INDIAN ENDODONTIC SOCIETY

IES TIMES

Official Newsletter of Indian Endodontic Society

Vol 1 : Issue 1 : 2022

INDIAN ENDODONTIC SOCIETY

IES TIMES

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Table of Content:

INDIAN ENDODONTIC SOCIETY

Presidential message

Dear IES members, friends and colleagues!

I am extremely delighted to share that IES has completed 34 glorious years and is organizing the 30th national conference in October this year.

It is laudable that during the past three decades IES has carved a niche in the dental arena. Our Society is only as strong as its members and the IES TIMES, the first newsletter illustrates the endeavours and achievements of all the members of our endodontic fraternity.

To allow professional growth and ensure highest standards of patient care, Indian Board of Endodontics (IBE) has been constituted under the aegis of IES. IES has also launched an annual Research Grant Award for promoting endodontic research and genesis of newer knowledge in Endodontics. IES is also working on increasing its social media presence to raise awareness about endodontic treatment among masses.

I thank all our office bearers, committee members and other volunteers who have generously given their time, energy and skills in 2021-22 to make sure that IES continues to grow & achieve its objectives of advancement & promotion of knowledge in the field of endodontics. While we each have our own specific mission, together we bring innovation, discovery & research to the care we provide.

"Coming together is a beginning, staying together is progress and working together is success".

Looking forward to seeing you all in October 2022.

Dr. Sangeeta Talwar
President IES

INDIAN ENDODONTIC SOCIETY

Our Mentor's Message

Hearty congratulations to IES for completing 34 glorious years and adding another feather to its cap the introduction of much awaited IES TIMES, the official newsletter of IES. This is indeed a huge step forward for the IES.

This newsletter will aid in dissemination of information of special importance to all members of the IES at a glance. It will not only help us connect better but also provide an insight of various national and international activities planned for the year and keep us informed about any new research and latest development in our field.

The IES TIMES will provide us a great platform in the near future through which we can acknowledge and show case all our events and achievements.

I once again whole heartedly congratulate the editor of IES Times and her team for bringing out a revolutionary newsletter which will bring each and every IES member closer to build a stronger community aiming towards providing the best treatment in terms of methods, facilities and techniques to their patients.

My good wishes to Dr. Vineeta Nikhil, the energetic Editor.

(Hony.) Brig. Dr. Anil Kohli
Permanent EC member-IES

INDIAN ENDODONTIC SOCIETY

Secretary General's Message

"A journal disseminates knowledge while
IES TIMES connects the hearts & souls of knowledge seekers"

Indian Endodontic Society has always strived to make a meaningful difference to the field of endodontics in India. It is yet another commendable endeavor of the IES team to start this newsletter aptly titled as "IES TIMES" that collectively chronicles the events and moments of importance in the field of endodontics in India.

The editorial team of IES TIMES headed by Dr Vineeta Nikhil and ably supported by Dr Sonali Sharma, Dr Poorni, Dr Marina Fernandes, Dr Kushal Fuladi and, Dr Sonal Sahu have done a wonderful job in conceptualizing and executing this concept.

We look forward for the continued support from all the members of our fraternity and we hope that each one of you enjoy the varied flavors of endodontics that are engraved for posterity in the following pages !!!

Dr. Gopi Krishna
Secretary General – IES

INDIAN ENDODONTIC SOCIETY

Editor's message

Continuing a Proud Tradition

Hello friends,
I am honoured to be taking on the role of an Editor of IES TIMES; an official news letter of the Indian Endodontic Society. I would like to start by conveying my regards to all the executive committee members who supported me for making this happen, especially Dr. Anil Kohli Sir.

On behalf of the Editorial Board, I am pleased to bring forth this maiden issue of our Newsletter "IES TIMES" which is a reflection of our society's activities– the achievements, the spirit of all the clinicians, students and faculty members, fantasies and goals, experiences and everything that is a part of Indian Endodontic Society, be it curricular, co-curricular or extra– curricular.

In order to keep the readers widely interested and updated, we will continue the tradition of communicating the significant events and activities of IES Head office and its members.

I would like to thank President Dr. Sangeeta Talwar and Secretary General Dr. Gopi Krishna for the continuous motivation, input and time to time guidance. Last but not the least, my gratitude to the co-editor Dr Sonali Sharma for helping me throughout in giving final shape to this issue.

Please go through it and give your valuable feedback in order to improve the forthcoming issues at iestimes@ies.org.in

Dr. Vineeta Nikhil
Editor IES TIMES

INDIAN
ENDODONTIC
SOCIETY

Chronicles of success: IES Activities 2022

IES TIMES
Official Newsletter of Indian Endodontic Society

INDIAN ENDODONTIC SOCIETY

Chronicles of success: IES Activities 2022

Indian Endodontic Society organised various programmes throughout the year.

- We started our journey 2022 with the IES Endo Retrieval contest in Feb 2022.

- A 5-day online research methodology workshop on OVERVIEW OF THESIS PROCESS FROM INCEPTION TO COMPLETION was organised by SRM Dental College and Manav Rachna Dental College from 7th to 11th Feb 2022.

- IES team organised the first ever Post Graduate Students exchange program at King George Medical University, Lucknow from 28th Feb to 5th March which was appreciated and enjoyed by all students. IES PG National Quiz Competition followed by a cultural evening was held on 5th March 2022 on the occasion of Endo Awareness Day. PGs of 31 colleges from all over the country actively participated in this event.

- We celebrated women's day by paying a tribute to legend Lata Mangeshkar by organising contests like NIGHTINGALE OF ENDODONTICS and ENDO POETIC GEMS in March 2022.

- We managed to bring everyone together from all over the country during the COVID pandemic for ISTHMUS 2022 – IES Mid-term conference at Pune, on 12th and 13th March, under the leadership of Dr Vivek Hegde. There were about 582 registrations and 89 paper and 100 poster presentations. The Isthmus Galaxy of speakers were Dr Arvind Shenoy, Dr V.Gopikrishna, Dr Ajay Logani, Dr P.D. Joshi, Dr Alok Lathi and Dr Sanjay Jain.

- The new office bearers of IES were elected and took charge under the incoming President Dr Sangeetha Talwar and Secretary General Dr V. Gopikrishna in March 2022.

INDIAN ENDODONTIC SOCIETY

Chronicles of success: IES Activities 2022

- IES Membership drive was promoted with the IES Activities video and IES membership benefit PDF. There were around 200 new membership registrations in 2022.

- IES released a public interest notification – Facts about Root Canal Therapy.

- IES announced ONE LAKH RUPEES ANNUAL IES RESEARCH GRANT from this year onwards.

- Endodontology Reminiscence!! The scientific content from the older issues of the Endodontic Journal was archived (1989-2015) on the journal website on 27th July.

- IES launched an exclusive web portal www.vidocto.com for all of its online events on 24th Aug 2022.

- Endodontic Annual Symposium 2022 (online) - PATHWAY TO QUALITY RESEARCH was conducted on 26th Aug 2022 through the Vidocto portal with free access to IES Life members. Dr Frank Setzer, Dr Ajay Logani and Dr Venkatesh Babu were eminent speakers at this symposium.

- 30th IES National Conference will be conducted at Hotel Grand, New Delhi from 14th to 16th October 2022. The keynote speakers will be Dr James Gutmann, Dr Jeeraphat Jantarat, Dr Philip Tomson, Dr Tugba Turk, Dr Gianluca Gambarini, Dr Vivek Hegde, Dr Sanjay Jain, Dr Fernando Durian – Sindreu Terol, Dr V. Gopi Krishna, Dr Gopalakrishnan and Dr Himanshu Tagra.

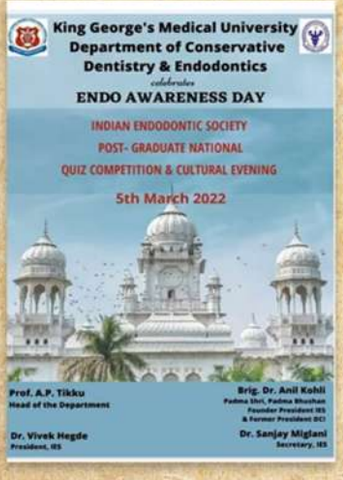
- IES Times – Newsletter will be released at the National Conference.

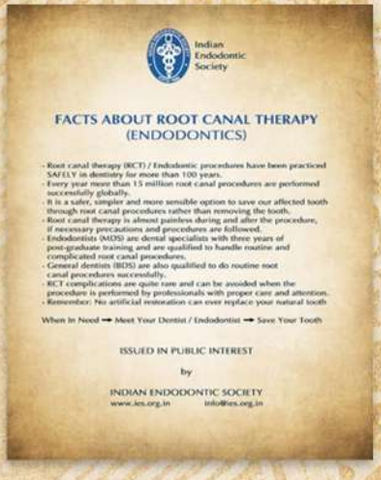
Chronicles of success: IES Activities 2022

- From this year, we will initiate the highest award to be given by IES annually and this would be titled "IES Medal of Honour" (50 gm. silver medal with gold plating). Dr Anil Kohli will sponsor the endowment fee.

- Indian Board of Endodontics (IBE) Diplomate Examination – Online Part I Exam on 2nd Oct 2022 and Part II clinical portfolio Examination and viva on 14th Oct 2022 (External Examiner - Dr James Gutmann) onsite at New Delhi will be conducted. The convocation and certification of IBE Diplomates (IBE Award Night) will be celebrated on 15th Oct 2022.

- IES Life membership e-certificate is made available on the members' profile page at the official IES website.





INDIAN
ENDODONTIC
SOCIETY

Tête-à-tête with maestro….

IES TIMES
Official Newsletter of Indian Endodontic Society

INDIAN ENDODONTIC SOCIETY

Tête-à-tête with maestro….

Dr Josette Camilleri

B.Ch.D., M.Phil., Ph.D., FICD,
FADM., FIMMM, FHEA

An exuberant scholar, extensive researcher and a dedicated teacher in the field of Endodontics, Dr Josette Camelleri, will tour us through her experiences in this column.

Q. What attracted you towards dentistry and then motivated you to become researcher?

I have over the years accepted what fate offered. I never planned to be a dentist least of all a researcher. I always planned to be a full-time housewife and bring up a family. In fact, that is exactly what I did for many years. My parents invested in very good schools for me regardless the tuition being more than they could afford. They were true role models. Hard working people who prioritized my education. This made me always work hard to achieve the best grades to make them proud of me. I obtained the grades, and at the last minute put dentistry as my first choice in choosing a course. It had a numerus clausus so looked like a challenge. The research choice is another matter. After getting married, I was a housewife for 8 years. I did a bit of reading and the then Dean of Dentistry encouraged me to do some research to avoid getting bored while the children were at school. We had no research labs. I only had a very old saw that could section teeth. I looked at leakage of obturated teeth using dyes after sectioning and looking at the sections under the light microscope. Professor Tom Pitt Ford was invited to be my external supervisor. He then encouraged me to do a PhD. I had no funding and no resources. I moved to civil engineering as they had some equipment I could use. I did all my PhD in a civil engineering laboratory with some visits to the UK as I was successful in obtaining a Commonwealth Scholarship. Everything I did was purely coincidence. I just followed the path of least resistance.

INDIAN
ENDODONTIC
SOCIETY

Tête-à-tête with maestro….

Q. How will you describe change in Endodontics from your graduation days till now?

I have graduated 30 years ago so I have seen a very big change in some aspects such as digital dentistry and implantology. Endodontics is easier as the magnification and equipment is more advanced. However, everything was and still is industry inspired rather than evidence and research based. There seems to be still very old ideas and older materials being used with no evidence as to their effectiveness. The hydraulic cements have made a change in endodontics specifically in the management of immature teeth.

Q. Material science is thought to be very dry. How did it become your area of interest?

Material science is dry when it is not understood. I hated it as an undergraduate student. Could never remember anything!!. I took it up as it was the only thing available to me and I could share the labs in engineering. Once I started using the equipment and deepening my knowledge, I started understanding the material properties making the subject very fascinating.

Q. An educator, researcher or a clinician, which is your favourite role?

Education. I have the best time of my life with my students and teaching.

Q. Although more than 11000 researchers have cited your work, which one of your works is closer to your heart?

My original MTA papers are obviously very close to my heart. However, the discolouration of bismuth oxide in contact with sodium hypochlorite is my absolute favourite. This discovery was purely a coincidence. However, I think it has changed clinical practice and industry have mostly eliminated the bismuth oxide from most of the dental materials.

Camilleri J. The color stability of white mineral trioxide aggregate in contact with sodium hypochlorite solution. Journal of Endodontics 2014;40:436-40.

Tête-à-tête with maestro….

Q. You seem to be a fitness enthusiast, how do you manage your work life, family and fitness regime?

No, I am not a fitness enthusiast. I am a very lazy person who loves eating and travelling. I have never managed much of a balance unfortunately. I did mostly everything full time. I was a full-time mother, did research when I got bored. Then once my daughters got older, I dedicated my existence to my work. I play tennis and run a few km occasionally. I try to walk a bit when I get some time But I do dedicate a lot of time to work. I work about 13-15 hours per day including weekends.

Q. You are a role model to many what do you have to say to our dental post graduate students in India pertaining to research and its scope abroad?

Being a role model is a huge responsibility. Research is not easy as one has to have ideas and also find the ways to answer the research question. Funding and facilities are an enormous challenge. I think all is possible if one loves their work and has a passion for it. One should follow one's path and not ignore the little directions given by circumstances. Studying and living abroad is not easy. It puts a lot of strain on the family and personal life. Family time is an absolute must especially in the start of a relationship and when the children are young and need their parents in the formative years.

Q. After you have done extensive research in hydraulic calcium silicate cements like MTA, how has the development taken over years?

I think the development is slow as it takes a lot of time to find the funding, the man power and also the right people to work with. Building a research team is not easy. I think I have now a very good idea of what I want to achieve and have some long-term plans. Endodontics and materials need to be easy and accessible to all.

Tête-à-tête with maestro….

Q. How do you decide on taking up a particular research topic?

I take a lot of ideas for research by talking to people and looking for challenges in the clinical practice. All my research has been solutions to clinical problems.

Q. What interests you more, research in restorative dentistry or Endodontics? And why?

Endodontics and specifically hydraulic cements. They are an enigma. Forever providing me with a new challenge that needs investigating.

Q. Over last few years, we see a paradigm shift from cold lateral compaction to single cone technique and warm vertical compaction. What do you have to say on this?

There has been a paradigm shift but unfortunately there is no evidence that the techniques are better than the lateral condensation. The problem is the lack of guidance and research with regards to the clinical protocols. The warm vertical compaction although used for decades still does not have a dedicated sealer and a clinical protocol. The heat carriers do not have a well-regulated temperature output and this can be dangerous. The single cone is sealer-based. Again, more research on sealer properties is necessary.

Q. You once mentioned in an interview that your favourite topic of research is material interactions, can u tell us about any additional courses you took up to understand these materials?

I have never received any training except the use of equipment in various labs. I am self-taught. I read and am very inquisitive. I am not afraid to ask questions. This is the best way to learn.

INDIAN ENDODONTIC SOCIETY

Tête-à-tête with maestro….

Q. How did it feel to be the first female to have been awarded the Louis Grossman prize by the French endodontic society.

I was ecstatic to be chosen in general and to join such a prestigious list of researchers in Endodontics. Being the first female to get the prize in 2019 means that women are underrepresented. There are a lot of women who choose dentistry as a profession. Now more than men. Why nobody was deemed fit to join the list prior to myself is clearly worrying. This issue is not only with the prize but also when I am invited to lecture at international meeting and more often than not, I am the only female. Women are clearly there but obviously not making it to the top positions.

Q. What would you be if not an oral health professional?

I would be an engineer. I have worked at engineering for quite a long time and it is something that I find very attractive.

Q. You seem to have an inclination for sports, which is your favourite sport. Also how was it to be associated with the commonwealth games?

I am a very lazy person, but I do love tennis as it is an opportunity to use force in a civilized way. Also, the moves need some planning which I find very interesting. The running gives me time to think. I chose to volunteer and lead the oral health team at the Birmingham Commonwealth Games as I am from a commonwealth country and also a commonwealth scholar. I needed to give something back. I truly enjoyed getting the service organized. It was an opportunity of a lifetime.

INDIAN
ENDODONTIC
SOCIETY

Overseas Endo

IES TIMES
Official Newsletter of Indian Endodontic Society

INDIAN ENDODONTIC SOCIETY

Overseas Endo

Dr. Anil Kishen

Professor, Endodontics Program
Graduate Coordinator, Graduate Education
Principal Investigator, Dental Research Institute
Faculty of Dentistry, University of Toronto, Toronto
Associate-Scientist, Mount Sinai Health System, Toronto

Navigating the circuit for a career in academia

Do you have a flair to identify research gaps? Do you enjoy designing experiments to solve current world problems? Do you draw motivation from mentoring students? You may possess the skills to enjoy a rewarding career in academia!.

The academic environment offers prospects for growing as a Scientist and a mentor; opportunities to gain and disseminate knowledge in the form of international conferences, collaborating with research groups from around the World, and teaching students from different backgrounds. A successful career can lead to academic tenure, a highly prestigious appointment that guarantees job security.

As with most industries, to ensure a good start to your career, you must apply to prestigious schools that will ensure you enjoy the right opportunities to showcase your research and allow you to build on new skills. This, however, is a competitive field, and begs to focus on the key question: "How can I prepare for a successful career in academia?" A good starting point is to identify your goals early. Identifying skills and achievements that will set your application apart will help you work in a goal-oriented manner during your graduate program.

An academic hiring committee typically evaluates candidate across four broad criteria:research potential, teaching skills, service to institution (minor factor) and fit into the existing system. As a graduate student, you are provided the opportunity to develop research skills and gain teaching experience as part of the program. You must choose your research project and teach subjects based on your field of interest, keeping in mind your end goal – the Faculty you wish to work with as an academician. The research, teaching and service are criteria which is within a person's control, while the knowledge of fit is not in a person's control.

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Your research skills will be assessed based on the grants and awards you receive, peer-reviewed publications based on your original research, relevant conferences where you have presented your research, and any books or book chapters you have contributed to. You must be proactive and use every opportunity to highlight the significance of your research findings. This will not only enhance your research profile, but help you build new collaborations, and develop innovative ways to apply your work to advance current knowledge in your field.

You may also consider reviewing journal articles and book chapters to stay on top of latest research in your field of interest. However, you must be mindful to refrain from taking on tasks that may not contribute towards your end goal avoid writing articles that are unrelated to your dissertation or program unless they are certain to be published. Ideally, you should restrain from organizing conferences unless you are sure that the meeting would lead to books. You should edit books only if you are certain that they will be published quickly, and you should avoid writing many conference papers, if you do not intent to publish in journals.

As with other faculties, strengthening your research background with a PhD program has benefits when applying for a position at the Faculty of Dentistry in any University. Students with a background in dentistry or dental speciality may consider research projects in Basic Sciences or Translational Research for their PhD program. Completing a PhD program reflects on qualities such as perseverance, tenacity, and drive in an individual. A successful PhD graduate is one who has conducted novel, independent research that has significant impact on the field. Such work is identified by several factors, such as the grants that have been awarded towards such research, the number of, and reputation of peer-reviewed journals the research has been published in, impact of the research project (citations and H-index), and student preparedness for independent research in their next job.

Your teaching skills can be strengthened by teaching courses relevant to your research area, this will add value to your profile as opposed to teaching courses that may not be pertaining to your research. Role as a teaching assistant for your research supervisor is also helpful. Avoid teaching courses outside your area of expertise before your dissertation / thesis is completed. Most universities offer workshops to improve academic writing and Science communication which can help individuals become better at teaching. In order to demonstrate commitment to teaching, individuals can audit course in pedagogical methods and learn to draft a teaching philosophy and/or a statement. It is imperative to begin compiling a teaching dossier early. It is also worthy to supervise a student conducting an independent study in your lab besides encouraging the student to present or publish their work.

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Service activities demonstrate that you are a team player. These activities offer insight into how departments and committees really work. Acknowledging these goals but keeping in mind the need to complete your degree in a timely manner, consider participating in committees in which you do not over-invest yourself and/or is too time-consuming. Service to graduate student council is an excellent social networking opportunity.

In brief, there are many highlights to a career in academia. If you have done your background preparation and are committed to your goals, you can build a fulfilling career in academia.

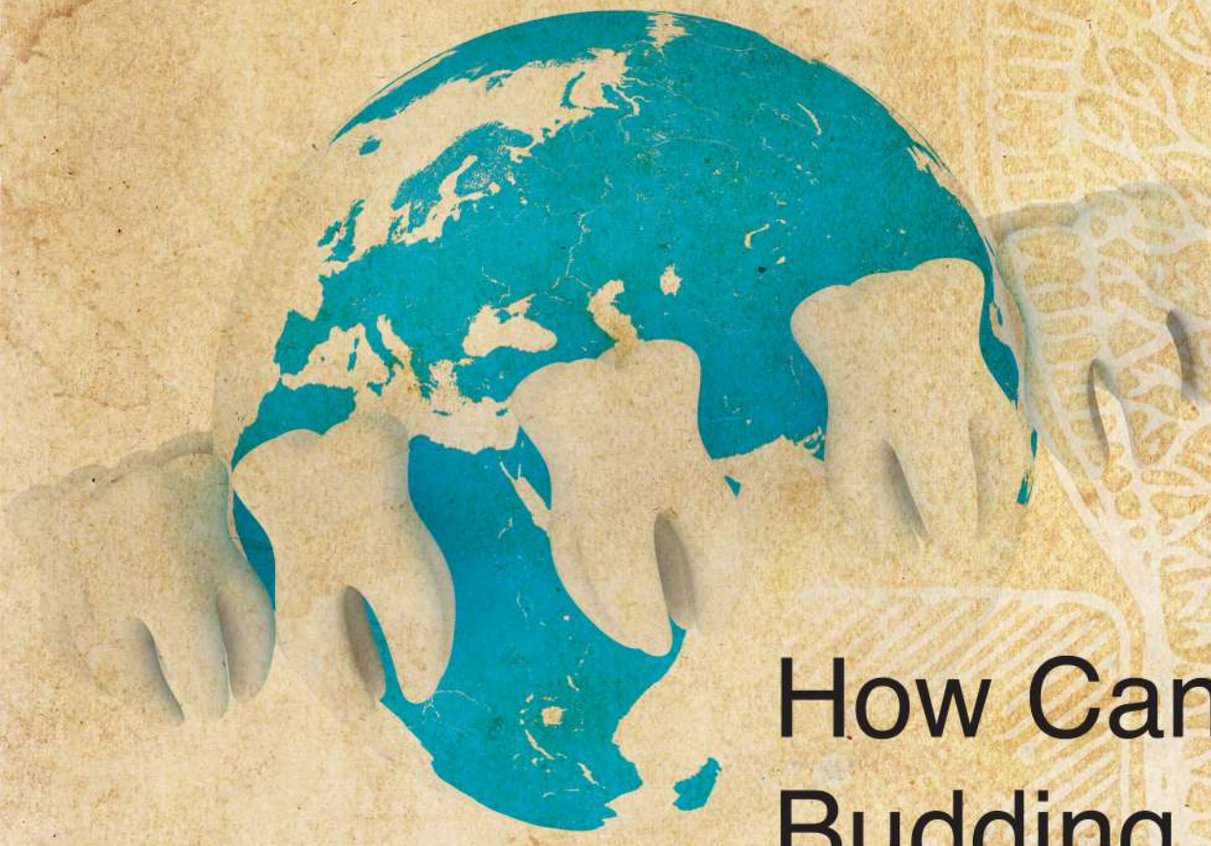
For further reading:

• Adam Chapnick, Do's and don't's to land an academic job interview-University Affairs, 22 2010.

• Paul Gray, David E. Drew, What They Didn't Teach You in Graduate School, 2nd edition, Stylus Publishing, 2008.

•https://navigate.aimbe.org/find-your-dream-job/career-pathways-in-bioengineering/career-paths-in-academia/

INDIAN
ENDODONTIC
SOCIETY



How Can Budding Indian Endodontists Forge a Career Overseas?

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Official Newsletter of Indian Endodontic Society

INDIAN ENDODONTIC SOCIETY

Overseas Endo

Dr Abhishek Parolia

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Associate Dean, Postgraduate,
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How Can Budding Indian Endodontists Forge a Career Overseas?

Endodontics is one of the most rewarding branches in Dentistry that gives a sense of satisfaction to a clinician providing endodontic treatment to their patients by improving their oral and overall health. Over the past few years, we have seen an increasing trend of Indian dental graduates opting to be Endodontists. After finishing the post graduate degree entitled 'Master of Dental Surgery (MDS) in Conservative Dentistry and Endodontics', many lucrative opportunities may open for graduates in India as well as overseas. As an Endodontist, you have the options to practice as a full-time clinician in the government/private clinics or hospital settings, as an academician in dental schools or as a researcher/clinical scientist in research based dental organisations. However, when it comes to working overseas, these roles need to comply with policies and guidelines for fitness to practice along with recognition and accreditation of basic and master dental degrees in the foreign country.

The Malaysian Dental Council recognises the Bachelor of Dental Surgery (BDS) and MDS degree from few Indian dental schools that enables Indian Endodontists to work as dental faculty in a Malaysian Dental School. However, new guidelines suggest that any candidate applying for a dental faculty position in Malaysian dental school will need to appear for the Professional Qualifying Examination (PQE) consisting of three parts including theory examination, pre-clinical examination; and clinical examination.

A foreign dental faculty in Malaysia is allowed to teach at the preclinical/clinical settings and may have limited licence to practice/treat patients within the Dental school's premises. Furthermore, the dental faculty can advance their career as a researcher/clinical scientist and in administrative roles within the dental school/university. Additionally, Malaysian dental schools may also provide opportunities to a foreign dental faculty to pursue PhD while working. Such provision requires the consent of the head of the dental school and is governed by the university policies.

Overseas Endo

Similarly, universities in Hong Kong and Singapore also recognise foreign Endodontists to work as an academician/researcher/clinical scientist but prefer candidates with PhD, strong curriculum vitae (CV), and focussed research niche area. Other East Asian and Southeast Asian countries may also offer a dental faculty position to Indian Endodontists and prioritize candidates with PhD degree and robust CV. Such positions however require proficiency in the native language in addition to compliance regulatory requirements.

Indian Endodontists may find Middle East more lucrative to practice as a full-time clinician in a private and government setting. However, each country in the Middle East has their own legal requirement to get a government-issued license before engaging in professional practice. For example, Dubai Health Authority (DHA) exam in Dubai, Health Authority of Abu Dhabi (HAAD), now called Department of Health (DOH) exam in Abu Dhabi, Qatar Prometric Exam in Qatar, Saudi Dental Licensure Exam (SDLE) in Saudi Arabia, Kuwait Dental Licencing Exam (KDLE) in Kuwait and Ministry of Health (MOH) exam etc. Like Malaysia and Hong Kong, dental schools/universities in the Middle East also provide the opportunity for foreign trained Endodontist with impressive CV and holding PhD degrees to work as a dental faculty/academician/researcher/clinical scientist.

Indian Endodontists do have the prospects to work as dental faculty in the dental schools and universities across the globe including Australia, New Zealand, United States of America (USA), Canada, and United Kingdom (UK). Once again, candidates with PhD and strong CV complying with their respective dental council's regulations and requirements for licensure are preferred.

Indian Endodontists may also pursue PhD or Postdoctoral in various countries across the globe. A candidate needs to identify the key area of research interest and recognise the resource person who can be a potential supervisor. The research funding and quality of research proposal play a crucial role in the application process in addition to the CV, basic research skills and proof of previous work done by the candidate.

Lastly, Endodontists can also venture out their career in medical/dental education. Getting specialisation in medical education can enhance their job perspectives in foreign universities. Many universities in USA, UK, Europe, Malaysia and Singapore offer certificate, master, doctorate degrees in medical education.

In conclusion, there are many options for Indian Endodontists to explore their career pathways. However, it requires clear goals with well executed planning along with appropriate guidance, and dedication to achieve.

INDIAN
ENDODONTIC
SOCIETY

Courting controversy in Endo

IES TIMES
Official Newsletter of Indian Endodontic Society

INDIAN
ENDODONTIC
SOCIETY

Courting controversy in Endo

Practice of Endodontics majorly revolves around prevention and treatment of pulpal infections. Although the strategies followed for treatments are usually evidence based, but, due to development of technology and advancements in material science newer concepts are being floated and practiced for the management of diseases. This section highlights the opinion of three endodontists on one presently existing controversy, "Traditional vs Conservative Access cavity" for which differences of opinion still prevail in the field of Endodontics.

Prof. Dr. Jojo Kottoor MDS

Professor, Royal Dental College, Kerala
Restorative Dentist & Endodontist
Proprietor, Root Canal Point, Kochi

Minimal Endodontic Access Cavity: Our Future Destination

For more than six decades (1950-2010) there was not much change in the principles of access cavity designs. More than tooth conservation, the traditional access cavity was fundamentally designed to satisfy the primary objective of root canal treatment, three-dimensional disinfection. This objective was achieved by making a large opening into the pulp chamber to provide operator convenience. Accordingly, the operator gets some inherent advantages, such as enhanced visibility, improved exploration of the pulpal floor, etc. Additionally, radicular access was also recommended using gates-glidden drill and Ni-Ti orifice openers facilitating cleaning, shaping and obturation.

Tooth fracture of endodontically treated teeth is suggested to be directly related to the quantity of tissue lost. Traditional access cavity designs disregarded the need to preserve sound toothstructure to allow the long-term function of the tooth (Dietschi et al. 2007). In addition, radicular access with orifice shapers can compromise the integrity of Peri-Cervical Dentine (PCD). No surprise that tooth fracture was reported to be one of the most frequent reasons for endodontic failure.

INDIAN
ENDODONTIC
SOCIETY

Courting controversy in Endo

In endodontology, minimal invasiveness is defined as the process of achieving the primary objectives of root canal treatment by removing and replacing as little tissue as possible (Gianluca 2021). Hence, these modern access cavities not only aim to achieve better treatment outcome but also the long term retention of the natural teeth (Ericson 2004). However, these minimally invasive conservative access cavities can compromise disinfection of the pulp chamber, increase the risk of missed canals/untouched canal walls, increased stress on the mechanical files, compromise irrigant penetration, dampening of ultrasonic energy, complicate root canal obturation and coronal restoration (Gianluca 2021). In addition, it can increase the time span of the treatment to unacceptable levels. Moreover, repeatability, predictability and teachability of minimally invasive conservative access cavities are questionable.

The benefits and the possible drawbacks of minimal invasive conservative access cavities have become the topic of debate among clinicians, academicians and researchers. All the above mentioned drawbacks can be overcome with the help of new cutting edge technological advancements coupled with enhanced operator training.

The current technological advancements that enable the process of tissue preservation in endodontics can be summarized as follows:

- Dental operating microscopes
- Limited FOV, high resolution CBCT imaging
- Sharp and precise cutting burs
- Image-guided endodontic access
- Ultrasonic / Sonic tips and devices
- Heat treated flexible/resistant controlled memory files with lesser taper
- LASER activated irrigation (PIPS, SWEEPS) and GentleWave® system
- Optimised nanoparticle based disinfection
- Injectable bioceramic obturation materials
- Precision in dual-cure adhesive dentistry protocols

With advancement of technology and material science, our understanding of what is considered as a present day norm could very much become inadequate and even incorrect in the future. That's the nature of science and research; concepts, materials and techniques will change over time. I personally believe that in the future, endodontics will be performed in a biomimetic and minimally invasive manner. In spite of the many present day challenges and the fact that many amongst us lack the belief or are outright against minimal invasive conservative access cavities, I believe it to be a certainty of the future.

INDIAN ENDODONTIC SOCIETY

Dr. Agam Bhatnagar, MDS
CEO Etica Hospital
Director EEducation.in
Micro-Endodontist

Is New Always Better?

"Minimal invasion" has been the new emerging theme, common to the evolution of all branches of medicine. To replace an existing protocol, any new technique must demonstrate a reduction in the previously documented side effects, while establishing superiority/maintaining equivalence of outcomes. This burden of proof must be satisfied using standardised laboratory experiments that can eliminate bias while maintaining adequate internal validity and reliability. The data from these studies must serve as a stepping stone to clinical studies that assess real world outcomes, rather than their blind extrapolation.

The contracted endodontic accesses (Conservative, Truss & Ninja) are examples of minimal invasion in the field of Endodontics. The original premise of the technique was based on preserving the pulp chamber roof and the pericervical dentin with the consequent improvement in tooth survival (Clark and Khademi, 2010).

Despite the concept not being tested until four years later (Krishan 2014), the idea found 'viral' popularity on social media, with radical designs (Ninja and Truss) being showcased much before any scientific evidence could back/ refute them. In fact, there was no attempt to standardise/define these accesses until as recent as two years ago (Isufi, 2020) (Silva 2020) (Shabbir, 2021).

Recently, Silva et al have regarded the original concept as an "opinion-based narrative" with the authors Clark and Khademi "assuming" an increased resistance to fracture, without offering any experimental proof for the same (Silva EJNL et al, 2022).

Evaluation of available evidence suggests the current support for the contracted accesses stems from the results of the initial studies on fracture resistance. Supporters profess the merits based on the results of early studies like Plotino et al (2007), Krishan et al (2014) and subsequent works like Makati et al (2018), Abou-Elnaga et al (2019), Karobari et al (2021), Marinescu et al (2020), Saberi et al (2020) and Santosh et al (2021). These studies found different minimal access preparations to have more fracture resistance than traditional ones.

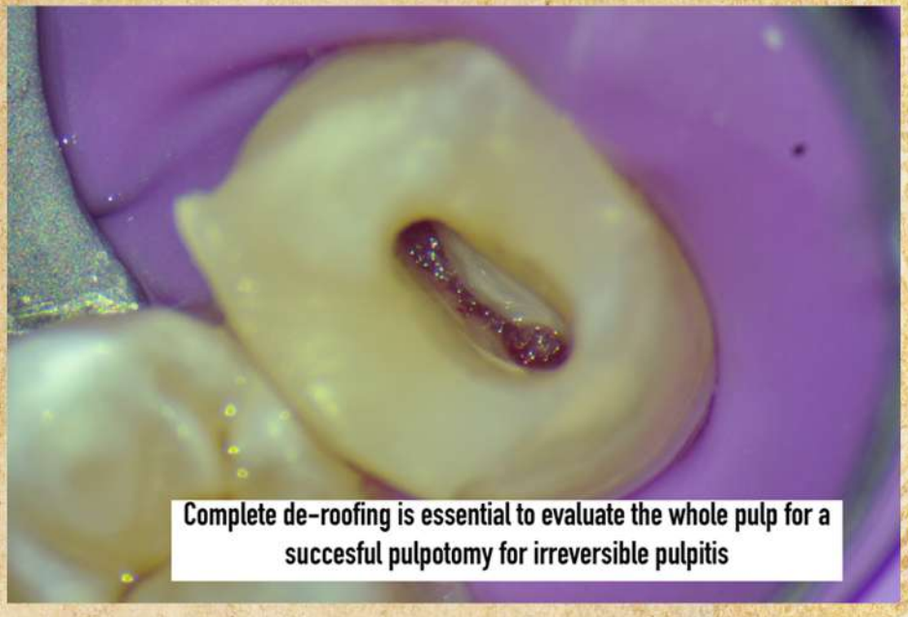
However, with the introduction of Micro-CT in endodontic research, the trustworthiness of the results of these studies has been recently questioned (Silva et al, 2022). The authors point out the incorrect use of conventional radiographs and/or external tooth measurements for specimen allocation (instead of pair-matching of extracted teeth using micro-CT) in all these studies. This flaw in study design may invalidate the results. It is not surprising that several subsequent studies using Micro-CT imaging found no difference in the fracture resistance of different types of access openings (Rover et al 2017, Silva et al 2020, 2021, Augusto et al 2020, Barbosa et al 2020, Lima et al 2021, Pereira et al 2021, Rover et al 2020 and Xia et al 2020).

Furthermore, several of these studies had samples with either unfilled canals or unrestored crowns (Ivanoff et al 2017, Krishan 2014, Mustafa 2020, Sabeti 2018). Results of such studies cannot be extrapolated to a clinical scenario since they fail to account for the regaining of fracture resistance as a result of canal filling (Sandikci and Kaptan 2014), restoration (Hamouda and Shehata 2011) and full coverage crowns (Tan 2005) which are anyways needed in most teeth because of cuspal and ridge compromise due to caries.

Thus, as on date, the very premise of "increased fracture resistance" for contracted access cavities lacks the foundation of both experimental and clinical evidence (Silva et al 2020). In the absence of this previously perceived benefit, the potential compromise in the fundamental principles of root canal therapy (orifice location, canal cleaning, disinfection, restoration) caused by a contracted access cannot be justified. Studies evaluating these parameters have either found contracted accesses to be inferior to traditional ones (Restoration: Rover et al 2020, Lima 2021; Disinfection: Vieira 2020; Neelakantan 2018, Shaping: Zhang 2019) — or equivalent at best (Rover et al 2017, 2020; Shaping: Barbosa 2020). No study till date has shown any superiority of the contracted accesses over traditional ones in terms of endodontic outcomes.

While availability of CBCT, microscopes, ultrasonics and modern NiTi may make it "possible" for skilled clinicians to achieve these openings, the lack of additional benefits invalidates the extra time spent (Niemi et al 2016) and steep learning curves. Without these resources, any attempt to achieve such an opening (due to social media peer pressure) risks iatrogenic errors and compromised treatment.

The buzz around these openings has deviated the focus from the more promising aspects of minimal invasion. Changed understanding of pulpal disease has placed full and partial pulpotomy as a potential replacement of pulpectomy for irreversible pulpitis (Ricucci D et al 2016, 2019; Taha et al 2018). These studies have shown a direct correlation between clinical presentation and histological picture. This allows for the selective resection of necrotic and inflamed pulp while preserving healthy pulp, under magnification. Such procedures require careful evaluation of the whole pulp (including pulp horns and sometimes below orifice level) in order to establish the correct level of resection. The visualisation needed cannot be accomplished through contracted access openings. The 'root-sparing' nature of the procedure makes this a far more conservative option as compared to the traditional pulpectomy. This advantage alone should supersede any argument against using a traditional access to achieve this end. The author (AB) at Etica Hospital and Research, Gurgaon has documented a 55% reduction in use of Pulpectomy as a treatment for teeth with irreversible pulpitis in the last one year in the favour of Pulpotomy — with a new modified protocol (manuscript ready) showcasing higher than usual success rates.



Complete de-roofing is essential to evaluate the whole pulp for a succesful pulpotomy for irreversible pulpitis

This evidence-based analysis above must not be misconstrued as an argument against conservation of tooth structure. It is possible to de-roof the chamber completely so as to not compromise endodontic outcomes — and yet, no more than is absolutely necessary.

In conclusion, the "modern access" needs to be driven by evidence and not social media. Future study designs on the topic must account for a scientifically valid assessment. It is high time that such trends be brought down from opinion-based pedestals and subject to the standards of scrutiny befitting an evidence based scientific specialty, that Endodontics today is.

INDIAN ENDODONTIC SOCIETY

Prof (Dr) Kanwalpreet Kaur Bhullar MDS
Professor and HOD
Sri Guru Ram Das Institute of Dental Sciences and Research
Director of Bhullar Dental Clinic

Traditional access vs. Conservative: The Current Status

In the past years, medicine has evolved with advancement in system engineering, imaging technology and guidance for surgical procedures, so has dentistry in many ways specifically in imaging systems, tools and magnification which aims to the preservation of tooth structure in every possible way. An important zone in preservation of dentin during endodontic access preparation is the pericervical dentinal (PCD) which is essential during functional loading stress, and acts ostensibly to minimize cuspal flexion during mastication. This led many researchers and clinicians to challenge the traditional access cavity design and compare it to the new conservative designs.

However, removal of the remaining carious dentine and defective restorations in an endodontic cavity preparation is necessary to visualize pulp chamber floor and identify root canal orifices which has been achieved accurately by traditional access since decades. It enables the clinician to correctly shape and position the outline form to establish complete access for instrumentation, from cavosurface margin to apical foramen endorsing the fact that "a proper access leads to a higher success".

With newer designs of cavity preparation, different terms were introduced to justify each cavity design. Although, they are mostly contracted cavities, forty different terms have been proposed to define them (Isufi et al, 2020), but still the confusion pertains making the nomenclature difficult to communicate amongst the present and upcoming clinicians.

The modern perspective changes cannot change the truth about the historical traditional access cavity design. It not only helps to visualize the chamber in a better way, but also increases overall disinfection as it helps in the proper debridement of pulpal tissue. According to Neelakantan et al. (2018), mandibular molars with Truss Access Cavity prepared using rotary instruments had greater amount of pulp tissue retained in the pulp chamber than Traditional Access Cavity probably because the remnants of the pulp chamber roof interfered with the flow of the irrigant solution delivered using conventional syringe irrigation. Ultraconservative Access Cavity was also associated with greater amounts of accumulated debris in irregular areas of the canal system (Lima et al., 2021; Silva et al., 2020a) or even extruded through the apical foramen (Tüfenkci et al., 2020) than Traditional Access Cavity.

Contracting the size of the access cavity leads to high torsion forces on the instruments as it has to negotiate acute canal angulations due to the coronal interferences. Studies by Silva et al., 2021a, Spicciarelli et al., 2020 et al have shown that instruments used in teeth prepared with minimally invasive access cavities were associated with less cyclic fatigue resistance values than in teeth with Traditional Access Cavity as the greater maximum angle of canal curvature increased the level of stress along the active part of the instrument (Pedullà et al., 2018, 2020), increasing the chances of instrument fracture. Another disadvantage of minimal access preparation is the canal transportation, which results in major deviation of the original canal anatomy. Alovisi et al. 2018 observed that the maximum angle of curvature was higher in teeth with conservative access than the conventional access causing excessive pressure of the instrument against the outer aspect of the root canal curvature, increasing the risk of transportation and other iatrogenic errors during canal shaping.

Minimal access cavity can lead to higher cervical stresses, whereas the traditional access cavities transmit the stresses to an apical direction. Therefore, the conservative access preparation does not improve the fracture resistance of the tooth in a considerable manner (Krishan et al.11) and there is no advantage of conservative access cavity design over traditional design in terms of fracture resistance in anterior teeth.

Overall, the minimal access does not influence the quality of root canal filling or the fracture resistance as compared to the conventional access, but results in more debris after preparation, remnants in the pulp chamber, voids in obturation and increased overall time required to perform the endodontic treatment. Conservative design cavities require highly flexible instruments, investigations like CBCT, micro CT, magnification equipment, newer dental materials, thus raising the overall treatment cost and difficulty for the beginners to master the technique. There are minimal chances of operator error in traditional access cavity preparation which at present has a more consistent and well taught protocol.

There has been a considerable research and debate on conventional versus the conservative access cavity designs and in the current scenario, the benefit of minimal access cavities is not clear cut, therefore it should not be advocated as being superior to the traditional approach. We need more randomized controlled trials, standardized in vitro studies mimicking closely intra oral conditions such as moisture control, thermal stresses, enzymatic reactions, variable forces, bacterial biofilm activity, etc to prove the benefit of one design over the other. There is a long way to go in research for this "hot' topic of endodontics which forms the very basis of endodontology.

Thus, keeping in view the above facts, though there is an opposition to the traditional access, it remains to be the cavity design of choice for overall success of the root canal treatment. It is best to deliver time tested treatments to the patients and wait till the newer concepts prove themselves to be biologically and economically beneficial to the clinician and patients.

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Endodontic Showcase

IES TIMES
Official Newsletter of Indian Endodontic Society

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Role of statin on bone regeneration in periapical lesion – a case report

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Tamil Nadu Government Dental College and Hospital

INTRODUCTION

The ultimate goal of wound healing is to reconstitute the original architecture and biological function of the injured tissue. Traditionally, Surgical approaches for treating the periradicular defects includes debriding periapical lesions along with reshaping of the surrounding bone where healing is mostly done by Repair mechanism[1]. Thus, attention has now shifted towards regenerative approaches that aim to restore lost tissue. Regeneration is reproduction or reconstitution of a lost or injured part without any scar and various bone substitutes are being used to achieve regeneration of the bone and optimal healing[2]. Statin is a specific Inhibitor of 3-hydroxy-3-methylglutaryl coenzyme A reductase, a rate-limiting enzyme in cholesterol synthesis. Statin has certain pleiotropic effects including an anti-inflammatory effect, improves angiogenesis and promotes vascular endothelial cell function[3]. Simvastatin and atorvastatin with α – Tricalcium phosphate were found to be effective in inducing dentin bridge formation which was comparable to Mineral Trioxide Aggregate (MTA)[4]. This case report represents the regeneration potential of statin when placed in periapical lesions.

CASE REPORT

A 20 years old female patient reported to our department with chief complaint of pain and tooth discolouration with pus discharge from labial marginal gingiva in upper front teeth for past 2 years. Patient gave history of trauma before 5 years. On clinical examination (fig. 1) tooth 21 showed mild discoloration, was tender on percussion and failed to respond to pulp sensitivity tests. Intra oral periapical radiograph (fig. 1) revealed periapical radiolucency measuring about 6.9 x 10 mm in relation to 21and 22. The medical history of the patient was non-contributory. The diagnosis was pulp necrosis with chronic periapical abscess in relation to 21and 22. Treatment plan was root canal treatment in relation to 21 and 22 followed by periapical surgery.

CASE DESCRIPTION

Root canal treatment was completed in 21 and 22. Extra-oral and Intra-oral antisepsis was performed with 5% povidone iodine and 0.02% chlorhexidine (CHX) rinse. Under local anaesthesia, crevicular incision was placed on labial surface extending from 11 to 22 using BP blade No.15 and full thickness mucoperiosteal flap was reflected using periosteal elevator (fig. 2). After reflection of flap and exposure of osseous defects, a thorough surgical debridement was done. Root end was resected and retrograde filling was done with GIC (GC Fuji IX GP) (fig. 3). The periapical defect was filled with 1.2% Simvastatin which was prepared by coacervation phase separation method with collagen fibres which were obtained commercially (Hemocoll, Advanced Biotech Products Ltd) (fig 4).

The mucoperiosteal flap was then repositioned and sutured. Post-operative instructions were given. Using cone beam computed tomography (CBCT), bone density evaluation was done before surgery, 6 months and 1 year after surgery and grayscale values were obtained. At the end of 6 months and 1 year, the post-operative bone density grayscale values were higher than pre-operative bone density values (fig. 5).

DISCUSSION

Suppression of the enzyme 3-hydroxy-3-methylglutaryl coenzyme A (HMG-CoA) reductase and the resultant obstruction of the mevalonate pathway is probably the most important mechanism of prevention of bone resorption by statin. Simvastatin upregulated Alkaline phosphatase (ALP) activity and mineralization and supports Bone morphogenetic proteins (BMP) induced osteoblast differentiation by antagonizing Ras/Rho/MAPK pathway. It also augments BMP-Smad signalling which ameliorates inflammation[4]. Apart from cholesterol, there are a number of other products of this pathway. These include compounds referred to as isoprenoids, which are primarily responsible for the prenylation of guanosine triphosphate (GTP)-binding proteins, and involved in cytoskeletal function and vesicular trafficking[5].The successful use of statins to promote bone formation in vivo depends on the local concentration, and there have been continuous efforts to find an appropriate delivery system. An appropriate carrier should be biocompatible, nontoxic, biodegradable, and bioactive, should localize and retain the molecule to the site of application, should serve as a matrix and substrate for cell filtration, cell growth, and differentiation. Collagen based controlled delivery of statins achieves the goal of tissue engineering by replacing tissue transplantation with implantation of constructs which stimulates endogenous regeneration and repair[7].

CONCLUSION

For regeneration of Periapical bone defect, 1.2% SIMVASTATIN + COLLAGEN was found to be more effective and collagen proved to be an effective scaffold system which will be a valuable option for biomaterial-based delivery of pro-osteogenic drugs in periapical bone defects.

Fig.1: Preoperative photograph and radiograph

Fig. 2: Flap elevation

Fig.3: root end resection and retro filling

Fig.4: Placement of 1.2% Simvastatin + collagen

Fig.5: CBCT evaluation (grayscale values)

REFERENCES:

1. Bashutski JD, Wang HL. Periodontal and endodontic regeneration. J Endod 2009:35 (3);321–328.
2. Glossary of Periodontal Terms. American Academy of Periodontology, Chicago, Ill, USA, 2001.
3. Mundy G, Garrett R, Harris S. et al., Stimulation of bone formation in vitro and in rodents by statins, Science 1999;286(5446):1946–1949.
4. Varalakshmi PR, Kavitha M, Govindan R, Narasimhan S. Effect of statins with α-tricalcium phosphate on proliferation, differentiation, and mineralization of human dental pulp cells. J Endod 2013;39(6):806-812
5. Mahendran K, Ponnusamy C, Maloor SA. Histological evaluation of pulpal response to direct pulp capping using statins with α-tricalcium phosphate and mineral trioxide aggregate in human teeth. J Conserv Dent 2019;22:441-448.
6. Martande SS, Kumari M, Pradeep AR. et al, Comparative evaluation of efficacy of subgingivally delivered 1.2% Atorvastatin and 1.2% Simvastatin in the treatment of intrabony defects in chronic periodontitis: a randomized controlled trial. J Dent Res Dent Clin Dent Prospects 2017;11(1):18-25.
7. Parmar PD, Dhamija R, Tewari S et al, 2D and 3D radiographic outcome assessment of the effect of guided tissue regeneration using resorbable collagen membrane in the healing of through-and-through periapical lesions – a randomized controlled trial. Int Endod J 2019;52:935–948.
8. Nowicka A, Wilk GZ, Lipski M, Ko1ecki J, Buczkowska-Radlinska J. Tomographic Evaluation of Reparative Dentin Formation after Direct Pulp Capping with Ca(OH)2, MTA, Biodentine, and Dentin Bonding System in Human Teeth. J Endod 2015;41: 1234–1240.
9. Gupta S, Del Fabbro M, Chang J. The impact of simvastatin intervention on the healing of bone, soft tissue, and TMJ cartilage in dentistry: a systematic review and meta-analysis. Int J Implant Dent 2019 Apr 9;5(1).
10. Degala S, Bathija NA. Evaluation of the Efficacy of Simvastatin in Bone Regeneration after Surgical Removal of Bilaterally Impacted Third Molars—A Split-Mouth Randomized Clinical Trial. J Oral Maxillofac Surg 2018;76(9):1847-1858.

INDIAN ENDODONTIC SOCIETY

Endo Hacks

To prevent unfriendly working environment with Rubber dam sheet:

During the course of endodontic therapy under rubber dam isolation, whenever a need for radiograph arises, removing the dam frame to take radiograph is the usual practice.

However, this majorly leads to soaking of dam sheet in saliva (Fig-1) and produces an unfriendly environment to the operator during post-radiograph period. In order to avert such hostile working environment, tying the dam sheet with a rubber band (Fig-2) or securing it with a radiographic clip extra-orally would be the key. If secured with radiographic clip, care should be taken to remove them while taking radiograph as metal clip might have an image interference.

Fig 1: Dam sheet soaked in saliva in-between the endodontic procedure producing an unfriendly working environment.

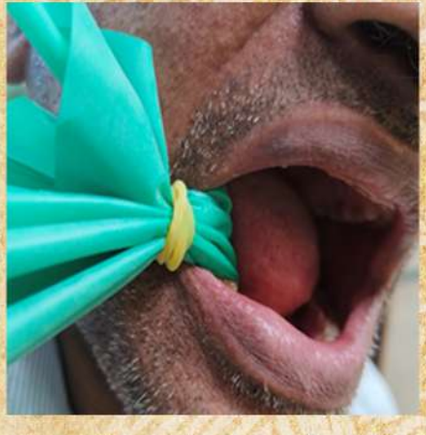

Fig 2: Tying the dam sheet with a rubber band to avoid soaking of saliva in-between the endodontic procedure for radiographic purposes

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Sri Venkateswara Dental College and Hospital

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Accolades and Laurels

IES TIMES
Official Newsletter of Indian Endodontic Society

JOE Publication Awards

1. Dr. Nandani Suresh, Dr. HJ Subbarao, Dr. Velmurugan N and Dr. Anil Kishen bagged JOE Case Report : Clinical Technique award 2021 for their case report on Maxillary Anterior Teeth With Extensive Root Resorption Treated With Low-level Light-activated Engineered Chitosan Nanoparticles.

Dr. Nandini Suresh

Dr. Velmurugan N

Dr. Anil Kishen

2. The JOE award for Clinical Research was awarded to Dr. B Koli, Dr. Amrita Chawla, Dr. Ajay Logani, Dr. V Kumar and Dr. S Sharma for clinical research on Combination of Nonsurgical Endodontic and Vital Pulp Therapy for Management of Mature Permanent Mandibular Molar Teeth with Symptomatic Irreversible Pulpitis and Apical Periodontitis.

Padma Bhushan
(Hony) Brig. Dr. Anil Kohli

- Was Invited to speak on Trilateral Summit organised by World Humanitarian Drive at London.
- He also received British Regal Award at Royal Society of Arts London on 15 September 2022 from President of Trinidad from World Humanitarian Drive.

Col (Dr) Sonali Sharma

- Selected by Rashtrapati Bhawan as 'the Endodontist' to treat President of India, His Excellency Shree Ram Nath Kovind.
- Received Chief of Army Commendation Award.
- Recipient of 02 International Awards
    a. IADR Centennial Awards 2022.
    b. IADR GC Centennial Research Award 2022

INDIAN ENDODONTIC SOCIETY

What Next.....

The 13th IFEA World Endodontic Congress will be hosted by the Sociedad De Endodoncia De Chile in Santiago, Chile, November 9-12, 2022.

Registration Area

Registration info

Registration info

Online Registration

Online Registration (PDF)

REGISTRATION FEE	EARLY BIRD (UNTIL 15/04/2022)	REGULAR REGISTRARION (01/04/2022 - 31/08/2022)	PRE - REGISTRATION (01/09/2022 - 06/11/2022)	AT HEADQUARTERS
IFEA Members	350 USD*	390 USD	490 USD	520 USD
Members of entities that provided scientific support	420 USD*	420 USD	510 USD	570 USD
Non-IFEA Members	480 USD	480 USD	550 USD	630 USD
Student / Graduate Student	300 USD*	320 USD	350 USD	380 USD
Companions	250 USD	250 USD	250 USD	250 USD

Once you have completed the registration form your fee is confirmed, in the course of the previous days the Technical Secretariat will verify the payments and send a confirmation e-mail.

IFEA members: you can consult the member countries at the following link https://www.fiaendo.org/about-us/membership-roster/ , it will be necessary to send proof of membership of the society to which it belongs to the mail registration@ifea2022santiagodechile.com in order to respect the value of the registration.

*VAT included

* Registration can be done online.

For more details kindly login to : www.ifea2022santiagodechile.com

1st Asian Regional Congress of Dental Traumatology has been scheduled to be held in the ancient city of majestic Taj Mahal- the symbol of eternal love. This will be the biggest event of Dental Traumatology in 2022 and first ever joint scientific event of the Indian Society of Dental Traumatology (ISDT) and International Association of Dental Traumatology (IADT).

Categories	Early Bird (Till 30th Sept 2022) Indian	Early Bird (Till 30th Sept 2022) International	1st Oct to 30th Nov 2022 Indian	1st Oct to 30th Nov 2022 International	Spot Indian	Spot International
Students						
IADT + ISDT Member*	7500+1350 GST	120 USD	8500+1530 GST	130 USD	9500+1710 GST	150 USD
IADT / ISDT Member**	8500+1530 GST	130 USD	9500+1710 GST	150 USD	10500+1890 GST	165 USD
Non Member***	9500+1710 GST	170 USD	10500+1890 GST	190 USD	11500+2070 GST	205 USD
Dentists						
IADT + ISDT Member*	8500+1530 GST	130 USD	9500+1710 GST	150 USD	10500+1890 GST	165 USD
IADT / ISDT Member**	10000+1800 GST	160 USD	11000+1980 GST	170 USD	12000+2160 GST	190 USD
Non Member***	11000+1980 GST	200 USD	12000+2160 GST	210 USD	13000+2340 GST	230 USD
Accompanying Person	5000+810 GST	75 USD	5000+810 GST	75 USD	5000+810 GST	75 USD

*Delegates having membership of both IADT and ISDT benefit from the lowest conference registration fee
** The Fee of IADT Members and ISDT Members are equal
*** For Non members, the Fee of Indian delegates is different from International Delegates

18% Goods and Services Tax (GST) has been mentioned with the Fee in Indian Rupees. The Fees in US Dollars is inclusive of all taxes, transfer and conversion charges
Registration fee includes entry to the Scientific Sessions, Scientific Presentations, Tea/Coffee and Lunches at The Taj Convention Centre, Agra and a Delegate Gift
The Accompanying Person Fee includes Tea/Coffee and Lunches at The Taj Convention Centre, Agra on 17th and 18th December 2022

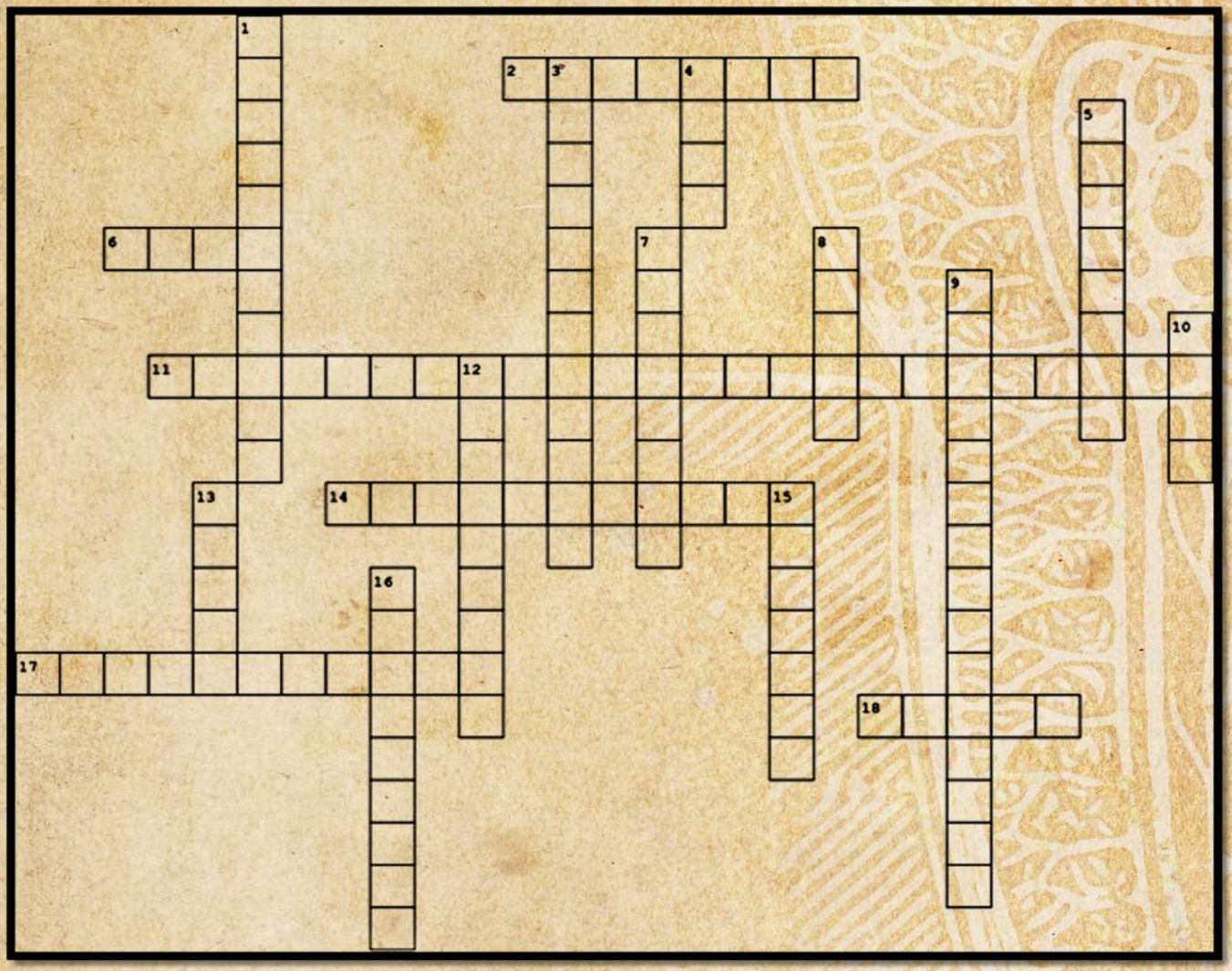
- IADT Membership Annual Fees: LDC countries: Students- USD 50, Dentists USD 120:: Other countries: Students- USD 75, Dentists USD 235
- IADT offers several membership benefits such as IADT's Fellowship, Lecture packages, Dental Traumatology Journal and special rates at the events
- ISDT Membership: A non member can enroll for ISDT Life membership (INR 5900/-) at www.isdt.in, for availing the special rates and benefits

Social Programs-ISDT-IADT Reception on 16th December 2022 (entry by invitation only), The "Taj" Banquet (Entry tickets to be purchased)
Visit to Taj Mahal, Post Congress Tours (to be pre-booked/arranged with travel partner)

ESE congresses are well known as exceptional meetings that combine the clinical science and practice of Endodontics with the underpinning biological and materials sciences. ESE biennial congresses normally include pre-congress courses and workshops, a range of lectures and symposia, a comprehensive trade show as well as exceptional social events.

INDIAN ENDODONTIC SOCIETY

ENDO-CROSS-O-MANIA



Across

2. Gave mountain pass theory in 1939
6. An undesirable side-effect of shaping procedures, first described by Pague
11. Biomarker associated with inflamed state of pulp
14. Property of biofilm to self organize themselves
17. Surgical removal of one root and overlying crown
18. Fine alternating hyperdense and hypodense stripes appear to be radiating from the edge of the volumetric data in a CBCT image

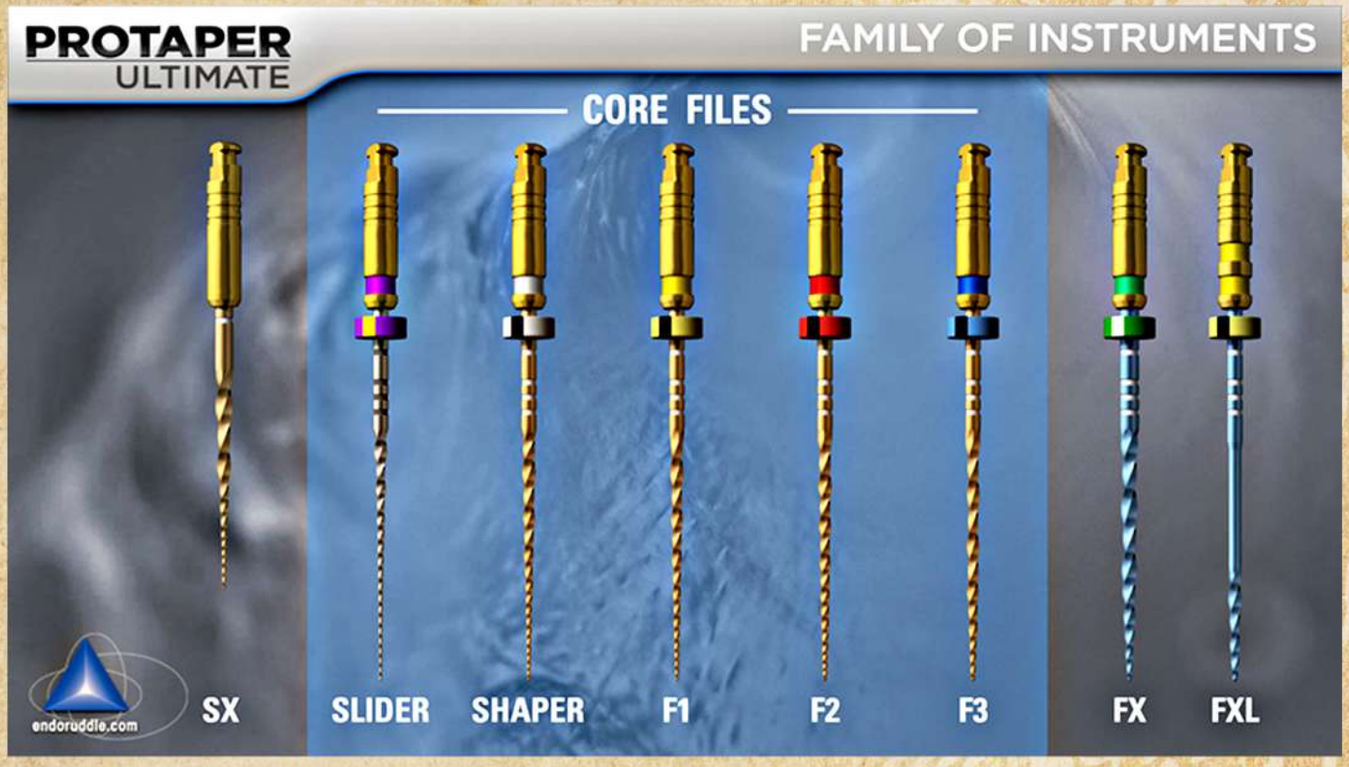
Down

1. A calcified tissue formed due rapid deposition of secondary dentin with entrapped odontoblasts
3. The term that focuses on formation of new tissue reproducing both the original anatomy and function
4. Described the different vehicles for administration of calcium hydroxide
5. Another name for injectable scaffolds
7. A natural biodegradable scaffold simulating ECM of dentin
8. The type of laser that operates at a wavelength of 488nm
9. Species that survives in non favourable environment and is frequently isolated from obturated teeth
10. The year rubber dam was developed
12. The concept of single visit endodontics is based on this theory
13. Orifice-directed dentin conservation access cavity
15. Irrigator used in microsurgical procedures
16. Pliers used for the retrieval of silver points

INDIAN ENDODONTIC SOCIETY

The Debutante....

PROTAPER ULTIMATE FILE SYSTEM



Dentsply has always been at the forefront of innovative file systems that have revolutionized the cleaning and shaping procedures. 2022 has seen the launch of the ProTaper ULTIMATE file system in which there are 5 "CORE FILES" and 3 auxiliary files. Some of the key features highlighted by the manufacturer are an Innovative, File-Specific Heat Treatment featuring M-wire, Gold-wire and Blue-wire, changing cross- section, a proprietary alternating offset machining (AOM) process, reduced file separation and a Deep shape concept. In the Deep Shape concept, the Core Shaper files dominantly prepare the coronal two-thirds of a canal, while the Core Finisher files serve to increase the terminal diameter and apical one-third taper of a canal without needlessly further enlarging the body of the same canal. This Deep shape provides a greater fluid volume, improving the potential to actively exchange a reagent. It also serves to safely confine irrigant within the preparation while creating a capture zone for controlled 3D filling.

https://www.dentsplysirona.com/en-us/discover/discover-by-brand/protaper-ultimate-solution.html.

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The Debutante....

EdgePRO Laser-Assisted Microfluidic Irrigation device(Edge Endo)

Cleaning and disinfection procedures have been one of the core essentials of successful Endodontics. Among the vast array of irrigants and devices which are currently being used for irrigation and disinfection procedures, Lasers have shown promising results. One such Laser device launched this year is the EdgePRO Laser-Assisted Microfluidic Irrigation device. It is designed for endodontic procedures for cleaning and disinfection. It utilizes BIOLASE's Er,Cr:YSGG 2780 nm wavelength technology. This laser technology can be used for debridement, cleaning, and disinfection for root canal procedures. It uses laser light-sound technology paired with irrigation to do this.

BIOLASE and EdgeEndo have announced the U.S. Food and Drug Administration (FDA) clearance of EdgePRO.

https://www.biolase.com
https://www.edgeproendo.com

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EDITORIAL TEAM

The Strength of the team is each individual member.
The strength of each member is the team…..

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Indian Endodontic Society (IES)

Indian Endodontic Society (IES) is one of the largest Endodontic Societies with more than 3000 life members representing the endodontic goals and interests of Indian endodontists and Indian dentists.

IES is a non-profit society and was formed and registered in the year 1989. IES has been an active scientific body in the field of Endodontics in India for the past 32 years. The scientific bi-annual journal of IES is the Endodontology Journal and is a prestigious Scopus indexed journal.

IES is also the official country representative society of India with both Asian Pacific Endodontic Confederation (APEC) and International Federation of Endodontic Associations (IFEA).

Come join IES....

Let us all work together for a better and meaningful future
for our specialty of Endodontics in INDIA !

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of becoming a member of Indian Endodontic Society

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- Attend and present scientific papers at IES National congress annually at preferential rates

- Attend Asia Pacific Endodontic Confederation(APEC) & International Federation of Endodontic Asssociation (IFEA) international conferences at special rates

- Apply for annual IES Research Grants

- Apply for annual IFEA Research grant for 6000 USD

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TYPES OF MEMBERSHIP

Life Membership

Person holding/pursuing post-graduate degree in Conservative Dentistry/Operative Dentistry/Restorative Dentistry/Endodontics from any Indian/Foreign University Board/Statutory body recognized by Dental Council of India and whose name appears in part A of Dentists Register of Dental Council of India are eligible for Life Membership.

Associate Life Membership

Any person who is a qualified dental surgeon and duly registered with dental council of India but not holding Post Graduate Degree/Diploma in this speciality or not studying Post Graduate/Diploma course or undergoing any training in this specialty recognized by Dental Council of India shall be eligible for associate life membership.

(Only the founder members & life members will have voting right, no other category of members will have voting right. However, all members can involve themselves in all organizational activities including attending in annual/extra-ordinary general body meeting but without the right to participate in discussion & voting.)

Membership FEES Details

Life Membership	: Rs. 5,000/- one time fee
Associate Life Membership	: Rs. 6,000/- one time fee

For Online Registration scn QR code :

For membership queries contact :

Dr V Gopi Krishna (Secretary General)	:	9840218818
Dr.M.Kavitha (Joint Secretary)	:	9841161131
IES helpline e-mail	:	info@ies.org.in


IES POSTGRADUATE CONVENTION
AURANGABAD
3rd, 4th & 5th MARCH 2023
INDIAN ENDODONTIC SOCIETY
ESTD 1988
PERFECTION IN PRECISION
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PG CONVENTION
Aurangabad
Coming Soon
Dr. Filippo Cardinali
Dr. Abhishek Parolia
Dr. Deepak Mehta
Dr. Nandini Suresh
Dr. Siju Jacob
Dr. V. Gopikrishna
Dr. Vivek Hegde