P)	A comparative evaluation of the fracture resistance of endodontically treated teeth using three different obturating systems - an in vitro study
2	Dr. Raghav pratap	3rd year	K D Dental College Mathura up	Comparasion of shear bond strength of composite resin to bleached enamel after application of various antioxidants : an in vitro study
3	Dr. Gauri Sanwatsarkar	3rd year	Sri Aurobindo college of , dentistry Indore (M.P)	Evaluation of scouting ability and apical debris extrusion using different glide path endodontic instrumentation inmoderately curved root canals
4	Dr. Sanket hans pandey	3rd year	SAIMS, Indore (M.P)	A comparative evaluation of the abrasive action of various herbal and non Herbal toothpastes on enamel surface and their effectiveness in plaque control
5	Dr. Ankita hirawani	3rd year	New horizon dental college and research institute, sakri, bilaspur	Evaluation of surface roughness and microleakage of enamel on coming in contact with commonly used beverages
6	Dr. Sadaf tamanna & Dr. Shadab	3rd year	Dr.Ziauddin Ahmed Dental College, AMU, Aligarh	Concentration dependent genotoxicity of sodium hypochlorite- An in vivo study
7	Dr. Chhaya harinkhere	2nd year	Sri Aurobindo college of dentistry, Indore	Evaluation of antibacterial activity of three different glass ionomer cements on streptococcus mutans: an in-vitro antimicrobial study.
8	Dr. Ankita grace lall	2nd year	CODS, Indore (M.P)	A comparative evaluation of the abrasive action of various herbal and non Herbal toothpastes on enamel surface and their effectiveness in plaque control
9	Dr. Ruba khan	3rd year	Peoples college of dental science and research centre, Bhopal (M.P)	Management of Apical Root Resorption Using Bioactive Bioceramic Materials : A Case Series

EAST ZONE

Rank	Name	College	Topic
1.	Dr. Rupankar Dey	Guru Nanak Institute of Dental Sciences & Research	Polymerase Chain Reaction (PCR) for Identification and Quantification of Microbes From Root Canals of Patients With Primary Endodontic Infection
2.	Dr. Shivangi Shreya	Buddha Institute of Dental Sciences and Hospital	Smile Design:a Thing of Beauty is a joy Forever
3.	Dr. Snigdho Das	Dr.R.Ahmed Dental College & Hospital	Decoding The Diagnostic Dilemma: Cone Beam Computed Tomography and Ultrasonography as a tool in Differentially Diagnosing Peri-Apical Lesions-A Case Series
4.	Dr. Aalisha Kanodia	Regional Dental College, Guwahati	Application of Platelet-Rich Fibrin in Periapical Surgeries - An Excellent Aid In Healing
5.	Dr. Aakriti Jain	Kalinga Institute Of Dental Sciences, Bhubaneswar	Gaining Closure : A Case Series on Apexification

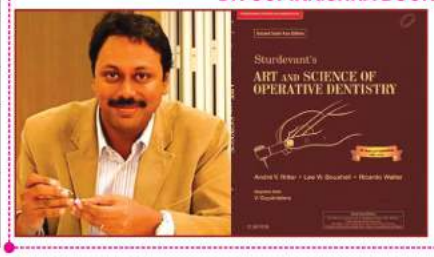
SOUTH ZONE

Sr. No.	Presenters	Reg. No.	College Name	Title
1	Dr. Paramarshi Das	SZC0594	Dayananda Sagar College of Dental Sciences	To Evaluate And Compare The Surface Deformation Of Hyflex Cm And HyflexEdmNiti Rotary File System After Instrumentation And Heat Sterilization -An In Vitro Study.
2.	Dr. Afiya Eram	SZC0509	A .J. Institute of Dental Sciences	Comparitive Evaluation of Treatment Options on Biomechanics of Simulated Immature Teeth: A Finite Element Analysis Study
3.	Dr.M.H.MohamedAbubacker, Dr.M.Arun Prasad	SZC0516	Tamilnadu Government Dental College and Hospital	Histogical Evaluation Of Pulpal Response To Direct Pulp Capping Using Statins With ? Tricalcium Phosphate And Mineral Trioxide Aggregate On Human Teeth Pulp Tissue
4.	Dr.A. Yogha Padhma	SZC0391	Adhiparasakthi Dental College and Hospital	Dentin Microhardness Changes Following Routine Irrigation Regimens And Medicaments And Its Reversal Using Antioxidants
5.	Dr. Rajatha Shetty, Dr. Eva Shukla	SZC0623	FDS, Ramaiah University	Comparative Evaluation Of Vascular Endothelial Growth Factor-A Released From Platelet Rich Fibrin, Platelet Rich Fibrin Matrix And Dental Pulp At Different Time Intervals
6.	Dr. Apoorva Sharma Dr. SaiSudheshna	SZC0134	Srm Dental College Ramapuram, Chennai	Evaluation Of Anti Inflammatory Action Of Petasin Incorporated Eugenol On Zebrafish : An in Vivo Study
7.	Dr. Akshay ,Khandewal	SZC0084	Saveetha Dental College , Chennai	Periapical Healing After Root Canal Treatment Using Different Endodontic Sealers: A Systematic Review.
8.	Dr.AeshaAkhtar, Dr.Vedavathi B	SZC0598	Dayananda Sagar College of Dental Sciences	To Evaluate And Compare The Fracture Resistance Of Simulated Immature Endodontically Treated Teeth With Flared Canals Using Edelweiss Post, EverstickPost And Fiber Post -Ribbond Combination-Invitro Study
9.	Dr. CharanyaChandrasekaran,	SZC0589	SRM Dental College, Ramapuram, Chennai	Magnesium Sulfate Comes To Rescue!!!
10.	Dr.Nazrin.M	SZC0369	Tagore Dental College and Hospital	Evaluation Of Remaining Dentin Thickness Around The Prepared Root Canals And Its Influence On The Temperature Changes Of External Root Surfaces Using Different Obturation Techniques
11.	Dr. GokulNath. M. U	SZC0550	Tamil Nadu Govt. Dental College & Hospital, Chennai.	Comparitive Evaluation Of Post Instrumentation PainUsing Protaper Gold And Waveone Gold In Mandibular Molars - A Randomized Controlled Trial.
12.	Dr. VidyaVenkat	SZC0417	SRM Kattankulathur Dental College	Artifacts In Magnetic Resonance Imaging From Endodontic Procedures
13.	Dr. BhavyaShetty, Dr. G.Harish Kumar	SZC0639	AJ Institute of Dental Sciences	Assessment Of Micro-Organisms Of The Cellphones Used By Post Graduates From The Department Of Conservative And Endodontics
14.	Dr.S.Kathiravan, Dr.Swathi.A.M	SZC0208	Tamil Nadu Govt.dental College & Hospital	Comparative Evaluation Of Concentrated Growth Factor (Cgf) And Platelet Rich Fibrin (Prf) On Healing Of Periapical Lesions Using Cone Beam Computed Tomography (Cbct) - An In Vivo Study"
15.	Dr. Neha Jain	SZC0131	Government Dental College and Research Institute, Bangalore	Evaluation Of Antimicrobial Effectiveness Of Nigela Sativa On Enterococcus Faecalis
16.	Dr. Arthi. K. Harith	SZC0220	Meenakshi Ammal Dental College	Role Of Concentrated Growth Factor And Platelet Rich Fibrin In Vital Pulp Therapy Of Irreversible Pulpitis In Permanent Molars- A Triple Blinded Randomised Clinical Trial
17.	Dr. MythreyeeSriragaVidhya	SZC0011	Kle Society's Institute of Dental Sciences, Bangalore	Comparative Evaluation Of Shear Bond Strength After Acid Etching With 35% Glycolic Acid And 1% Phytic Acid
18.	Dr. IshwaryaGurucharan Dr. Roger DerickIssaac	SZC0657	Srm Dental College, Ramapuram	Nanohydroxyapatite And Nanochitosan – The Armors Of Dentin
19.	Dr.SadiyaMangalath, Dr.Keerthi R Deth	SZC0347	Mes Dental College, Perinthalmanna	Learning Curve Of Indirect Vision And Fine Motor Skills Under Magnification: An Experimental Study
20.	Dr. Benoy Jacob	SZC0112	Saveetha University	Evaluation Of Oxidative Stress Levels In Hish Caries Risk Patients Following PunicaGranatum Peel Extract Oral Rinse-A Clinical Study
21.	Dr.U.Himasindhu, Molars Dr. R.Priyanka.	SZC0116	Narayana Dental College and Hospital	Prevalence Of Mb2 Canals In Maxillary First Of Indian Population ---Moose Analysis.
22.	Dr. Gayathri. P	SZC0227	Govt Dental College Trivandrum	Prevalence Of Dental Erosion Among Patients Attending A Tertiary Dental Care Centre
23.	Dr. SiddharthRai	SZC0365	V.S Dental College And Hospital	Assessment Of Bond Strength Of Universal Bonding Agent,Following Contamination And Decontamination Procedures, Used In Total And Self Etch Technique
24.	Dr. Vinoth Kumar	SZC0015	Sri Ramachandra Dental College	Polymerisation Kinetics And Thermal Behaviour Of Bulk Fill Fiber Reinforced Restorative Composite Resin – A Pilot Study
25.	Dr. Mithun.M. J	SZC0228	Govt Dental College Trivandrum	Non Surgical Management Of Rare Case Of Type II Dens Invaginatus With 2 Apical Opening

NORTH ZONE

Rank	Student Name	College
1.	Dr. Ritu Sharma	Sharda Dental College
2.	Dr. Deepanshi	PDM Dental College
3.	Dr. Ritika	Rohtak Dental College
4.	Dr. Manreet Kaur Parhar Sgrd	Amritsar
5.	Dr. Priyanka Paulose	AIIMS

DR GOPIKRISHNA BOOK RELEASE



Second South Asia Edition of Sturdevant's Art and Science of Operative Dentistry –by**Dr V Gopikrishna.**

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MESSAGES

A MORNING WELL SPENT.

We convinced Dr Mazumdar to spare a little time from his very busy schedule and give us an interview. Here are a few excerpts giving us a little insight to this very approachable, passionate and dynamic President of the Dental Council of India

1. Tell us about your journey. (Emphasis on the beginning of your career and growth)? Why did you choose Conservative Dentistry and Endodontics.

I wanted to pursue Oral surgery – that would have been my first choice. But there were very few seats in that field. I got Pedo in 1979 in Lucknow. Then in 1980 BHU declared Operative Dentistry PG . PG Entrance exam was introduced; I appeared and stood first in that. "That's the most memorable day and turning point of my life".

2. Who is your role model and inspiration?

My father, Late. Dr.Brajendra Kumar Mazumdar.

3. What are your hobbies?

Watching sports and classic movies.

4. What is your fitness mantra ?

No mantra – I don't do Yoga or anything special.

5. Do you have any pets at home?

I had two dogs at home - Chockos (St. Bernard).
Tiger (Golden Retriever)

Recently we lost one of them. They are family to me.

6. What is your favourite food?

Indian Mughlai Cuisine

7. What is the naughtiest thing you've done in college or anything you regret?

Back in 1973-75, I got involved in University politics. I regret that – its not a nice thing to do in college days.

8. Tell us something about your personal life.

My personal life consists of my wife Supriya, daughter Debotina and son Debojyoti, who is incidentally is also endodontist.

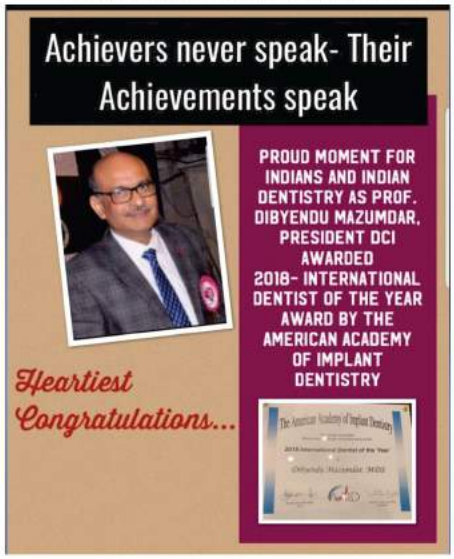
9. What is your message to the youngsters of today?

There is a huge potential in dentistry today. Stay focussed and practice hard ethically.

On the way do not forget to enjoy the finer things in life as they come by.

10. Please tell us a few words how you feel about the newsletter? Things we can incorporate to make it better.

It's a great endeavour and smart presentations. Keep up the good work.



Reported by:
Mamta and Neha

EDITORIAL

Dr.MamtaKaushik
Editor
Pins and Post

IQ or EQ

Which one is more important?

Traditionally, we have been very fascinated with people who have had a high IQ.

Intelligence Quotient (IQ) is used to determine academic abilities and identify individuals with off-the-chart intelligence or mental challenges.

In the recent past, there's been a huge hullabaloo over EQ.

Emotional quotient (EQ), or Emotional Intelligence. This is an individual's ability to identify, evaluate, control, and express emotions.

From claims of people with high EQ making great leaders and team players because of their ability to understand, empathize, and connect with the people around them.

IQ, on the other hand has been moved to the side as an insignificant quality for workplace success.

In this editorial I decided to read more on the EQ - IQ *tamasha* and evaluate the necessity of each in the dental profession.

The IQ is evaluated by certain tests which assess intelligence. They decide an individual's ability to learn, understand and apply information. Logical reasoning, abstract spatial thinking and filtering irrelevant information; these are a few strong words describing IQ. Whereas EQ holds in it kitty words like control and express emotions, perceive and assess others emotions, understand emotions.

So I deduced that at a work place EQ should play a large role in developing leaders, team players, service orientation, and collaboration. And IQ should be involved in solving challenging tasks, research and development.

So when applied to the dental profession –

The Charm and Awe of IQ

Everyone wants the best doctor. Patients expect their doctor to know medical information by heart, to possess diagnostic acumen, and to be well-versed in the latest tests and treatments.Those who have studied in the best medical schools and passed with 'gold medals'. This opinion has persisted for decades. But,do the smartest students, as measured by grades, truly make the best physicians?

By prioritizing academic achievement, the profession has overemphasized general intelligence and underemphasized emotional intelligence. We have and we still consider high test scores are the judgement of knowledge.

For instance, good test takers can score high on examinations but may lack real analytic ability, problem-solving skills, and common sense. Scoring well on these metrics reveals nothing about the clinical ability and skills that are critical to being an excellent physician.

I am not saying that intelligence is not necessary, just pointing towards the fact that diagnosing and knowing the correct interventions will not guarantee that the doctor will be able to lead a multidisciplinary team and effectively help the patients to change their behaviour and lead to improvement in quality of life.

The EQ Hullabaloo

What distinguishes humans from primates is our social ability. EQ also contributes to better results as persuasion and participation of others is governed more by emotions than logic.

Effective doctors need both an adequate IQ and a high EQ.

The challenge todayis that along with solving diagnostic problems, identifying syndromic patients or administering specially designed therapeutic regimen; the doctors have to care for patients with several comorbidities and must lead teams that emphasize educating patients, ensuredrug adherence, diagnose and treat concomitant emotional well being issues, anticipate potential exacerbations, and discuss treatment preferences.

These exercises rely on listening, building trust, empathy, and depicting shared objectives.

"When dealing with people, remember you are not dealing with creatures of logic, but with creatures of emotion." -Dale Carnegie

Enhancing EQ

There are no criteria to recruit medical/dental students having a high EQ.

EQ—like IQ—is also somewhat genetic.

However the good news is that as there are ways to improve general intelligence, the EQ also can be enhanced.

The admissions tests should not be based only on IQ based questions. Some portions can be modified by removing irrelevant science sections and including humanity based questions.

And thereafter the selection into the medical/dental school should be based on interview which has a fixed set of evaluation technique to assess the EQ.

Unfortunately, these options don't seem very practical in the current scenario. So, what can practically be applied is including more training for the students, focused on enhancing EQ.

Students should be taught how to listen to their patients, encourage behavioral changes, and coordinate with team members in clinical settings. Soft Skills and empathy training can be part of the curriculum. We have to openly appreciate and award the students who are able to deliver comprehensive care and not just the top scorers in the subject.

It is time for us to reduce emphasis on IQ. If we want the next generation of caring, effective doctors who can induce patient behaviour change, we must start by recognizing the importance of EQ,

"No one cares how much you know, until they know how much you care."

-Theodore Roosevelt

Letter to Editor

Text: Happiness

Dr. Col. B Pruthi (Chandigarh)
Father of Dr Anya Parthi
Past President IDA Chandigarh Br (3 times)
Editor of IDAJ Chd Br

From a philosopher's point of view happiness constitutes emotional, physical, social and spiritual well being of people and even the nations. It is the statistical tool to compute "happiness quotient". A house with 4 walls and roof without loving and caring members will not make a happy home.

A poet says:

If you wanna be happy in a million ways

Cause no matter how far away you roam!

Oh!there is no place like home for the holidays

For the holidays you can't beat home sweet home

It about living and letting others live

"kabirakara bazaar – mange sab kikher; na koi dost – nakissi se beir"

Withour meaningfulness- happiness is an illusion.

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ACTIVITIES

RECAPITULATION X

The annual CDE program was conducted successfully by the Department of Conservative & Endodontics, Faculty of Dentistry,Meenakshi Academy of Higher Education and Research (MAHER) on the 12th of July 2018.

This is the 10th successive year this programme is being conducted by Team ODS headed by Dr.N.Velmurugan. It was planned to commemorate the occasion by inviting International faculty as guest speakers. We were fortunate to have Dr. Anil Kishen fromUniversity of Toronto, Canada. Dr. Kishen is Professor of Endodontics and Principal Investigator of the Nanoparticle Guided Functional Tissue Engineering Lab at the University of Toronto. He has published over 120 peer-reviewed articles with over 10 invention disclosures to his credit. Dr. Kishen has pioneered novel technologies for endodontic treatments and is a strong advocate for high-quality translational research benefiting patient care. His lecture focused on (a) the fundamentals of dentin matrix and immune modulation and (b) the application of functionalized nanoparticles for dentin engineering for periapical tissue repair.

The other speaker was Dr. Lars Bjørndal from the Department of Odontology, University of Copenhagen, Denmark. His areas of expertise are within the field of deep caries lesion pathology, treatment and quality-shaping factors concerning endodontic treatment. He has authored and co-authored numerous international and national articles and book chapters.His lectures present an updated understanding of carious pathology, including suggested guidelines for deep carious management based on published clinical data.

The program had a overwhelming participation of over 280 students and faculty members from departments of Conservative Dentistry and Endodontics and Pedodontics. The deliberation of the program was well received by the participants who actively interacted with the invited faculty. The board of management of MAHER University, the Vice Chancellor Dr. Neelakantan and Principal, Dr. N. Ambalavanan were thanked &felicitated during the program.

COLLOQUIM CHENNAI

IVTH PG COLLOQUIUM 2018

SRM Dental College, Ramapuram had organised a one day CDE Programme themed "Mining NiTi" representing the "4th PG Colloquium", the annual academic meet of the Conservative and Endodontists Association of Tamil Nadu(CEAT) on 25th April, 2018. The programme witnessed over 150 registrations and comprised of a Webinar by Dr.Nicola M.Grande and 4 guest lectures by Dr M.Kavitha (Professor and Head, Tamil Nadu Government Dental College), Dr NarasimhaBharadwaj (Professor, Saveetha Dental College), Dr KavithaSanjeev (Professor, SRM Dental College) and Dr Nandini Suresh (Reader, MeenakshiAmmal Dental College).

CLINICAL REGISTRY OF VARIATIONS IN ROOT CANAL ANATOMY

The clinical registry for variations in root canal anatomy was launched at the DCI- IACDE Teachers Meet on 24th March 2018 at Hyderabad by the DCI President, Dr. DibeynduMazumbdar. The Clinical Registry offers a window to showcase and archive interesting cases across the geographical spectrum.

In the recent past, there has been a difficulty in reporting and publishing root canal anatomic variations. Single case reports are not easily accepted for publications.There is also no cumulative data for variations found in the Indian population. The Clinical Registry offers a platform to showcase these variations. This will act as database of Indian population; serve as a ready reference for all practicing Endodontists to understand the incidence of variation leading to improved patient care and higher success rates. It will also serve as a reference for authors writing books. Additionally, it may add to the Google Scholar profile of the researcher as an update. The simplicity of the procedure is its USP.

Information can be used to improve patient care and also to evaluate utilization of resources and clinical outcome. It is invaluable in studying many aspects of the population pattern and finding previously unrecognizedassociations.

HOW DOES IT WORK?

Once a case is submitted to the registry as per the stipulated guidelines, quality checks are performed for correctness and completeness of data by our team.


Dr. MAMTA KAUSHIK
Administrator


Dr. ROSHNI
Associate Administrator


Dr. NEHA MEHRA
Analytical and Assessment Team


Dr. VINUTHA MANJUNATH
Analytical and Assessment Team


Dr. KITU SHEORAN
Analytical and Assessment Team

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PANEL DISCUSSION

PANEL DISCUSSION
Glass Ceramics Vs Zirconium

GLASS CERAMICS

Dr. KusumBashetty MDS
Conservative Dentistry and Endodontics
Private Practitioner,
Bengaluru

Use of Glass

In response to the rising demand for highly aesthetic products, Ceramics were developed to satisfy the clinical requirements of dentists as well as the aesthetic expectations of patients. There are numerous all-ceramic systems available in the market, and two of the most popular systems are Zirconia-based and Lithium disilicate-based (Glass ceramic).

Glass-ceramics based on leucite, show exceptional biocompatibility. Apart from their good chemical, physical and mechanical properties, this type of glass-ceramic is well suited for computer aided machining. Due to these highly aesthetic properties, this glass-ceramic is mainly used to fabricate anterior crowns as well as inlays and onlays. In order to extend the indication range of glass-ceramics beyond that of the anterior teeth, a glass- ceramic had to be developed that showed significantly higher strength and fracture toughness compared with the leucite type glass-ceramics. Therefore, a new chemical system, based on a lithium disilicate glass-ceramic was developed to meet this need. This material is suitable for fabricating crowns and frameworks for three-unit bridges using the well-established press technique. These products are subsequently coated with a fluoroapatite glass-ceramic in order to imitate the optical properties of natural teeth.

Three factors that play a role in light behaviour are translucency, metamerism, and opalescence. An area where the zirconia-based and lithium disilicate crowns differ substantially is translucency. High translucency, however, is not always desirable. Although zirconia's relative opacity is advantageous when masking is desired, lithium disilicate has the potential to produce similar results when using medium opacity (MO) and high opacity (HO) formulations of the material.

A closer understanding of the dynamics of Glass ceramic materials with respect to design of the restoration and the intended use is required to enable these restorations to perform productively

Dr. MeeraGopalakrishnan, MDS
Private practitioner, Kochi
Former Professor
Department of Conservative Dentistry and Endodontics
Indira Gandhi Institute of Dental Sciences, Kothamangalam.

Glass Ceramics – The Epitome of Esthetics

Since the advent of Ceramics into Dentistry in the 18thCentuary, this material has been the most esthetic and biocompatible among all the available restoratives at all times. In Dental science, ceramics are referred to as nonmetallic, inorganic structures primarily containing compounds of oxygen with one or more metallic or semi-metallic elements.

The presently used glass ceramic systems are mostly High-leucite (approx. 50%)-containing glass, glass-ceramics (Eg: IPS Empress) or Lithiumdisilicate glass-ceramics (IPS Empress 2 or presently known as IPS E.max® pressable and machinable ceramics)

Glass ceramics made of a glass matrix phase and at least one crystal phase is produced by controlled crystallization of glass. It is available as castable,machinable, pressable and infiltrated forms used in all-ceramic restorations. These dental ceramic systems were strengthened with various forms of mica and the added fluorides gave fluorescence. The core formed by lost wax technique is layered with veneering ceramic. The Chameleon effect in which some part of color is picked up from adjacent teeth is a significant property of these ceramics. flexural strength is in the range of 120–150MPa, may just be adequate for posterior crowns but is not sufficient for the construction of all-ceramic bridges.

The mechanical properties of Lithium Di Silicate based glass ceramic are far superior to that of the leucite glass ceramic, with a flexural strength in the region of 350–450 MPa and fracture toughness approximately three-times that of the leucite glass ceramic. The glass ceramic is claimed to be highly translucent due to the optical compatibility between the glassy matrix and the crystalline phase, which minimizes internal scattering of the light as it passes through the material

ZLS (Zirconia reinforced lithium silicate)

The evolution of dental materials has attempted to suppress the remaining disadvantages of this ceramic system by means of the development of glass-ceramics reinforced with polycrystalline ceramics.

These new glass-ceramics contain lithium silicate as the main crystalline phase in a vitreous matrix reinforced with zirconium dioxide crystals (~10%). When this material goes through the crystallization process, the nucleated lithium silicate crystals achieve a mean size (0.5 to 1 µm) that is up to 6 times smaller than that observed for lithium disilicate crystals present in lithium disilicate glass-ceramics and achieves a flexural strength up to 800MPa.

Advantage-These novel zirconia-reinforced lithium silicate glass-ceramics have good mechanical properties ,excellent esthetic quality, superior polishability ,their timesaving ability for the production of dental restorations, since they are faster to be milled in CAD-CAM machines than lithium disilicate glass ceramics

References

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ZIRCONIUM

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Zirconia (baddeleyite) is a crystalline dioxide of zirconium (ZrO2) also known as "Ceramic steel." The name Zirconium was derived from Arabic "Zargun" (golden in colour), which in turn comes from the two Persian words "Zar" (Gold) and "Gun" (Colour). It is organized in 3 crystallographic forms: monoclinic (M), tetragonal (T), and cubic (C). Yttrium cation-doped tetragonal zirconia polycrystals (3Y-TZP), magnesium cation-doped partially-stabilized zirconia (Mg-PSZ) and zirconia-toughened alumina (ZTA) are most commonly used forms in dentistry. Its advantages include increased compressive strength (2000 Mpa), fracture toughness (1-8 Mpa), high fracture resistance, low thermal conductivity (1.7 W/m.K), biocompatible and corrosion resistant.

Its applications include for making crowns and bridges, inlays and onlays, endodontic post and cores, fillers in composite, radio-opacifier in Biodentine, pedodontic crowns, implants and implant abutments and also as orthodontic brackets. Glass-based crowns are more translucent and have better optical property but they are mechanically weaker. Thus, ZrO2 crowns exhibit superior strength to withstand posterior occlusal forces and also provide excellent gingival response. Due to its resistance to aggressive chemical agents, chemical bonding of ZrO2 is difficult when compared to glass ceramics. Various surface treatment modalities have been proposed such as hot acid etching, air abrasion with diamond or alumina, selective infiltration etching, fusion sputtering, application of laser, and plasma oxyfluoride plasma spray. The simplest and effective method in bonding is to use phosphate-based luting cement on freshly air-abraded ZrO2. Its limitations include wearing of opposing dentition (Monolithic ZrO2), opacity, difficulty in adjusting occlusion.

Zirconia has a well-placed position to satisfy the aesthetic needs in dentistry. In future, long-term clinical studies are needed to evaluate the survival of ZrO2 crown and veneers. Rapid development in processing technology and materials in future may enhance the reliability of ZrO2 as a multipurpose material.

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USE OF ZIRCONIA

Concerns regarding metal-ceramic restorations biocompatibility limitations and optical qualities provoked the shift to all-ceramic restorations placement. While achieving marginal accuracies these provide superior gingival response.

Glass ceramic crowns, even with a densely sintered alumina core, showed brittle fracture in the posterior region. Patient selection may be critical and the technique remains sensitive.

Studies reported that zirconia ceramic flexure strength and fracture toughness are twice that of alumina ceramics. Zirconia offers sufficiently high strength of 900-1200 MPa with a fracture toughness of 9-10 MPa/m2 and the modification to a monoclinic phase, exhibits 4% volume expansion. To propagate, the crack must overcome the compressive stresses generated at the crack tip. They thus become a material of choice in posterior teeth.

Solid zirconia is effective in masking highly discolored preparation whereas, Layered zirconia is more translucent and opalescent, leading to good aesthetics.

Monolithic zirconia has become popular because of their high flexural strength, natural tooth color, less wear on the antagonists, and occlusal reduction of as little as 0.5 mm.

Cerconht - ZLS (zirconia-reinforced lithium silicate)- The inclusion of 10% ZrO2 with 4-8 times smaller crystallites and ultra-fine microstructure results in high average flexural strength, translucency, opalescence, fluorescence and chameleon effect, with high edge stability and excellent polishability.

Indications- Multi-unit bridges with no more than 2 pontics and no more than 6 units.

CONCERNS of Zirconia

The toughness of the material has raised some concerns about friction against the tooth root and wearing of opposing teeth. Frequent checks, however, help to reduce any possible risks.

CONCLUSION

Zirconia restorative material is well-placed to satisfy esthetic and functional requirements. Further studies should be conducted to resolve the complications that may reduce restorations longevity.

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See, recognize, realize

Visual shade analysis and its realization into a ceramic crown

Bastian Wagner, Munich/Germany

The wide variety of ceramic materials available today, allows the dental technician to reproduce the natural, dynamic light qualities present in natural dentition. Recognizing and realizing these visual characteristics, however, is a challenge which can only be mastered with a great deal of patience and knowledge.

Each individual patient case requires the full attention of all involved – patient, dentist, dental technician – to the finer details in this complex piece of work. It is the dental technician's job to produce a durable prosthetic restoration, which with its functional, biological and esthetic characteristics, is adapted to suit the individual requirements and specifications of the patient.

The advancement in technologies and materials within the last few years has dramatically changed the work of dental technicians. We are, however, still often faced with a huge challenge: to recreate nature's perfection and provide oral harmony. In particular, consistency and discipline are needed to fabricate anterior teeth. In order to produce an esthetic restoration, the dental technician must recognize the correlation between the tooth shape, surface structure and function and the effects of phonetics and colour. These factors form the foundation.

With a passion for the work involved and the necessary sensitivity and specialized knowledge, a lifelike appearance can be successfully imitated. At times this can be a laborious task and require a great deal of patience and sometimes it takes quite a few attempts to achieve the desired results. In order to realize a harmonious and esthetic smile in the end result, good communication between the patient and dental technician is essential. The patient's expectations must be clearly understood by all parties and their wishes transposed as a team. This article concentrates on shade selection and shade reproduction using the veneering ceramic IPS e.max® Ceram. The fabrication of an anterior tooth is shown on the basis of a patient case.

The visual properties of natural teeth

Three shade characteristics must be taken into account when determining the shade: the colour (Hue), the brightness (Value) and the colour intensity (Chroma). The colour itself is the most obvious part of a shade. The brightness is a definition of how light or dark a colour is. The colour intensity describes the purity of a colour. The highest attention should be paid to the brightness. If the value of a restoration is not ideally matched to the rest of the dentition, then even the slightest deviation can be detected within normal speaking distance by the person standing opposite. [2].

In general, it is very important to understand the three visual properties and use the chosen ceramic system to adapt to each situation individually.

The principles of shade selection

For shade selection a shade guide is used, which presents the following colour tones:

A = orange B = yellow/orange

C = grey/orange D = brown/orange

The shade should be selected at the start of the restorative treatment so that it is not affected by a dehydrated natural tooth structure. In order to select the hue, value and chroma, individually fabricated shade samples in the relevant ceramic assortment can be useful (Fig. 1). The ceramic materials are designed in such a way that the complex shades and characteristics of natural teeth can be better distinguished. The colour of the gingiva or other surrounding influences can affect the shade selection. For example, the background colour during shade selection can change the perception of the colour intensity and the colour tone. In order to avoid any misinterpretation it is advisable to cover the dark oral cavity with a grey card. Another method is to use a gingiva coloured holder (Gumy, Shofu, Germany) for each individual shade sample in order to provide simultaneous and successive contrast effects. The samples are surrounded by a colour which imitates their natural environment. The Gumy gingival mask is available in

Fig. 1: Individual shade samples for the ceramic range IPS e.max Ceram

four different colours. When a shade is selected, the sample is then placed into the Gumy so that it can be checked with the gingiva. For basic shade determination it is advisable to take a photo of three different shade samples on one photo. This provides a comparison. One sample should represent the brightness of the tooth to be prepared; the second should have a lower value and the third a slightly higher value. Furthermore, during the preoperative shade determination, important information on the selection of a suitable material should also be considered.

Photographic documentation of the shade selection

In an addition to the shade selection, photo documentation is essential. A photographic shade comparison of the natural tooth colour and the corresponding shade tabs provides further details. In general, digital photography is a unique communication tool for the entire treatment team and it should be firmly established within the treatment process [1]. When taking photographs, the following procedure must be observed. The shade sample and the natural tooth must both be parallel to the sensor level on the camera and receive the same amount of light exposure as the camera flash. The shade information in the photograph and the anatomical and morphological characterization can then be analyzed on the screen. In order to avoid falsified information on the screen, it should be calibrated perfectly. If a grey card is used whilst

Fig. 2: Reconstruction of tooth 11. Shade determination at the beginning

Fig. 3: Shade determination with gingiva coloured holder for the shade samples

photographing, differing camera values can be corrected using white balance with the image-editing program (e.g. Adobe Photoshop Lightroom). Information is not lost or distorted. When the photos are converted in the image-editing program into black and white pictures, the surface texture and difference in brightness is clearly visible. To better identify internal characterization, the contrast control can be adjusted to "maximum" and the highlight function to "minimum". This will show all details clearly. The collected information is converted into a shade diagram, which is synchronized with the ceramic material to be used, and a layering concept is created. The following case shows one possible procedure for realizing the determined tooth shade.

Patient case

This patient case with the reconstruction of tooth 11 shows clearly how the determined shade can be reproduced. The preoperative shade analysis shows that the adjacent tooth 21 has a very high degree of brightness in the cervical area and in the body (Figs 2 and 3). The natural tooth exhibited opalescent/transparent areas on the ridges and in the incisal region. The mamelon structure had a high value and a slightly yellowish chroma (Figs 4 and 5). The basic shade selected was BL 3. Various methods can be used to increase the brightness of the IPS e.max Ceram ceramic. In this case, due to the high degree of value, the brightness of the dentin B1 ceramic material was

Fig. 4: Shade determination of the internal structures

Fig. 5: Selection of the individual opal materials using self-fabricated shade samples

increased with the highly fluorescent MM light ceramic material from the IPS e.max range. The framework material used was an MO1 press ingot (Fig. 6). The structure was lightly covered in a wash bake with MM light and then fired (Fig. 7). During the first dentin bake, the framework was evenly covered with dentin B1 and MM

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light. The area towards the ridge which had a high degree of value was imitated using Deep Dentin B1 and MM light to a ratio of 4:1 (Fig. 8). The tooth shape was then completed using Dentin BL 3 (Fig. 9). Cutting back the incisal area and the edges made space for the Effect materials. Before the actual build-up, in order to create the mamelon structure, the material MM light was mixed with Essence Lemon and White until the ideal mixing ratio had been found and then a firing sample was fabricated. The exactly mixed ratio was then applied to the incisal plate (Fig. 10) and the edges were built up with OE 1. The incisal plateau was completed by alternately layering OE 2 and OE 3 (Fig. 11). Finally, the halo-effect was imitated from the incisal edge to the proximal area and the crown was then fired (Fig. 12). The second bake included slight shape corrections. To achieve a natural appearance the ceramic surface was given structure and then fixed with a glaze bake (Figs 13 to 15).

Fig. 6: The crown framework IPS e.max Press (MO1 ingot) before the wash bake

Fig. 7: Wash bake and characterisation with MM light before firing

Fig. 8: The crown framework was built up with Dentin B1 and MM light and Deep Dentin and MM light (ratio 4:1) was built-up towards the edges

Fig. 9: Completion of the internal structure with Dentin BL 3

Fig. 10: Application of the mamelon structure with a mixture of MM light and Essence materials

Fig. 11: Completion of the incisal plate with Opal materials

Fig. 12: Results after the first bake

Fig. 13: Checking the surface structure

Fig. 14: The finished piece of FW work after the glaze firing

Fig. 15: The finished restoration of both incisors

Conclusion

The diverse spectrum of a modern ceramic range gives the technician the ability to reproduce a variety of dynamic light features. Recognizing and realizing the tooth shade is and always will be a huge challenge. This is why the intensive study of chromatics and of your own ceramic assortment is essential. Even though the material prerequisites for reproducing lifelike restorations are available, each dental technician is responsible for developing their own skills and capabilities. The challenge of recreating a shade will always be unique for each different patient case.

In autumn 2015, Ivoclar Vivadent introduced the IPS e.max Ceram Power Dentin and Incisal layering ceramics which feature a high brightness value. These materials are ideal for use on less reflective translucent substructures. In cases such as the one presented in this article, in which a high degree of brightness is required, the Power materials can also be used on opaque frameworks to realize the desired results with little effort.

Literature available from the editors on request

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SCIENTIFIC UPDATE

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ASK THE EXPERT

1. **What should be the ideal gauge or size of the needle selected for thermoplastic GP obturation?**

   It depends on the root canal width and viscosity of GP pellets. Needles come in 3 different sizes (20, 23 and 25 gauge).

   23 gauge is what I prefer for regular cases, while the 20 and 25 gauges are used for wide and narrow canals, respectively. GP comes in 3 different viscosities (hard, regular and soft). Soft GP is generally used with 25 gauge needle, regular with 23 gauge and hard with 20 gauge needles.

2. **What is the length of time required to introduce thermoplasticizedguttapercha in prepared root canals?**

   a. It depends on many factors like the technique employed, viscosity of GP, needle gauge, canal anatomy and operator skill and experience.

   b. Injectable guttapercha is commonly deposited in 3-5 mm increments. Hence, if the squirting technique is used, a routine thermoplastic obturation could average about 5 minutes per canal.

3. **Till what apical extent of the root canal should the needle be introduced during obturation? Is it different for different teeth and different roots of the same teeth?**

   a. Preferably, the needle should extend up to approximately 5 mm short of the working length, but most importantly without binding in the canal lumen.

   b. This rule remains constant irrespective of the tooth or roots, with minor modifications as in the case of curved canals.

4. **As the chances are high of GP getting extruded through apical foramen. How we can gauge that our apical preparation is exacting?**

   a. Apical preparation or size is not correlated with GP extrusion into the periapex.

5. **What are the chances of over extrusion of GP and what precautions need to be taken to prevent it?**

   a. The key to prevent extrusion is a well-defined apical stop. In addition, the needle should not bind with the root canal walls while extruding GP.

6. **Are there limitation of thermoplasticizedobturation technique based on the canal shape or anatomy?**

   a. Not specifically for canal shape; however, a loss of apical stop and an open apex are some strict contraindications for squirting of guttapercha.

7. **Which obturation technique is preferred for a C4 (Fan's Anatomical classification) canal configuration. Sectional obturation followed by backfill with thermoplastic GP or backfill with lateral condensation?**

   a. Squirting technique is the preferred method in this situation.

8. **How can we avoid occurrence of voids while using injectable technique for thermoplasticizedguttapercha in C-shaped canals?**

   a. Blot the root canal and lubricate with a thin coat of sealer, to smoothen the flow of GP.

   b. Always place the needle tip in contact with the down-packed GP, and maintain contact for three seconds, to allow for better fusion between layers.

   c. Compacting hand pluggers should be placed with firm apical pressure to provide adequate compaction while additionally offsetting any thermal shrinkage.

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ASSOCIATION UPDATE

Student Exchange Program

ARMY COLLEGE OF DENTAL SCIENCES

K M Shah Dental College, Vadodara

The Oxford Dental College

ITS DENTAL COLLEGE

KING GEORGE MEDICAL UNIVERSITY

SAVEETHA DENTAL COLLEGE

PANINEEYA INSTITUTE OF DENTAL SCIENCES

TERNA DENTAL COLLEGE

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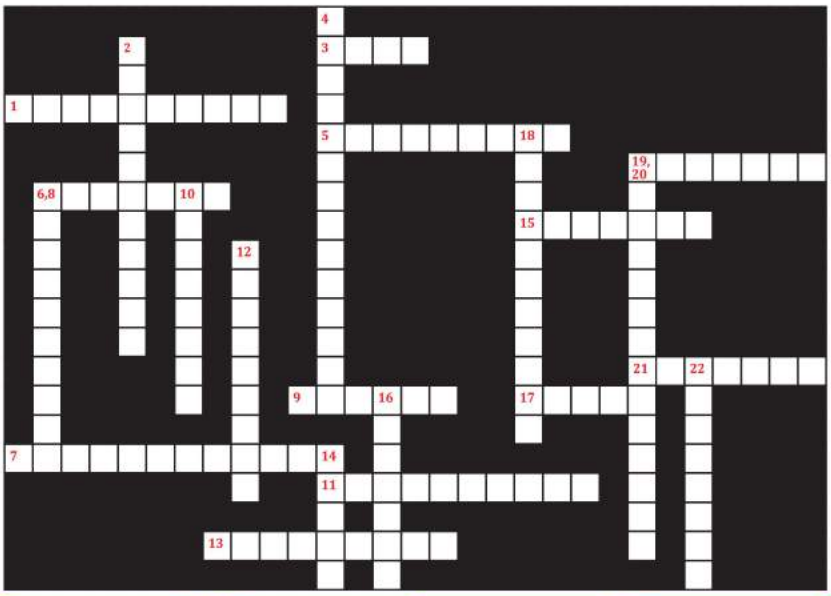
CROSSWORD
IACDE - 9



ACROSS	DOWN
1. Slow Hand Piece	2 Diagnosis of fractured tooth
3. Pigmented Skin/ Oral Lesions	4 Now you see me well
5. Supernumerary tooth	6. Rotary file with blue surface colour
7. Process of insertion of tooth back into the socket	8 Storage media for avulsed tooth
9. Root canal instruments with less flutes and triangular cross-section	10 Complete displacement of tooth from socket
11 Diagnosis of caries detection	12 Secret to radicular rotary safety
13 Pressure syringe for intraligamentry injection	14 Hard Tissue laser commonly used
15 Condition in which immune system reacts abnormally	16 Intracanal medicament with combination of Calcium Hydroxide and Iodoform
17 Hand file with teardrop crossection	18 Concept of Hybrid Layer proposed by
19 Polymerization shrinkage depends on this	20 Motion while doing biomechanical preparation
21 Motion of H- file	22 Technique of root canal preparation

PAPER ART...
THE IDOL OF MAA DURGA...

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Govt.Of Tripura.

NAVARATRISPECIAL
"Sabuddana Khichdi"

Ingredients:

1 and ½ Cup Sabudana (Sago)
½ Cup Boiled potato
½ Cup roasted Peanuts Powder
4-5 Green Chillies
2 Tbsp Ghee
½ Tsp Cumin Seeds
Salt and Sugar to taste
Finely Chopped Cilantro/ Coriander
1 Lemon

Method:

1. Soak Sabudana in water overnight. Drain water and keep aside for 4-5 hours.
2. In a wok, heat 2 tbsp Ghee. Temper with cumin seeds and finely chopped chillies. Add boiled potato slices and stir.
3. Once potato slices are done, add sabudana and sauté very well, cover the lid and let it cook.
4. Once sabudana is cooked properly add peanut powder, salt and sugar to taste.
5. Add lemon juice and stir.
6. Garnish with cilantro/ coriander.

Serve hot with Yoghurt and Sweet Lemon Pickle

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A.B.Shetty Memorial Instiitute of Dental Sciences

JUMBLE WORDS - 8

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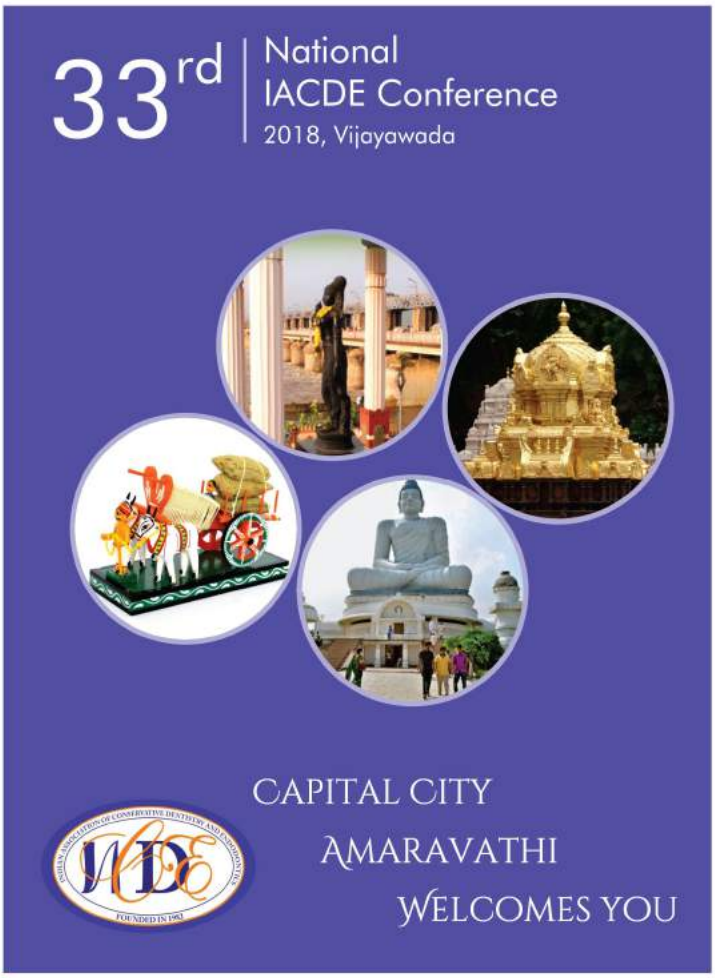
CALENDAR OF EVENTS



CALENDER OF EVENTS- 2018

Sl. No.	Date	Events	National / International	Venue
1.	1-2Sept 2018	1st IACDE West Zonal National Conference	National	Jaipur- India
2.	20- 22 Sept 2018	1st North Zonal Conference	National	New Delhi- India
3.	4-7 Oct 2018	IFEA 11th World Endodontic Congress	International	Seoul- Korea
4.	4-6 Oct 2018	26th National Congress, Italian Academy of Endodontics	International	Florence-Italy
5.	14-16nov 2018	33rd IACDE National Conference	National	Vijayawada, India
6.	18- 19th Jan 2019	3rd National Conference of Academy of Cosmetic Dentistry	National	Hyderabad- India
7.	5th – 7th Feb 2019	AEEDC Dubai Conference	International	Dubai- UAE
8.	8th -10th Feb 2019	Endovista	National	Mumbai- India
9.	8-10th March 2019	20th IACDE PG Convention	National	Chandigarh- India

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SIGNING OFF

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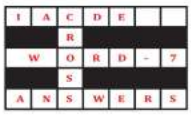
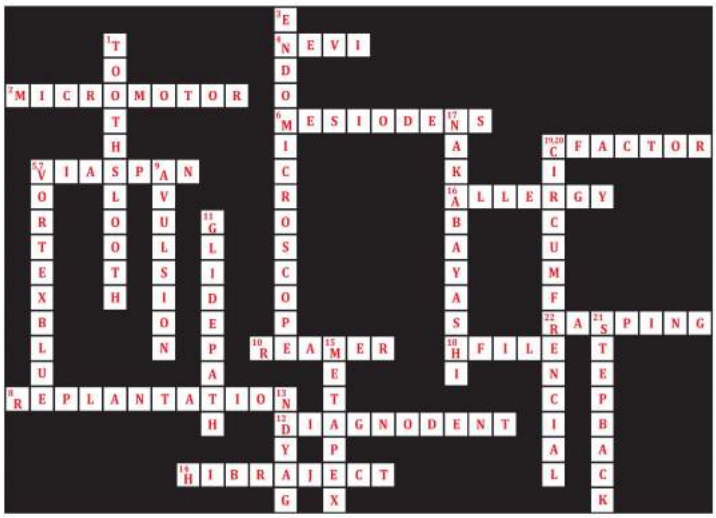
CROSSWORD IACDE 9 ANSWERS





JUMBLE WORDS - 8

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1 F	L	E	X	O	F	I	L	E

Restoration of perfusion to a body part or organ that has suffered ischemia

F	E	R	R	U	L	E