ISSN 2456-2041

INDIAN ASSOCIATION OF CONSERVATIVE DENTISTRY AND ENDODONTICS

IACDE

FOUNDED IN 1982

Wishes a Happy New Year

to all its **Members...**

ISSN 2456-2041

PINS & POSTS

AN OFFICIAL NEWS LETTER OF IACDE

KOLKATA CONFERENCE SPECIAL EDITION

VOLUME - I

ISSUE - III

September - December - 2016 (16 Pages)

ACTIVITIES - Page 4 | ACADEMICS - Pages 5 to 7 | REST-ORE-TAINTMENT - Page 14 | CALENDAR - Page 15

IACDE OFFICE BEARERS

President:
Dr. Vimal K Sikri

Hon.General Secretary:
Dr. Mohan.B

Immediate Past President:
Dr. T. Murali Mohan

Editor:
Dr. Aditya Mitra

President Elect:
Dr. Kidiyoor.K.H

Vice President:
Dr. Sanjeev Tyagi
Dr. Vibha Hegde
Dr. Chandrasekhar.V

Joint Secretary:
Dr. Mohan Kumar.R.S

Treasurer:
Dr. Rajeswari Gopal.K

Associate Editor:
Dr. Abhishek Laha
Dr. Chi Koy Wang

Newsletter Editor:
Dr. Mamta Kaushik

Newsletter Associate Editor:
Dr. Neha Mehra

Executive Committee Members:

Dr. Ratnakar P, Dr. Balaram Naik, Dr. Kavitha.M, Dr. Mahima Tilakchand, Dr. Priti D Desai, Dr. Prahlad A Saraf, Dr. Vineeta Nikhil, Dr. Shashirekha.G, Dr. Rana K Varghese, Dr. Venkatesh.A, Dr. Jagat Bhushan, Dr. Poorni.S, Dr. Chi Koy Wang, Dr. Rahul Maria, Dr. Rashmi Nair

Past President Members:

Dr. Jaidev Singh Dhillon, Dr. Srinivasan M R, Dr. Karunakar P

FROM THE EDITORS DESK

"The thoughtless person playing with penicillin treatment is morally responsible for the death of the man who succumbs to infection with the penicillin-resistant organism."

Alexander Flemming

This prediction of antibiotic resistance was made by the discoverer of the first antibiotic more than 70 years ago.

The beginning of the antibiotic era brought about wonderful changes in the life quality and life expectancy of humans. Diseases like tuberculosis, pneumonia, syphilis, gangrene, and diphtheria which were considered deadly before the introduction and development of antibiotics became treatable. This helped to usher in an era of incredible advances in medicine spanning the 20th century.

However overuse of antibiotics teamed with bacterial evolution have lead us to a stage where bacterial strains have developed serious antibiotic resistance, creating mutants which are resistant to the highest grade of antibiotics.

This editorial focuses on the overuse of antibiotics that lead us here. In recent years, there has been an awareness to the harm overuse of antibiotics can cause and many surveys and publications that highlight the extent of this practice. Across the world, bacterial infections that were easily curable with antibiotic prescriptions are getting harder to treat because of antibiotic resistance. It is particularly significant in India. I used to consult with a doctor who prescribed Amoxycillin 250 twice a day to every patient who came to the clinic! This is not an unusual example; it is a reflection of how; over the years; antibiotic prescription has become common practice in India.

The scenario in the whole country cannot be controlled by us but we as Dentists and Endodontists can do our bit in correcting this over use of antibiotics in dental practices; be it our own or with the doctors we consult..

I believe that antibiotic resistance can be made to slow down if not completely eliminated. I would like to share with you a few strategies that I try and follow to do my bit to help.

Avoid antibiotic usage if possible. We must reason with all around us that antibiotic is not an analgesic and we should not use antibiotics when not needed.

If antibiotics are needed, try and ensure the patient takes the complete prescribed dose by informing them of the harms of an incomplete regimen of antibiotics that can lead the bacteria to survive and become more resistant to the antibiotic being prescribed.

I also refrain from giving mild doses of antibiotics over long time periods. High dose prescriptions are preferable as any bacteria that survive a mild dose are more likely to become resistant

For those who are reading this editorial, I trust that you are already avoiding the use of antibiotics for complains of pain and overuse of antibiotics for pulpal disease without justifying it. I also hope that you shall help create an awareness and consciousness in the community on reasonable use of antibiotics. Let's start by using analgesics for pain and watch it work.

Dr Mamta Kaushik
Editor

PRESIDENT'S MESSAGE

Dear Members,

"Season's Greetings"

An Eventful year ahead.....

Visionaries are not born, but futuristic visions are. It was a proud moment indeed for me to take over as the President of this esteemed association. It is a fact that our association IACDE is one of the largest and most active in India. Our association has popular and powerful academicians as well as clinicians who hold prime posts in the field of dentistry. It is a proud moment for all to be associated with IACDE. It is imperative that we maintain the momentum we have gained as we confront the issues of the coming year and beyond.

Our association born in the year 1982 has now grown beyond imagination with the selfless contribution of many of the members. At this juncture, I would like to thank each and everyone for bringing the association up to this level. The two great stars we have in our association are our present president of Dental Council of India Dr. Dibyendu Mazumdar and the past president Dr. Anil Kohli. I would like to personally thank them from the bottom of my heart for their contribution towards the Dental Profession and Conservative Dentistry in particular. All our past Presidents and Secretaries need a special mention. The New Head Office Team which took over in Amritsar in 2015, under the Presidentship of Dr. Murali Mohan has taken up list of activities and has given a new dimension to our Association. A special mention to our Past Editor Dr.Gopi Krishna who has taken our journal to the next level. I express my best wishes to the New Editor Dr.Aditya Mitra and his team to continue good work and to take our journal to greater heights.

Now in the year in front of us, our entire Head office team along with me would definitely like to bring out some healthy and necessary improvements to our association which will benefit the future generation. The entire head office team is now working with a VISION FOR THE FUTURE. On behalf of this team, I take this opportunity to request the support of all the members of Indian Association of Conservative Dentistry and Endodontics and the members of Indian Endodontic Society to ensure that we all sail in the same boat towards future. You will be updated constantly with the actions of the head office. A few of the activities would include the formation of state bodies to felicitate Zonal Convention formation of IACDE Speaker bank, Student exchange program, celebration of CONS ENDO day and week. In the International front we are eagerly waiting for the Inauguration of Cons Asia, in Seoul Korea later this year.

Once again thank you all for giving me the wonderful opportunity to be with you.....

JAI HIND
Yours Truly

Dr.Vimal k Sikri

ISSN 2456-2041

PINS & POSTS

IN THE SPOT LIGHT

POST GRADUATE STUDENT SCIENTIFIC AWARDS

Kolkata National Conference

TABLE CLINIC

1. Mohammad Sharif- Army College of Dental Sciences, Secunderabad

VIDEO PAPER

1. Sakshi Jain- R Ahmed Dental College, Kolkata
2. Sharmika Joshi and Nikita Arora- YMT Dental College, Mumbai
3. Sarita Gill- AIIMS, New Delhi

POSTER

1. Ayesha Habib
2. Manikandan MK Nathan - Thai Moogambikai Dental College and Hospital, Chennai
3. Dilji Johny - Thai Moogambikai Dental College and Hospital, Chennai
4. Ankita Hirwani & Naina Agarwal – New Horizon Dental and Research Institute, Sakri, Bilaspur

PAPER

1. Soutab Roy and Satyasachi Chatterjee- R Ahmed Dental College, Kolkata
2. M Nagarjuna- Panineeya Institute of Dental Sciences and Research Centre, Hyderabad
3. Khusboo Kumari- Buddha Institute of Dental Science and Hospital, Patna
4. Aarti Deepak Dhume- Goa Dental College, Goa
5. Girija K- TNGDC, Chennai
6. Rutika Vijay Kumar Bhangde- YCMM & RDFS Dental College, Ahmednagar, Maharashtra
7. Pranav Thakkar- YMT Dental College, Mumbai

CASE REPORT OF THE MONTH

S.No.	NAME	DESIGNATION	INSTITUTE
1.	Aparna Gupta	Ist year Post Graduate	R. Ahmed Dental College and Hospital, Kolkata
2.	Dr Umesh	3rd year Post Graduate	Tamil Nadu Government Dental College
3.	Dr.Shravan Kumar	Post Graduate	Panineeya Institute Of Dental Sciences & Research Center
4.	Dr.Shobana C.S	Ex- Post Graduate Student	Tamil Nadu Government Dental College
5.	Dr.Sheik Izaz	Post Graduate	Sibar Dental College and Hospital, Guntur
6.	Dr.Smita Reddy	Professor	Sri Sai College of Dental Surgery, Vikarabad
7.	Dr.Renita Soares	Post Graduate	Goa, Government Dental College
8.	Dr.Aditi Jain	Senior Lecturer	Maiti College of Dentistry and Research, Institute, Anjora, Chattisgargh
9.	Dr.Vijaivikkasini	Post Graduate	SRM Kattankulathur Dental College and Hospital, Chennai
10.	Dr. C.S Karunanan	Private Practitioner	North Gopalapuram, Chennai

FAMDENT AWARDS 2016

Dr Sanjay Miglani was awarded "The Best Endodontist of the Year"

Dr Mohan won "The Aesthetic Practice of the year". This is the third consecutive year he wins this award

Dr Gopikrishna won the Special Jury Award for "Academician of the Year"

Dr Prahlad Saraf, Reader, PMNM Dental College and Hospital, Bagalkot

Attained Post Graduate Diploma in Medical Law and Ethics (PGDMLE) (National Law School University of India (Nlsiu).) in Aug 2016.

Dr Pradeep Jain, Professor and HOD, PG and PhD guide from Sri Aurobindo College of Dentistry, Indore, Madhya Prdaesh, took over as the President IDA, MP state in a recently held state conference at JABALPUR.

Dr Pradeep Jain an academician has been an active member of IACDE since 20years.

He had also been appointed as an EC member earlier.

"The IACDE Award That Changed My Life"

Dr. Kirtika Dhandhania was awarded the Young Achiever Award 2014 by IACDE, at Jaipur Conference for securing 3rd highest marks in the subject in undergraduate examination. She completed her undergraduation from SDM College of Dental Sciences in October 2014.

The award motivated her towards selecting Conservative Dentistry and Endodontics and she started preparing for PG Entrance Examinations. Dr Kirtika successfully cleared the AIPGDEE 2015, and secured an AIR 57.

Currently she is pursuing MDS in Conservative Dentistry and Endodontics at GDC&H, Ahmedabad under guidance of Dr.GirishParmar since May 2015.

The message from Dr KirtikaDhandhania to the IACDE Team:

"Thank you is a very small word indeed, but my sincere thanks to IACDE, for that one token of appreciation that gave direction to a clueless student. I had no idea what speciality to pursue, or rather in which speciality I would be able to do well; the award from IACDE took the decision for me."

GUIDENT AWARD

Dr Sanjay Miglani was awarded the Most Proactive Academician (Endodontics) at the Guident National Dental Academic Excellence Awards 2016 at Navi Mumbai

ISSN 2456-2041

MESSAGES

Continuing dental education and organised dentistry; symbiotic or separate pursuits?

Dear friends,

Greetings from Singapore. Yours truly has had the privilege to lecture at two scientific conferences of your Indian Association of Conservative Dentistry and Endodontics in 2013 (Hyderabad) and 2016 (Kolkata). From these involvement, I have gained the utmost respect for the intellectual dynamism and organisational reach of IACDE. The participants of scientific conferences all benefit from the continuing education events held as well as the networking among like-minded colleagues.

This has led me to reflect on the twin pursuits of continuing dental education and organised dentistry. Are they a natural symbiotic fit or can one be done without the other?

Our dental profession is a highly technique oriented profession. The science behind our clinical practice is evolving and there are frequent paradigm shifts impacting the manner that dental therapies are rendered. Hence the conscientious clinician has to educate himself/ herself through frequent continuing dental education events. Indeed, the governing authorities of dentistry of many countries have mandated that practising dentists satisfy periodic certification to confirm their updated status before they are permitted to continue practising dentistry.

Dental societies and associations small or large, can rightly be described as organised dentistry. It arises from the recognition that our dental profession and our dental patients are better served when we come together as a unit to be better and efficient providers. The prime benefit from organisation can be realised through the avenues of enhanced peer relationships, advocacy, deeper service to the community, career support of member dentists as well as the provision of quality continuing dental education. It is pertinent that organised dental groups with their sizeable membership and financial strength should attract the best of dental educators imparting their lessons in optimal facilities and structured program.

As dentists, we do have a choice to join a dental organisation or any at all. However, we dentists need to realise that organised dentistry in creating a network imparts strength to our profession. One may not choose to be in the frontline of organised dentistry activities but one's support empowers those colleagues who are championing our common cause. While politics may feature prominently in organised

dentistry, other features like excellent continuing dental education are important endeavours that arise from we coming together as a group. Our dental profession has rightly earned an honourable respect in our community but we need to continue to protect that.

What better way to improve our professional expertise through continuing dental education and preserve the status of our dental profession then to support organised dentistry! These two pursuits do look like they are intrinsically linked and do form a symbiotic fit.

With best regards,

Yours sincerely,
T C Phua

Dr TC Phua is primarily a dental clinician in private group practice, TP Dental Surgeons. It is the largest dental group practice in a single location in Singapore. His involvement with organised dentistry has been through the College of General Dental Practitioners, Singapore (Vice President) and the Asian Academy of Aesthetic Dentistry (Past President).

CONS ASIA INITIATIVE

The Korean Academy of Conservative Dentistry had initiated the idea of forming a Forum for the Asian and Oceanic countries in the branch of Conservative Dentistry. The KACD President Dr. Byeong Hoon along with his able team reached all the countries and successfully organized the first preparatory meet in Seoul on the 22nd off November 2016. The meeting was a successful one with the participation of 8 countries. India supported the initiative from the start and IACDE representatives did participate in the meeting with the presentation of the present status of IACDE. The inauguration and the formulation of By laws is planned in the Autumn. The first Cons Asia will be organized by KACD in 2018 at Seoul and this decision was unanimously accepted in the meeting. IACDE has extended its fullest support and the head office request all its esteemed members to actively support this initiative. Also we request our members to be present for the first conference in 2018. Its very important for our growth and the growth of our association on the international front. WELCOME TO SEOUL IN 2018

ISSN 2456-2041

PINS & POSTS

ACTIVITIES - ACHIEVEMENTS - AWARDS

ODACE - CDE Programme at Bhubaneshwar

One day program was conducted at Institute of Dental Sciences, Siksha "O" Anusandhan University, Bhubaneswar on 24th October 2016 in collaboration with IACDE, Ivoclar Vivadent and ODACE.

The guest lectures were delivered by eminent speaker Prof (Dr.) Jayashree Hegde from Bengaluru on "Post Endodontic Restorations" and by Prof (Dr.) Shashirekha. G of IDS on Certion-N-Product launch. The program was well attended with over 150 delegates and students.

14th Annual Conference and Family Meet of (CAESOK) Conservative And Endodontic Society of Kerala.

The 14th Annual Conference and family meet of CAESOK was held at Bolgatty Hotels and Resorts, Cochin on 10th and 11th September 2016. Dr George Eipe, one of the senior most endodontist of Kerala inaugurated the meet and was felicitated at the meet for overall contribution to Conservative Dentistry and Endodontics in the state. The meet saw an active participation of nearly 70 Endodontists with their families. President of the society Dr Prasanth Dhanapal, addressed the gathering and Dr Rajesh P gave the secretaries report. Dr Romel Joseph was the organizing Chairman and Dr Sunil Eraly was the Organizing secretary for the family meet.

GDC Goa

The department of Conservative Dentistry and Endodontics of Goa Dental College and Hospital, Bambolim- Goa conducted a Continuing Dental Education program on 10th December, 2016 at Goa Dental College.

The topic of discourse was Alkasite restoratives – an update, featuring a novel restorative material called Certion- N from Ivoclar Vivadent. The talk was delivered by Dr. Mayuri Rane, Lecturer in the Department of Conservative Dentistry. The program was attended by undergraduate students, post graduate students and Staff of Goa Dental College.

An introductory lecture was given by Ivoclar India representative, followed by a detailed elaboration of the material by Dr. Mayuri Rane and followed by a demonstration of manipulation of the material by Ivoclar India representatives.

Conclave 2016

The department of Conservative Dentistry and Endodontics, Tamil Nadu Government Dental College and Hospital, Chennai organized a CDE programme titled "Conclave 2016" on Full Mouth Rehabilitation in association with IACDE and CEAT on 15.12.2016.

Guest lectures delivered by Dr. B. Mohan, Secretary IACDE, Dr. Kavitha Sanjeev, Professor, SRM Dental college&Hospital, Chennai and Dr. R. S. Mohan Kumar, Joint Sec, IACDE. The lectures were followed by a Live Demonstration by Dr .B. Mohan. The CDE programme was attended by around 200 delegates from all over Tamil Nadu.

CDE Programme in assocaition with IACDE at Annoor Dental College, Ernakulam.

A professional enrichment program on "Legal Issues in Dentistry" and launch of a new restorative material "Certion – N" was held at Annoor Dental College, Muvattupuzha, Ernakulam , Kerala on 27th October 2016. The program was attended by over 250 delegates including faculty, post graduates, interns and students.

Dr Prasanth Dhanapal, Professor, Department of Conservative Dentistry and Endodontics gave a presentation on the newer material Certion -N followed by a demo of the material by Ivoclar Vivadent.

Dr Elbe Peter from Government Dental College, Kottayam spoke on the "Legal Issues in Dentistry". The program was facilitated by IACDE head office.

CDE Programme at DHS|IDS Chandigarh

A CDE programme was conducted under the banner of and with the support of IACDE and Ivoclar Vivadent at Dr. Harvansh Singh Judge Institute of Dental Sciences, Punjabi University, Chandigarh on December 10, 2016.

The programme included the product launch of Certion-N, followed by lecture and hands on for the participants. It was conducted by Dr. Kuber Sood from New Delhi.

Dr. Vivek Kapoor from the host college spoke on Abrasion and its role in MID. The programme was attended by almost 100 participants which included faculty members and post graduates of the Host College and colleges from nearby places.

All the participants had a detailed interactive session and hands on experience with Certion N. The programme was well appreciated by the audience.

CDE Program on Smile Designing at SDM Dharwad

The SDM College of Dental Sciences and Hospital, Dharwad, conducted their 2nd successful CDE program of the year in collaboration with Ivoclar Vivadent and IACDE. Headed by Dr.MahanteshYeli, the programme on the 23rd of December 2016 was presided by many eminent people from the field of Endodontics .

Amidst many were the two guest of Honors: Dr.Karunakar P., Principal Parineeya Dental College, Hyderabad and President IACDE Telangana State Branch, Dr. K.H. Kidiyoor, President Elect IACDE and other dignitaries including Dr. Srinath Thakur, Principal SDMCDS, Dr.Balaram Naik, Dean Administration SDMCDS and Executive Committee member IACDE, Dr. Ramesh Nadiger, Dean Support Services, SDMCDS and Dr. KVV Prasad, Dean Academics, SDMCDS.

The program had many attendees including the PGs and Staff and interns from various dental colleges in Karnataka. A lecture by Dr.Geeta Hiremath, Associate Professor Department of Conservative Dentistry and Endodontics, SDM College of Dental Sciences and Hospital, Dharwad on a recently introduced product by Ivoclar Vivadent: Certion-N. Briefing on the manifold advantages of this new material the speaker spoke vividly on how Certion-N could replace both amalgam and GIC in near future.

This was followed by the lecture on Smile Designing by Dr. Rashmi Nair, Associate Professor, Rungta Dental College, Raipur. The speaker drew attention towards the latest and most predictable and successful ways of dental esthetic treatments with many useful clinical guidelines and tips.

Altogether all the attendees left learning in abundance about both a new trending dental material and the most trending science of smile designing.

CDE Programme at Government Dental College, Ahmedabad

On 19th December 2016, a CDE programme was held at Government Dental College, Ahmedabad in collaboration with the IACDE. Dr. B. Mohan, secretary, IACDE conducted a guest lecture on 'Metal free restorations'.

The event turned out to be a major success with more than 100 Post Graduates and faculty members from every nook and corner of Gujarat participating in the event.

The event also witnessed the launching of the official website of the next National Conference, www.iacdeies2017.com to be held in Ahmedabad, Gujarat from 23rd – 26th November 2017.

ENCORE - KVG DENTAL COLLEGE & HOSPITAL,SULLIA

A CDE Programme, **ENCORE** was organised on 28th October 2016, on the topic **"ADHESION IN RESTORATIVE DENTISTRY & INTRODUCTION TO CENTION N"** by Guest Speaker **Dr. NAVEEN KUMAR. K** in association with **"INDIAN ASSOCIATION OF CONSERVATIVE DENTISTRY & ENDODONTICS" & "IVOCLAR VIVADENT INDIA".** KVG Dental College & Hospital, Sullia is one amongst 20 colleges selected by Ivoclar for introducing the new product.

This program was forwarded by Prof & Head of Department, Vice-President IACDE, Dr. L. Krishna Prasad, Principal Dr. Moksha Nayak &, Sr lecturer, Dr. Ramya M. K. of KVG Dental College &Hospital, Sullia. This programme was attended by150 members, including all staff members,post graduates students & under graduate students.

Colloquium 2016 (Chennai)

The second edition of the PG Colloquium was held at Ragas Dental College and Hospital on 23rd and 24th September 2016 on behalf of Conservative Dentistry and Endodontics Association of TamilNadu (CEAT).

Dr. Revathi Miglani, Dr. Sunnel Kumar Chinni and Dr. Chitrarasan MD (Radiologist) were the guest speakers. Around 250 PG students and delegates from Tamilnadu attended the two day event. The students presented Papers and E-Posters. Dr.S.Ramachandran former Principal Ragas Dental College and Hospital, Dr.R.Indira, Former HOD, Dept of Conservative Dentistry and Endodontics, Ragas Dental College, Dr. V.G.Sugumar Former Principal and HOD, Sri Balaji Dental College and Hospital were honoured with the 'LIFE TIME achievement award'.

For the first time mixed hand ball game was conducted for the post graduate students and Govt. Dental College were the winners and Sri Ramachandra Dental College were the runners up respectively.

For the first time mixed hand ball game was conducted for the post graduate students and Govt. Dental College were the winners and Sri Ramachandra Dental College were the runners-up respectively.

The editorial team of the Journal of Conservative Dentistry and Endodontics (JCDE) presented the Journal to all the invitees. The Association's President Dr.M.R.Srinivasan Hon. secretary Dr.M.Rajasekaran, Guest of Honour Mr.Kanakaraj, Chairman, Ragas Dental College and Hospital, Dr. Azhagarasan, Principal of Ragas Dental College and Hospital, Dr.R.Anil Kumar, HOD , Dept. of Conservative Dentistry and Endodontics, Ragas Dental College gave away the prizes to the winners of poster and paper presentation.

ISSN 2456-2041

PANEL DISCUSSION
Regenerative Endodontics

Prof. (Dr.) Mithra N Hegde
Vice Principal/ Dean of Dental Faculty
Dept of Conservative Dentistry & Endodontics
A.B.Shetty Memorial Institute of Dental Sciences
Nitte University, Mangalore- 575018
Email id: drhegdedentist@gmail.com

CRITICAL EVALUATION OF REGENERATIVE ENDODONTICS

Regenerative endodontics is defined as a biologically based procedure which is designed to replace damaged structures including dentin and root structures, as well as cells of pulp-dentin complex (AAE 2012).Foundation of tooth regeneration was laid by stomatologist G.L.Feldman and regeneration of pulp was conceptualized by Ostby in 1961. Dental pulp stem cells have the capacity to differentiate into various cell types, which conceptualizes the idea of regenerative endodontics. Regenerative endodontic procedure which includes root canal revascularization, postnatal stem cell therapy, pulp implantation, scaffold implantation, injectable scaffold delivery which are implicated in clinical practice. However, long term prognosis is not yet analyzed clinically. Critical procedures like regeneration of whole teeth, stem cells implantation for pulpal regeneration, 3-D cell printing to replace pulp tissue and various gene therapies are still in experimental stage.

Revascularization procedure for blunderbuss canals or Seal Bio procedure for non-vital teeth with closed apices is done in combination of modified cleaning and shaping procedure and regenerative tissue engineering. The novel technique of Seal Bio showed success rates up to 97% in a 6 year follow up study conducted by Shah N (Contemporary clinical dentistry, 2016; 7:296-301). Measuring of clinical outcome is difficult because the histopathology of differentiated tissues is not possible, pulp vitality test may not be relevant due to loss of signs and symptoms, and thus it is only radiographic analysis.

For regenerative endodontics procedures to be widely available and predictable, endodontists will have to depend on tissue engineering therapies to regenerate pulp dentin tissues. One of the most challenging aspects of developing a regenerative endodontic therapy is to understand how the various component procedures can be optimized and integrated to produce the outcome of a regenerated pulp- dentin.

Dr Uday Kumar
Ex- Principal, Army College of Dental Sciences
Professor, SVS Institute of Dental Sciences
Mahabubnagar, Telangana

REGENERATIVE ENDODONTICS

Root canal therapy has been the treatment of choice for several decades whenever there has been a pupal injury to the tooth. Though it has gained enormous popularity and acceptance as speciality by itself, the improvement in the implant material science and placement techniques has led to a debate questioning the success of the endodontic procedures per se. The focus has shifted to regenerative endodontics and most of our scientific research is in this direction.

The question is are we any way close to achieving this objective? The objective is, to the creation and delivery of tissues to replace diseased, missing and traumatized pulp. Measuring these clinical outcomes remains a challenge and difficult as of today. Once a tissue engineered pulp is implanted, it is not ethical to remove the functioning tissues to conduct histological analysis. We have to rely on the non invasive tests like laser Doppler blood flowmetry, pulp testing involving heat and cold etc.

A number of crucial concepts have not been well discussed or understood in the field of regenerative endodontics. Which includes critical size defect in the pulp and dentin, Cell lineage commitment to odontoblasts, regeneration vs. repair and hurdles of cell based pulp regeneration for clinical applications.

If we have a conclusive answer to all these questions there will be a paradigm shift in our approach to the treatment of a traumatized pulpal tissue. Till then, the certainty of conventional root canal therapy which includes disinfection and obutration of the root canal will remain the treatment of choice.

Dr. Naseem Shah
Professor of Dentistry
North Delhi Municipal Corporation Medical College,
Hindu Rao Hospital, Malka Ganj, Delhi 110007
Office: 011-23832126, 011-23832127

Current status of Regenerative Endodontics

Regenerative endodontics (RE) has emerged and evolved over past 15 years. The first report which kindled the interest in RE is when Iwaya and Kubota reported a case of an immature, non-vital tooth successfully treated by RE in 2001. This regenerative process called revascularization and later as revitalization was intended to allow maturogenesis of an immature tooth with open apex by thickening and elongation of the root and regeneration of pulp-like tissue in the root canal. The concept involved thorough disinfection of canal, inducing intentional bleeding to provide a scaffold of blood clot and also cause implantation of endogenous stem cells from the periapical region of the tooth in to the canal. In presence of various growth factors released from the blood clot, periapical tissues and radicular dentin matrix, the stem cells could differentiate into various forming cells like fibroblasts, osteoblasts, cementoblasts etc and form mineralized tissues in a previously non-vital tooth. This report was based on the previous works of Nygaard and Ostby (1961), Rule and Winter(1966) and Skoglund (1981).

The basis of RE is the triad and interaction of stem cells, growth factors and the scaffold.

Stem cells can either be isolated from elsewhere and cultured and expanded in –vitro in a laboratory. This is a very cost and labour intensive and technique sensitive procedure to regenerate pulp-dentin complex. The other more practical, logical and inexpensive method is to use locally available endogenous stem cells available in periapical region of a tooth like dental pulp stem cells (DPSC), periodontal ligament stem cells(PLSC), stem cells from apical papilla(SCAP), bone marrow mesenchymal stem cells (BMMSC), recently recognized dental follicle stem cells (DFSC) and inflamed periapical progenitor stem cells (PAPC).

Scaffolds provide a matrix into which stem cells can get implanted, grow and differentiate. It can be either natural or synthetic. However, blood clot or blood derived platelet rich plasma (PRP) and platelet rich fibrin (PRF), prepared from patients' own blood can serve as the best scaffold. PRP contains 338 % higher concentration of platelets than blood and is rich in growth factors. The important growth factors that play a part in RE are: Platelet derived growth factor (PDGF), vascular endothelial growth factor (VEGF), Transforming growth factor (TGF α and β), Fibroblast growth factor (FGF) and Bone morphogenic protein (BMPs 2, 3, and 7). Dentin matrix is also rich in growth factors like Dentin sialo-protein (DSP) and dentin phospho-protein wherever RE is planned to (DPP) and VEGF. These growth factors are released whenever dentin is demineralized. Therefore, EDTA as the last irrigant is recommended in RE.

The success in RE is measured by the extent to which the primary, secondary and tertiary goals of RE are achieved. The primary and the most important goal is to eliminate symptoms and evidence of bony healing, the secondary goal is to achieve root wall thickening and/ or increased root length (desirable but perhaps not essential) and the tertiary goal is positive response to vitality testing. [http://www.aae.org/uploadedfiles/publications_and_research/research/currentregenerativeendodontcoonsiderations.pdf (Accessed on 31-5-16)].

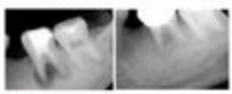
RE was primarily introduced for treatment on non-vital, immature tooth but now, it has been expanded for the treatment of pulp and periapically involved mature teeth as well. The first report on RE in mature teeth was published in 2012, which was termed as "SealBio". The root canal cleaning and shaping was modified to achieve a more thorough disinfection of the canal. The technique was documented to be successful in 18 cases and was shown to heal periapical lesion by increased bone and cementum density at the root apex by CBCT in 6 teeth. The technique has received Australian and US patents (Australian patent no. 2010335508 dated January 9th, 2014 and US patent no. US 9,180,072B2 dated November 10, 2015).

Following publication of this report, few case reports have reported RE in mature teeth. The difference between "SealBio" paper and other papers is that in the former, no attempt was made to regenerate vital tissues in the canal, the goal being to achieve periapical healing (the primary goal of RE) and biological seal at the apex. In mature teeth, both the secondary and tertiary goals of RE are not relevant. Moreover, the tissue formed after RE has been shown to be loose connective tissue, resembling periodontal ligament and not the pulp. On the other hand, since no vital tissue is expected to be in the canal, post-core restoration can be made after SealBio, which can help to salvage many mutilated teeth.

In conclusion, RE is an exciting field and is constantly evolving. It is important to keep abreast of developments in this field so that the clinician can provide the most cost-effective and least invasive treatment to their patients.

Fig.1. Revascularization in a 12-year-old girl. Note the healing of large periapical lesion, root thickening and elongation.

Fig.2. A case of "SealBio" in a 38-year-old man.
Note the complete healing of periapical lesion on the mesial root at 2-years follow-up.



Dr. Sai Kalyan
Associate Professor, Rural Dental College,
Pravara Institute of Medical Sciences
Loni, District Ahmednagar,
Maharashtra, India 413736

Regenerative endodontics: A biological Approach

Clinical endodontics has transcended as new data have accrued regarding biological concepts and improvements in procedural techniques have opened up newer treatment vistas. Its not easy to be interesting and Regenerative endodontics for as interesting it might sound is full of challenges. Cell transplantation has limitation of low survival rate and the use of ex vivo cell products faces many translational hurdles. Recently, endogenous stem cells have been made to recruit to a desired anatomic site pharmacologically.

Last decade has witnessed numerous scientific papers on the potential outcomes of regenerative protocols with variable outcomes. There has been a surge of research on this game changing area of dentistry all over the globe and India is no exception.

Recently, there is spurring interest in developing new generation of biomaterials that incorporate and release selected powerful extracellular influences in a near-physiological fashion. These simple and cost efficient procedures may potentially reduce the economic costs for standard medical treatments. Further, with the incorporation of 3D Printing technology into dentistry, three dimensional scaffolds can be created which are believed to yield better growth and differentiation of stem cells into desired cell population. Need of the hour is to amalgamate these stupendous technologies with clinical skills to the benefit of pulpal regeneration. Formulation of a standardized protocol would entail a detailed analysis of the factors critical to success and reasons of failures in cases treated so far.

ISSN 2456-2041

TEAMWORK

Complex esthetic and functional rehabilitation using glass-ceramic materials

Long-term documentation of a restoration worn for more than eleven years
Prof. Dr Daniel Edelhoff, Munich, and Oliver Brix, Bad Homburg/Germany

Given the enamel-like properties of glass-ceramic materials, minimally invasive treatment options provide a reliable method to restore the function, esthetics and biomechanical characteristics of the dentition while minimizing the damage to the biological structures.

Resin-bonded single-tooth glass-ceramic restorations such as veneers and onlays have been routinely used for many years in dentistry. Nonetheless, their use for complex rehabilitations – e.g. in patients with generalized hard tissue defects – is still critically discussed. These reservations can be increasingly abandoned in view of the beneficial preliminary results reported in controlled clinical studies and the experiences gained in specialist practices. It is essential for the long-term and reliable application of this method to accurately coordinate the stages between the dentist and technician and allow the patient to be actively involved. These stages consist of a careful treatment planning process including a study wax-up/mock-up (esthetic evaluation), adequate pre-treatment phase including a functional "test drive" (functional evaluation), selection of correct materials, combined with

Fig. 1: Preoperative situation: severely impaired esthetic appearance due to a loss of vertical dimension of occlusion (VDO) and the formation of a reverse smile line due to extensive loss of tooth structure

a preparation and placement technique appropriate for the materials selected, and implementation of an adequate occlusal design. This case report first describes the use of glass-ceramic restorations for the complex rehabilitation of a patient with extensive loss of tooth structure and then evaluates the restorations after they have been in situ for more than eleven years.

Pre-operative situation

A 40-year-old female visited the practice with the request to have her severely worn dentition restored. She said that she had begun to experience increased sensitivity to thermal and chemical stimuli and complained about the unfavourable esthetic impact of her teeth (Fig. 1). When we recorded her dental history, she told us that she had become aware of an untoward change in her anterior teeth and in the fullness of her lips, particularly when she was looking at photographs of herself. The clinical findings and dental history showed a large and, at times, substantial destruction of her tooth structure and extensive changes in the proportions of her teeth. These changes were primarily caused by abrasive processes and resulted in a reduction of the vertical dimension of occlusion (VDO). The functional analysis of the dentition did not reveal anything unusual. However, the loss of canine guidance and the rise of anterior and posterior group guidance were conspicuous (Figs 2a and b). The special challenges of this case were: high complexity of the rehabilitation, the patient's request for a prompt and minimally invasive improvement of her situation, the need for creating an appropriate tooth morphology and therefore for reconstructing the VDO as well as the permanent placement of the restorations on damaged tooth structure.

Treatment planning

Fillings were placed on the teeth, some of which were severely damaged, using an adhesive composite system (Syntac®, Tetric CeramR) before planning of the permanent restoration was commenced. This enabled us to better assess the extent of the destruction and obtain a better idea of where the potential preparation margins would be located.

Fig. 2a: Lateral view from the left at dynamic occlusion: traumatic contacts during functional movements have led to extensive loss of enamel and exposure of dentin.

Fig. 2b: Lateral view from the right at dynamic occlusion: loss of canine guidance and severe destruction of maxillary and mandibular anterior teeth.

The amount of exposed dentin is an important indicator for estimating the degree of hard tissue destruction.

To achieve an esthetic and functional rehabilitation, the following treatment goals were defined:

- create an adequate tooth morphology on the basis of a suitable width-length relationship of the teeth,
- establish an anterior canine-protected dynamic occlusion and
- rebuild the vertical dimension of occlusion (VDO).

The destructive processes to which the damaged teeth had been exposed should be halted and a lastingly stable occlusion should be created. The patient wanted a long-lasting rehabilitation based on a minimally invasive procedure and tooth-coloured restorations.

Final restoration was to be achieved using adhesively bonded glass-ceramic veneers and onlays. Glass-ceramic crowns would be used for those teeth that were severely damaged (13 to 23). In view of the fact that these extensive esthetic and functional modifications had to be combined with a re-adjustment of the VDO, the clinical team decided on the following treatment plan:

1. Fabrication of a study wax-up to assist in the creation of an adequate esthetic and functional tooth morphology
2. Intraoral evaluation of the wax-up (mock-up) by the patient with the help of a diagnostic matrix
3. Transfer of the increase in the VDO as determined with the wax-up to a stabilization splint for functional evaluation
4. Tooth preparation guided by the diagnostic matrices and reciprocal determination of the maxillomandibular relationship with a split stabilization splint
5. Trial of the direct temporaries on the basis of the outer contours established in the wax-up
6. Impression-taking and prompt fabrication of the permanent glass-ceramic restorations in the lab
7. Try-in and permanent adhesive placement of the glass- ceramic restorations

Clinical implementation and long-term evaluation

Crowns made of lithium disilicate ceramic in the layering technique (IPS e.max® Press/Ceram) were used for the upper anterior region because of the high degree of tooth destruction present (large composite fillings, Fig. 3a). In the lower anterior region, glass-ceramic veneers layered on refractory dies (IPS d. SIGN®) were inserted (Fig. 3b). Full-contour onlays pressed from leucite-reinforced glass-ceramic

Fig. 3a: Frontal view at protrusion: traumatic contacts have led to substantial changes in the morphology of the teeth.

Fig. 3b: Frontal view at protrusion following the restoration: the function and esthetics of the dental morphology has been restored.

Fig. 4: Onlays made of leucite-reinforced glass-ceramic (IPS Empress Esthetic). The minimum layer thickness of the occlusal surface is 1.5 mm.

Fig. 5: Adhesive placement of the restorations in the mandible using the total-etch technique and rubber dam isolation.

Fig. 6a: Onlays on teeth 34 to 37 after adhesive cementation in 2004 (cf. Fig. 4)

Fig. 6b: Onlays on teeth 34 to 37 in the summer of 2015, after having been in situ for eleven years (cf. Fig. 6a)

and customized using the staining technique were placed in the posterior region (IPS Empress® Esthetic). The onlays exhibited a minimum occlusal thickness of 1.5 mm (Fig. 4). Cementation was achieved with a multi-component adhesive system in conjunction with the total-etch technique (Syntac) and a dual-curing low-viscosity luting composite, using where possible rubber dam isolation (Fig. 5).

Recall after more than eleven years

At a follow-up examination conducted more than eleven years after the restorations had been placed, 15 posterior onlays were retained in an undamaged state.

Fig. 7a: Preoperative situation: mandibular anterior teeth showing substantial changes in proportion and exposure of dentin due to a reduction in VDO.

Fig. 7b: Layered veneers (IPS d.SIGN) in the mandibular anterior region after adhesive cementation

Fig. 7c: Mandibular veneers in the summer of 2015: a severe wear facet has formed on tooth 43 over the eleven years since the veneers were placed (cf. Fig. 8b).

ISSN 2456-2041

Figs 8a to f: Portrait pictures taken more than eleven years after the placement of the restorations. The esthetic and functional requirements of the patient have been and continue to be fully satisfied.

(Figs 6a and b). However, cracking had been noticed on the glass-ceramic onlay of tooth 24 after more than six years of clinical performance and for this reason the onlay had subsequently been replaced. Close inspection of the mandibular anterior veneers revealed a severe wear facet on veneer 43 (Figs 7a to c). Similar to the other veneers, this area was in direct contact with the lithium disilicate crowns on the maxillary anterior antagonists during dynamic occlusion.

Conclusion

Given the enamel-like properties of the glass-ceramic material, the minimally invasive methods used for this case provide a long-lasting approach to restoring the function, esthetics and biomechanics of the dentition while minimizing the damage to the biological structures (Figs 8a to f) [4, 6]. Beneficial clinical long-term results have been described and confirmed in several studies [3, 8]. Parafunctions, endodontically treated teeth and an adequate amount of enamel have, among others, been flagged as risk factors influencing the success of these restorations [3, 22]. Against such a background, the additive wax-up technique used here proved to be beneficial. Together with a diagnostic matrix, this technique enables a conservative approach to tooth preparation and helps preserve the remaining enamel during preparation. In addition, an in-vitro investigation has shown encouraging data regarding the stress distribution in ceramic onlay restorations [13]. It is, however, important to note that preparations should have soft and rounded transitions to prevent stress peaks from occurring [7]. In recent years, the authors of this report have mainly used glass-ceramic onlays based on lithium disilicate in conjunction with the staining technique [5, 7]. Given its increased strength, this material allows the minimum thickness to be reduced by one third to just over one millimetre, further increasing the amount of tooth structure that can be preserved during preparation.

Given their extremely high strength and optimal marginal integrity, glass-ceramic onlays appear to be ideally suited for restoring the function, esthetics and biomechanical properties of abraded and eroded posterior teeth. They offer an opportunity to circumvent traditional prosthetic measures that are more invasive and involve higher biological costs [6].

Literature available from the editors on request

Contact details:
Prof. Dr Daniel Edelhoff
Director Department of Prosthodontics
Ludwig-Maximilians-University
Goethestrasse 70
80336 Munich
Germany
daniel.edelhoff@med.uni-muenchen.de

Oliver Brix
innovative dentaldesign Oliver Brix
Kisselleffstrasse 7a
61348 Bad Homburg
Germany
Oliver-Brix@t-online.de

ISSN 2456-2041

KOLKATA CONFERENCE

॥ JAI MA ॥

It was a proud privilege and honour for the Organising Committee of **31st IACDE and 24th IES National Conference** to hold the prestigious annual event at **Kolkata from 9th to 13th November 2016 at Science City Complex.**

The **Conference** started with a grand event – Preconference Lecture cum Hands-on course by Renowned Endodontist **Dr. Hammo** from Jordan. The lecture was inaugurated by DCI President **Dr. Dibyendu Mazumder** in the presence of **Honorary Secretary of IACDE Dr. B. Mohan.** The lecture was attended by more than 500 doctors followed by 60 participants at hands-on. Three other preconference courses were held on 10th and a conference course by Dr. Mohan on 11th.

On 10th November, there were 11 paper halls and 6 poster halls running simultaneously from 9 am to 6 pm. Video paper presentation made its debut in IACDE - IES Conference at Kolkata.

From 11th morning luminaries in the field of Conservative Dentistry and Endodontics shared their vast knowledge to packed halls.

The conference was inaugurated by State Cabinet minister **Dr. Shashi Panja** and **Dr. Dibyendu Mazumder.** The highlight of the inauguration was the IACDE awards which have been initiated by the association for honouring and encouraging members.

The inauguration was followed by Dance performance by **Tanushree Shankar** and her troupe. Then **Babul Supriyo** took over in a rare performance.

The Banquet night was all **Armaan Malik.** The stunning performance was enjoyed by all- from junior most PGs to Senior Professors.

On the last day the Prize winners of Oral and Video Papers and Posters presented their papers again in the main auditorium. The Conference concluded with **President IACDE** doing the honour of **thanksgiving lecture** at the valedictory function.

The participants will remember the **City of Joy** for a long long time.

Pronam to all
Organising Secretary
IACDE-IES 2016 National Conference
Kolkata

ISSN 2456-2041

KOLKATA CONFERENCE

IACDE Award - 2016 1st Edition

ACADEMIC EXCELLENCE AWARD

DR. MITHRA N.HEGDE
Professor & Head of the Department
A.B Shetty Memorial Institute of Dental Sciences
Mangalore, India

DR. KAVITHA.M
Professor & Head of Department
Tamil Nadu Government Dental College

DR. VELMURUGAN.N
Prof and Head of Department
Meenakshi Ammal Dental College and Hospital, Chennai

RISING STAR AWARD

DR. ADITI JAIN
Maitri College of Dentistry and Research Institute, Anjora (Chattisgargh)

Dr.NEHA MEHRA
Senior Lecturer
Army College of Dental Sciences, Secunderabad

DR. JAYADEV.M
Senior Lecturer
Panineeya Institute of Dental Sciences
& Research Centre, Hyderabad

CLINICAL EXCELLENCE AWARD

DR. LT COL SONALI SHARMA
Command Military Dental Center
Western command

HUMANITARIAN AWARD

DR. KARUMARAN.C.S
Professor
Ragas Dental College, Chennai

DR. PRITI D DESAI
Professor
Gurunanak Institute of Dental Sciences and Research Centre, Kolkata

OUTSTANDING ACHIEVEMENT AWARD

DR. ANIL CHANDRA
Professor
King George Dental College, Lucknow

LIFE TIME ACHIEVEMENT AWARD

DR. DIBYENDU MAZUMDAR
President
Dental Council of India

DR. SUBASH CHANDRA SHETTY
Managing Director Confident Dental

DR. C.V.SUBBA RAO
Rtd. Professor, GDC Chennai.

UNDERGRADUATE AWARD WINNERS

Rank I - DR. SAGAR S BHAT
Oxford Dental College, Bengaluru

Rank II - JOSHUA NG CHOR YANG
Saveetha Dental College, Chennai

Rank III - ADEEBA KHAN
I.T.S Centre for Dental Studies & Research, Ghaziabad

POSTGRADUATE AWARD WINNERS

Rank I - DR.RENITA SOARES
Goa Dental College & Hospital

Rank II - DR.SHOBANA.C.S
Tamilnadu Government Dental College & Hospital

RANK III - DR. SRI NITYA REDDY.I
Panineeya Institute of Dental Sciences & Research Center
Hyderabad

IVOCLAR STUDENT OF THE YEAR 2016

DR. MALINI SHANKAR
KLE University

HU - FRIEDY STUDENT OF THE YEAR 2016

DR. MUDITA VERMA
V.S Dental College

RESEARCH GRANT FROM IACDE

THE FACULTY OR CLINICIAN RESEARCH GRANT

DR. RUPAL VAIDYA
Professor and HOD
Ahemdabad Dental College, Gujrat

THE STUDENT RESEARCH GRANT

1. **DR. SIMITH YADAV**
   Second Year Post Graduate
   King George Dental College, Lucknow
2. **DR. HARDIK MAKKAR**
   Final Year Post Graduate
   Kalinga Institute of Dental Sciences
   KITT University Bhuvneshwar, Odisha.

ISSN 2456-2041

KOLKATA CONFERENCE

HU-FRIEDY SPECIAL OFFER FOR IACDE

2 INSTRUMENTS FOR UG'S

CODE NO	DESCRIPTION
EXC18	EXC18#18 DE Excavator
PFITR1/2	PFITR1/2#1/2 Trico DE Plastic Filling Inst.

4 INSTRUMENTS FOR PG'S

CODE NO	DESCRIPTION
EXDG16	#DG16 DE Endodontic Explorer
EXC33L	#33L DE Endodontic Excavator
TNCCIB	XTS #B Cosmetic Contouring Inst.
TNCIGFT3	XTS #3 Goldstein Flexi-Thin

IACDE ENDODONTIC KIT (5INSTRUMENTS WITHOUT CASSETTE)

CODE NO	DESCRIPTION
MIR5	#5 FS CS, Single Sided, Single
MH6	Cone Socket Mirror Handle, Satin Steel
EXDG16	#DG16 DE Endodontic Explorer
EPL1	#1 Endo Pliers (Locking)
EXC33L	#33L DE Endodontic Excavator
RCSGP1	#GP1 SE Root Canal Spreader

IACDE ENDODONTIC KIT (5 INSTRUMENTS WITH 5 INST SIG CASSETTE)

CODE NO	DESCRIPTION
MIR5	#5 FS CS, Single Sided, Single
MH6	Cone Socket Mirror Handle, Satin Steel
EXDG16	#DG16 DE Endodontic Explorer
EPL1	#1 Endo Pliers (Locking)
EXC33L	#33L DE Endodontic Excavator
RCSGP1	#GP1 SE Root Canal Spreader
IM6050	5 Inst. Sig Cassette Red

IACDE ENDODONTIC KIT (5 INSTRUMENTS,ENDODONTIC STAND & HINGED INSTR. CLIP WITH 8 INST SIG CASSETTE)

CODE NO	DESCRIPTION
MIR5	#5 FS CS, Single Sided, Single
MH6	Cone Socket Mirror Handle, Satin Steel
EXDG16	#DG16 DE Endodontic Explorer
EPL1	#1 Endo Pliers (Locking)
EXC33L	#33L DE Endodontic Excavator
RCSGP1	#GP1 SE Root Canal Spreader
IMS-1275	IMS Endodontic Stand, 24 Holes
IM1000	2-Pack Sig Series Hinged Instr. Clip
IM5081	8 Inst. Sig Cassette Gray

FOR PRICING DETAILS CONTACT

HU-FRIEDY MFG.CO.,LLC,

(India Liaison Office) GE-8, 2ND Floor, 1834, Rajdanga Main Road, Kolkata - 700 107

Contact Person: **Mr. KAUSHIK BASU,** Country Manager - India

Mobile Number: +91 98310 11088, Email : kbasu@hu-friedy.com

IACDE - Hu- Friedy kits

Hu-Friedy the manufacturer of the world's finest dental instrument has been supporting IACDE for the past 4 years. Now, Hu-friedy in association with IACDE has come with good offers for its members. The details are given herewith. Let's make the best use of it.

ISSN 2456-2041

KNOWLEDGE FORUM

ASK The Expert

Dr Gopi Krishna V
Prof Thai Moogambigai Dental College
Chennai

1. What is the best irrigation sequence to be used for clinical practice?

A. NaOCl is universally accepted as the standard of care irrigant to be employed during endodontic irrigation protocols. It should be used in concentrations ranging from 2.5% to 6% during the complete shaping and cleaning procedures. The irrigation sequence should be as follows.

- Initial Irrigation Phase :

Flood the pulp chamber with NaOCl (2.5% to 6%) and to use the pulp chambers as a reservoir right from the start of canal patency till the completion of the shaping procedure

- Primary Irrigant

Cleaning the canal with NaOCl(2.5% to 6%) as the sole primary irrigant in between each shaping rotary instrument being employed till we achieve the recommended MAF size.

- Smear Layer Removal Irrigant:

Final rinse of the root canal with 17% EDTA for not more than 1 minute to enable complete removal of the smear layer

The following irrigation protocols are controversial and not conclusive enough for us to recommend them for routine practice.

Controversy #1: Antimicrobial ability of 2 % Chlorhexidine irrigation

The use of Chlorhexidine 2 % has been recommended due to its antimicrobial and substantivity potential. However, couple of recent studies using real time PCR has revelaed no significant advantage of using Chlorhexidine and in fact found NaOCl to be superior or equal to Chlorhexidine.

Controversy#2: Use of NaOCl final rinse after using 17% EDTA irrigant

Certain researchers recommend the use of a last final flush of NaOCl after using 17% EDTA in the root canals. This is recommended even in standard textbooks like Cohen's Pathways of the Pulp. Recent research is however revealing extensive erosion of peritubular and intertubular dentin when EDTA, EGTA or Citric Acid were used first followed by NaOCl. On the other hand, no erosion was detectedwhen chelating agents were used as the final rinse after NaOCl.

Controversy#3: Clinical Validity of MTAD and HEBP irrigants:

These newer irrigants have certain properties that are useful as endodontic irrigants but at this point of time cannot be recommended to replace NaOCl.

2. What is the volume of irrigant to be used and how to ensure the same?

A. The primary endodontic irrigantNaOCl is dependent on three important variables for effective irrigation.

i. Concentration : Clegg et al demonstrated that a concentration dependant antimicrobial effect of NaOCl with

a. 6% NaOCl being the only agent capable of both killing bacteria and aids in removal of biofilm.

b. 3% NaOCl showed absence of biofilm c. 1% NaOCl showed only partial disruption of biofilm

ii. Contact Time: Clinically relevant would be to use NaOCl as a "working solution" by keeping the pulp chamber constantly replenished with fresh NaOCl as concentration and time are inversely proportional. As many clinicians use 2.5% NaOCl it makes it imperative to increase the contact

ii. Volume: In this context, volume plays a key role forNaOCl as the chlorine ion present in NaOCl is unstable and gets consumed within 2 minutes of being in contact with tissues or bacteria. A constant replenishment in the canal using 2 ml per canal per instrument change seems to be clinically relevant recommendation

3. How to ensure that the irrigant reaches the apical third of the canal?

A. The key to ensure that the irrigant reaches the apical third would be determined by Depth of needle insertion into the prepared canal which in turn is determined by two factors primarily:

i. Size of canal preparation : An apical enlargement of #30 and above combined with increased taper allows better irrigant replacement in the apical third

ii. External diameter of the needle : 30 gauge needles can be place 2 to 3 mm short of the working length for effective irrigant replacement

4. How to prevent irrigant extrusion into the periapical area?

A. Irrigant extrusion leads to catastrophic tissue reactions as none of the irrigants that we employ can claim to be totally bio-compatible. Hence clinical prudence is to ensure that the irrigatn reaches the critical apical third of the canal and does not violate the apical tissues. The following recommendations would minimize the risk of irrigatn extrusion clinically:

i. Needle binding: The probability of the irrigant extruding out of the canal increases exponentially when the needle is wedged into the canal thereby preventing the effective backflow of the irrigant. Hence, care should be taken to keep the needle 1 mm short of point where the needle binds into the canal.

ii. Closed ended Side vented needle : In terms of needle designs, the closed ended side vented needle is without doubt one of the safest needle designs that can prevent inadvertent irrigant extrusion

Clinical recommendation: Using a 30 gauge closed ended side vented needle place 3 mm short of working length without binding the canal is the safest method to prevent irrigant extrusion

5. Does the choice of irrigant differ based on the pulpal and periapical condition?

A. The irrigating protocol for cases without periradicular changes is universally accepted to be NaOCltfollowed by 17% EDTA as explained earlier.

However, in retreatment cases as well as in cases with chronic periradicular lesions the irrigation protocol is not conclusive. While some researchers give evidence of the effectiveness of 2% Chlorhexidine in such cases as an efficient method to reduce bacterial load within the root canals.

However, this protocol has certain disadvantages.

i. Care should be taken to ensure that NaOCl and Chlorhexidine do not come in contact with one another as this causes the production of reddish brown precipitate in the canals.

ii. A recent randomized clinical trial using real time quantitative PCR showed no difference in clinical efficacy of 2% Chlorhexidine in comparison with 1% NaOCl in the retreatment cases.

Further studies in this area are needed for us to be conclusive on the benefits of this irrigation protocol

6. What is the needle gauge employed for irrigation?

A. In a nationwide survey conducted by our group we found that 97% of endodontic faculty and students in post graduate departments of our country are using either 26 or 27 gauge needle for irrigation. As clearly shown in the above answers this would be effective only in the coronal and middle third of the canal as the irrigant replacement is restricted to a depth of 2 mm apical to the placement of the irrigating needle. Hence, the much needed paradigm shift in endodontic irrigation should be in using 30 gauge endodontic needles with the closed ended side vented proving to be the most effective and safe.

IVOCLAR VIVADENT launches a New Restorative Material – Cention-N

CentionN is a new category of composite resin in a powder liquid form. It is a perfect alternative for silver amalgam. This non bonded restorative material can be used in large class I and class II cavities, also gives a possibility to bond if required. Releases fluoride on demand and has got flexural strengthmore than 100 MPa. In short it is a time saving replacement of tooth structure. For further details visit our website www.iacde.in

Failing Silver Amalgam

Prepared cavity

Restoring the cavity

Post - op

Courtesy Dr. MOHAN B

ISSN 2456-2041

KNOWLEDGE FORUM

KANDY'S CORNER

Dr. D. Kandaswamy MDS, FDS RCPS(Glasg)
Dean, Faculty of Dentistry, SRMU, Chennai

Hi folks, I recently saw the news item regarding the famous ship wreck Titanic.

It claims that there are 27 different strains of bacteria which are eating away the ship wreck metal leaving behind rusticles or icicles like deposit of rust and expect the rusticles to eventually dissolve into a fine powder and in another fifteen to twenty years only rustic stain will remain of the entire ship in the ocean. This is to just understand the power of bacteria.

Just imagine recycling the entire ship into a biodegradable material the amount of man power and technology that will be required but this single cell bacteria are supposed to do the job in next 15 to 20 years.

Why I am referring this at this point is bacteria play a major role in dental caries.

I used to wonder if dental caries is a bacterial disease. But i don't think we can say that because for any disease to be called as a bacterial disease, it should be caused by toxins of bacteria. We all know that bacterial toxins play no role in initiation of dental caries and we know bacterial action on dietary sugars which results in formation of acids is ultimately responsible for the demineralization of enamel. Enamel being the second hardest naturally occurring substance next only to diamond is demineralized by bacteria with ease. But, if bacteria can eat up Titanic ,then enamel should not be a problem .They are able to achieve this because of certain special characteristic of bacteria. Let us take a closer look at the ability of bacteria .Bacteria have inhabited the earth 4 million years ago much before any living organism came to existence .

At this point of time, we roughly estimate there are 5,000,000,000,000,000,000,000,000,000,000,000 bacteria at present. Even though bacteria are single cell they have a communication molecule by which they communicate with bacteria of same or different species.

But most importantly, they possess a quality called quorum sensing that is they will know the amount of bacteria present in a given place of their own species and like minded species. The bacteria know that they are not powerful when single, but they can bring down anything by their combined power. They sense they have enough quorum to attack and cause disease.

A human being is highly evolved species on earth came to existence 2.5 billon years ago. Now the human population is almost 7.4 Billon strong .The battle for survival between single cellular bacteria and highly evolved species started when Alexander Fleming discovered penicillin. We all know who is Winning.

But then how? Why are we losing the battle to single cell organism every day?

We are producing generations of antibiotics and they become ineffective after sometime. Can't trillion of human cells smash up one single cell of bacteria? The reason this doesn't happen is because the bacteria is not fighting the battle alone. They realized the importance of being in a joint family, which we have forgotten. They live in colonies along with likeminded bacteria and when a new drug is introduced they die in good numbers but at the same time the remaining bacteria study the molecules and genetically modify themselves to resist the drug. If only we could control the bacteria we will win the battle against the Dental caries.

To do that, we should take the clue from the enemy. Its time we wake up and combine all our brains together and raise one single research question for this country which is

"Elimination of Dental Caries from the Face of the Earth". From now all research should focus on this topic, with collective research and sharing of knowledge. When we do that the day will not be far off when we will have Caries Free India.

ISSN 2456-2041

REMEMBERING THE TITANS

DR. A.PARAMESWARAN

Dr. A.Parameswaran, retired as Principal of Tamil Nadu Government Dental College & Hospital, Chennai, India in September 1996. Post his retirement, served as Professor and Head at the Department of Conservative Dentistry and Endodontics, Meenakshiammal Dental College, Chennai and is presently in exclusive private practice.

During his tenure as administrator of a Government Dental College, he was enthusiastic to develop the institution towards attainment of excellence through international exchange of students & faculty. With more than three and half decades of teaching experience in one of the premier dental schools in India, he has traveled widely and participated in several national & international professional meetings.

His major interest has been, development of good teaching material, since he strongly recognizes the deficiency of standard text – and reference book relative to Indian needs. As the Editor-in-Chief of the professional body; "Federation of Operative Dentist of India," he brought together the expertise of many Indian and foreign practitioners & theoreticians, and succeeded in producing three volumes of different aspects of Conservative, Cosmetic Dentistry and Endodontics for students use. He holds membership in New York academy of sciences, the editorial board of Asian journal of esthetic Dentistry (Malaysia), Asian Pacific Endodontic Federation (Australia). He was former President of Federation of Operative Dentistry India and active member in Indian Endodontic Society. He has taken part in various International and National Conventions and has published many articles in both Indian & foreign Journals.

He has received recognition for his teaching Dental graduates and is awarded Life-time Acivement award from Rajarajeswari Dental College and Hospital, Bangalore and The Tamilnadu Dr M G R Medical University, Chennai. He has been awarded the Scroll of Honour from A.J Institute of Dental Sciences, Mangalore. Famdent has offered him Famdent Achivers Award Bombay. Recently, The Tamil-Nadu Dental College has honoured him with the Fellowship of Government Dental College, Chennai.

Currently he and his research group are involved in the systematic investigation of toxicological problems faced by dentist in their profession, as they handle (or mishandle) many heavy metals and poisonous chemicals. In collaboration with Indian Institute of Technology, Department of Biomechanics he has brought out and edited and interdisciplinary monograph on "Advanced Dental Biomechanics". He is in the process of editing another multi author textbook for students on Dental Materials, in collaboration with senior chemist, and a text in endodontics.

e-mail : param1809@gmail.com
Phone : Residence (044) 26212366 / 26223939

Dr. Stephen Cohen, M.A., D.D.S., F.A.C.D., F.I.C.D., is a Diplomate of the American Board of Endodontics. Dr. Cohen is the senior editor for all nine editions of the definitive Endodontics textbook, *Pathways of the Pulp*, and a co-editor of the renamed 10th edition *Cohen's Pathways of the Pulp*.

After completing his studies in the Endodontics Postgraduate Program at the University of Pennsylvania, Dr. Cohen began his private practice in San Francisco's historic 450 Sutter Medical Building.

Dr. Cohen served as the Chairman of the Endodontic Department, University of the Pacific Arthur A. Dugoni School of Dentistry and has continued his long relationship with the school as an Adjunct Clinical Professor of Endodontics.

In addition to his academic appointments, Dr. Cohen has held leadership positions in many of the major professional and academic organizations in Endodontics and dentistry, including as a Director of the American Association of Endodontists and the San Francisco Dental Society, and as a fellow of both the American College of Dentists and the International College of Dentists.

Dr. Cohen has authored and co-authored numerous papers for the most significant journals, was Co-editor and contributing author of *A Clinical Guide to Dental Traumatology*, and has consulted many organizations including the House Intergovernmental Relations and Human Resources Subcommittee, Letterman Army General Hospital, and the California Dental Superiority of Service Panel.

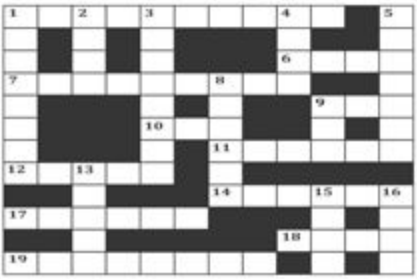
Dr. Cohen is also a leading legal expert witness on issues involving departures by dentists from the Standard of Endodontic Care, and has participated in over 400 cases in the United States and Canada.

As a leading educator, Dr. Cohen believes that providing complete and current information about endodontic treatment is a vital part of excellent patient care.

ISSN 2456-2041

REST-ORE-TAINMENT

CROSSWORD IACDE-3



CLUES ACROSS	CLUES DOWN
1. Ultrasonic synergestic system of root canal instrumentation and disinfection	1. This man is responsible for standardization of endodontic instruments. [5]
6. Parameter used in various rotary cutting tools.	2. Damage to the surface of a metal or alloy resulting in loss of luster. [7]
7. This agent aids in polymerization.	3. This technology of dentistry shares its name with the smallest automobile in India. [4]
8. Minute wavy S-shaped structure of dentine.	4. Destruction or complete removal of pulp [9]
9. This is an acronym of the system used in endodontic retreatment.	7. This instrument is efficient in excavation of caries and shares its name with a fruit[4]
10. Functional unit of a non-cutting instrument.	8. Sargent's Paste [2]
11. Painful sores that appear as a result of discontinuity or break in the skin or mucuous membrane which fails to heal.	11. A shallow depression found approximately in the middle of occlusal surface of molar. [5]
12. Person responsible for classification of fractured teeth.	12. This is also known as baby bottle caries or bottle tooth decay [5]
14. Hardest tissue in human body.	13. Styptic used in gingival retraction [4]
17. A hydrophilic monomer used in adhesive dentistry	14. This material used in adhesive dentistry shares its name with the fictional British secret service agent [4]
18. An unpleasant and emotional experience associated with potential tissue damage	15. This metal possesses shape memory and super-elasticity. [4]
19. An alloy in which the solidus and liquidus temperatures are the same	

JUMBLE WORDS - 3

NSLEIE

			4	7	

ADNDNTEOIG

						3			13

OARYTR

			8		11

BCSESAS

			10			

TUAOISCNSRL

6			1							

Periapical Cysts may be this

	A			C				B
		S						

VOICE OF A TOOTH

Canal oh! Canal,*my* loving root canal.
You were my gain, but now a pain.
You are making me suffer,
wish someone makes things differ.
Canal oh!Canal, *my* loving root canal.

I know the pulp is being a sadist,
but there is the Endodontist.
They remove your pulp,
and will give you help.
You will be shaped with files,
to bring back your smiles.

They clean you with irrigants,
to take away your irritants.
They clean you so well,
so that you can do well.
You will be filled,
and not be pulled.
There is nothing to fear because they are here.
Canal oh!Canal,
my loving root canal.

Dr. Mary Vinola Jenifer. S
IIIYear post graduate
SRM Dental College, Ramapuram, Chennai.

DENTIST'SPRAYER

Dear God, Thank you for this wonderful day.

You have immensely blessed me as a Dentist.

You have given me an opportunity to bring back healthy smile on the patients I treat.

Let me know that they are my responsibility and are trusting me while I treat them.

Grant me the wisdom and knowledge to serve them better, to brush away their fear towards treatment.

Let me handle them with care and commitment.

Let each touch of my hand turn into a healing miracle.

AMEN.

Dr.MaryVinolaJenifer.S
III Year post graduate
SRM Dental College, Ramapuram, Chennai

ISSN 2456-2041

CALENDAR OF EVENTS

CALENDAR

Sl. No.	Date	Events	National / International	Venue
1	6-7 January 2017	1st Indian Academy of Cosmetic Dentistry Annual Conference	National	Bangalore – India
2	1-3 February 2107	Finish Line 2017	National	Chennai – India
3.	2 February 2017	Endoaesthetics- Beyond book a clinical approach	National	Meerut – India
4	10-12 March 2017	MAHSA International Restodontic Conference and Exhibition	International	Kaulalampur-Malaysia
5	17 March 2017	Dental Panache- a one day Esthetic Workshop	National	Secunderabad – India
6	5-8 April 2017	18th Scientific Congress of Asia Pacific Endodontic Conference 18th IACDE-IES PG Convention	International	New Delhi – India
7	18-21 April 2017	33rd Annual American Academy of Cosmetic Dentistry Scientific Session – AACD	International	Las Vegas – USA
8	26-29 April 2017	American Association of Endodontics Annual Session	International	New Orleans Louisiana – USA
9	1-2 May 2017	International Conference on Oral Biology and Restorative Dentistry	International	Toronto – Canada
10	5-6 May 2017	12th CAD/CAM and Digital Dentistry International Conference	International	Dubai – United Arab Emirates
11	11- 13 May 2017	AIC 19th International Congress And Conexuno	International	Bologna, Italy
12	26-27 August 2017	Indian Society of Periodontics Restorative and Prosthodontic (ISPRP) Conference	National	Chennai – India
13	29 Aug – 1 Sept	FDI 2017- Annual World Dental Congress	International	Madrid – Spain
14	23-26 Nov 2017	32nd IACDE-IES National Conference	National	Ahmedabad - India

ISSN 2456-2041

SIGNING OFF

NEWS LETTER OFFICE

Dr. Mamta Kaushik,
Editor, News Letter - IACDE
Prof and Head
Conservative Dentistry and Endodontics
Army College of Dental Sciences
CRPF-Chennapur Road; Jai Jawahar Nagar
Secunderabad; Telangana- 500087

Please send your
Inputs,
Scientific and academic achievements,
Activities in your state/city,
Awards,
Jokes, cartoons &
Questions or Queries to :
newsletter@iacde.in

EDITORIAL TEAM

Editor
Dr MAMTA KAUSHIK
Professor and Head
Conservative Dentistry and Endodontics
Army College of Dental Sciences
Secunderabad

Associate Editor
Dr NEHA MEHRA
Senior Lecturer
Conservative Dentistry and Endodontics
Army College of Dental Sciences
Secunderabad

Editorial Team
Dr POORNI
Reader
Sri Venkateshwara Dental College
Chennai

Editorial Team
Dr PRASEAD SARAF
Reader
PMNM Dental College and Hospital
Bagalkot

IACDE HEAD OFFICE

Z-279, 5th Avenue,
Anna Nagar, Chennai,
Tamil Nadu - 600040
Mobile: 99400 86289
Landline: 044 45566289

Head Office
timings 10 am to 5 pm on
all working days
Sunday holiday
Email: info@iacde.in
Website : www.iacde.in

19TH IACDE AND IES PG CONVENTION- 2018 KALABURGI

CHIEF PATRON
SHRI.BASAVARAJ BHEEMALLI

CONVENTION SECRECTARY
DR.KARUNAKAR. P

ORGANISING SECRETARY
DR.RATNAKAR.P

EARLY BIRD REGISTRATIONS AT KOLKOTA CONFERENCE

CROSSWORD IACDE 3 ANSWERS

JUMBLE WORDS - 3

NSLEIE → S E N I L E

ADNDNTEOIG → D I A G N O D E N T

OARYTR → R O T A R Y

BCSESAS → A B S C E S S

TUAOISCNSRL → U L T R A S O N I C S

Periapical Cysts may be this → RADICULAR CYST

ISSN 2456-2041

Memorable Moments of 2016