Index Copernicus ID 5385

ISSN No. 0972-396X

KDJ

Kerala Dental Journal

Vol 41 | No. 2
April 2018

Quarterly Publication of Indian Dental Association, Kerala State Branch

kdj.idakerala.com

SIS Index ID 833

editorkdj2018@gmail.com

www.idakerala.com

Kerala Dental Journal
Vol. 41 | No. 2 | April 2018

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S rays: Another leap in digital Dentistry

Ultrasound sensors to detect oral diseases would replace the X rays soon. While X rays can detect cavities, bone loss etc the ultrasound sensors will image cracks cavities and provide a 3D model of hard as well as soft tissues. This invention called the S rays developed by a Seatle biotech company is seeking FDA clearance. S ray scans could be cheaper than X rays and safer as only ultrasound would be used and no radiation. There would be a difference in the Imaging technique as well, since miniaturisation will allow smaller components with much faster processing speed thus making this ultrasound dental scanner much smaller than a standard X ray machine. This would be another leap in digital Dentistry as this device can easily be connected to a tablet or computer thus giving the dental professional, high quality images of oral tissues in mere seconds without any harm or discomfort to the patient.

Edited by: **Dr. Anjana G,** Hon. Editor • Published By: **Dr. Suresh Kumar G.** Hon Secretary • **For IDA, Kerala State Branch**
• Design and concept: **Suman Graphics,** sumangfx@gmail.com • Printed at: **Printout Villa,** Mukkom

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Editorial

Dr. Anjana G.

The Future is wide open: Futuristic Approach in Dental Practice

The digital revolution is transforming every aspect of our world including Dentistry and Medicine in an enormous manner, from electronic record-keeping and data analysis to new diagnostic tools, novel prevention methods and revolutionary treatment options. Studies say that the technological advances would translate to same day dental care, rather than multi visit care allowing oral health more affordable and less cumbersome thus improving and broadening the access to dental care. That would mean that when an individual senses some sensitivity, his tooth brush would scan his teeth and upload the images to his smart phone and then the cloud which would be analyzed by artificial intelligence and translated to his dentist who would do a preliminary analysis and text an appointment. Lasers, 3D ultrasound, bioactive materials, 3D printers etc would make teeth restoration a matter of minutes. Vital statistics would include one's genome, which in turn would help us pinpoint the individual's susceptibility to various oral diseases as well as develop tailor made management protocol depending one's personal genetics.

Revolutionary diagnostic tools like Canary, which is a three second laser scan to detect caries and cracks or S rays which map tissues ultrasonically to detect caries and disease would be more accurate than x-rays and would not expose patients to harmful radiation. Bio printing would make construction of living human tissues possible thus avoiding the needs of grafts to rebuild lost tissues. We are living in the era of all sorts of gizmos, even in your tooth brush like cameras to identify areas which aren't brushed well or pressure sensors to tell you if you are brushing too hard. To summarize we should accept accommodate update and apply these developments in our practice progressively as the future of dentistry looks very different from the current scenario with easier and more accurate diagnosis, replacement of lost structures with biomaterials, no drills or anesthetic, shorter treatment time, better access and with greater emphasis on preventive and minimally invasive Dentistry.

Dr Anjana G
Editor, KDJ

Message from the President

Dr. Ciju A Paulose

Dearest Colleagues,

Being an avid reader of Kerala Dental Journal, I am immensely honoured to be called upon to pen a short message to commemorate the new issue.

Each issue Kerala Dental Journal strives to ensure that it showcases new and interesting information. It has always been a model example of what a journal should aspire to be and continues to be so with this current issue. The excellent content and quality is remarkable and each and every page of this journal is a reflection of the tireless work done by those behind the scenes. Countless hours have been devoted to this task, from the selection of the content to design of the issue itself. It is truely a demanding task which I am sure that you, the readers, will not fail to appreciate as you delve into the journal.

Kerala Dental Journal publications have always been so much more than mere collections of articles. They have always brought to attention key issues, new innovations, research, rare cases as well as the various commendable endeavours of the association. The characteristic I admire the most about the issues I have read, is clear and concise way in which all the content is showcased has ensured that even the most complex ideas can be easily followed. Practising dentists and fledgling students of the dental profession alike, are able to benefit from the eye catching and deceptively simple way in which information is presented. And this, I believe, is a key factor that indicates the measure of success enjoyed by a publication.

From its humble beginnings, the KDJ has now become a force to be reckoned with. Apart from being an archive of our profession's triumphs and accolades, this journal has metamorphosed into a powerhouse that spearheads progress and brings the aims and accomplishments of the profession to the forefront.

As President of the Indian Dental Association - Kerala State, I am proud to say that we have achieved much but, the knowledge of our achievements should not make us complacent. Conversely, they should serve as a reminder to us that it is our duty to at least ensure that the set standard is always maintained if not surpassed. Allow me to remind you that the privileges we enjoy today are the fruits of the labour of our predecessors who cherished goals similar to ours. It is their example that must be emulated and we must never waver in our resolve to achieve common goals. It has been the ability to look at the bigger picture and the pioneering attitude that has always enabled Kerala State IDA to be perceived as a prime example of how an association should function.

I have often said that the need of the hour is to broaden our horizons and to reach out and work with each other, while at the same time being guiding beacons to the new members of our profession who join our ranks in droves each year. Moreover, our focus should also extend to ensure that all who belong to our profession are brought up to date with the latest treatment modalities and techniques by means of CDE programmes. Kerala Dental journal, apart from being a fount of knowledge, has also been one of the main platforms that showcases joint efforts and innovative research and has become a tool for promoting continuing dental education.

Before I leave you to peruse the impressive content of this issue, I would like to extend my felicitations to the Honourable Secretary, Dr. Suresh Kumar and to the Editor, Dr. Anjana G. and her team on the quality and excellence of this issue and the dedication that they have shown towards furthering dental education. Journals such as the KDJ are hard to come by and I am sure all the readers will wholeheartedly join in me in expressing my sincere gratitude to you for a job well executed. I wish KDJ and all those associates with it, all the very best in this issue as well as the ones to come!

Thanking you

JAI IDA!

Dr. Ciju A Paulose
President, IDA Kerala State

Message from the Secretary

Dr. Suresh Kumar G

Dear colleagues in IDA

The year 2018 has been a challenging one so far with the implementation of the CE Bill and other challenges affecting the fraternity. The IDA Kerala State could support and stand up for the rights of the Dentists of Kerala whenever such needs arose. This was largely possible due to the cooperation and patience shown by the IDA members. The need of unity and coexistence could not be reemphasised more at this juncture and I am sure that we will be able to overcome all the hurdles affecting our progress and well being that may present in future too with our unity cooperation and clarity of thought.

The projects of IDA Kerala State, namely IDA HOPE, HOPE ASSURE, IDA CAN, IDA MARK as well as IDA Assist needs your support by your participation and utilisation of these, which would be encouraging for the state office to do good more good work for the benefit of IDA members and serve you better.

JAI IDA

JAI HIND

Thank you,

Dr. Suresh Kumar G.
Secretary, IDA Kerala State

Intentional reimplantation: An optimistic approach to save a despairing tooth

* Arya Sreedhar, **Santhosh V.C., ***Harish Kumar V.V., ****Sameera G. Nath

Abstract

Intentional reimplantation is a procedure in which the tooth is intentionally extracted and reinserted into the extraction socket. It is usually reserved as the last resort to save a tooth after other procedures have failed or would likely to fail. The common reason for failure of reimplanted teeth is root resorption, specifically ankylosis or replacement resorption. Eventhough the success rate is not always high, intentional replantation may be a treatment alternative that deserves consideration to maintain the natural dentition and avoid extraction of the tooth. This is a case report of preservation of a periodontally involved molar tooth of hopeless prognosis by means of intentional reimplantation.

Keywords: hopeless tooth, intentional reimplantation, combined endo-perio lesion

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► Introduction

The periodontal prognosis of tooth is dependent on various factors and the worst prognosis constitutes to a Hopeless tooth. To establish itself as a hopeless tooth, it has to fulfil criteria. It includes 75% of loss of supporting bone, Class III furcation involvement, probing depth of 8mm or more, hypermobility of tooth, history of periodontal abscess (De Vore 1988).[1] The management of such condition always exists as a dilemma. Extraction is considered to be the only treatment option of such periodontally involved hopeless tooth. Intentional reimplantation was defined by Grossman as the purposeful removal of a tooth and its reinsertion into the socket almost immediately after sealing the apical foramina.[2] It is considered to be a treatment option when other conventional forms of treatment either fail or are impossible. Intentional reimplantation is usually considered as one of the viable mode of treatment in certain situations to preserve the natural dentition.[3] Intentional reimplantation is contraindicated in the presence of periodontal disease, especially in presence of marked tooth mobility, furcation involvement or gingival inflammation. It has been reported that reimplantation will have a lower success rate if the tooth is already compromised periodontally and missing the interseptal bone.[4] Although most of the authors revealed periodontal involvement as a contraindication for reimplantation[4], there are some studies with successful results with periodontally involved teeth.[5] Here we are discussing a case of management of a tooth with combined endo-perio lesion with hopeless prognosis.

► Case report

A 62 year old male patient had reported in Department of Periodontology and Implantology, KMCT Dental College with complaint of pus discharge in relation right lower back tooth. Detailed history and examination revealed that he had undergone root canal treatment 9 months back for the same tooth and had persisting mobility and abscess since 2 weeks. He was systemically healthy. On clinical examination there was 10 mm probing depth on distal aspect and 5mm on mesial aspect of 46 [Figure 1]. Inflamed gingiva was present in relation to the same tooth. Grade III mobility was present. Severe attachment loss was evident in relation to distal root. Class III furcation involvement was also present. IOPAR revealed that there was more than 75% bone loss in relation to distal root and interradicular region of 46 [Figure 2]. There was periapical radiolucency in relation to both the roots. The clinical and radiographic findings was suggestive of combined endo-perio lesions. From the overall examination the tooth was categorised as a hopeless tooth.

After overruling the possibility of an endodontic retreatment, we had given the option of extraction followed by prosthetic

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rehabilitation to the patient. Since the patient was completely reluctant to go ahead with extraction, we had to look in for other treatment options to save the tooth.

The option of hemisection or bicuspidation was also ruled out due to the presence of periapical radiolucency in relation to mesial root. According to literature, intentional reimplantation is considered as last resort to save a tooth. So in this case, we decided to go ahead with purposeful extraction followed by apicectomy and reimplantation of 46.

Full mouth scaling and root planning was done in the first appointment. Patient was prescribed antibiotics for next 5 days. The patient reported back after a week and the abscess had resolved in relation to 46. Routine blood investigations were done and it was reported as normal.

Local anesthesia was administered. Incisions were placed and an access flap was raised in relation to the region of 44 to 47. 46 was extracted atraumatically inorder to preserve the vital ligament cells [Figure 3]. The distal root showed severe necrosed tissue on the surface. The distal root alone was debrided and root planed. The mesial root was left untouched. On both the roots apicectomy was done and root end filling using GIC was given [Figure 4]. The distal socket was selectively debrided using gracey curettes. No instrumentation was done in the

Fig 1: Pre-operative

Fig 2: Pre-operative IOPAR -46

Fig 3: Purposeful extraction of 46

Fig 4: After debridement, root planing, apicectomy and root end filling

Fig 5: After reimplantation into socket

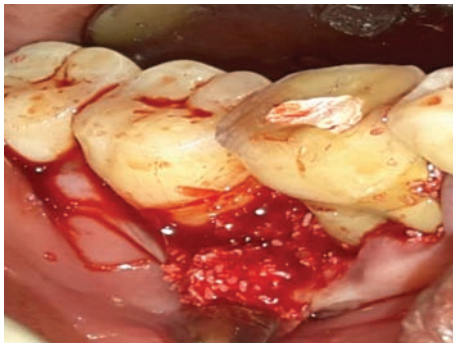

Fig 6: Placement of bone graft and barrier membrane

Fig 7: After suturing and splinting

Fig 8: 3 months post operative

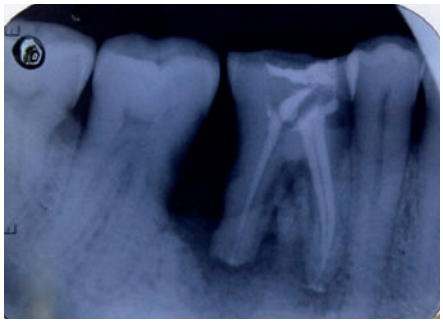

Fig 9: 5 months post op IOPAR showing gain in inter-radicular bone.

mesial socket. Once the reimplantation site was prepared, the tooth was cautiously reimplanted into the socket [Figure 5]. Simultaneously PRF was prepared and placed along with demineralized freeze-dried bone graft [Figure 6]. Collagen barrier membrane was also placed prior to suturing the site. The tooth was splinted using arch wire [Figure 7]. Coronoplasty was done inorder to make the tooth out of occlusion. Antibiotics and analgesics were prescribed for the next 7 days. Post-operative instructions were given.

The patient was recalled after a week for suture removal. The initial healing appeared to be satisfactory. Patient did not report any swelling and pain post operatively. Patient was reviewed after 2 weeks and then after 4 weeks the splinting was removed. By this time, the mobility had reduced to Grade I. The patient's oral hygiene maintenance was excellent when he reported after 3 months for review [Figure 8]. IOPAR was repeated even though it was too early to analyse the bone changes. There was presence of slight haziness in relation to inter-radicular region and distal root which could suggest gain in bone [Figure 9]. Clinically and functionally the tooth appeared to be stable even after removal of splint. The patient was pleased as he was able to chew using the side. The patient is still under maintenance phase.

► Discussion

Here we have discussed a case of combined endo-perio lesion with hopeless prognosis. The response to endodontic therapy was not satisfactory and the option of re-endodontic therapy seems to be unfeasible. Extraction was the only treatment option for this type of periodontally involved hopeless tooth. Intentional reimplantation is usually contraindicated in teeth with moderate-to-severe periodontal involvement, especially in which there is marked tooth mobility, furcation involvement or gingival inflammation, but there are studies showing favourable results in these types of cases.[4]

Lu et al[5] reimplanted a periodontally involved and endodontically mistreated tooth and showed functional stability upto 32 months. Yapraket al.[6] mentioned successful intentional reimplantation and 4-year follow-up of two upper adjacent central teeth, which were extremely mobile due to advanced periodontal disease. Intentional reimplantation is the procedure of purposeful removal of a tooth and its reinsertation into the socket after proper endodontic management and repair.[7] It is a treatment modality opted when more conventional forms of treatment are not feasible.[4]

The success rate of intentional reimplantation varies related to the observation period and the success criteria. Intentional reimplantation cases have a high percentage of success (52% to 95%).[2,4] It is difficult to compare our case with other investigators since our treatment technique, and most importantly the periodontal health of the replanted tooth was completely different than the other authors. In our case the mandibular first molar tooth had Grade III mobility, deep periodontal pockets, Class III furcation involvement and large bony defect around the distal root. Periapical radioluceny was evident in both the roots even after 9 months of obturation. This tooth had no chance of treatment with conventional forms of treatment and therefore a poor to hopeless prognosis.

The success of reimplantation mainly depends on 3 factors-the aseptic condition, extraoral time and the status of periodontal ligament. During the procedure we had maintained a complete aseptic field. Literature shows that an extraoral working time of 15 min provides fair prognosis to the success rate.[8] Here extraoral manipulations were done in less than 15 min which can be considered to be favourable. External root resorption is a serious complication of reimplantation. Since the slight external root resorption may not be detectable radiographically, the periodontal health of the tooth is more important and reliable parameter for the prognosis. Teeth with a necrotic periodontal ligament showed a high incidence of resorption and ankylosis. Due to these reasons, diseased periodontal ligament was removed prior to replantation in this case. The mesial root which was unaffected was not instrumented. Apicectomy followed by root end filling placement was done to seal the apex and prevent re-entry of infection.

The use of bone graft mixed with PRF and barrier membrane enhanced the regenerative potential. After the peri-radicular surgery, mesenchymal cells initiate the healing process by differentiating into mature cells such as osteoblasts, fibroblasts, or cementoblasts thus inducing osseous regeneration and apical attachment healing. Platelet concentrates have been recognised for promoting soft tissue healing, as it encompass, platelet growth factors that can improve the vascularisation of the surgical site, neoangiogenesis and fostering bone regeneration various growth factors.

Splinting of reimplanted teeth is not always considered to be necessary.[9] Mobility may inhibit periodontal repair and bone gain during therapy. So in this case splinting was done due to the severe periodontal destruction and lack of sufficient periodontal support.

Although the success rate is not always high, intentional reimplantation may be a treatment alternative that deserves consideration to maintain the natural dentition and avoid extraction of the tooth especially in cases of hopeless tooth. According to the results of the study by Demiralp et al., the success of the intentional reimplantation treatment is positively related to correct selection of cases, based on clinical and radiographic evaluations.[10]

Conclusion

Preservation of tooth in the mouth for as long as possible is the major goal of dentistry. In the present scenario, patient demand for maintaining the natural dentition is also increasing. During management of endo-perio lesions, in most of the cases initial removal of infection is completed, but the second stage of regeneration appears to be neglected by practitioners. This can be considered as one the common reason for failure of such cases even after proper endodontic therapy. So in such cases an interdisciplinary approach could be more effective in case selection and treatment plan. Intentional reimplantation is considered as the last resort treatment alternative to delay extraction of periodontally compromised teeth. In this case, patient was satisfied and tooth was functionally stable after intentional replantation procedure.

References

1. DeVore CH, Beck FM, Horton JE. Retained “hopeless” teeth: Effects on the proximal periodontium of adjacent teeth. Journal of periodontology. 1988 Oct;59(10):647-51.
2. Grossman L. Endodontic practice, 11th edn. Philadelphia: Lea &Febiger; 1988. p. 334-42.
3. Nagappa G, Aspalli S, Devanoorkar A, Shetty S, Parab P. Intentional replantation of periodontally compromised hopeless tooth. J Indian SocPeriodontol 2013;17:665-9.
4. Weine FS. The case against intentional replantation. J Am Dent Assoc 1980;100:664-8.
5. Lu DP. Intentional replantation of periodontally involved and endodontically mistreated tooth. Oral Surg Oral Med Oral Pathol 1986;61:508-13.
6. Yaprak E, Hakki SS, Akman S, Belli S. Aesthetical and functional management of periodontally involved hopeless anterior teeth with multidisciplinary approach: 4 years follow-up. Dis HekimligiFakültesidergisi The Journal of the Dental Faculty of Ankara University 2010;19:176-81.
7. Kratchman S. Intentional replantation. Dent Clin North Am 1997;41:603-17.
8. Dryden JA, Arens DE. Intentional replantation. A viable alternative for selected cases. Dent Clin North Am 1994;38:325-53.
9. Hammarstrom L, Pierce A, Blomlof L, Feiglin B, Lindskog S. Tooth avulsion and replantation--a review. Endod Dent Traumatol 1986;2:1-8.
10. Demiralp B, Tözüm TF, Eratalay K. Intentional replantation of a periodontally involved hopeless molar tooth: Results of 3-year follow-up: A case report. DergisiciltHacettepe Dental Schools 2005;29:47-51.

Prevalence of Periodontal disease in 'Kudumbashree' workers of Marad Unit, Kozhikode, Kerala

*Sunanda Sudhakaran, **Harish Kumar V.V., ***Santhosh V.C.,
****Sreekanth Puthalath, ****Sameera G. Nath

Abstract

Background and Objectives: Data on Periodontal status of Kudumbashree Workers are scarce. Hence the present cross-sectional study attempts analyse the periodontal diseases among the Kudumbashree workers in Maradunit, Kozhikode, Kerala.

Methodology: Hundred and two women working with Kudumbashree Marad Unit, Kozhikode who fall under the inclusion and exclusion criteria were recruited for the study. Periodontal Parameters like Gingival index (Loe and Silness, 1963), Simplified oral hygiene index (Greene and Vermillion; 1964), Clinical attachment loss (CAL) were assessed for each individuals and the data collected were subjected to statistical analysis and P value <0.05 was considered statistically significant.

Results: The periodontal clinical parameters in women working with Kudumbashree Marad Unit, Kozhikode were evaluated. It was found that despite majority of study population (58%) had a fair oral hygiene, 65% and 48% of the subjects had moderate gingivitis and periodontitis respectively indicating that the study population had an increased likelihood for periodontitis.

Conclusion and interpretation: It can be concluded from the study that though study population displayed a fair oral hygiene there is high prevalence of Periodontal diseases among Kudumbashree workers of Marad Unit, Kozhikode which could be related to the altered life style, inadequate diet and stressed work pattern. This shows the relevance of implementing proper dental health awareness among the Kudumbashree workers which could probably prevent the progression of periodontal diseases among them and their family members.

Key words: Periodontitis, Kudumbashree workers, Dental Health awareness

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► Introduction:

Periodontal diseases are one of the most common and prevalent oral disease of mankind[1]. Several factors like systemic and environmental factors including diabetes, stress, smoking osteoporosis influence the severity of the condition and proves to be a risk factor for periodontal diseases[2] Prevalence of the oral infections also reflects the variations in the geographic region, race, culture, tradition, habits etc. which will extent to literacy rate and hygiene practices.

'Kudumbashree' is the women empowerment and poverty eradication program network that brings women to the Grama Sabhas and helps them bring the needs of the poor to the attention of the local government.[3] Kudumbashree workers are engaged in different employments associated with stress, irregular diet, tobacco chewing and other deleterious habits. They belong to a low socioeconomic stature and their low literacy rate could sway on oral hygiene and general health.

Many studies have been conducted probing the periodontal status of different populations but there exists scanty evidence in literature investigating the prevalence of periodontal diseases among Kudumbashree workers. Henceforth present study was undertaken to assess the prevalence of periodontal diseases

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among Kudumbashree workers of Marad Unit, Kozhikode

► Materials and Methods:

Study design, Population and Time Period of the study:

A descriptive cross-sectional survey was conducted to assess the prevalence of periodontal status among Kudumbashree workers of Marad Unit, Kozhikode, Kerala in October 2017 to December 2017.

Permission and Ethical clearance:

The study protocol was approved by Institutional Ethical committee KMCT Dental College, Kozhikode.

Informed consent

The purpose and details of the study were explained, and a written informed consent was obtained from all the subjects who were willing to participate. Illiterate subjects were explained about the details of the study and their thumb impressions were taken on the consent form.

Table I: Distribution based on age group

Age (years)	n	%
35-44	51	50.0
45-54	29	28.4
55-64	18	17.6
>65	4	3.9
Total	102	100.0

Inclusion and exclusion criteria

The inclusion criteria include:

- All available female individuals present in Marad Kudumbashree unit.
- Patients aged 35 years and above.
- Those who gave consent for the study.

The exclusion criteria include:

- Those who did not give consent for the study
- Patients with systemic comorbidities.
- Patients who were severely ill.

Proforma details and clinical examination

Subjects who fall under these criteria were selected and they were interviewed about their age, occupation, educational level, marital age, medical history, family history and oral hygiene practices.

The oral examination of the subjects was carried out using artificial light. Examination was carried out by single examiner beginning from the maxillary right quadrant and proceeding in a clockwise direction to the mandibular right quadrant and was recorded by another examiner.

The periodontal parameters like Gingival index (GI) Simplified oral hygiene index (OHI-S) Clinical attachment loss (CAL) were assessed using periodontal probe and mouth mirror.

Statistical analysis

Data collected were subjected to analysis using SPSS software version 20.0. Chi-square test was used for comparisons. P-value<0.05 was considered to be significant.

► Results:

The present study was undertaken to assess the prevalence of periodontal diseases among Kudumbashree workers of Marad

Table II: Association between age group and OHI-S:X 2 value is 10.64; p = 0.10

Age group	OHI			Total
	Good	Fair	Poor	
Count	3	33	15	51
GROUP I (35-44)	5.9%	64.7%	29.4%	100.0%
Count	1	11	17	29
Group II (45-54)	3.4%	37.9%	58.6%	100.0%
Count	0	14	4	18
Group III (55-64)	0.0%	77.8%	22.2%	100.0%
Count	0	2	2	4
Group IV (>65)	0.0%	50.0%	50.0%	100.0%
Count		60	38	102
Total		58.8%	37.3%	100.0%

Unit, Kozhikode. Hundred and two individuals of age 35 yrs and above were recruited for the study and they were divided into 4 groups according to the age for the purpose of analysis as 35-44yrs (n=51); 45-54 yrs (n=29); 55-64 yrs (n=18) and above 65 yrs.(n=4) [as given in table 1]

Periodontal clinical parameters Gingival Index (GI) and Oral hygiene Index simplified (OHI-S) and Clinical attachment loss (CAL) were assessed for each subjects.

A meanage of 46.46± 9.76 was observed.

Table II shows Association between age and oral hygiene depicting that 64.7% and 29.4% in Group I had fair and poor oral hygiene status respectively; Group II showed 37.9%fair and 58.6% poor oral hygiene; Group III with 77.8% fair and 22.2% poor oral hygiene and Group IV had 2 individuals with fair and 2 individuals with poor oral hygiene status.

Table III elicits association of age and gingival health. Group I showed 70% of moderate gingivitis and 26% with severe gingivitis. Group II showed 58.6% of moderate gingivitis and 41.4% of severe gingivitis. Group III showed 66.7% of moderate gingivitis and 22.2% of severe gingivitis. Group IV had equal distribution of moderate and severe gingivitis within the group. In general within the population there were 65.3% of subjects with moderate gingivitis and 30.7% with severe gingivitis.

Table 4 elicits the clinical attachment loss with the age.

Table III: Association between age and Gingival index. X 2 value is 6.49; p = 0.37

Group (age)		GI			Total
		Mild	Moderate	Severe	
35-44	Count	2	35	13	51
		4.0%	70.0%	26.0%	100.0%
45-54	Count	0	17	12	29
		0.0%	58.6%	41.4%	100.0%
55-64	Count	2	12	4	18
		11.1%	66.7%	22.2%	100.0%
>65	Count	0	2	2	4
		0.0%	50.0%	50.0%	100.0%
Total	Count	4	66	31	102
	% within	4.0%	65.3%	30.7%	100.0%

Table IV: Association between age and CAL X 2 value is 9.08; p = 0.429.

	AGE		Clinical Attachment Loss			Total
			2-3mm	4-5mm	>5mm	
1	35-44	Count	15	25	11	51
		% within	29.4%	49.0%	21.6%	100.0%
2	45-54	Count	11	14	4	29
		% within	37.9%	48.3%	13.8%	100.0%
3	55-64	Count	6	7	5	18
		% within	33.3%	33.3%	33.4%	100.0%
4	>65	Count	0	2	2	4
		% within	0.0%	50.0%	50.0%	100.0%
Total		Count	32	48	22	102
		% within	31.3%	47.1%	21.6%	100.0%

Group I showed 49% with moderate periodontitis followed by 29.4%with mild and 21.6% with severe periodontitis. Group II showed 48.3% with moderate,37.9% with mild and 13.8% with severe periodontits. Group III elicits 33.3% with severe, 33.3% with mild and 33.4% with severe periodontitis. Group IV had 50% of individuals with moderate and severe periodontitis respectively.

The association between age and periodontal parameters (GI and CAL) taken among the study population did not show statistical significance (p-value=0.37 and 0.429) respectively

► Discussion

Periodontal health is influenced by multiple factors like genetics, environment, lifestyle, socio-economic status (SES) etc. Education level and economic status of the individual also determines the utilization of the health services in a particular population.[4] Many evidences demonstrates that altered lifestyle, low socioeconomic status, environmental factors deteriorate the periodontal health.

Numerous studies have been conducted to investigate the periodontal health status in different population, but no studies have been conducted so far on Kudumbashree workers. Hence present study was undertaken to find out the periodontal status of Kudumbashree workers of Marad unit, Kozhikode.

Kudumbashree organisation, enforced by Government of Kerala, aims at poverty eradication and women empowerment by forming self-help groups that engages women in wide range of activities.[3] Most of the women belonging to this group are from low socioeconomic background. Such population usually are unaware of oral health and are more likely to have an apprehensive approach to dentists as well as dental treatment[5] which calls for a curative approach rather than a preventive approach. Therefore in this study we have considered this Kudumbashree population so that we could provide dental awareness among them and also alleviate their fear and anxiety towards dental treatment.

In addition to this, studies have shown that individuals with low socioeconomic status residing in the disadvantaged neighbourhoods have higher odds of experiencing periodontal diseases than individuals residing in privileged and high socioeconomic neighbourhood.[6] So, to restrict the confounders we have chosen the place of study as Marad, Kozhikode.

The individuals working with Kudumbashree were mostly females of age limits 30-60 yrs. Considering the inclusion criteria of the present study we have considered women above 35 yrs of age which is in accordance with other prevalence studies.[6,7]

Periodontal diseases result due to interaction between the microbes in the dental plaque and the host immune cells. Oral hygiene measures prove to be one of the most important preventive measures in treating periodontal diseases. It was found that most of the individuals had a fair oral hygiene which was not in accordance with other studies[8]; which embodies the dental health awareness among our study population. Studies[9] have proven that as age advances there is an increase in the plaque accumulation and could reflect a poor oral hygiene status which is different in our present study which could be due to the limited number of the individuals in the group III and Group IV.

Good oral hygiene favours a disease free environment and reflects oral health.[10] As observed in the present study even though most of the subjects had a fair oral hygiene, 65% of the individuals had moderate gingivitis suggesting the role of environmental or systemic factors contributing to the inflammatory changes evident clinically which is supported by other studies by Diez Roux et al[11], Macintyre S et al[12].

CAL determines the severity of Periodontal diseases.[13] In the present study it was observed that the 47% of the population showed signs of moderate periodontitis which is accordance with study done by Morris et al[14]. Considering the association of age with the CAL in present study the association was not statistically significant which is in accordance with the study done by Genco et al[15] which claimed age alone does not act as a risk factor as it has been proven that there are many secondary factors related to sex and age that affect CAL.[16]

Hence it can be concluded from the present study that Kudumbashree workers in Marad Unit have an increased likelihood for periodontitis. The clinical parameters of periodontal diseases were found to be unrelated to the oral hygiene status of the individuals suggesting that environmental, systemic and altered life style could have favoured the initiation and progression of periodontal diseases.

Limitations of the Study:

Our study encountered several limitations. Our study period was of short duration and had a limited sample size (n=102). Increasing the sample size could have given more assuring results.

Future Directions:

Increasing the sample size by taking into account more Kudumbashree Units in Kozhikode as well as State level in future could help us in elucidating the modifying factors of periodontal health.

► Conclusion:

Within the limitation of the study, it can be concluded from

the present study that Kudumbashree workers in Marad Unit have an increased likelihood for periodontitis. As no other study have evaluated the Periodontal status in Kudumbashree workers present study shall serve as a baseline for upcoming studies in future.

Conflict of interest: None

References:

1. Singh GP, Soni BJ. Prevalence of periodontal diseases in urban and rural areas of Ludhiana, Punjab. Indian J Community Med. 2005 Jan 1;30(4):127-9.
2. Al-Zahrani MS, Bissada NF, Borawski EA. Obesity and periodontal disease in young, middle-aged, and older adults. Journal of periodontology. 2003 May 1;74(5):610-5.
3. John J. Kudumbashree project A Poverty Eradication Programme in Kerala..
4. Park K. Textbook of preventive and social medicine. 17th Ed. Jabalpur, India: BanarsidasBhanot Publishers; 2002. Concepts of Health and Disease; pp. 11–47.
5. Kadtane SS, Bhaskar DJ, Agali C, Punia H, Gupta V, Batra M, Singh V, Bumb SS. Periodontal health status of different socio-economic groups in out-patient department of TMDC & RC, Moradabad, India. Journal of clinical and diagnostic research: JCDR. 2014 Jul;8(7):ZC61.
6. Borrell LN, Beck JD, Heiss G. Socioeconomic disadvantage and periodontal disease: the Dental Atherosclerosis Risk in Communities study. American Journal of Public Health. 2006 Feb;96(2):332-9.
7. Gautam DK, Vikas J, Amrinder T, Rambhika T, Bhanu K. Evaluating dental awareness and periodontal health status in different socioeconomic groups in the population of Sundernagar, Himachal Pradesh, India. Journal of International Society of Preventive & Community Dentistry. 2012 Jul;2(2):53.
8. Bertoldi C, Lalla M, Pradelli JM, Cortellini P, Lucchi A, Zaffe D. Risk factors and socioeconomic condition effects on periodontal and dental health: A pilot study among adults over fifty years of age. European journal of dentistry. 2013 Jul;7(3):336.
9. Holm-Pedersen P, Agerbæk N, Theilade E. Experimental gingivitis in young and elderly individuals. Journal of clinical periodontology. 1975 Mar 1;2(1):14-24.
10. Petersen, P. E. & Ogawa, H.(2005) Strengthening the prevention of periodontal disease: the WHO approach. Journal of Periodontology 76, 2187–2193.
11. Diez Roux AV, Merkin SS, Arnett D, et al. Neighborhood of residence and incidence of coronary heart disease. N Engl J Med. 2001;345:99–106.
12. Macintyre S, Ellaway A, Cummins S. Place effects on health: how can we conceptualise, operationalise and measure them? SocSci Med. 2002;55:125–139.
13. Baelum V, Manji F, Wanzala P, Fejerskov O. Relationship between CPITN and periodontal attachment loss findings in an adult population. J ClinPeriodontol. 1995;22:146–152
14. Morris AJ, Steele J, White DA. The oral cleanliness and periodontal health of UK adults in 1998. Br Dent J. 2001;191:186–192.
15. Genco RJ. Current view of risk factors for periodontal diseases. J Periodontol. 1996;67:1041–1049.
16. VanDyke TE, Sheilesh D. Risk factors for periodontitis. J IntAcadPeriodontol. 2005;7:3–7.

Root Membrane Technique - A Case Report

* Segin Chandran K R

Abstract

Preserving what is remaining is much better than reconstruction of what is lost. That is the success mantra for anterior replacement of central incisor using dental implant. Partial extraction therapy, known in different names according to the protocols developed, seems to be one of the best ways to prevent buccal or labial bone resorption and to maintain gingival zenith and contour. Here, in this case report, we present a case done using root membrane kit, developed and propagated by a team of clinicians, in the most sophisticated and simplified, step by step protocol and armamentarium.

Key words: Root Membrane Technique, Socket Shield Technique, Root Submergence Technique, Partial Extraction Therapy

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► Introduction

To preserve the hard and soft tissues around an extraction socket especially when buccal bone on labial side is very thin using a root membrane left in place is widely accepted and has become an internationally accepted protocol. Successful immediate implant placement in aesthetic zone is best achieved by using Root membrane kit developed by a group of innovative dental scientists -Dr Yoshiharu Hayashi (Japan), Dr Konstantinos D Siormpas (Greece), Dr. Kwang Bum Park (S. Korea), Dr Chang Hoon Han (S. Korea), Dr Mitsias E. Miltiadis (Greece).

This was the first system comprehending all step by step procedures involved and giving proper armamentarium for achieving best results in partial extraction protocol. Here we try to explore all advantages of Root Membrane Kit in getting desired outcome.

► Case Details

Female aged 55 years reported to our dental practice with chief complaint of mobility for a root canal treated and restored central incisor with PFM crown. Clinical and radiographic evaluation revealed that the metallic root post and porcelain fused to metal crown had dislodged. The remaining root stump lacked sound dentin and enamel as it was invaded with extensive caries. Residual root stump did not have enough tooth structure to support existing or new prosthesis.

CBCT evaluation was done and all hard tissue measurements were taken using SIRONA Orthophos SL CBCT unit and GALILIOS software. Socket anatomy was representing Class II B type of Howard Gluckmans Classification in 2017 where tooth is retroclined and crestal bone is very thin.

Treatment choice was to do a partial extraction therapy using Root Membrane Kit.

Megagen's Root Membrane kit is made by many diamond drills (manufactured by a Japanese company "Hinatawada Precision Manufacturing")

After Measuring the root canal length, drills were used through the canal - first with Gates Glidden Drill and then with burs.

Shaping Burs IS1 and IS2 (Initial Shaper 1 and 2) were used to create a split through the entire length

Palatal fragment was removed atraumatically without disturbing labial fragment.

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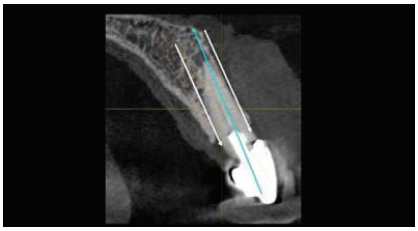
Round burs were used through the socket for shaping and thinning of root fragment.

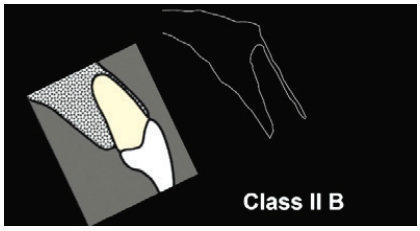
Final shapers were used to create a crescent shaped root fragment. FS1 was used with low speed or FS2 for high speed. Fragment was reassessed for stability

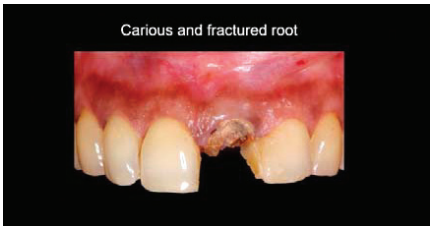
To get firm initial stability and to prevent slip of drills into socket depth a palatal entry point was made using initial shaper 2 bur in the same direction planned for implant in CBCT.

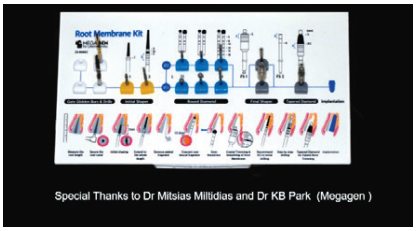
To avoid labial slipping of implant a good countersink and palatal bone trimming was done using a thick tapered diamond bur

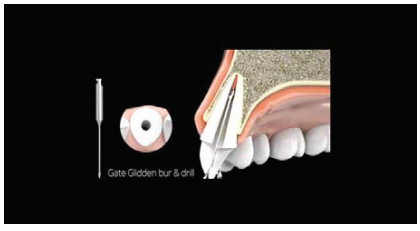
Drilling sequence was completed to full depth and to the

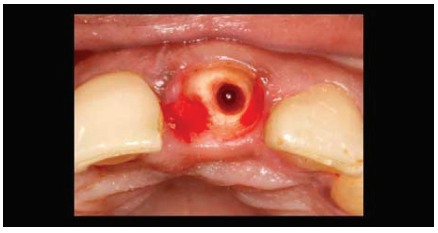


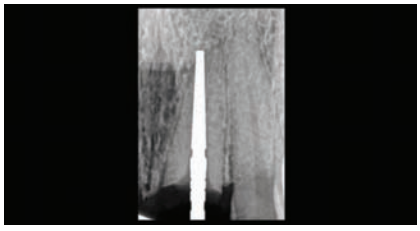


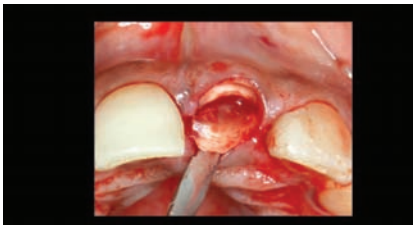


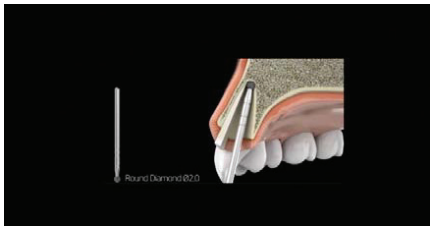


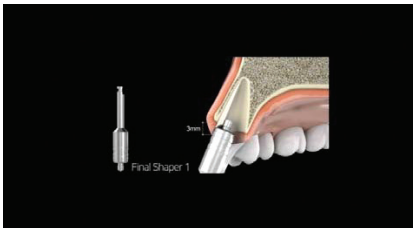


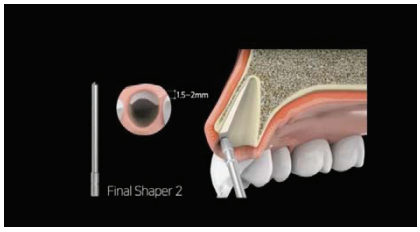


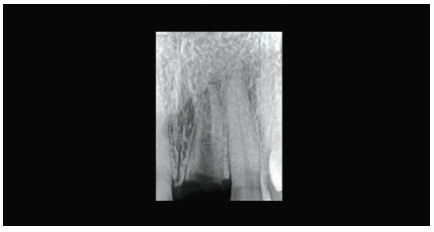


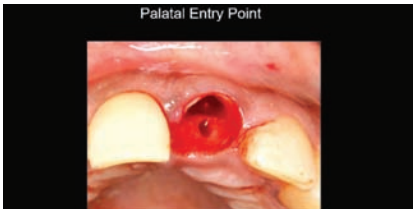


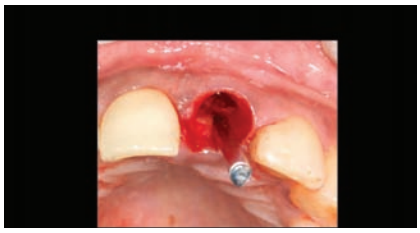


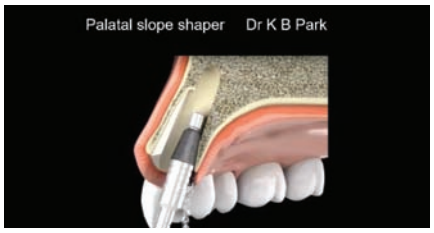


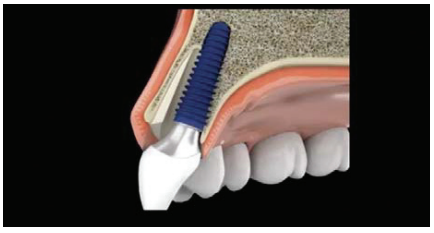

Final Shaper 2

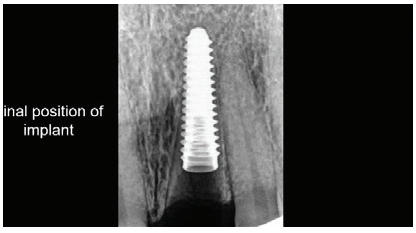


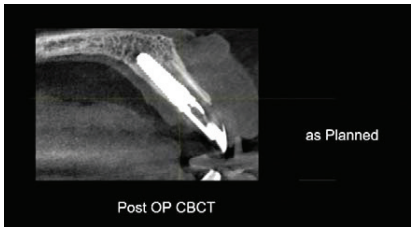

Palatal Entry Point

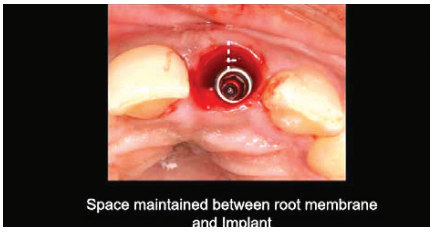


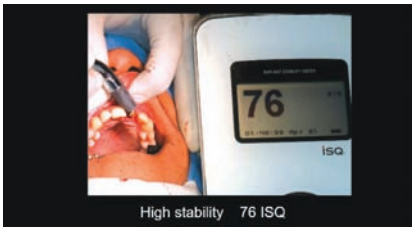

Palatal slope shaper Dr K B Park

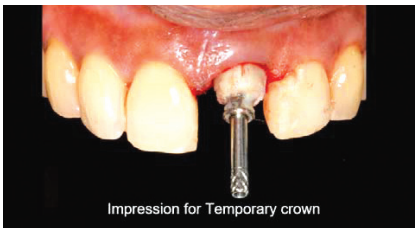


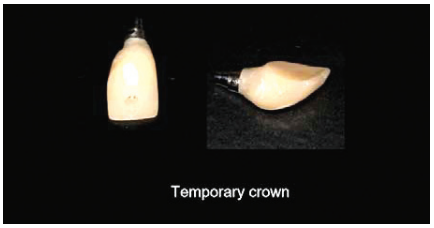

inal position of implant


as Planned
Post OP CBCT

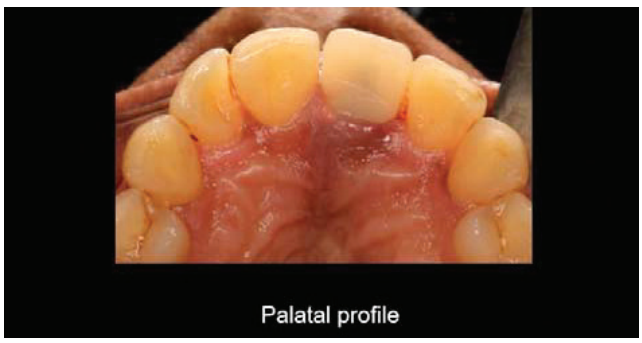

Space maintained between root membrane and Implant


76
ISQ
High stability 76 ISQ


Impression for Temporary crown


Temporary crown


After temporisation


Palatal profile


From shaky tooth to Confident smile in Day 1

core diameter of the implant planned

Placement of implant in palatal direction without touching the labial root fragment was achieved and was confirmed by post operative CBCT scan.

Palatal cortical engagement gave a high primary stability up to 76 ISQ in Osstell RFA device. Implant placed and its design also play a major role in gaining primary stability - Megagen Anyridge implant with knife edge design and progressive thread pattern is best suited for this procedure. In this case we used 4x13 mm Megagen Anyridge Implant.

Since the gap maintained from the shield was not more than 2mm we opted not to graft and to leave the space to be filled with blood clot.

Impression procedures were completed using customised impression copings and open tray technique. The temporary crown was given with no centric or eccentric contacts.

► Conclusion:

To overcome the sequelae of extraction and to overcome the loss of buccal bone many protocols like GBR (guided bone regeneration),connective tissue grafting were done as adjuvant procedures. These procedures are always associated with morbidity, increased treatment time and high cost.

Root Membrane Technique is a promising one to overcome these clinical difficulties as it follows minimally invasive, cost effective and with minimum healing time.

Long term studies have already validated this technique's credibility especially Human Histologic Evidence after 5 years of function after Root Membrane Therapy by Dr Mitsias E Miltiadis and team

Acknowledgement: Special thanks to Dr Lakshmi Ashwin and "Team Kamala Dental" for all support.

► References

1) Socket Shield Technique to support the bucco facial tissues at immediate Implant placement International Dentistry - African Edition Vol 5 No 3 Howard Gluckman, Jonathan Du Tolt, Maurice Salama.

2) A step by step Description of PDL Mediated Ridge Preservation for Immediate Implant rehabilitation in the Esthetic region. The international Journal of Periodontics and Restorative Dentistry Vol 35 No 6 Miltiadis E Mitsias.Konstantinons D Siormpas, Eleni Siormpas, Hari Prasad,David Garber, Georgios A Kotsakis

3) Advantages of Root Submergence Technique for pontic site development in Esthetic Implant Therapy The international Journal of Periodontics and Restorative Dentistry Vol 27 No 5 Maurice Salama,Tomohiro Ishikawa, Henry Salama, Akiyoshi Funato, David Graber

4) Radial Plane tooth position and bone wall dimensions in the anterior Maxilla: A CBCT classification for immediate implant placement The Journal of Prosthetic Dentistry 2017, Howard Gluckman, Jonathan Du Tolt,Carla Cruvinel Pontes

5) Root Membrane Technique: Human Histologic Evidence after 5 years of function, Biomed Research International Vol 2017, Miltiadis E Mitsias, Konstantinos D Sirompas, Georgios A Kotsakis, Scott D Ganz, Carlo Mangano and Giovanna Iezzi

Socket preservation Followed by Implant placement – A case Report

*Paulson George, * Achu Jerard, ** Jose Paul, *** Johnson Prakash D'Lima, *** Senny Thomas, **** Deepak Thomas, **** Binitta Paul

Abstract

When a tooth is of hopeless prognosis, the removal of it becomes mandatory. However, the irreversible shrinkage of the alveolar ridge followed by tooth extraction is inevitable and is a continues process that progress at a different pace at different sites in different individuals. The resorption that follows after tooth extraction presents a ridge with deformity that questions the functional stability and esthetic acceptance when a prosthesis is placed on it, which demands the need to perform various ridge augmentation techniques either at the time of extraction or later, during the time of rehabilitation once after the socket is healed. Nevertheless, as the proverb "Prevention is better than cure " states " its always easier to stop something happening in the first place than to repair the damage after it has happened" - which points out the significance of preferring the preservation of socket rather than attempting an augmentation once after bone resorption has occurred. Socket preservation through a grafting technique at the time of extraction prevents the irreversible resorptive process of the ridge, that very often follows a tooth extraction. The learning objective of this article is to substantiate further through a case report, the possibility and advantage of preventing the post extraction resorption of alveolar ridge, even in case of a chronically infected tooth site by adopting socket preservation technique.

Key words: Socket preservation, Ridge defects, Ridge augmentation, Regeneration

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► Introduction

Tooth extraction and its subsequent replacement with a prosthesis has always been one of the most commonly performed procedure, all the time through the history of dental practice. However, extraction of teeth is found to be always associated with alveolar remodeling which results in an irreversible, chronic, life-long, cumulative and a three dimensional resorption of bone in the region, the reason for which could be attributed to the reduced physical stimulation of the alveolar bone once the tooth is lost from the site.[1,2]

The alveolar bone consists of cortical bone, cancellous trabeculae, and the alveolar bone proper, which is compact bone that composes the alveolus (tooth socket).[3] Following the removal of tooth from the socket, healing of the extraction socket starts taking place often resulting in involution of the alveolar ridge at the site, which would be greater if the mode of extraction is traumatic. Several histological and histochemical studies in animals[4,5, 6, 7] and in humans[8,9] have described the healing process in an extraction socket. Evidence reveal that the catabolic changes are initiated by the resorption of the bundle bone, which is a tooth dependent structure of thickness 0.2-0.4 mm and that lines the extraction socket.[10] The destructive metabolic changes have been correlated with the disruption of the blood supply from the periodontal ligament, which subsequently leads to significant osteoclastic activity.[11] As the bundle bone is a tooth-dependent structure, it undergoes gradual resorption following tooth extraction with significantly greater resorption on the buccal aspect than on the lingual aspect in both the jaws. This phenomenon has been accredited to the limited thickness of the facial bone wall in comparison with the lingual/palatal aspects of the socket.

The post-extraction dimensional alterations appear to be related to several factors such as surgical trauma due to flap elevation, lack of functional stimulus on the remaining bone walls and a lack of periodontal ligament and genetic information.[12] On account of the amount of resorption,although bone resorption continues over time, two-thirds of the total changes take place within the first 3 months post extraction[13]

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with several factors such as facial bone wall thickness, angulation of the tooth, and other differences in anatomy at the various tooth sites guiding its extent. The resorption pattern shows a marked change between the maxillary bone and the mandible, where the resorption rate of the mandibular bone averages four times that of the maxillary with a larger percentage of reduction at the molar sites compared to the premolar sites.[1,3]

Bone resorption can be reduced, although not eliminated, by ensuring the placement of appropriate prosthesis that balances the loads to the underlying bone. In the present day scenario, if a tooth requires extraction, implant therapy is often considered one of the best options to replace a tooth functionally and esthetically. However, adequate bone volume and favorable architecture of the alveolar ridge are features that are essential to obtain ideally functioning and esthetically acceptable implant prosthesis with long term stability.[4] This makes it a real time challenge for a dental practitioner to act at the time of extraction to prevent the collapse of the ridge, which changed the focus of practice towards developing and employing techniques to meet the demand of preservation of alveolar ridge following a tooth extraction.

Several surgical techniques have been developed with the potential to modulate the degree of these inevitable resorptive changes, such as flapless tooth extraction,tooth/root retention, ridge preservation and immediate implant placement.

A less traumatic flapless approach is the most recommended one while tooth extraction is carried out in order to avoid any additional bone resorption from the bony surface which is related to the elevation of the mucoperiosteal flap. Flapless tooth extraction has been shown to reduce the amount of bone loss in the early healing phase 4–8 weeks postextraction compared with full-thickness flap elevations.[14] Even though tooth extraction has been considered a simple and straightforward procedure,

Fig. 1 Pre surgical view (46)

Fig. 2 Pre surgical radiographic view

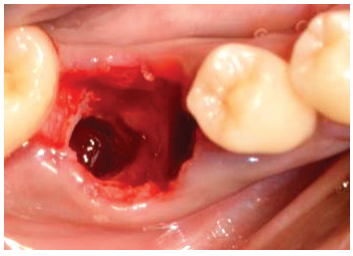


Fig. 3 Atraumatic extraction of 46 carried out by forceps technique and complete debridement of socket done

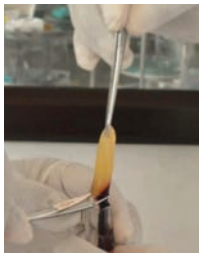
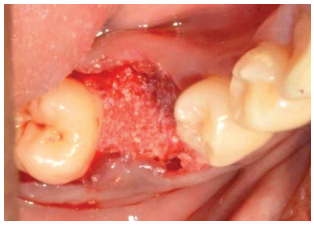


Fig 4 PRF prepared from the blood procured from the patient



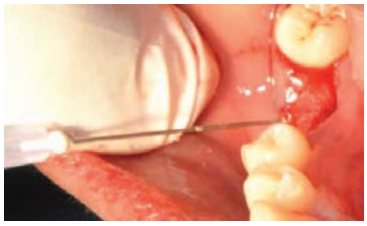


Fig 5 Bone graft mixed with PRF placed into the extraction socket and i-PRF added further on the mixture to fasten the healing process

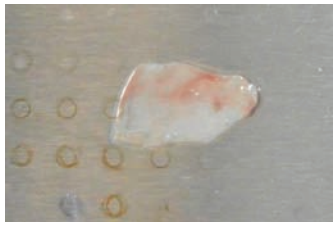


Fig. 6 PRF membrane developed and placed over the grafted socket

it should be performed with care, under the assumption that dimensional ridge alterations will follow since it is an invasive procedure that disrupts vascular structures and damages soft tissues and the associated periodontal ligament and hence the extraction itself should be performed without applying force toward the thin facial bone wall and several new surgical instruments such as periotomes, piezosurgery and vertical tooth extraction devices have been developed for the purpose.[15]

Early therapeutic attempts to prevent alveolar ridge resorption were performed using root retention by decoronation of the crown at the bone level so that existing bone volume dimensions are maintained with a primary goal of maximizing the stability of removable prostheses.[16]

Maintaining a facial shield of a root remnant simultaneously with implant placement has been advocated recently with the aim of preserving the facial bone architecture.[17] However, root retention with simultaneous implant placement is rarely feasible due to infection, fracture, or decay of the affected tooth or for strategic reasons.[16]

It has also been suggested that placement of implants into fresh extraction sockets with a bone-to-implant gap of 2 mm or less would prevent remodeling and hence maintain the original shape of the ridge.[18] However, there are controversial studies that question the factualness of this hypothesis.[19,20]

Socket grafting has gained popularity in recent years due to its conjectural attractiveness and technical simplicity. Incorporating a graft material into a socket has been one simple method proposed for preserving the natural tissue contours at extraction sites for possible reconstruction with an implant supported prosthesis.[3] A large variety of biomaterials have been employed and tested in several studies on this regard, including autologous bone(oral or extra-oral), bone substitutes (allografts-human freeze dried bone graft, xenografts- bovine/ porcine and alloplasts- hydroxyappetite), autologous blood-derived products and bioactive agents.[21,22]

This technique seems to serve the purpose of developing a stable and ideal site for implant supported tooth replacement with the graft placed playing the primary role of being a scaffold that aids in osteoid deposition and vital bone formation.

Socket preservation procedure following tooth extraction helps to prepare the site not only with adequate bone volume in height and width but also in achieving adequate soft tissue contour as it is determined by the underlying bone, in a way thus reduces the need for any further ridge augmentation technique prior to implant placement and will conserve the existing bone.

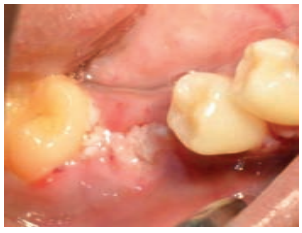
Here, in the attempt to graft the extraction socket, it was intended to preserve the original bone dimensional contours by limiting the normal post extraction resorptive process.

► Clinical case report:

An 18 year old female patient with a non-contributary medical history, reported to Department of Periodontology, Annoor Dental College in Muvattupuzha, presenting an asymptomatic case of chronic pus discharge from a site in the right lower back tooth region (figure 1). On clinical and radiographic examination, the source of chronic infection was diagnosed to be a tooth that was previously endodontically treated but with a periapical lesion and grade III furcation involvement with advanced bone loss at the time of presentation (figure 2).

These clinical and radiographic features lead to categorize it as a tooth with hopeless prognosis, for which removal was mandatory. Henceforth, extraction of the tooth followed by implant therapy was the treatment protocol laid out. However keeping in mind, the chances of greater resorption that could be associated with an infected socket and with the sole aim to control the modelling effect in fresh sockets and to induce a passive stimulation that is required to prevent the bone resorption, it was chosen to adopt a treatment modality to


Fig. 7 Sutures placed and periodontal pack given




One week post operative view

6 months post operative view

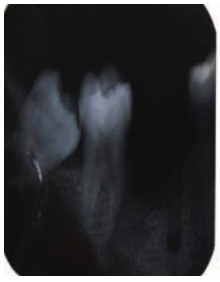
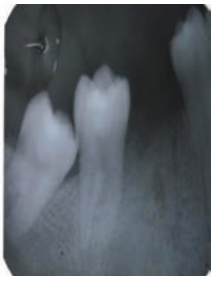



Fig 8. comparison of radiograph of extraction socket site pre and post operatively which demonstrates a significant gain in bone volume


Implant site osteotomy done followed by placement of implant done

preserve the socket to the maximum extent possible by placing bone graft which is presumed to act as a platform for osteoblastic activity.

An atraumatic extraction was carried out for 46 (infected tooth) where the buccal and lingual bony plates were preserved intact followed by a thorough degranulation and debridement of the extraction socket. The careful and meticulous debridement of extraction socket is essential as any small amount of granulation tissue left out can be a nidus for infection that would impair graft acceptance or interfere with the bone formation and healing at the site (figure 3). Wound site debridement is followed by placement of the bone graft (osseograft).

Demineralized bone matrix which is a xenograft by its characteristic feature was used for the purpose and was mixed with PRF prepared from blood procured from the patient(figure 4). Bone graft mixed with PRF was then placed into the socket followed by further addition of I-PRF into the site since PRF would act as natural bioactive additive molecules that would regulate the inflammation and fastens the healing process (figure 5).[22] A PRF membrane was also placed over the grafted site (figure 6) and suturing was done to help to stabilize the blood clot better and to obtain a completely sealed socket that would aid in primary closure (figure 7).[23] Patient was then followed up every one month after and in six months time implant was placed in the respected site with definitely contoured buccal and lingual bony plates with adequate bone volume (height>15mm and width >6mm) (figures 8).

► Discussion:

The 6 month postoperative clinical and radiographic presentation demonstrates the significant bone volume that could be achieve from attempting the socket preservation technique. This technique aids to prepare an ideal site for receiving a functionally stable and esthetically and biologically acceptable implant prosthesis.

Socket grafting has shown to modify there modeling events associated with the extraction socket, in a way partially counteracting the marginal ridge contraction that occurs following tooth removal.[3]

The healing events of extraction sockets had been examined in human biopsies taken at various time points after extraction and was shown that the density of vascular structures and macrophages slowly decreased from 2 to 4 weeks along with the level of osteoclastic activity, whereas the presence of osteoblasts peaked at 6–8 weeks and remained almost stable thereafter, providing favorable conditions for regenerative procedures.[24]

This article substantiates the evidence from various systematic reviews on the effect of socket preservation therapies following tooth extraction carried out in humans, where it has found to offer the following advantages;[25,26]

- The technique, when employed reduced the bone dimensional changes following tooth extraction, than when the socket is left to heal naturally.
- The graft, when inserted into the socket, act as a scaffold to enable osteoid deposition and vital bone formation.
- It also significantly reduced the vertical and horizontal contraction of the alveolar bone crest of the extraction socket.

In the effort to preserve the bony architecture remaining and develop a 3-dimensional site favorable for implant prosthesis through socket preservation, the socket was incorporated with xenograft and PRF mixture which serves as a scaffold with additional bioactive molecules well-integrated.

Araujo in 2009 mentioned that, the use of xenograft in socket preservation techniques will delay the socket healing but at the same time will help to conserve the socket anatomy and are considered the most used bone fillers in the socket preservation procedures due to their osteoconductive matrix framework that enhances the growth of new bone around it.[27]

Valentini in 1998 also showed that the bone implant contact at the sites grafted with bovine bone fillers is greater than in the non-grafted sites.[28] These evidences further validate the attempt to preserve the extraction socket with the demineralized bone matrix fused with PRF to develop a best possible bony platform for the implant prosthesis.

► Conclusion:

Loss of teeth due to complicated caries or infection often result in hard and soft tissue collapse, therefore the preservation of bone volume is of major importance in order to insure the proper implant or any prosthetic rehabilitation.

The use of bone replacement grafts and/or barrier membranes in the extraction socket at the time of tooth removal enhances the chance of developing an ideal site for the future placement of a dental implant or to maximize ridge dimensions following tooth extraction.

However, the scientific evidence did not provide clear guidelines with regard to the type of biomaterial or surgical procedure to best achieve ridge preservation and there are no data available till date to draw conclusions on the consequences of ridge preservation benefits as they relate to the long-term outcomes for implant therapy. However, in the current scenario with the few short term evidence in hand, grafting the socket at the time of extraction is important and crucial when aim for a three dimensionally stable prosthetic rehabilitation, especially if the bony contour and thickness are compromised before the time of extraction.

► References:

1. Bodic F, Hamel L, Lerouxel E, Baslé MF, Chappard D. Bone loss and teeth. Joint Bone Spine. 2005 May 1;72(3):215-21.
2. Petite H, Viateau V, Bensaid W, Meunier A, de Pollak C, Bourguignon M, Oudina K, Sedel L, Guillemin G. Tissue-engineered bone regeneration. Nature biotechnology. 2000 Sep;18(9):959.
3. Tomlin EM, Nelson SJ, Rossmann JA. Suppl 1: Ridge Preservation for Implant Therapy: a Review of the Literature. The open dentistry journal. 2014;8:66.
4. Schropp L, Wenzel A, Kostopoulos L, Karring T. Bone healing and soft tissue contour changes following single-tooth extraction: a clinical and radiographic 12-month prospective study. International Journal of Periodontics & Restorative Dentistry. 2003 Aug 1;23(4).
5. Stefani CM, Machado MA, Sallum EA, Sallum AW, Toledo S, Nociti JF. Platelet-derived growth factor/insulin-like growth factor-1 combination and bone regeneration around implants placed into

extraction sockets: a histometric study in dogs. Implant dentistry. 2000;9(2):126-31.

6. Geiger M, Li RH, Friess W. Collagen sponges for bone regeneration with rhBMP-2. Advanced drug delivery reviews. 2003 Nov 28;55(12):1613-29.
7. Tamimi FM, Torres J, Tresguerres I, Clemente C, López-Cabarcos E, Blanco LJ. Bone augmentation in rabbit calvariae: comparative study between Bio-Oss® and a novel β-TCP/DCPD granulate. Journal of clinical periodontology. 2006 Dec 1;33(12):922-8.
8. Simion M, Jovanovic SA, Trisi P, Scarano A, Piattelli A. Vertical ridge augmentation around dental implants using a membrane technique and autogenous bone or allografts in humans. International Journal of Periodontics & Restorative Dentistry. 1998 Feb 1;18(1).
9. Zitzmann NU, Schärer P, Marinello CP, Schüpbach P, Berglundh T. Alveolar ridge augmentation with Bio-Oss: a histologic study in humans. International Journal of Periodontics & Restorative Dentistry. 2001 Jun 1;21(3).
10. Schroeder HE. The periodontium. Handbook of microscopic anatomy. 1986;5:87-96.
11. Araújo MG, Lindhe J. Dimensional ridge alterations following tooth extraction. An experimental study in the dog. Journal of clinical periodontology. 2005 Feb 1;32(2):212-8.
12. Araújo MG, Silva CO, Misawa M, Sukekava F. Alveolar socket healing: what can we learn?. Periodontology 2000. 2015 Jun 1;68(1):122-34.
13. Schropp L, Wenzel A, Kostopoulos L, Karring T. Bone healing and soft tissue contour changes following single-tooth extraction: a clinical and radiographic 12-month prospective study. International Journal of Periodontics & Restorative Dentistry. 2003 Aug 1;23(4). Dent 2003: 23: 313–323.
14. Fickl S, Zuhr O, Wachtel H, Bolz W, Huerzeler M. Tissue alterations after tooth extraction with and without surgical trauma: a volumetric study in the beagle dog. Journal of Clinical Periodontology. 2008 Apr 1;35(4):356-63.
15. Muska E, Walter C, Knight A, Taneja P, Bulsara Y, Hahn M, Desai M, Dietrich T. Atraumatic vertical tooth extraction: a proof of principle clinical study of a novel system. Oral surgery, oral medicine, oral pathology and oral radiology. 2013 Nov 1;116(5):e303-10.
16. Chappuis V, Araújo MG, Buser D. Clinical relevance of dimensional bone and soft tissue alterations post-extraction in esthetic sites. Periodontology 2000. 2017 Feb 1;73(1):73-83.
17. Bäumer D, Zuhr O, Rebele S, Schneider D, Schupbach P, Hürzeler M. The Socket-Shield Technique: First Histological, Clinical, and Volumetrical Observations after Separation of the Buccal Tooth Segment–A Pilot Study. Clinical implant dentistry and related research. 2015 Feb 1;17(1):71-82.
18. Paolantonio M, Dolci M, Scarano A, d'Archivio D, Placido GD, Tumini V, Piattelli A. Immediate implantation in fresh extraction sockets. A controlled clinical and histological study in man. Journal of periodontology. 2001 Nov 1;72(11):1560-71.
19. Vignoletti F, Johansson C, Albrektsson T, De Sanctis M, San Roman F, Sanz M. Early healing of implants placed into fresh extraction sockets: an experimental study in the beagle dog. De novo bone formation. Journal of Clinical Periodontology. 2009 Mar 1;36(3):265-77.
20. Alharbi HM, Babay N, Alzoman H, Basudan S, Anil S, Jansen JA. Bone morphology changes around two types of bone-level implants installed in fresh extraction sockets–a histomorphometric study in Beagle dogs. Clinical oral implants research. 2015 Sep 1;26(9):1106-12.
21. Darby I, Chen ST, Buser D. Ridge preservation techniques for implant therapy. Int J Oral Maxillofac Implants. 2009 Oct 2;24(Suppl):260-71.
22. Borie E, Oliví DG, Orsi IA, Garlet K, Weber B, Beltrán V, Fuentes R. Platelet-rich fibrin application in dentistry: a literature review. International journal of clinical and experimental medicine. 2015;8(5):7922.
23. Lekovic V, Kenney EB, Weinlaender M, Han T, Klokkevold P, Nedic M, Orsini M. A bone regenerative approach to alveolar ridge maintenance following tooth extraction. Report of 10 cases. Journal of periodontology. 1997 Jun;68(6):563-70.
24. Trombelli L, Farina R, Marzola A, Bozzi L, Liljenberg B, Lindhe J. Modeling and remodeling of human extraction sockets. Journal of clinical periodontology. 2008 Jul 1;35(7):630-9.
25. Ten Heggeler JM, Slot DE, Van der Weijden GA. Effect of socket preservation therapies following tooth extraction in non-molar regions in humans: a systematic review. Clinical oral implants research. 2011 Aug;22(8):779-88.
26. Vignoletti F, Matesanz P, Rodrigo D, Figuero E, Martin C, Sanz M. Surgical protocols for ridge preservation after tooth extraction. A systematic review. Clin Oral Implants Res 2012;23(suppl 5):22-38.
27. Araujo M., Linder E. Effect of a xenograft on early bone formation in extraction sockets: an experimental study in dog. Clin Oral Implants Res. 2009; 20(1): 1-6
28. Valentini P. Histological evaluation of Bio-Oss in a 2-stage sinus floor elevation and implantation procedure. A human case report. Clin Oral Implants Res 1998; 9(1): 59-64

Management of multisurface decay in primary first molars using Stainless steel crowns: A report of 2 cases

* Kumar Kavita Krishna

Abstract

Wide proximal cavities are indeed a challenge to manage not only for the general practitioner but also for the Pedodontist. Frequent food impaction and pain following this, make it a nightmare for both the patients and their parents. Repeated dislodgement of conventional Glass Ionomer Cements and poor bonding characteristics of primary enamel are often, the problems encountered. This article describes 2 case reports of effective management of wide proximal cavities by using stainless steel crowns. Minimal tooth preparation and establishment of better marginal contacts prove to be the governing factors in their selection

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► Introduction

The anatomy of a primary molar tooth, especially the first primary molar differs significantly from that of any other tooth in the oral cavity. The marked cervical constriction of the tooth, poses a challenge for retention of conventional restorative materials like glass ionomer cements.[1] Challenges in isolation and bonding make it difficult to use composite resins, which are the most sought after restorative materials in modern restorative dentistry.[2] Frequent refilling of cavities not only poses an economic burden on parents, but also makes the existing cavities wider and deeper necessitating need for further endodontic procedures. A better solution to this problem is a full coverage restoration that is easy to place as well as able to maintain good contacts preventing food impaction. Stainless steel crowns being thin have the ability to be contoured according to the anatomy of the tooth, thus reducing chances of dislodgement. The marked cervical constriction in the first primary molar also aids in retention of the crown.[3]

This article describes 2 cases of successful management of proximal decay in upper first primary molar, using stainless steel crowns.

Case 1

A 5-year-old girl child reported to the department of Pedodontics, Annoor Dental College; with a chief complaint of pain due to food impaction on the upper right posterior tooth region. Her medical history was not contributory. Pain history revealed a dull type of pain while chewing food from that side for the past few months. Parent also reported a need to use a toothpick to remove food debris from the interproximal region. There was no history of spontaneous pain or night pain. Clinical examination revealed multisurface decay involving both mesial and distal sides of 54, the primary first molar on the right side. Code 5 could be assigned to the cavities on the mesial and distal sides using ICDAS II scoring criteria for smooth surface caries (Figure 1)

As both mesial and distal surfaces were involved and contact areas needed to be established to prevent food impaction, a more definitive form of restoration was needed; which would not only establish form of the tooth but also restore the function of the tooth. SS crown has proved to be superior to glass ionomer cement for restoring multisurface decay and hence was selected as the treatment of choice.

Remaining caries was excavated followed by proximal reduction was done with knife-edge margins. No buccal or palatal reduction was done and less than 1 mm of occlusal reduction at the cusp tips was done.

A size 5 Stainless Steel crown (NuSmile Stainless Steel

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Primary Crowns; Houston, TX, U.S.A.) was contoured and crimped and tried on to check the fit and contacts. On conforming to the requirements, the crown was luted with Type I Glass Ionomer cement (GC Corp, Japan) (Figure 2).

Case 2

A 6-year-old girl child reported to the department of Pedodontics, Annoor Dental College, Muvattupuzha with a chief complaint of food impaction in between the upper right posterior teeth. No relevant medical history was reported. Pain history revealed dull pain while eating food from that side. Patient has undergone fillings on the same teeth multiple number of times which have been repeatedly dislodged. The parents demanded for a more permanent solution to their child's problem. The child did not give any history of spontaneous or night pain. Decay on 54 could be given Code 5 according to ICDAS II scoring criteria for smooth surface caries and 55 also was given code 5, but caries had not involved line angles on 55 (Figure 3). Hence a decision was made to give conventional Glass Ionomer Restoration on 55 (GC Fuji IX Extra GC Corp. Japan) and Stainless Steel Crown on 54. (NuSmile Stainless Steel Primary Crown; Houston, TX, U.S.A.) Thus both form and function of 54 and 55 were restored back to normal (Figure 4)

► Discussion

When it comes to treatment of proximal caries in primary teeth, options available are limited. Traditionally silver amalgam was primarily used to restore such cavities. However,their use is coming down due to need for extensive cavity preparation and concerns regarding mercury toxicity.[4] Issues regarding disposal of old amalgam restorations is also a factor limiting their use in modern day dentistry.

Glass Ionomer Cements developed by Wilson and Kent in 1930 are the best available restorative materials for primary teeth.[5] Their ease of manipulation and fluoride release properties make it appropriate to be used in pediatric mouths. However, their limited ability to bear occlusal forces and poor wear resistance makes them a bad choice in stress bearing areas like marginal ridges of posterior teeth.[6] Regarding use of conventional GIC in class II cavities, findings of a systematic review and meta analysis suggest that conventional GIC's are not recommended for class II cavities in primary teeth.[7] They also have other drawbacks like poor anatomical form and marginal integrity.[8]

Stainless steel crowns have been introduced to pediatric dentistry in 1950 by Engel followed by Humphrey. Randall[9] in his literature review suggests multiple indications of Stainless Steel Crown, of which large caries extending beyond line angles is one of them. The advantage of using Stainless steel crowns is that they do don't depend on the shape of the preparation, except at the gingival margin. As the most convex portion of the tooth is at the cervical aspect of the buccal and lingual surface of the crown, it is this phenomenon that provides retention to a stainless steel crown. The crown being flexible springs into these undercut areas thus providing retention.

While evaluating studies regarding longevity of stainless steel crowns, the earliest study can be traced back to 1975 where Braff suggested that stainless steel crowns were a more economical option to mutisurface amalgams in children who around are 4 years of age.[10] O Sullivan and Cruzon reported in a study over 2 years that the time taken to place a composite resin and Stainless steel crown under General anaesthesia is almost similar and recommended that gross caries be managed with Stainless Steel Crowns.[11] Tate et al on another study of 241 patients reported similar findings.[12] Papathanasiou et al[13] in a survival analysis of 128 patients with 604 restorations reported maximum success of stainless steel crowns followed by amalgam, composites and glass ionomer cements.

Fig. 1 Multisurface dentinal caries on 54

Fig. 2 Mesial and Distal contacts restored with SS Crown)

Fig. 3 Caries involving line angles on distal side of 54 and not involving line angles on mesial side of 55.

Fig. 4 54 restored with SS crown, 55 restored with GIC

In the above case reports, both the patients presented multisurface decay and were seeking some form of definitive treatment. Hence in light of the above mentioned studies Stainless steel crowns were chosen as the best restoration.

► Conclusion

Restoring multisurface decay in primary teeth is indeed a challenge. The aim of restoration is not only to restore form and function but also do it within minimal time and discomfort to the pediatric patients. Stainless steel crowns thus should be the best possible restoration of multisurface decay as it satisfies all the aforementioned requirements. Hence it is high time we start preferring them to composites and conventional glass ionomers, at least in areas where esthetics is not a major concern.

► References

1. Myers DR. The restoration of primary molars with stainless steel crowns. ASDC J Dent Child. 1976; 43:406-409
2. Antony K, Genser D, Hiebinger C, Windisch F. Longevity of dental amalgam in comparison to composite materials. GMS Health Technol Assess 2008;13(4):Doc12
3. Brook AH, King NM. The role of stainless steel crowns Part 2. Clinical applications. Dent Update. 1982;9:84-85
4. Beazoglou T, Eklund S, Heffley D, Meiers, J, Brown LJ, Bailit H. Economic impact of regulating the use of amalgam restorations. Public Health Rep 2007;122(5): 657-63
5. Chadwick BL, Evans DJ. Restoration of Class II cavities in primary molar teeth with conventional and resin modified glass ionomer cements: A systematic review of the literature. Eur Arch Paediatr Dent 2007;8(1):14-21.
6. Toh SL, Messer LB. Evidence-based assessment of toothcolored restorations in proximal lesions of primary molars. Pediatr Dent 2007;29(1):8-15
7. Mickenautsch S, Yengopal V, Leal SC, Oliveira LB, Bezerra AC, Bonecker M. Absence of carious lesions at margins of glass-ionomer and amalgam restorations: A meta-analysis. Eur J Paediatr Dent 2009;10(1):41-6
8. Daou MH, Tavernier B, Meyer JM. Two-year clinical evaluation of three restorative materials in primary molars. J ClinPediatr Dent 2009;34(1):53-8.
9. Randall RC. Preformed metal crowns for primary and permanent molar teeth: review of the literature. Pediatr Dent. 2002;24(5):489–500
10. Braff MH. A comparison between stainless steel crowns and multisurface amalgams in primary molars. ASDC J Dent Child. 1975;42:474-478.
11. O'Sullivan EA, Curzon MEJ. The efficacy of comprehensive dental care for children under general anaesthesia. Br Dent J. 1991;171:56-58
12. Tate AR, Ng MW, Needleman HL, Acs G. Failure rates of restorative procedures following dental rehabilitation under general anesthesia. Pediatr Dent. 2002;24:69-71.
13. Papathanasiou AG, Curzon MEJ, Fairpo CG. The influence of restorative material on the survival rate of restorations in primary molars. Pediatr Dent. 1994; 16:282-288.

CBCT assisted nonsurgical endodontic management of Dens invaginatus in mandibular central incisor – A case report

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Abstract

Dens invaginatus is a rare malformation with a widely varied morphology and it presents a challenge to the endodontist. The aim of this case report is to highlight the advantage of CBCT in endodontic management of teeth with dental anomalies. Dens invaginatus is commonly seen in maxillary teeth. Involvement in mandibular central incisor is very rare. A provisional diagnosis of type III dens in dente was made based on radiographic findings. Among the three types, type III is most rare. Considering the complex anatomy, CBCT was advised for confirmation. Dental operating microscope was used to access the primary root canal and the area of invagination. Biomechanical preparation of the root canals were done, apical plug created with MTA and obturated with Gutta-percha. This case report demonstrates rapid management of type III dens invagination in mandibular cental incisor with open apex and large periradicular lesion.

Key words: CBCT, Dens invaginatus, MTA

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► Introduction

Dens invaginatus is a rare malformation of teeth, which exhibits a broad spectrum of morphological variations. This developmental anomaly results from the invagination of the enamel organ into the dental papilla before the occurrence of calcification[1]. The label of Dens invaginatus encompasses small lingual pits in the cingulum, of otherwise normal teeth, to broad frank tracts visually or radiographically apparent in dilated teeth. This phenomenon is referred to by various other names such as Dens in dente, invaginated odontoma, dilated gestant odontoma, dilated composite odontoma, tooth inclusion, and dentoid in dente.

In 1794, Ploquet, who discovered this anomaly in a whale's tooth, was the first to describe this kind of a dental malformation. In the case of human teeth, it was a dentist named Socrates, who, in 1856, first described Dens invaginatus[2]. The occurrence of dens invaginatus is reported to be in a range of 0.04% to 10%. The upper lateral incisors are the most commonly affected by this phenomenon, followed by maxillary central incisors, premolars, canines and molars. Males are more affected by a ratio of 3:1. Generally, a dens invaginatus is detected purely by chance on the radiograph. Clinically, an unusual crown morphology or a deep foramen caecum may provide a vital clue, but affected teeth sometimes present no clinical signs of the malformation[3].

Various theories have been proposed for the etiology of dens invaginatus[4]. These include folding in of the enamel organ during the tooth germ development due to pressure from adjacent developing tooth germs, rapid in-growth of a portion of the internal enamel epithelium into the developing adjacent dental papilla, failure of a small area of the internal enamel epithelium to grow along with the adjacent epithelium which continues to grow and develop normally, and infection during tooth development, absence of certain inter-cellular signal molecules causing dental anomalies. According to Oehlers,[5] the distortion of the enamel organ during tooth development and the subsequent protrusion of a part of this can result in a linear enamel canal that ends at the cingulum and sometimes, at the incisal border, producing an irregular crown shape.

The first classification of invaginated teeth was published by Hallett,[6] in 1953. However, the commonly used classification, proposed by Oehlers in 1957, includes the following 3 types,based on the depth of the invagination and the degree of communication with the periodontal ligament or the periradicular tissue.

Type I: Invagination confined to inside the crown, and not extending beyond the cemento-enamel junction (CEJ).

Type II: Invagination extending beyond the CEJ, which may or may not communicate with the pulp and does not reach the periradicular tissue.

Type III: Invagination which extends beyond the CEJ,

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penetrates the root and exhibits second foramina in the apical third within the periradicular tissue.

Different treatment options have been suggested for these teeth, and all of them are related to the degree of complexity of the tooth anatomy. Witherspoon and Ham[7] have described an apical closure technique in a single appointment making use of mineral trioxide aggregate (MTA) in teeth with pulp necrosis and immature apex, reporting it as an alternative to the traditional apexification technique with calcium hydroxide.

A review of literature indicates that dens invaginatus in mandibular incisor is extremely rare, with only a few cases reported previously.

► Case report

A healthy 25-year-old male patient reported to the department of Conservative Dentistry and Endodontics with a complaint of pain and swelling in lower incisor region.

Patient history revealed similar swelling and pain in the same tooth, five years back, which was relieved by medication. He complained of occasional pus discharge from the area, which subsided on its own. There was no history of trauma.

Clinical examination showed the mandibular left central incisor with folding of the crown. It was acutely tender on percussion. No periodontal pocket was seen. Sinus tracts were present in the labial gingiva in relation to 31 and 41.

The two mandibular central incisors did not respond to electric pulp vitality test, however, adjacent teeth responded within normal limits.

Radiographic examination revealed the presence of an invagination along the entire length of the root of 31.

CBCT scan of the mandible was taken and a three dimensional reconstruction of the involved tooth was done. This showed a developmental groove along the entire length of the root. Labial and lingual root canal space was seen. External root resorption was also seen.

Based on the clinical and radiographic finding, presence of Type III dens in dente was confirmed and a definite treatment plan formulated.

Treatment plan included non-surgical endodontic therapy, and surgical apical curettage, if necessary.

► Treatment

The lower anterior quadrant was isolated with rubber dam following administration of local anesthesia. Endodontic access of 31 and 41 was prepared using an endoaccess diamond bur (Dentsply No.2). Using a DG16 endodontic explorer (Hu-Friedy, Germany) and a size 10 K file, two orifices in 31 were identified.

Fig. 1 intraoral view of mandibular left central incisor

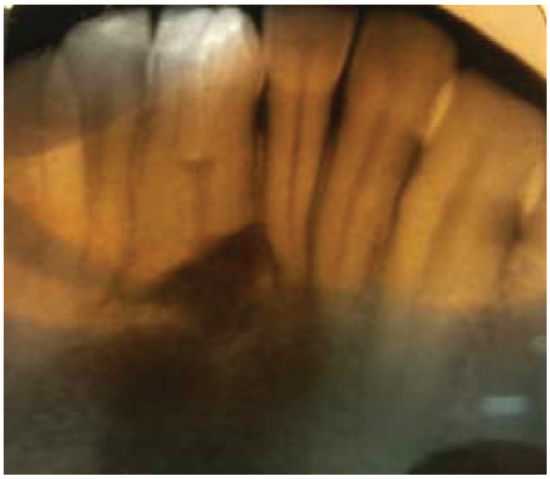

Fig 2 IOPA radiograph showing dens in dente

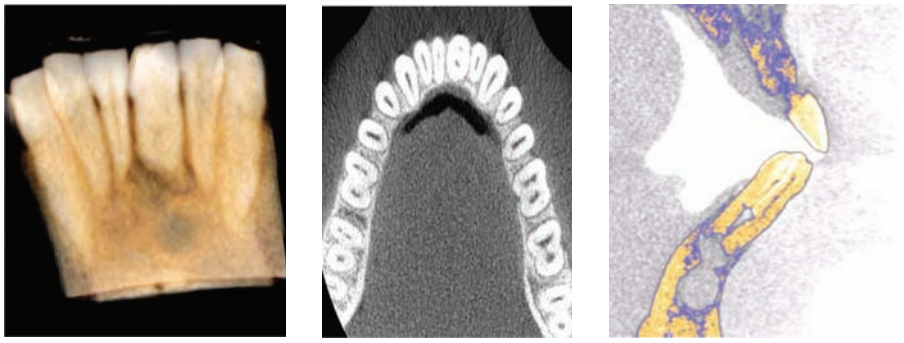

Fig 3- CBCT images

One wide canal through the center of the calcified mass and narrow canal labially out side the mass.

Working length was estimated using radiographic technique and was found to be 15mm for the labial canal and 18mm for the central canal.

Cleaning and shaping of both canals in 31 was done using MTwo file system and sodium hypochlorite as irrigant and closed dressing was given using calcium hydroxide as intra canal medicament. Similarly, 41 access was prepared,cleaning and shaping was completed and intra canal calcium hydroxide dressing given.

On reviewing after two weeks, the swelling had subsided and both teeth were asymptomatic.

Root canal obturation

There was no apical stop for the wide canal through the central calcified mass in 31. MTA (Angelus) was placed to form an apical plug of 4mm and a cotton pellet moistened with distilled water was placed inside the canal for 48 hours to allow complete setting of MTA. Thereafter the cotton pellet was removed and after verifying the setting of MTA, the rest of the canal was obturated with gutta percha by sectional obturation technique. The other narrow canal was obturated by lateral condensation using 2% gutta percha (No.30) and accessory cones. 41, root canal obturation was done by lateral condensation technique using 4% gutta-percha (No.30) and accessory cones.

► Discussion

Early diagnosis and intervention are required for Dens invaginatus, as it may quickly result in periradicular pathosis. The blind sac forming deep pits provide an ideal niche for bacterial growth. In these defects, enamel is often malformed or may contain numerous fine canals which link the invagination with the pulp space. The complexity of these root canals and the type and extent of invagination require management with endodontic therapy.

In the present case, unusual crown anatomy was found in the mandibular central incisor. A provisional diagnosis of type III dens in dente was made based on radiographic findings. The cause of the periradicular periodontitis was most probably due to ingress of bacteria into the invagination, which allow the entry of irritants into an area. Invagination are often separated from the pulp by hypomineralized enamel and dentin providing easy access for organisms into the pulp chamber[8]. The consequence would be pulp necrosis,shortly after tooth eruption, followed by abscess formation, cysts, displacement of teeth, and may even lead to internal resorption.

When compared to tomographic techniques, periapical radiographs have limitations in revealing the type, extension, and complex morphology of dens invaginatus, along with, the actual bone loss. More advanced imaging techniques, such as CBCT, may assist the diagnosis as well as the management plan and also the follow-up of teeth with this developmental defect. CBCT is a very useful tool for the management of complex endodontic problems, as it enables one to acquire three-dimensional information on the morphology of root canals, teeth, and periapical areas, with radiation doses lower than the conventional CT[9]. The reconstructed images from the CBCT data are particularly useful in assessing the true nature of the invagination, in particular, and the relationship of the invagination within the root canal. In this case, CBCT helped to assess the course of invagination along the length of the root and also, the course of treatment.

Different treatment options are available, depending on the morphological complexity of the affected tooth. These include non-surgical endodontic treatment of the root canal and the invagination, a combined endodontic and surgical treatment, intentional replantation, or extraction.[10]

In this case, non-surgical endodontic treatment was done in an attempt to debride the canal space as much as possible. This was based on the widely accepted concept which holds that non-surgical endodontic treatment should be the first line of treatment. Surgical treatment is considered as an option only when the non-surgical treatment failed.

Examination of literature shows that, Dens invaginatus is commonly seen in maxillary teeth and occurrence in mandibular teeth is rare[11]. It has been observed that the maxillary lateral incisors are the most commonly affected teeth (54.7%), followed by maxillary central incisor (21.33%), maxillary canine (12%), mandibular lateral incisors (5.33%), mandibular canine (4%) and mandibular central incisor (2.67%).

Fig. 4 Access cavity prepared under rubber dam isolation

Fig. 5 Master cone radiograph

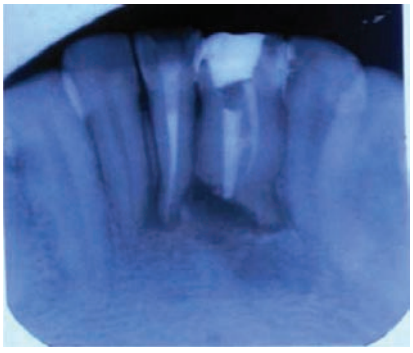

Fig. 6 Post obturation radiograph

The reason behind this kind of occurence is believed to be the unfavorable position of maxillary lateral incisor during its formative stages and also, it is the last anterior tooth to calcify[12].

Bilateral occurrence of Dens invaginatus is not rare and occurs in 43% of all cases with a high degree of inheritance 3. But bilateral occurence or evidence of inheritance was not found in this case.

Obtaining an adequate closure of the root canal is a major problem in endodontic therapy in teeth with pulp necrosis and openapex. The clinical procedure required for such teeth is based on the principle of pulp space disinfection, which allows the formation of a mineralized tissue barrier at the apex of the tooth. Calcium hydroxide is the most commonly used medication for this purpose[13]. MTA has been suggested as a material for immediate closure of the apical opening without waiting for it to heal naturally. This will create an apical barrier in the canal, and prevent the extrusion of root filling material into the periapical tissues. It has been shown that MTA induces the formation of a calcified matrix in the periapical tissue and regeneration of new cement. This is possibly associated with its high sealing capacity, biocompatibility, alkaline pH, and liberation of substances activating the cementoblasts, which in turn will create a matrix for the cementogenesis[14].

Conclusion

Historically, endodontic treatment of teeth with severe dens invaginatus was considered impractical. Treatment options were usually limited to extraction. The dramatic improvements in endodontic armamentarium and diagnostic aids like CBCT have enhanced the possibility for the conservative treatment of such anomalies. The clinician should be aware of this anomaly as there is the risk of apical inflammatory disease. Prophylactic restoration of the palatal pits of these teeth is vital so as to avoid possible biologic injury and related inflammation.

References

1 Schaefer H. Clinical aspects of the dens in dente. Dtsch Zahnarztl Z 1955;10:988-95.

2. Alani A, Bishop K. Dens invaginatus. Part 1: Classification, prevalence and etiology. Int Endod J. 2008;41:1123–36.

3. Hulsmann M. Dens invaginatus: Aetiology, classification, prevalence, diagnosis and treatment considerations. Int Endod J. 1997;30:79–90.

4. Patel S. The use of cone beam computed tomography in the conservative management of dens invaginatus: A case report. Int Endod J. 2010;43:707–13.

5. Oehlers FA. Dens invaginatus (dilated composite odontome). I. variations of the invagination process and associated anterior crown forms. Oral Surg Oral Med Oral Pathol. 1957;10:1204–18.

6. Gupta R, Tewari S (2005) Nonsurgical management of two unusual cases of dens in dente. J Indian Soc Pedod Prev Dent 23: 190-192.

7. Witherspoon DE, Ham K. One-visit apexification: technique for inducing root end barrier formation in apical closures. Pract Proced Aesthet Dent 2001;13:455-60.

8. Gonçalves A, Gonçalves M, Oliveira DP, Gonçalves N. Dens invaginatus type –III: Report of a case and ten year radiographic follow-up. Int Endod J. 2002;35:873–9.

9. Kaneko T, Sakaue H, Okiji T, Suda H. Clinical management of dens invaginatus in a maxillary lateral incisor with the aid of conebeam computed tomography – a case report. Dent Traumatol. 2011;27:478–83.

10. Carvalho-Sousa B, Almeida-Gomes F, Gominho LF, Albuquerque DS (2009) Endodontic treatment of a periradicular lesion on an invaginated type III mandibular lateral incisor. Indian J Dent Res 20: 243-245.

11. Prevalence Of Dens Invaginatus In North Indian Population Oral & Maxillofacial Pathology Journal [OMPJ] Vol. 4 No. 1 Jan - June 2013 ISSN 0976 - 1225

12. Tiku A, Nadkarni UM, Damle SG (2004) Management of two unusual cases of dens invaginatus and talon cusp associated with other dental anomalies. J Indian Soc Pedod Prev Dent 22: 128-133.

13. Metzger Z, Solomonov M, Mass E. Calcium hydroxide retention in wide root canals with flaring apices. Dent Traumatol 2001;17: 86-92.

14. Giuliani V, Baccetti T, Pace R, Pagavino G. The use of MTA in teeth with necrotic pulps and open apices. Dent Traumatol 2002;18:217-21.

Platelet Rich Fibrin: A Zero cost regenerative material for Grade III Furcation Involvement – A Case report - 6 years follow up

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Abstract

Platelet Rich Fibrin is a natural fibrin-based biomaterial prepared from an anticoagulant-free blood harvest without any artificial biochemical modification that allows obtaining fibrin membranes enriched with platelets and growth factors. The scientific rationale behind the use of these preparations lies in the fact that the platelet alpha granules are a reservoir of many growth factors (GFs) that are known to play a crucial role in hard and soft tissue repair mechanism. Sufficient evidences are available in the literature suggesting the potential role of PRF in periodontal regeneration. In this case report,successful management of periodontopulpally involved maxillary first molar with Grade III furcation involvement was described. Root resection of distobuccal root of first molar and the defect was treated with PRF. Six years follow up revealed a significant improvement in clinical and radiographic parameters.

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► Introduction

The ultimate goal of periodontal therapy is the regeneration of lost tissues. Periodontal regeneration involves the formation of alveolar bone, cementum, and a new functional periodontal ligament. Multiple approaches have been used in an effort to achieve this goal including, demineralized freeze-dried bone allografts, bovine derived xenografts, barrier membranes, and combinations of membranes and bone grafts. Platelets can play a crucial role in periodontal regeneration as they are reservoirs of growth factors and cytokines which are the key factors for regeneration of the bone and maturation of the soft tissue. The slow polymerization during centrifugation and fibrin-based structure makes PRF a better healing biomaterial than Platelet rich plasma and other fibrin adhesives. This case report shows appreciable bone fill in relation to distal aspect of a maxillary molar treated by root resection and PRF.

► Case Report

A 44 year old male patient was referred to the department of Periodontics, Government Dental College (Kozhikode) with the chief complaint of pus discharge and food lodgement in the upper left posterior region since 3 months. On clinical examination, deep periodontal pockets were found. A deep periodontal pocket measuring upto 10mm was noticed in the distal and mesial aspect of left maxillary first and second molar (Fig. 1). Full mouth intra oral radiographs revealed generalized horizontal interproximal bone loss with severe bone loss extending beyond the root apex in relation to disto-buccal root of left maxillary first molar (Fig. 5). Vitality testing was performed for maxillary first molar and was found to be non-vital. Case was diagnosed as chronic generalized periodontitis with periodonto pulpal involvement of maxillary first molar. After recording all the findings, a thorough treatment plan was decided which comprised of scaling, root planning,endodontic therapy of 26, full mouth flap surgery along with root resection of disto-buccal root of 26 was formulated and advised to the patient. Advantages and disadvantages of the procedure was explained to the patient and informed consent was obtained.

Phase I therapy (scaling and root planning) was performed. The patient was advised 0.2 % chlorhexidine mouth rinse twice daily. Patient was recalled 4 weeks after phase-I therapy and the clinical parameters were reevaluated and patient was referred to the department of endodontics for endodontic therapy of 26. Case was reviewed after three months of endodontic therapy. Routine blood investigations were carried out and patient was called for surgical periodontal therapy and root resective therapy.

After administration of local anesthesia, full thickness flaps were elevated on the buccal and palatal aspect (Fig 2). The area

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was debrided of subgingival calculus and granulation tissue and irrigated with normal saline. After debridement, morphology of the bone defects, amount of remaining bone was evaluated. Grade III furcation involving the distobuccal root was found. Decision to resect the disto-buccal root was re-confirmed. A high-speed, surgical length fissure carbide bur was used to make an oblique cut from just apical to the contact point of the tooth, through the tooth and to the facial and distal orifice of the furcation. After completion of the sectioning, the root was elevated from its socket with a periosteal elevator and removed (Fig 3). Granulation tissue was curetted out of the distobuccal root socket using curettes.

A venous blood sample was taken at the time of the surgery, and centrifuged according to the PRF protocol developed by Choukroun et al. Briefly, 6 ml blood sample was taken from the patient without an anticoagulant in 10 ml glass test tubes and immediately centrifuged at 3000 rpm for 10 min. Superficial Platelet poor plasma was discarded, PRF was separated from red corpuscles base using sterile tweezers and scissors. The junction of PRF to RBC layer was preserved, as this region is supposed to be richest in all the growth. The PRF clot was placed into the distobuccal root socket (Fig 4). Facial and palatal flaps are approximated by using external mattress sutures. The area was covered with non-eugenol periodontal dressing. Post surgical instructions were given. The patient was prescribed Amoxicillin 500 mg, TDS for 5 days and Aceclofenac plus paracetamol, BD for 3 days, Rantac 150mg BD for 5 days. Patient was recalled after one week for review and wound healing was found to be satisfactory. Patient was recalled every three months for review after that and was asymptomatic.

At six month evaluation there was significant reduction in probing pocket depth and gain in clinical attachment level and patient was recalled every year and plaque control was reinforced. After six months the tooth was restored with metal ceramic jacket crown and patient was put on maintenance phase. At six years follow-up all the clinical parameters was stable. Intraoral periapical radiograph after six years revealed bone fill In the distal aspect of 26 (Fig 6).

► Discussion

Periodontal regeneration is a complex multifactorial process involving biologic events like cell adhesion, migration, proliferation, and differentiation in an orchestrated sequence1. Periodontal regenerative procedures includes soft tissue grafts, bone grafts, root biomodifications, guided tissue regeneration, and combinations of these procedures[2]. The disruption of vasculature during wound healing leads to fibrin formation, platelet aggregation, and release of several growth factors into tissues from platelets through molecular signals which are primarily mediated by cytokines and growth factors. There is evidence that the presence of growth factors and cytokines in platelets play key roles in inflammation and wound healing[1]. Platelets also secrete fibrin, fibronectin, and vitronectin, which act as a matrix for the connective tissue and as adhesion

Fig 1. Pre-operative view

Fig 2. Flap elevation

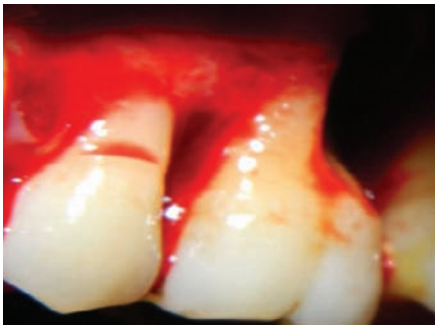

Fig 3. After resection

Fig 4. PRF placement

Fig 5. Pre OP

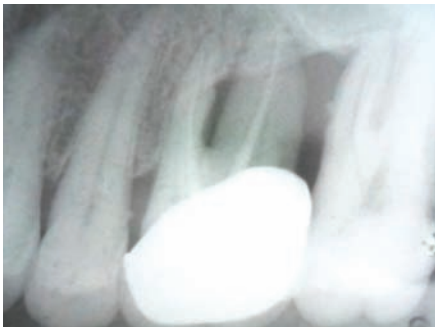

Fig 6. Post OP 6 years

molecules for more efficient cell migration[3]. Thus platelet offers promising regenerative material to improve tissue repair particularly in periodontal wound healing.

Platelet-rich fibrin (PRF) described by Choukroun et al. is a second-generation zero cost platelet concentrate which contains platelets and growth factors prepared from the patient's own blood free of any anticoagulant or other artificial biochemical modifications. The PRF clot forms a strong natural fibrin matrix[4,5] and shows a complex architecture as a healing matrix with unique mechanical properties which makes it distinct from other platelet concentrates. PRF membrane is an autologous membrane with no external additives to enhance the physical properties other than the natural resistance offered by the fibrin matrix[6]. PRF is a powerful healing biomaterial with inherent regenerative capacity and can be used in various procedures such as periodontal intrabony defects[7,8], horizontal defects[9], treatment of furcation[10], sinus lift procedures[11] and as application in the field of tissue engineering.[12]

This case report highlighted the importance of PRF as regenerative material, meticulous plaque control and proper maintenance programme for the successful management of tooth with questionable-poor prognosis.

► Conclusion

Within the limitations of the study, it can be concluded that the Platelet rich fibrin leads to significant improvements in clinical as well as radiographic parameters. It is a reservoir of growth factors and cytokines that can 'jump start' the healing process to a more predictable regenerative process. Platelet rich fibrin, with its well established effects on hard- and soft-tissue cells, may thus have the potential to overcome the limitations of the conventional bone grafts and barrier membranes and promote periodontal regeneration.

► References

1. Giannobile WV. Periodontal tissue engineering by growth factors. Bone [Internet]. 1996;19(1):S23–37. Available from: http://www.sciencedirect.com/science/article/pii/S8756328296001275
2. Greenwell H, Science and Therapy. American Academy of Periodontology C on R. Guidelines for Periodontal Therapy: Position Paper. J Periodontol [Internet]. 2001;72(11):1624–8. Available from: http://scholar.google.com/scholar?q=related:yP3HwE7YuB4J:scholar.google.com/&hl=en&num=30&as_sdt=0,5&as_ylo=2001&as_yhi=2001%5Cnpapers3://publication/uuid/59B2FD85-2279-4FA1-8826-87A2826A1E98
3. Dohan DM, Choukroun J, Diss A, Dohan SL, Dohan AJJ, Mouhyi J, et al. Platelet-rich fibrin (PRF): A second-generation platelet concentrate. Part I: Technological concepts and evolution. Oral Surgery, Oral Med Oral Pathol Oral Radiol Endodontology. 2006;101(3).
4. Dohan DM, Choukroun J, Diss A, Dohan SL, Dohan AJJ, Mouhyi J, et al. Platelet-rich fibrin (PRF): A second-generation platelet concentrate. Part II: Platelet-related biologic features. Oral Surgery, Oral Med Oral Pathol Oral Radiol Endodontology. 2006;101(3).
5. Dohan DM, Choukroun J, Diss A, Dohan SL, Dohan AJJ, Mouhyi J, et al. Platelet-rich fibrin (PRF): A second-generation platelet concentrate. Part III: Leucocyte activation: A new feature for platelet concentrates? Oral Surgery, Oral Med Oral Pathol Oral Radiol Endodontology. 2006;101(3).
6. Sam G, Vadakkekuttical RJ, Amol NV. In vitro evaluation of mechanical properties of platelet-rich fibrin membrane and scanning electron microscopic examination of its surface characteristics. J Indian Soc Periodontol [Internet]. 2015;19(1):32–6. Available from: http://www.ncbi.nlm.nih.gov/pubmed/25810590
7. Sharma A, Pradeep AR. Treatment of 3-Wall Intrabony Defects in Patients With Chronic Periodontitis With Autologous Platelet-Rich Fibrin: A Randomized Controlled Clinical Trial. J Periodontol [Internet]. 2011;82(12):1705–12. Available from: http://www.joponline.org/doi/10.1902/jop.2011.110075
8. Rosamma Joseph V, Raghunath A, Sharma N. Clinical effectiveness of autologous platelet rich fibrin in the management of infrabony periodontal defects. Singapore Dent J. 2012;33(1):5–12.
9. Rosamma Joseph V, Sam G, Vijay Amol N. Clinical evaluation of autologous platelet rich fibrin in horizontal alveolar bony defects. J Clin Diagnostic Res. 2014;8(11):ZC43-ZC47.
10. Sharma A, Pradeep AR. Autologous Platelet-Rich Fibrin in the Treatment of Mandibular Degree II Furcation Defects: A Randomized Clinical Trial. J Periodontol [Internet]. 2011;82(10):1396–403. Available from: http://www.joponline.org/doi/10.1902/jop.2011.100731
11. Mazor Z, Horowitz RA, Del Corso M, Prasad HS, Rohrer MD, Dohan Ehrenfest DM. Sinus Floor Augmentation With Simultaneous Implant Placement Using Choukroun's Platelet-Rich Fibrin as the Sole Grafting Material: A Radiologic and Histologic Study at 6 Months. J Periodontol [Internet]. 2009;80(12):2056–64. Available from: http://www.joponline.org/doi/10.1902/jop.2009.090252
12. Gassling V, Douglas T, Warnke PH, Açil Y, Wiltfang J, Becker ST. Platelet-rich fibrin membranes as scaffolds for periosteal tissue engineering. Clin Oral Implants Res. 2010;21(5):543–9.

Proteomics - A Boon to Periodontics!!!!

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Abstract

Proteomics is the study of structure as well as the function of proteins. Proteins are considered to be the vital part of any living organism due to its role in cell metabolism. Proteins play different roles in physiologic as well as pathologic conditions of the cells. The altered proteins in pathologic conditions are called Biomarkers. Proteins being the building blocks of periodontium, the rate of progression of periodontal disease affect various protein molecules. Since proteins are involved in the pathogenesis of different types of Periodontitis, the altered proteins can be used as biomarkers. Thus Proteomic studies will help in the early diagnosis and prevention of periodontal diseases.

Keywords: Proteins, Proteomics, Periodontitis, Biomarkers.

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► Introduction

Periodontal disease is a chronic inflammatory disease caused by bacterial infection of gingival tissues and involves a complex interrelationship between infectious agents and host factors. It is characterized by persistent inflammation, annihilation of connective tissue matrix and ruining of alveolar bone. Periodontitis is diagnosed by measuring the probing depths of the gingival crevice, bleeding on probing, clinical attachment levels, plaque index, gingival index and radiographic analysis. Expensive equipment, skilled clinician and time factor imposes restraint to this diagnostic approach. Secondly these diagnostic parameters are excellent to assess when significant level of damage has occurred and determines only a past history of disease but they fail in assessment of ongoing disease. The knowledge towards analyzing the diseases is now changed from environmental risk factors to the host based risk factors. The paradigm is shifting towards genetic basis of the encountered diseases. With the help of the cellular and molecular biology, the depth of any disease can be recognized which proves to be a great help in finding the root cause of the pathogenesis and etiology of the disease. Three developments that has changed the biological landscape and formed the foundation of the new biology are the growth of gene, expressed sequence tag (EST) and protein-sequence databases during the 1990s, the introduction of user-friendly, browser-based bioinformatics tools to extract information from these databases and the oligonucleotide microarray. The array contains a series of gene-specific oligonucleotides or cDNA sequences on a slide or a chip. The fluorescent DNA labeling can be carried out either in solution or on a reverse phase column. These procedures provide simple, inexpensive methods of multiple DNA labeling and of introducing one fluorescent dye molecule per RNA, as well as quantitative DNA fragmentation and incorporation of one label per fragment. These methods were shown to be efficient for use in the hybridization of labeled RNA, DNA and DNA fragments with oligonucleotide microchips in the field of proteomics[1].

Proteins are the working parts of human cells. Almost every organic molecule in the body is either a protein or the result of a protein's activity. Proteins are vital parts of living organisms, as they are integral components of the physiological metabolic pathways of cells. Proteins are composed of 20 different types of amino acids. They perform a crucial role in structural support, catalysis, and signal transmission, and are known as the working horses of a cell[2]. The proteome is the entire complement of proteins, including the modifications made to a particular set of proteins, produced by an organism or system. This will vary with time and distinct requirements, or stresses, that a cell or

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organism undergoes. In simple terms, proteomics is defined as the study of all proteins including their relative abundance, distribution, post translational modifications, functions and interactions with other macromolecules, in a given cell or organism within a given environment and at a specific stage in the cell cycle.

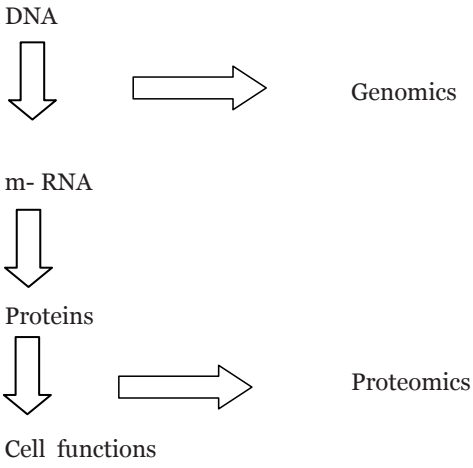
The proteomics of the different types of human cells, organs, tissues and fluids has been a major research topic in life sciences all over the world for the last few decades and useful basic data for a variety of targeted tissues are still greatly needed. The word "proteome" is a blend of the words "protein" and "genome" created in the mid-1990s by Marc Wilkins, an Australian geneticist[3].

History to the newer biological concepts

From last two decades Gingival Crevicular Fluid (GCF), inflammatory exudates, has been investigated as an alternative diagnostic approach[4]. This again is a technically demanding, time consuming procedure with limitations in sample volume and having site specific variation which has made the scientific community to look for an alternative simple, non-invasive, less demanding diagnostic technique. The new term "proteome" or "proteomics" was first introduced in 1995. The historical perspective of proteome analysis derived from protein characterization methods. A powerful set of protein analytical tools was developed over the years. Techniques include separating thousands of proteins in one run, and their identification could be achieved with minute amounts. These fulfilled the biologically relevant questions. Proteome analysis describes various pathophysiological processes. A proteome is like a snapshot of a physiological scenario. Proteome analysis supplements gene sequence data with protein information about where and in which ratio and under what circumstances proteins are ex pressed. Simultaneously the concept "one gene – one protein" was no longer accepted.

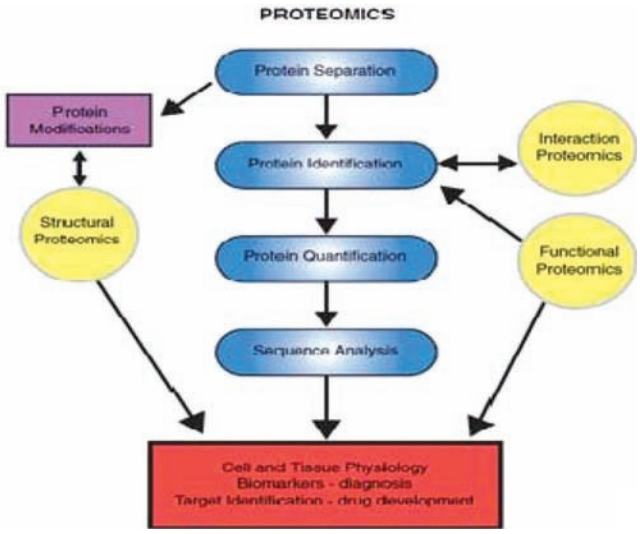
The simple view of protein biosynthesis, where a DNA sequence found in a chromosome translates into a corresponding RNA sequence which serves as a blueprint for the ribosome to manufacture an amino acid sequence and the resulting protein develops a three-dimensional structure to play a particular role at a particular place in an organism, was obsolete. In addition, molecular biology has taught us that a gene can undergo different splicings, and that posttranslational modifications can result in several active forms of proteins. Sequence information in DNA is not sufficient to describe life. Proteins are the virtual actors in the life sciences. After genomics and transcriptomics, proteomics is the next step in the study of biological systems[5]. It is more complicated than genomics because an organism's genome is more or less constant, whereas the proteome differs from cell to cell and from time to time.

Biochemical context of genomics and proteomics



Relevance of Proteomics to Periodontics

Proteomics has quickly become one of the most researched frontiers in modern dentistry. The two primary areas which dental proteomics have really shown are salivary diagnostics i.e. oral fluid diagnostics or oral fluid biomarkers and proteomics of bone and enamel structures, especially dental enamel. Human saliva contains proteins and comprehensive analysis and identification of the proteomic contents in human whole and ductal saliva is a necessary first step toward the discovery of saliva protein markers for human disease detection in particular for oral cancer and Sjogren's syndrome[6]. Salivary diagnostics is an emerging field in proteomics and it uses salivary proteome for the prognosis, diagnosis and management of periodontal diseases. Saliva composed of water, electrolyte and organic molecules like amino acids, peptides, proteins, glycoprotein and glycolipid is derived from local vasculature



Types of Proteomics and steps of sequence analysis

originating from carotid arteries. Saliva contains biomarkers derived from serum, gingival crevicular fluid and mucosal transudate. Many analytes associated with periodontal diseases have been detected in this bio-fluid. Saliva is considered as an important Periodontal diagnostic tool since variable amounts of blood, serum, serum products, GCF, electrolytes, epithelial and immune cells, microorganisms, bacterial degradation products, lipopolysaccharides, bronchial products and other foreign substances are present in whole saliva[7]. Matrix metalloproteinases, immunoglobulins, esterases, lysozyme, lactoferrin levels in saliva are valuable for determining and predicting the progression of periodontitis. Numerous other salivary proteases have also been used as diagnostics biomarkers. Various cytokines like C- reactive protein, pentraxin-3, TNF, various other interleukins which are involved in its pathogenesis have come handy in diagnosing periodontal diseases. The proteome map, which is the complete catalogue of the matrix and cellular proteins expressed in various ways including that of alveolar bone, cementum, periodontal ligament, and gingiva, is to be explored for more in-depth understanding of periodontium. The pathogenesis of periodontal diseases which include various proteins, can be used as biomarkers. Thus the knowledge of various proteins involved in periodontal disease pathogenesis can be used in the diagnosis, prevention and treatment of periodontal diseases.

The use of proteomics and gene expression will advance the diagnosis and treatment of various oral pathological conditions. Several possibilities for further application of proteome mapin biotechnology and health care applications, especially in the field of diagnostics, exist[8]. Huge amount of research activity has already been done to expose the role of oral and salivary fluids in oral diagnostics. Recent advances in HIV diagnosis, for example, OraSure, OraSure Technologies, Bethlehem, Pennsylvania, which collects HIV-1 antibodies from gingival tissues using oral mucosal transudate, are entirely based on proteome analysis. Advances in tissue engineering, drug delivery, gene therapy and biopharmaceuticals will present new therapeutic opportunities.

► Conclusion

An important challenge in front of us to be met by research workers in periodontology is to embrace proteomics approaches when appropriate, and start to apply them to critical, unresolved questions such as the biological basis for the heterogeneity in gingival, bone, and cementum cell populations. However, its application into the field of dentistry depends on how best oral health care practitioners will incorporate this into their practice. Therefore immense research and motivation factors should be emphasized to make proteomics a part of normal dental life.

► References

1. Lamba. M, Singh. A, Jithendra K.D,. Sinha. A - Proteomics- a new era of modernization in periodontics. IJRID Volume 5 Issue 4 Jul.-Aug. 2015.
2. Khurshid.Z, Zohaib. S- Proteomics Advancements in Dentistry. J Dent Oral Disord Ther 2016, 4(2): 00104.
3. Sharmila.K, Safal.S, Daisy. H, Parag. H, Javed. S- Proteomics or Genomics: A new era in Periodontics. J Dent Allied Sci 2013; 2(2) 62-65.
4. Dhiraj.T and Chhaya.T- Salivary proteome in periodontal diagnosis. Int J Pharm Bio Sci, Vol 3/Issue 2/April – June 2012
5. Sreedhar A, Shobha.P, Sapna.N, Santhosh.K- Proteomics - The New Era of Periodontics; Journal of Dental Sciences and Research, 2011, Vol. 2, Issue 2, Pages 1-5
6. Yogesh.G, Richa.M, Abhay P.A, Lavanya A. A -Proteomics-A New Dimension to Diagnosis. IJSR, Volume 4, Issue 2, February 2015.
7. Rahul K., Pradeep.A.R - Salivary proteomic biomarkers for oral diseases: a review of literature. Archives of Oral Sciences & Research 2010;1(1):43-49.
8. Proteomics for the periodontium: Current strategies and future promise. Periodontology 2000, Vol. 40, 2006, 173–183.

Giant cell granuloma of maxilla – A case report

* Sherry Andrews, **Mathew Sam, **Brigit Eapen

► Introduction

Oral pathologies are a common entity in various age groups and genders and management of such lesions need adequate knowledge of its pathogenesis. Giant cell granuloma is an uncommon benign lesion seen commonly in younger age groups and more commonly in females[1]. The common site of occurrence of the lesion is the mandible, anterior to the molars but sometimes in the maxilla too. The lesion is usually a painless slow growing swelling which can turn rapid at times but rarely erodes the bone. In this report we have discussed a case of giant cell granuloma (GCG) in the maxilla and its management.

► Case report

A 16-year-old female patient reported to the Maxillofacial outpatient clinic in Armed Forces Hospital Southern Region, Khamis Mushayt, K.S.A with complaint of swelling in the left upper jaw which had been gradually increasing for 3 months. She had no relevant medical history. On clinical examination, there was a well defined swelling evident extra orally in the left nasolabial region approximately 2x2 cm in size. On palpation, intraorally, the swelling was firm in consistency, non-tender, extending from the left piriform to 26 region approximately 3x3 cm in size. Generalized calculus and gingival inflammation was evident. Grade I mobility of 24 and 25 was present. Radiographically, CT scan revealed a well circumscribed radiopaque lesion in the left maxillary alveolar ridge from 22-26 region extending palatal but not involving the teeth (Fig 1, Fig 2, Fig 3). We had a provisional diagnosis of adenomatoid odontogenic tumor, ossifying fibroma and calcifying epithelial odontogenic tumor. Anincisional biopsy was done initially under local anesthesia. Histopathology revealed fibrillar connective tissue stroma with oval and spindly mononuclear cells mixed

Fig 1

Fig 2

Fig 3

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with uneven cluster of multinuclear giant cells and haemorrhage. No atypia or mitosis seen. This confirmed a giant cell lesion. All blood parameters were within normal limits. The patient was later taken under general anesthesia and complete surgical excision of the lesion was done. The underlying bone and adjacent teeth were all preserved. The final diagnosis was Giant cell reparative granuloma. Patient recovered uneventfully and is under regular follow up for past 6 months with no recurrence.

► DISCUSSION

The Giant Cell Granuloma (GCG) is defined by World Health Organization as an intra-osseous lesion consisting of cellular fibrous tissue that contains multiple foci of haemorrhage, aggregations of multinucleated giant cells and occasionally trabeculae of woven bone[2].

The GCG occurs usually as a painless swelling which can become of expansile nature in some individuals. The swelling can turn from an asymptomatic state to a painful aggressive lesion causing bone resorption and is usually confined to the tooth bearing alveolar region. It can cause displacement of teeth and root resorption.

According to literature, these lesions are usually seen in younger age groups and more commonly in females as seen in this case report. These swellings go undetected as they are asymptomatic, pain-free. However, if they attain bigger size causing facial asymmetry, displacement of teeth, patient seeks treatment for the same.

Radiologic features vary from undefined destructive lesions to a well-defined, multilocular appearance. Teeth or roots displacement are the most consistent features which are clearer on CT than on plain film[3]. However, none of these radiological features is specific for GCG[4]. It is important to bear in mind that the X-ray appearance of the lesion is not pathognomonic and may be confused with many other lesions of the maxilla and the mandible[5].

Histologically, multinucleated giant cells, in a cellular vascular stroma, and often new bone formations are detected. The osteoclast-like giant cells have a patchy distribution and are usually associated with areas of haemorrhage. Ultra-structurally, the proliferating cells include spindle-shaped fibroblasts, myofibroblasts, and inflammatory mononuclear cells[6].

Surgery is the gold standard and most accepted form of treatment for Giant Cell Granulomas. However, the extent of tissue removal ranges from simple curettage to en-bloc resection[5]. In this case report also, authors have done complete excision of the lesion preserving the bone and adjacent teeth. However, authors believe that a regular follow up must be done every 3 months to check for recurrence. The incidence of recurrence, after surgery, is 4-20%, whereas local aggressive giant cell lesions have a higher recurrence rate[7,8]. Intra-lesional administration of corticosteroids have been reported in literature showing promising results but considering the short duration and aggressive nature of the lesion in this case, authors considered complete excision of the lesion to prevent recurrence.

► Conclusion

Giant cell granuloma (GCG) is a rare lesion seen in the maxillofacial region. Surgery is the still most accepted treatment for GCGs, but authors believe that it is important to understand the pathology and its aggressive nature for which comprehensive surgery and regular follow up is needed to avoid recurrence.

► References

1. Jaffe HL. Giant-cell reparative granuloma, traumatic bone cyst, and fi brous (fi bro-oseous) dysplasia of the jaw bones. Oral Surg Oral Med Oral Pathol1953;6:159-75.
2. Kramer IRH, Pindborg JJ, Shear M. Histological typing of odontogenic tumors. Second Edn. Berlin: Springer-Verlag; 1991.
3. Bodner L, Bar-Ziv J. Radiographic features of central giant cell granuloma of the jaws in children. PediatrRadiol1996;15:148-51.
4. Murphey MD, Nomikos GC, Flemming DJ, Gannon FH, Temple HT, Kransdorf MJ. Imaging of giant cell tumor and giant cell reparative granuloma of bone: radiologic-pathologic correlation. Radiographics2001;21:1283-309.
5. Bataineh AB, Al-Khateeb T, Rawashdeh AB. The surgical treatment of central giant cell granuloma of the mandible. J Oral Maxillofac Surg2002;60:756-61.
6. Rosai J. Ackerman's surgical pathology. 8thEdn. St. Louis, MO: C.V. Mosby Co.; 1996.
7. Whitaker SB, Waldron CA. Central giant cell lesions of the jaws. A clinical, radiologic, and histopathologic study. Oral Surg Oral Med Oral Pathol1993;75:199-208.
8. Spraggs PD, Roth J, Young-Ramsaran J, Goodwin WJ. Giant cell reparative granuloma of the maxilla. Ear Nose Throat J 1997:76:445-6.

Dr Anvar M. Ali
Hon. Secretary IDA HOPE, Kerala State Branch

Dear Friends,

Greetings fom IDA HOPE office. This is my first opportunity to reach across to you through our Journal.

A smiling face is the best gift one can give his fellow beings. WE blend together science, technology & art with Passion and a touch of care to create SMILES for our patients.

But life is full of uncertainties, many a times wiping away the SMILES from our faces and those of our beloved ones. A case of medical negligence might jolt your flourishing practice, robbing you of your peace of mind, An accident while travelling may result in an inability to practice and earn your livelihood, Death can strike you anywhere, anytime creating a big void in the lives of your dear ones.

Who will protect you in these instances?

Our leaders have put in a lot of efforts to address this question, and our answer to the googlies of nature – HOPE - Help Offered for Professionals in Emergencies

Let me introduce HOPE and its features -

Social Security

We love our family, our children are dear to us; we go to any extent to give them a good education and life. We toil throughout our lives to secure their future. But what happens to them in an unfortunate instance where we leave this world leaving them behind in their early years ?

IDA stands for its members in their professional life and is committed to support their families in their absence, thus the inception of our Social Security Scheme (SSS).

In the unfortunate event of death a HOPE member, the family is given an amount of Rs 12 Lakhs, presently (increasing with HOPE membership number). This can also be availed by the member in case of Total Permanent Disability and he is not able to practice or earn further.

The SSS cover is provided to our members at very low annual renewal rates, which is very low in comparison with any life insurance policies available in the market.

This is designed as a benevolent scheme and run by the contribution from all the members by collecting an amount of Rs 500 as fraternity contribution. So it's a scheme FOR OUR MEMBERS, BY OUR MEMBERS.

Till date we have contributed more than Rs 1 CRORE for the families of our members

Professional Protection

We practice in an era of Internet and Google, increasing awareness among our patients, and increasing litigations. A Medico-Legal issue can create a big impact on our psyche, practice and income. We can be harassed by unwarranted litigations, dragged into courts, indicted for no fault of ours. We lose our peace of mind, we have to run around searching for help, we have to tax ourselves for the expenses of the litigations.

This is where IDA can support its members; the Legal Cell of HOPE takes care of the worries of its members in case of Medico-Legal litigations and helps them to continue their practice with peace of mind.

For the members HOPE Legal Cell takes up the case from the start itself, studies the issues, arranges for expert lawyers, expert witnesses, follows up the legal proceedings and tries for a favorable verdict in support of our member.

The expenses incurred in legal cases are borne by HOPE and if any compensation is awarded HOPE pays it. Now a member has HOPE Professional Protection coverage of 4 Lakhs (with a co-pay of 25% above 2 Lakhs)

HOPE is a unique scheme where the Professional protection cover is provided at NO EXTRA COST to its members.

We are efficiently monitoring and managing the medico-legal cases against our members in various levels of courts / forums. Presently we are managing more than 26 legal issues at Lok adalath, Human Rights Commission, State Consumer forum, and various District Consumer Redressal forums throughout Kerala.

We have a very good track record in managing the legal cases and so far we have not had to pay any compensation.

HOPE Medi

Medical treatment is becoming expensive day by day. A serious illness can really drain our resources heavily. We have to plan ahead for the health of our families and ourselves.

We have a tailor-made group medical insurance policy with lot of features beneficial for our members.

All HOPE members are eligible to join HOPE Medi,

Family members can also be added,

No age restrictions,

No pre-medical check ups,

Pre-existing illness coverage,

Wide coverage of network Hospitals including super speciality Hospitals providing cashless treatment option or reimbursement,

Pre & post hospitalization expenses covered,

Least claim rejection ratio of less than 1%

Our PARENTS can also be part of the policy with NO AGE BAR,

Pre-existing illness is covered.

An additional Critical illness Buffer is also included for all insured which is over and above the sum insured.

All this at very competitive premium rates which cannot be availed anywhere else or with any other policy.

Choice of different sum insured values are available to select according to our convenience.

In the three years of our policy period our members, spouses, children and parents have availed the facility of our HOPE Medi policy for treatment of illness ranging from normally occurring fever to grave diseases like Cancer, Kidney failure, Cardiac ailments, Trauma etc.

CABG surgeries, Laparoscopic surgeries, Angioplasties, GI surgeries, Orthopaedic surgeries, Ophthalmic surgeries and a lot of other procedures were covered under the policy, averting life threats to many of our members and families.

It's really great to see that a lot of our members are benefited by our scheme and will surely do so in the future.

IDA HOPE MEDI Premium/Claim Details			
Year	2015-16	2016-17	2017-18
Premium paid	9365338	15405150	21350000
Claims paid & in progress	14734881	16523825	15339956

*Claim amount till 31-05-2018

Our HOPE Medi policy is due for renewal on 1st October 2018 and the policy is being finalized, and the enrollment will be starting in September 1st week.

We request all HOPE members to enroll in HOPE Medi and avail the benefits.

HOPE Assure

A specially crafted policy to provide an extra 25 Lakhs Professional Indemnity Cover for our members, with added coverage of cosmetic, orthodontic and maxillofacial treatments (which are usually excluded in standard PIC policies available)

Additionally we can insure our clinics against Natural calamities, Fire, Riot & Strike, Burglary & Theft, Malicious damage & Vandalism etc.

We can avail the coverage of this policy at a very competitive rate which is specially discounted for us.

Be prepared for the UNEXPECTED !

JOIN HOPE AND REST ASSURED !

Contact your branch HOPE rep NOW and join HOPE.

CROSSDENT

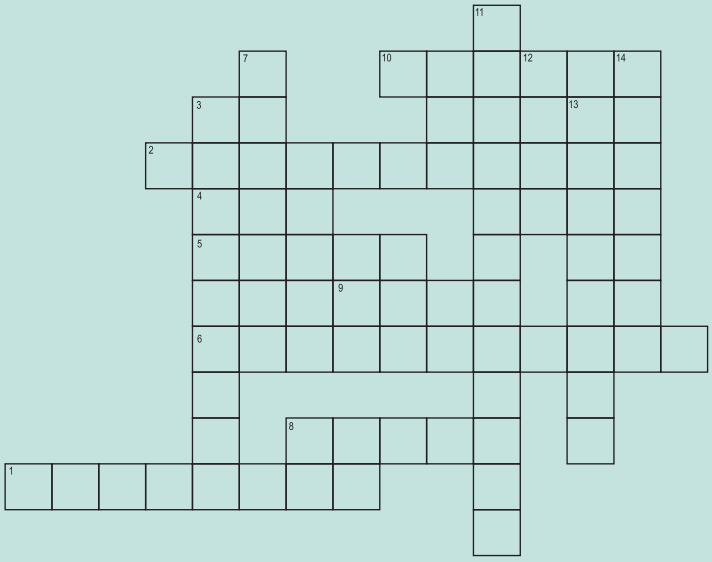
Created by: **Dr Nirmal George Saibu MDS**

ACROSS

1. Bone described as bat with extended wings (8 letter)
2. Trisodium phosphate in alginate acts as – (8 letter)
4. An extracted tooth is discarded in which bag (3 letter)
5. Bond found in G I C (5 letter)
6. A matter which partially transmit light and partially scatters it (11 letter)
8. Ketone body formation takes place in (5 letter)
9. A child han to be given premedication for behavior modification, which is the most preferred route (4 letter)
10. T. cells matures in (6 letter)

DOWN

3. Electronic instrument used to measure gingival crevicular fluid (9 letter)
7. Basic metabolic unit of bone (6 letter)
11. Chemical used to etch ceramic is (12 letter)
12. The arithmetical average of 'number of observations' is called (4 letter)
13. Hyaline cartilage is developed from (8 letter)
14. Largest component of amalgam (6 letter)



CROSSDENT
General Rules and Regulations for CROSSWORD CHALLENGE

1. IDA Kerala State is the only organisation responsible for, this prize puzzle competition
2. All contestants should participate individually in the event.
3. The competition carries prize for 1st 2nd 3rd place holders only.
4. Contestants must mention their name and submit IDA membership number.
5. There will be a unique solution for a crossword will be declared as the winner.
6. In case none of the contestants are able to solve the crossword completely, the contestant with the maximum number of correct answers will be selected as the winner.
7. In the event of a tie, the contestants who have tied for the winner will be selected from them by lot system.
8. Unnecessary overwriting, lack of clarity, incomprehensibility can lead to cancelation or disqualifying the participant.
9. In case of any divergence regarding any clues or else, decision of the jury panel will be final.
10. Any type of false move/ adopting unfair means by any participant will lead to disqualification of him/her immediately.
11. All entries can be send through whatsapp or by mail to editors office
12. The winner of this prize puzzle competition will be decided by the Editor and editorial board
13. The decision, or decisions, of the Editor and editorial board in all and every matters, pertaining to this prize puzzle competition, are, final.

1st Prize
1no. Filtek Z250XT Nanohybrid composite (3g)

2nd Price
1no. SingleBond Universal (1.5ml)

3rd Prize
1no. Ketac Universal (2.5g)

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**Includes registration kit,entry to scientific sessions and tradefair

***No certificate of participation,eligible for inaugural dinner,banquet,two lunches,entry to scientific sessions and tradefair

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CDE Report

Dr Anil Thunoli
Chairman CDE

Dear Colleagues,

As the first half of this IDA year is coming to an end its indeed a pleasure to know that all the local branches together have conducted around 80 continuing education programmes. I appreciate all the local branch officials for the same.

The second state CDE programme was held on 6th may 2018 at Hotel Classic Avenue,Trivandrum on the Topic "Successful Dental Practice". Dr Civy V Pulayath, MDS and Dr Mili James, MDS were the faculties. The Programme was inaugurated by Dr Abhilash G.S, President Elect, IDA Kerala. The CDE was jointly hosted by IDA Trivandrum and Attingal branches.

The third state CDE programme of this year is scheduled to be held on 29th July 2018 at Hotel Wyndvalley Resorts, Kalpetta, Wayanad. Dr Joby Peter, MDS will be speaking on the topic " Developing Malocclusion at an Early Age". The programme will be hosted by IDA Wayanad branch.

Thanking You

Dr Anil Thunoli

CDH Report

Dr. Joby J Parappuram
Chairman,
Council on Dental Health

Dear friends,

I am really thrilled to present the CDH report before you.

The world no tobacco day was observed in a very well manner throughout Kerala.

As we decided we could follow a uniform pattern while observing a special day.

This time we focused on Road shows. The state event was hosted by IDA Thrippunithura and IDA Malanadu. We conducted a friendly football match at Kakkanadu. Road shows were arranged at Perumbavoor and around places.

Coastal Malabar – screening and awareness class at Mattool primary health centre

Malbar – road show from GDC Kozhikode

Thalassery – flash mob and awareness rally

Thiruvananthapuram – at Govt. Dental College

Pathanamthitta – with child line drama at bus stand

Central Kerala Kottayam – awareness class in hindi for north indian labourers, jail program inauguration by Thiruvanchoor

Mavelikkara – CD release which will be distributed in 100 schools in and around Mavelikkara falls under 3 districts

Malanadu – Street drama, road show – Perumbavoor, Nellikkuzhi, Kuruppumpady

North Malabar – 101.5 FM talk by Jayasree K T, awareness program in central prison Kannur

Attingal – Bike rally

The second program was National Oral Hygiene day on August 1.

It was hosted by Malappuram Branch.

This time we focused on Schools were we conducted mass brushing. This is going to be a one month program. It will help our fellow surgeons to mark an entry to the nearby schools which really was a goal when we started with.

I take this opportunity to congratulate all the leaders of the different branches who are working in pace with the state office.

I also like to mention the energy given by Dr. Ciju A. Paulose and Dr. Sureshkumar G and all other leaders who give me the freedom to plan and implement State CDH programs.

Regards.

Dr. Joby J. Parappuram
Chairman, Council on Dental Health,
IDA KSB

Dr Susha C N
WDC Chairperson

WDC Report

Dr Anney George
WDC Secretary

WDC PALAKKAD

On 22nd April 'World Earth Day', 'Hug a tree campaign' was organised at Aayush care Ayurveda.

On 23rd April 'World book Day',organised a contest for Bibliophilies of IDA Palakkad family members

On 29th April,an awareness class was organised at IMA Hall on 'Mammography & Indian women

On 4th May 'Mothers Day' organised a selfi contest with mothers

In May: 'WDC Special 'write up published in IDA Palakkad news bulletin

On 5th June 'World Environment day',1020 paper seed pens made by 'Karimba Pain & Palliative centre were distributed.

On 23rd June 'International Yoga day',yoga sessions were organised at Aayush Care Yoga therapy Centre.

An awareness class by Dr Shabeen Sheikh on " Know your child" was also organised at Basel Evangelical Mission School for SPC & family.

WDC TRIPUNITHURA

On World Environment day,planted saplings at No.38 Anganwadi premises &100 % compostable bags & saplings were distributed

On 6th May, a leadership camp was organized for children, under coach & journalist Mr. Sudeep Sebastin

On 19th May, clubbed with CDH & conducted an awareness class & dental camp with sample distribution for SPC at Govt. Girls High School Auditorium.

WDC CKK

On 20TH May, as part of the new project "Snehasparsham", the ladies & kids of the branch conducted entertainment programmes, donated baby food & school kits for anganwadi kids who are inmates of "Providence",Kunnanthanam, an institution for the mentally challenged.

On 17th June, visited "Alphonsa Sneha Nivas ", conducted entertainment sessions, games,donated Rs 10,000 towards school expenses,donated crayons, water colours, used books etc & also celebrated Environment day by planting plants.

WDC QUILON

On 7th April 'World health day',donated a cooking stove to a destitute woman (Govt. Welfare institution) on the occasion of her marriage. On 15th May 'Mothers day' utilities were donated to the aged mothers of St Vincents Home

On 25th May, Hepatitis B vaccine were administered for 151 residents of SS Samathi. On 8th June, WNTD class on Substance Abuse had been conducted at St. Marys Public School

On 24th June, a public Govt. servant had been honoured at Govt. Childrens Home.

WDC TRIVANDRUM

On 17th June,a programme on 'womens wellness –an interdisciplinary approach 'by Dr Anjana Ranjith B.A.M.S had been conducted.

Mavelikkara Branch

DENTIST DAY CELEBRATION. March 6

IDA Mavelikkara celebrated Dentists day by conducting anti drugs programmes in Mar Ivanios College, Mavelikkara, MSM College, Kayamkulam, Christian College, Chengannur, Bishop Moore college Mavelikkara and public places at Chrumood, Pandalam and Adoor. Awareness programmes were conducted with flash mob by IDA Mavelikkara members their children's and friends. Government officials and social workers gave messages to college students and public in various places.

VENALKINAVU. April 22

IDA Mavelikkara summer family union Velnalkinavu was conducted at greenvalley park and swimming pool. Watervollyball poolside games and swimming competitions for doctors and children were also conducted. This was followed by IDA Mavelikkara star singers orchestra and various entertainment programmes.

WORLD NO TOBACCO DAY May 31.

IDA Mavelikkara celebrated world no tobacco day on may 31 by releasing a video with messages by most eminent personalities like Dr PV Gangadharan, Dr Sashi Tharoor, Rishi Raj Singh IPS and Smt Sugathakumari teacher. IDA Mavelikkara CDH chairman Dr Mathew G Varghese released the CD at Bishop Moore College with Chris Varghese students representative. This video is exhibited in various Schools and public places. Anti Tobacco anti drug programme in schools is the major project of IDA Mavelikkara this year. The project is organised in various schools in association with mythri of excise department.

Trivandrum Branch

CDE Programmes: 1. The State CDE -2018 on the topic "Successful Dental practise" by Dr. Mili James and Dr. Civy Pulayath was held in Hotel Classic Sarovar Portico hosted by IDA Trivandrum and IDA Attingal on Sunday, May 6th from 9.30am-5.30pm. Topics were Sterlization and disinfection in Dental Clinic and Tips and tricks in Practise management. 58 members attended the CDE Programme.

2. The 4th CDE of IDA Trivandrum (2 day Hands-on CDE) on the topic "Esthetics Unlimited" by Dr. Burzin Khan was held on May 27 & 28 @ Hotel Residency Tower from 9.30am – 5pm.

3. The 5th CDE of IDA Trivandrum on the topic "Dento alveolar Surgery" by Dr. Suvy Manuel M.D.S (Oral Surgery) was held on Sunday, June 3rd @ IDA Hall, Innu apartments from 4.30pm-8.30pm. An Iftar was also conducted between the CDE programme for the participants.

CDH Activities: 1. The First CDH Activity in April was conducted on Sunday,April 8th at Ponmudi, Trivandrum in association with Sri Sathya Sai Seva Samithi (City).

2. The Second CDH Activity in April was conducted on Sunday, April 22nd at Choozhatukotta, Trivandrum in association with Sri Satya Sai Seva Samithi from 10am-1pm.

3. The Third CDH Activity of IDA Trivandrum branch was held in National Institute of Speech and Hearing (NISH) April 3rd,2018.

The awareness class was taken by Dr. Kamalalekshmy for the EIP students and the dental check-up camp was conducted by Dr. Pramod, Dr. Preetha V Nair and Dr. Kamalalekshmy.

4. The Fourth CDH Activity was conducted on Kanjirampara colony Anganvadi on Saturday, May 5th from 10am-12pm.

5. The Fifth CDH activity of IDA Trivandrum branch was conducted along with Govt. Dental College, Trivandrum as "Santhwanam Free denture programme" at Govt. Old age home(Care Home), Pulayanarkotta on Thursday, May 10th from 10am-12.30pm. Primary impressions for the dentures were taken.

6. The Sixth CDH activity was conducted on Sunday, May 13th at Edappazhanji in association with Sri Satya Sai Sevasamithi from 10am-12pm. 60 patients were examined.

7. The Seventh CDH activity was held at Govt. Old age home on Thursday, May 17th from 10am-12.30pm in association with GDC, Trivandrum for the "Santhwanam free denture programme".

8. The Eighth CDH Activity of IDA Trivandrum was held at Govt. Old age home on Thursday,May 24th from 10am-12.30pm in association with GDC, Trivandrum for the "Santhwanam Free denture programme".

9. IDA Trivandrum branch CDH wing distributed note books worth Rs.10,000 for nearly 500 students for their current academic year at 10 schools of tribal village in Kotoor, Kattakada.

The Nineth CDH Activity programme was co-ordinated by the Gandhi Darshan Balavedi Association and was officially inaugurated on Thursday, June 7th By Dr. Arun Ramachandran, President IDA Tvm and presided by the Panchayath President of Kotoor and Headmistress of Kotoor LPS.

10. The delivery of the free dentures as a part of the "Santhwanam free denture programme" was done on Thursday, June 14th as a public function in Care Home, Pulayanarkotta. The Tenth CDH Activity programme was inaugurated by the famous Magician Shri. Gopinath Muthukad.

WOMEN'S COUNCIL ACTIVITY:

1. IDA Trivandrum Women's Council: The Third meeting of the Women's Council of IDA Trivandrum was held on Sunday, June 17th from 4pm-5pm at IDA hall, Innu apartments. Followed by a talk on the topic "Women's wellness-an interdisciplinary approach" by Dr. Anjana Renjith B.A.M.S

EXECUTIVE COMMITTEE MEETINGS

1. The Third Executive committee meeting of IDA Trivandrum branch was held on Monday, April 2nd at IDA Hall, Innu apartments.

2. The Fourth Executive committee meeting of IDA Trivandrum branch was held on Wednesday, May 9th at IDA Hall, Innu apartments from 8pm-9.30pm.

3. The Fifth Executive committee meeting of IDA Trivandrum was held on Wednesday, June 13th @IDA Hall, Innu apartments from 8pm-9.30pm.

NO TOBACCO DAY OBSERVATION OF IDA TRIVANDRUM BRANCH

The "NO TOBACCO DAY" observation of IDA Trivandrum branch was held on Thursday,May 31st @ Martyr's column, Palayam in association with Govt: Dental College, Trivandrum from 9.30 am -1 pm as a public awareness programme.

The public awareness programme included *"No Tobacco day" poster exhibition and talk * "No Tobacco" awareness video show & pamphlet distribution for the public * No tobacco awareness model display * Tobacco related oral cancer screening for the public * As a part of the eco-friendly initiative we distributed re-usable cloth carry bags with "No tobacco" logo to the public in Palayam market area, free of cost.

E.O.G.M OF IDA TRIVANDRUM BRANCH

The E.O.G.M of IDA Trivandrum branch was held on Saturday,June 30th at Trivandrum Club from 7.30pm-9pm. IDA Kerala State President Dr. Ciju A. Paulose,IDA Kerala State President Elect Dr. Abhilash G.S,Past National President Dr. Alias Thomas and State Secretary Dr. Suresh Kumar were present for the EOGM.



Eranad Branch

IDA Eranad celebrated International Day for Health and Safety at Work, on May 6th @Perinthalmanna by conducting a 10 km Marathon

IDA Eranad observed international forest day and water day on 22/3/18 at MMLP School Edakkara, distribution of plant siblings to students and planting trees in campus have done.

IDA Eranad Won the IDA Kerala State Football Tournament

IDA Eranad conducted Iftar family get together on 2nd June, 60 IDA members and their families participated.



Palakkad Branch

The second executive meeting was held on the 26th April at 7pm in Hotel Sayoogyam.

Various Proposals were discussed including future CDE and WDC projects. Budget was also allocated for IDA sports activities. The meeting was chaired by President Dr Dinesh.

CDE ACTIVITIES

The second CDE of Palakkad District IDA was an 2 day interbranch CDE, the topic All about Implantology conducted on the 7 and 8th of April at ATS Grand Kera in Palakkad. The speaker was Dr Kiran Kelkar of International repute and was a very successful program with more than 90 participants attending the lecture and hands on programme.

The 3rd CDE programme on Dental Practise Management was conducted on the 25th of May 2018 at ATS Grand Kera. The programme was very intense and very informative and had an attendance of 50 members. The Speaker was Dr Joby Peters.

The 4th CDE of Palakkad District IDA was conducted on 24th June Minor Oral Procedures in Oral Surgery at Hotel ATS Grand Kera. The lecture and Hands on was appreciated by around 67 members who attended both the sessions. The Speakers were Dr Jayakrishnan and Dr Manikandan.

PUBLICATIONS

Our Second News Letter and our First Branch Magazine was launched Successfully and distributed to all the members.

CDH ACTIVITIES

A IDA dental camp was conducted in NS Hall Kalladikode Palakkad 6th June. It was attended by Dr Rineesh, Dr Arun Mukadda.

WDC

World Earth Day

HUG-A-TREE CAMPAIGN - DATE: 2018 April 22

☐ Venue: AayushCare Ayurveda

☐ Successfully saved a tree to maintain the greenery of the earth

WORLD BOOK DAY - 2018 APRIL 23

☐ Project: WDC IDA Palakkad organised a contest for bibliophiles of IDA Palakkad family members

☐ Reviewer: Mr. Jibin Jose.P (M.Phil.)

☐ Winners: I. Dr. Geetha Nambiar II. Dr. Sreeja Sarath III. Dr. Shabeena Shiekh

MOTHERS DAY - 2018 MAY 14

☐ Project: Conducted a Selfi Contest

☐ Selfi with your mother Contest for IDA Palakkad and general public

HEALTH AWARENESS CLASS - 2018 APRIL 29TH

☐ Venue: IMA Hall, Palakkad

☐ Audience: General Public and IDA Members

☐ Topic: Mammography & Indian Women. Common myths in reproductive health

☐ Welcome Speech: Dr. Sreeja Sarath

☐ Presidential Speech: Dr. Juby Jose

☐ Chief Guest: Smt. Prameela Sasidharan (Hon. Municipal Chairperson)

Coastal Malabar Branch

CDE Activity: 5th CDE Programme was held on 19/04/2018 at Hotel Juju International, Payyannur and the faculty was Dr Renjith Raveendran, Prof, Dept of Orthodontics, Pariyaram Dental College and Topic was Early Management of Skeletal Malocclusions. The 6th CDE Programme was held on 27th May 2018 at Hotel Juju Residency, Payyannur and the faculties were Mr. Damodhar Baliga who Speak on Investment Planning and Dr Nitha Sankar, Asst Prof, Dept of Prosthodontics, Pariyaram Dental College, Kannur, Kerala who spoke on "Start Best to Finish Best"- Impression Making for Complete Dentures. Hosted an Interbranch CDE on 24th June 2018 at IMA Hall, Thaliparamba on the Topic – "A Primer to Neuromuscular Dentistry" and faculty was Dr Rajesh Raveendranath.

CDH Activities : 1. No Tobacco Day: Our Branch observed the 'No Tobacco Day' on 31st May 2018 at Mattool Primary Health Centre, Kannur. Block Panchayath President Mrs. V. V. Preetha inaugurated the Programme and Dr A V Madhusoothanan presided over the function. CDH Convenor Dr Nidhin Naroor took a Dental Educational Class on Ill Effects of Tobacco and gave a No Tobacco Pledge.

2. Dr Santhosh Kumar. P gave an awareness class in the Local Television Channel about the Importance of Maintaining of Good Oral Hygiene and advancements in the field of Dentistry.

Family Meetings: Hosted a Family Meet and Ifthar Sangamam on 27th May 2018 from 6 30 pm at Hotel Juju International, Payyanur and Conducted 2 Days Family Trip to Silverwood Resorts, Wayanad on 12th and 13th May 2018.

Pathanamthitta Branch

13-04-2018- CDH – Oral Health For Overall Health Oral health awareness class conducted at St. Mary's Orthodox Church, Vettippuram for OVBS students. Dr. Dhanya Krishnan took awareness class. Dr. Anita Markos & Sujith P R participated in the programme.

16-04-2018 - Executive Committee Meeting: Second executive committee meeting at Hotel Hills Park,Pathanamthitta on 16th April 2018. Dr. Sujith P R presided the meeting. Had full attendance for that meeting. Agenda: Report,Programme planning (three months), Membership,Accounts,Tour,IDA HOPE, ASAP, any other matter with prior permission to chair.

APRIL 27 – CDH - Oral Health For Overall Health: Conducted oral heath awareness class at Junior Jaycee Academy, a camp organised by JCI India for Students at Charalkunnu Camp Centre, Kozhenchery on 27-04-2018. The awareness class was taken by Dr. Dhanya Krishnan.

APRIL 28 & 29 -WOMENS WING – Ladies Day Out: Women's wing organised two day tour Ladies Day Out on 28th and 29th April 2018 to Thrisangu Heaven, Kuttikanam.

05-05-2018 FAMILY MEET Hosted by Women's wing: Women's wing organised a family meet on 5th May 2018 at Sam's Gardens,Pathanamthitta. Dr. Sujith P R presided over the meeting and women's wing chairperson Dr. Rincy Eugene welcomed the gathering. IPP Dr. Hema Rajesh bestowed felicitations. Songs, dance and instrumental music by Ida family members had enriched the programme. TV artist Mr. Sunil Viswam performed mimicry and entertained the crowd with few songs.

20-05-2018 CDE Programme: The third CDE Programme with 6 KDC Credit Points on the topic Complete Denture Simplified was conducted on 20th may 2018 at Aban Arcade, Pathanamthitta. Dr. Sujith P R presided over the meeting. IPP Dr. Hema Rajesh welcomed the faculty and participants. CDE Chairperson Dr. Anita Markose introduced the faculty. Dr. Byju Paul Kurian MDS was the faculty for the programme.

31-05-2018 CDH - No Tobacco Day Observance: CDH wing observed No Tobacco Day on 31st May 2018 by conducting a street play in association with District Childline (1098) at Muncipal Bus Stand, Pathanamthitta. Dr. Sujith PR presided over the inaugural meeting. District Police Chief Shri. T. Narayanan IPS inaugurated the programme, CDH Chairperson Dr. Dhanya Krishnan welcomed the gathering. Secretary Dr. Ralu Varghese, Dr. Johnikutty Jacob, Dr. Biju U Nair, Dr. Pramod Roy, Dr. Praveenkumar were participated in the programme. The street play BLACK OUT was performed by Mr. Ajay Udayan, from School of Drama, Thrissur and directed by Mr. Manoj Suni, State award winner. Tobacco awareness leaflets also distributed after the programme.

11-06-2018 CDE Programme: The fourth CDE Programme on the topic Pediatric Behaviour Management and Pulp Therapy was conducted on 17th June Sunday at Aban Arcade, Pathanamthitta. Dr. Sujith P R presided over the meeting. IPP Dr. Hema Rajesh welcomed the faculty and participants. CDE Chairperson Dr. Anita Markose introduced the faculty. The faculty was Dr. Rupesh S MDS.

13-06-2018 CDH –Oral Health For Overall Health: Conducted Oral Health Check up and Awareness Class at Gvt UP School, Erathumpamon on 13th June 2018. Dr. Suma S Mohan, Dr. Ralu Varghese, Dr. Sujith P R were participated in the camp. Dr. Dhanya Krishnan took Awareness Class.

19-06-2018 CDH - Oral Health For Overall Health: Conducted Oral Health Check up and Awareness Class at CMS UP School,Nallanikunnu on 19th June 2018. Dr. Anita Markose, Dr. Suma S Mohan, Dr. Ralu Varghese, Dr. Sujith P R were participated in the check up camp. Dr. Dhanya Krishnan took Awareness Class.

22-06-2018 CDH- Oral Health For Overall Health: Oral Health Check up and Awareness Class at Govt LP School, Vettolimala on 22nd June 2018. Dr. Ralu Varghese and Dr. Sujith P R were participated in the camp. Dr. Sujith P R took Awareness Class.

Kodungallur Branch

CDE Report: 1st CDE: Topic- management of a problematic child in your dental office. Speaker -Dr Gopu Hareendralal on 8th at Feb IMA Hall, Kodungallur

2nd CDE: Topic-clinical orthodontic diagnosis. Speaker -Dr Benoy ambookan on 15th March at Rotary Hall, Kodungallur

3rd CDE & 1st inter branch cde: Topics- challenges in posterior restoration. DR. Pipp.E. Schneider on 18th March at Rotary Hall, Kodungallur

4th CDE :Topic - Requirements for optimal orthodontic care

Speaker –Dr BENOY AMBOOKEN on 10th may at Rotary Hall, Kodungallur

5th CDE : Topic- Rubber dam isolation and basic documentation . Speaker - Dr. Rajeeve s pillai on 28th june at Rotary Hall, Kodungallur

CDH Report : June 2ñd : Dental screening camp at Abhaya bhavan porathissery, Irinjalakuda, it's a destitute home, totally 18 bed ridden patient's. Dr. Jolly, Dr. Aldis and Dr. Lini participated.

July 6th: Dr. Shameem conducted Dental awareness class and check up camp at Asha bhavan Ollur.45 students were attended.

July 11th: Screening camp, awareness class and dental kit distribution at Sangameswara English medium school Irinjalakuda,100 students were examined. Dr. Jolly, Dr. Aldis and Dr. Rivin participated.

July 21st: Screening camp, awareness class and dental kit distribution at Little flower LP school North Thanissery. 89 students were attended. Dr. Jolly, Dr. Aldis and Dr. Rivin participated.

July 25th: Dr. Renju participated in ASIA NET NWES in Doctor live program, conducted a detailed talk about children facing dental problems.

July 26th: Awareness class, Dental hygiene kit distribution at St. Annes English medium school Cheloor. Dr Renju took the awareness class, Dr. Aidid and Dr. Rivin participated in the camp.

July 29th : Screening camp at Christuraja Church hall Krishnankotta, near kodungallur. Dr. Jolly and Dr. Honey were participated.50 peoples were attended in the camp

July 30 th: Screening camp, awareness class and oral hygiene kit distribution at Govt. Girls school Irinjalakuda. 70 students were examined. Dr. Jolly and Dr. Aldis participated.

Malabar Branch

1,Participation in IDA Kerala State Football Tournament 2018 (18/03/18): IDA Malabar branch participated in the IDA Kerala State football tournament held at Trichur on 18/03/18 and reached the semifinals and won the most popular team award.

2,Gothrasanjeevani Tribal Camp at Mukkam (18/03/2018): IDA Malabar branch in association with Govt health centre conducted dental check up camp and awareness class at Parathode sub centre, Mukkam, Distribution of Oral Health Kit were also done. On behalf of IDA Malabar branch Dr. JubnaIkram, Dr. Shoma Renjith and Dr. Fathima participated.

3,Camp at Govt. Leprosy Hospital Chevayur, World Oral Health day (20/03/18): IDA Malabar conducted awareness class and distributed oral health kits to the inmates of Govt Leprosy Hospital Chevayur as a part of World Oral Health Day observations.

4,CDE No.2. Clinical Pediatric Dentistry Redefined (25/03/18): The second CDE of IDA Malabar branch was held on 25/03/18 at Hotel Maharani Kozhikode. The Topic of the CDE was Clinical Pediatric Dentistry Redefined, Faculty was Dr. Akshatha P Puranik MDS PHD.

5, Third CDE of IDA Malabar Branch and Observation of World Health Day (07/04/18): The third CDE of IDA Malabar branch was held on IDA Hall Ashokapuram Kozhikode on 07/04/18. The topic of the CDE was Lifestyle Diseases. The faculty was Dr. Mohandas MD, Senior consultant retd DHS.

6, Release of Journal (07/04/18): The first edition of IDA Malabar branch journal 'Malabar Dentist' was released on 07/04/18 by Dr. Gilsa K Vassuni Principal Govt Dental College in the presence of Dr. Mehul R Mahesh at IDA Hall Ashokapuram Kozhikode.

7, Dental Checkup Camp, Awareness class and Distribution of Dental Health Kits (22/04/18): IDA Malabar branch conducted dental checkup camp and dental health kits were distributed at Vennayur School Ayikkarappadi. Dr. Febin Shalu took the awareness class.

8, Dental Checkup Camp (22/04/18): IDA Malabar branch conducted dental checkup camp at South LP School Purakkad. Around 60 patients were examined.

9, Fourth CDE of IDA Malabar Branch (29/04/18): The fourth CDE of IDA Malabar branch was held on 29/04/18 at Hotel Maharani Kozhikode. The Topic of the CDE was Neuromuscular Dentistry, Faculty was Dr. Rajesh Raveendranathan. The programme started at 9:30am, First session includes Lecture on neuromascular dentistry. Second session started at 11;45am after tea break and was a lecture on neuromuscular disorders. Third session was on bite protocol to treat TMD/OSA/Cervical posturology which started after lunch break. Certificates for the participants were distributed followed by evening tea at 4:30pm.

10, Summer Camp (30/04/18 – 10/05/18): IDA Malabar branch conducted a summer camp for the kids of members of the branch. Mrs. Sandhya Verma was the faculty. The camp includes training for speaking, reading, writing, art & craft, Drawing and colouring, Brain games, puzzles and much more.

11, Fifth CDE of IDA Malabar Branch (13/05/18): The fifth CDE of IDA Malabar branch was held on 13/05/18 at Hotel Maharani Kozhikode. The Topic of the CDE was Understanding CBCT, Faculty was Dr. Prashanth D Shirke, Dr. Niyas Ummer, Dr. Shereen Ummerkutty, Dr. Vivek G.

12, Dental Checkup Camp, Awareness class and Distribution of Dental Health Kits (14/05/18): IDA Malabar branch conducted dental checkup camp and dental health kits were distributed at Perambra. Dr. Renjith Menon took the awareness class. Around 100 patients were examined. On behalf of IDA Malabar branch Dr. Renjith Menon and Dr. Indhu B Nair participated.

13, World No Tobacco Day (31/05/2018): IDA Malabar branch arranged a float in a tempo showing the adverse effects of tobacco and simultaneously announcing the adverse effects of tobacco and giving awareness to the public which ran throughout the Kozhikode City from 10.00 AM to 5.00 PM. On 31/05/18. Flagging of of vehicle was done at Govt Dental College Calicut by Dr. Sudha S Principal Govt Dental College Calicut in the presence of Dr. Ravindran Nair HOD OMFS and past president IDA Malabar branch.



Thrissur Branch

Family meeting was held on 7th April in association with World Health Day at Casino Hotels, Thrissur. Chief guest: Agricultural Minister Mr. V S Sunil Kumar. A Practical session on Face Yoga was held. 92 members with family attended the event.

CDH Activity: A dental Screening camp was conducted
Venue: St. Christina's Home for Girls and Women, Pullazhi, Thrissur
Date: 7th April; Members Participated: Dr. Davis Thomas, Dr P S Dinesh, Dr Rekha Mallaya, Dr. Tameem A. Total No of residents screened: 150

CDE Activity: Intra-branch CDE
Topic: Introduction to CBCT; Date: 11th May
Faculty: Dr. Varghese Mani, MDS (OMFS)
Venue: Hotel Trichur Towers; Time: 6:30 - 9:30pm
Total No of members attended: 100

Anti Tobacco Day: It was decided that all members of our branch shall display a poster on Anti tobacco day for public awareness in their dental clinics.

Other activities: IDA Trichur participated in the Cycle Rally on Anti tobacco Day organized by Thrissur Cyclist Club and Excise department on No Tobacco Day, May 31st.

World Environment Day: IDA Thrissur distributed free tree saplings to 100 members as part of Environment day, on June 5th




Tellicherry Branch

Activities April and May

CDE PROGRAMMES: 1ST CDE Programme was conducted at AL-BAIK RESIDENCY,on 1st April on UNDERSTANDING CBCT,programme was conducted by Dr. Niyas Ummer, Dr. Vivek G, Dr. Shereen Ummerkutty From 9.30am to 4.30pm. 13 members attended the programme.

2nd CDE programme was conducted at AL-BAIK RESIDENCY, on 30th April on ORAL LESIONS –DIAGNOSIS AND TREATMENT PLANNING, programme was conducted by Dr. PRATHIMA SUMAL(MDS ORAL MEDICINE AND MAXILLOFACIAL RADIOLOGY) from 7pm to 9pm. 26 members attended the programme.

CDH PROGRAMME:

1. CDH camp conducted at Keezpally Iritty by Dr. Shaheen Niyaz, Dr. Pramith, Dr. Binil Benny. 100 patients attended the camp.

2. An awareness programme on WORLD NO TOBACCO DAY was organized at tellicherry new bus stand in association with JCI THALASSERY. A flash mob was organised by the students of Kannur dental college. programme started around 10am. Awareness speech on demerits of tobacco usage was conducted by Dr. SHAHEEN NIYAZ. It was well attended function. members who attended from tellicherry were Dr. Prathima Sumal, Dr. Ali Kpm, Dr. Latha Jhony, Dr. Firoz, Dr. Shaheen Niyaz.

IDA TELLICHERRY celebrated IFTAR SANGAMAM & FAMILY GET TOGETHER on 3rd June at HOTEL NAVARATHNA Thalassery. Around 30 members participated in the celebration.

Malanad Branch

06-03-2018: 4th CDH activity of IDA Malanadu in association with IDA kerala state in association,state wide inauguration of "PAAL PUNCHIRI" was done at Odakali, Perumbavoor. As part of the event Angawadi children in an around Odakali and school children upto the age of 12 of Kothamangalam and Muvattupuzha education district were screened for Dental caries and oral hygiene kits were distributed.

08-03 2018: Women's day activity of IDA MALANADU was held in Al Azhar Dental College, Thodupuzha.

10-03-2018: Dentist day celebration of IDA MALANADU and distribution of IDA KERALA state dental excellence award

IDA Kerala state was held at Sree Moolam Club, Muvattupuzha.

10-03-2018: Malanadu Dental Journal was released by Dr Anjana editor, KDJ

20-03-2018: World Oral Health Day, IDA Malanadu in association with IDA Kerala state celebrated the world oral health day

At Thodupuzha, as part of the event road shows, Flashmob and dental awareness skit was conducted

At bus stand and near civil station, Thodupuzha

21-03-2018: 2nd cde of IDA Malanadu on management of dental infections by Dr Arun George and webcast

On managinggram negative microorganisms in chronic dental infections and recent advances in universal

Precautions for infection control by Dr Ashok Vishnu Dabir

21-03-2018: Charter day was celebrated by IDA Malanadu with the cutting of cake by our charter members

10-04-2018: 3rd Executive meeting of IDA Malanadu was held at Brookside club, Kolenchery

22-05-2018: 4th CDE of IDA Malandu was held at hotel Kabani, Muvattupuzha,

Topic was clinical management tips for pediatric dental practice by Dr Joby Peter MDS

26-05-2018: Family tour of IDA Malanadu to dream valley resort, Vattavada, Munnar. 18 families participated the tour.

There was also a general body meeting held at the resort.

29-05-2018: 4th executive meeting of IDA Malanadu was held at Hotel Kabani, Muvattupuzha

29-05-2018: 5th CDE Of IDA Malanadu was held at hotel Kabani, muvattupuzha. Topic was KNOW YOUR COMPOSITES by Dr Vijith Narayana, MDS.

31-05-2018: World anti tobacco day was observed by IDA Malanadu In association with IDA Kerala state and Indira Gandhi Dental College, Nellikuzhi, Kothamangalam. Street plays and awareness classes were conducted for the General public.

Thiruvalla Branch

IDA Thiruvalla conducted two Executive committee meetings.

CDE PROGRAMME

The second Cde of Ida Thiruvalla was conducted on May 20th at Righteous Path Auditorium Thiruvalla. Topic- Crown to Root solution,Faculty was Dr Deepak Mehta. The CDE was very well attended and was very informative.

The Third Cde Of the Branch was held on June 24th at Righteous Path Auditorium. Topic-Invisible Aesthetics. Faculty Dr Santhosh Ravindran. He talked about procedures done daily, he gave a lot of tips on how we can increase the life of our fillings without increasing the costs.

RELEASE OF OUR JOURNAL- TAPER

The official Journal-TAPER of IDA Thiruvalla was released on June 24th. The Editor Dr Elizabeth Joseph along with Secretary Dr. Simon George worked hard for this. This journal contains a lot of informative articles.

Vatakara Branch

Installation of new office bearers

Installation of new office bearers of 2018 was held at IMA Hall Vatakara on 10-12-2017 at 7 pm. Our state president Dr. Sanu Kurien was the chief guest and installing officer. Dr. Sabu Kurian installed Dr. Pramod R as the new president of IDA Vatakara. Other office bearers were installed by the new President. Playback singer Dr. V. T. Murali was the guest of honour.

Dr. Nisaro Siyo, Dr. C.C. Joseph, Dr. Husain felicitated the gathering. Dr. Abdul Salam M.K, Hon. Secretary delivered vote of thanks followed by entertainment and dinner. It was well attended by members and their family.

Dentist day celebration

IDA Vatakara celebrated dentist day by visiting Thanal Rehabilitation centre Idachery, we conducted a oral check up camp for both physically and mentally disabled inmates and medicine distributed. Around 240 inmates were screened and referred some 13 patients to our own clinic for further management. we arranged dinner. 18 members participated

International womens day

International womens day celebrations was observed by conducting an awareness class at Vatakara east JB School for kids. Pensil colours and chocolates were distributed. Dr. Chithralekha, Dr. Sreekala (womens council members), Dr. Sushmitha, Dr. Soumya participated

SPORTS

Our branch participated in sevens football state level tournament held at Thrissur corporation stadium on 18-3-2018

CDH

We conducted 5 oral checkup camp during the period

24-12-2017 (after installation of office bearers)

At Kariyad nambiars up school, 111 patients attended

Dr. Bineesh, Dr. Asma KP, Dr. Salman, Dr. Pramod participated

31-12-2017

In association with Vipanchika arts and sports club in Valayam-Kallunira, Dr. Abdul Salam, Dr. Pramod, Dr. Salil C., Dr. Sanal, Dr. Noufal and Dr. shafad examined the patients, 78 patients were screened

4-2-2018

Camp at Nadapuram Road – Karakkad Mappila School. In association with Manaveegam residence association

46 patients screened

Dr. Salil, Dr. Savad, Dr. Bineesh, Dr. Nithin and Dr. Neethu participated

11-3-2018

At Samskrithi Public School, Purameri

Dr. Salil, Dr. Nikhil, Dr. Gireesh Kumar participated

Dr. Nikhil gave awareness classes

CDE

1st CDE: 21-1-2018

Oral lesions and Protection from Radiation hazards

Faculty: Dr. Prathima Sreenivasan (Prof and HOD oral medicine – Kannur Dental College)

2nd CDE: 11-2-2018

Concepts in complete denture

Faculty: Dr. D. Lingeshwar MDS (Asst Professor, Govt. Royapettah Hospital - Chennai)

Executive meetings

1st Executive Meeting was held on 16-1-2018 at IDA Hall, Vatakara. 21 members participated. 2nd Executive meeting was held on 17-2-2018 at 8pm at IDA Hall Vatakara. 13 members participated

Third executive meeting was held at ida hall Vatakara on 05-04-18. Meeting decided to conduct a cde on endodontics and Iftar meet on may.

4th executive meeting held at ida hall Vatakara on 27-06-18. Decided to host the fourth state executive meeting. It also decided to conduct a cde in July.

ACTIVITIES

3rd CDE on post endodontic restoration on 22 -4-18 by Dr N Narasimha Bharadwaj in association with GC Pharmaceutical. 31 members attended for both lecture and demonstration class.

Conducted Iftar meet on June 12th 2018 at Govt Guest House Nadapuram, followed by a brief general body meeting. It was well attended by members, associated members and their families

Quilon Branch

APRIL:

CDE programme on "Laser Dentistry " by Dr Parvathy V & a CDH programme on WHD: talk by Dr Rugma S, followed by a Medical - Dental camp had been conducted at Mahila Mandiram. WDC donated a cooking stove to a destitute woman of Govt. welfare institution.

MAY:

Two day CDH programme (WNTD) had been conducted: talk by Shri Shaharudeen followed by dental camp in Govt. ITI College & a rally in collaboration with the excise dept. & TKDM GVHSS. WDC donated utilities on Mothers day& administered Hepatitis B vaccine for residents of SS samathi.

JUNE:

CDE programme on"Methodical tooth preparation" by Dr Visakh Suku & in relevance to Public Service day, a medical –dental camp with a talk & honouring of a public servant at Govt. Childrens Home as CDH& WDC progs had been conducted. A seminar on substance abuse (WNTD) was also conducted by WDC at St. Marys School.

BUILDING CONSTRUCTION:

Roof concrete of top floor completed.

EXECUTIVE & GENERAL BODY MEETINGS:

2nd GB & 2nd ECM had been conducted on 22nd April & 20th June respectively.

Malappuram Branch

4th CDE Indian dental association malappuram conducted tii training programme at educare institue of dental science on april 21

5TH CDE PROGRAMME: IDA Malappuram fourth CDE programme on " Head & Neck Cancer-An Overview was held at ASTER MIMS HOSPITAL, Kottakkal on 10-05-2018 Thursday 7pm -10.30 pm. More than 30 members participated in this programme

A CDH Camp held at Areecode On Sunday (29/04/2018) 11am to 2pm. Around 80 patients Screening Done

MIDA IFTAR MEET'18: IDA Malappuram conducted IFTAR MEET " on Saturday, 09/06/18 at White Restaurant, Puthanathani. More 40 members participated

MIDA FANS FEVER'18: IDA Malappuram conducted a "Fans fever on Sunday, 01/07/18 at CLUBONE', Malappuram.

The event started with 5 fans team Brazil fans, Argentinafans,Portugalfans,Francefans,Spain fans Respectively. More 40 members participated in the friendly 5s football fest. Brazil Fans became champions and Argentina fans became runners up.

IDA Malappuram branch conducted 3rd exeuctive meeting on 18th April 2018 at Kottakkal. 16 members attended the meeting.

Attingal Branch

7th April - World Oral Health Day: Observed at Kerala State Ex Service League, Pallickal. 50 participants attended the programme. Screening has done and took awareness class.

15th May - International Day for Families: Observed at Anganvadi, Madavoor. Painting competition has done. Toothpastes and colouring kits were distributed. Demonstrated how to brush teeth.

31st May - World No Tobacco Day: Observed by conducting a road rally with 15 bikes and cars from Kazhakutom to Attingal (15 kms). Pamphlets were distributed. President Elect IDA KSB Dr Abhilash GS gave awareness talk to public at each main junctions.

5th June - World Environment Day: Observed at Anganvadi, Pallickal. Saplings and seeds of various plants distributed among the pupils. Colouring kits,Study materials, tooth brushes and pastes distributed

Second CDE - Restoration of Badly Mutilated Teeth and Post and Core conducted on 22 April. Faculty was Dr Santhosh Raveendran. It was conducted in Hotel Karthika Park, Kazhakutom. 37 participants attended the programme. The programme was very beneficial, he pointed out the mistakes we usually do in the clinics and he explained how to rectify that mistakes.

On 6th May a state CDE programme was conducted along with IDA Trivandrum Branch. Topic was Successful Dental Practice. Faculties Dr Civy Pulayath and Dr Mili James. The programme was conducted in Hotel Classic Avenue, Trivandrum.

Third CDE programme was Amazing Assistance, a training programme for dental assistants. The programme was conducted at Al Saj Convention Centre, Kazhakutom. 160 dental assistants of different clinics from different districts attended the programme. Sterilisation part was handled by Dr Joji Thomas, Maxillofacial surgeon of Cosmopolitan Hospital, Trivandrum. Clinical Management part was handled by Dr Civy Pulayath. He has given a new outlook to the assistants for handling the clinics. The interactive session was very beneficial for the assistants. Dr Sudeep S, Dr Dinesh, Dr Arun S, Dr Abhilash GS and Dr Hari Krishnan demonstrated mixing of different dental materials.

North Malabar Branch

The third, fourth, and fifth executive meetings of the branch was convened on 11th April, 21st May and 25th June respectively. Various activities of the branch was discussed and executed.

CDE programmes of the branch

4th CDE was on complications in exodontia by Prof. Dr. Ajoy Vijayan, MDS OMFS on 3rd April, 2018. 30 members attended.

5th CDE challenges in anterior - Minimum invasive layering technique with composites by Prof. Dr. Mohankumar, MDS Endodontics on 22nd April, 2018. 48 members attended.

6th CDE A panel Discussion on Endodontic - Periodontic-Prosthodontic Continuum, A clinical perspective on 8th May, Moderated by Prof. Dr. Anil Melath MDS Periodontics. Panelists were Prof Dr. A.V. Sreekumar MDS Prosthodontics and Prof Dr. Shishir Shetty, MDS Endodontics. 56 members attended.

7th CDE, detection of oral cancer - A clinical perspective was on 10th June by Prof Dr. Sajith Babu, Dept of Surgical Oncology, MCC Kodiyeri. 57 members attended.

8th CDE, A joint programme with Coastal Malabar Branch on 24th June, Topic was Primer to neuromuscular Dentistry by Dr Raj Ravi BDS of ICCMO The occlusion and TMJ authority India section. 36 members attended.

CDH Activity

No Tobacco day observation was done on Kannur Central Jail on 31st May, in association with MCC Kodiyeri. Miss EP Latha, Kannur Mayor was the Chief Guest, Jail, Superintendant Mr. N.S Nirmalanandan Nair, Guest of Honour. Doctors from both dental and medical fraternity spoke on the occasion. Dr. Jayashree KT gave an awareness talk on A.I.R. 101.5 FM on Pukavaliyum Danta Rogangalum

The first issue of the online journal Densinfo was published in the month of May. Second issue of online newsletter Densinfo published in the month of June. These are the activities done by our branch in the last three months.

Tripunithura Branch

IDA Tripunithura branch distributed food items, vegetables, steel plates and glasses, mats etc to the relief centre at Bhaskaran Community, Irumpanam.

We conducted a CDE on Re-treating the Treated a Clinical Perspective on 28th July. The faculty was Dr. Rakesh R. Rajan.

IDA CDH and Women's Wing jointly conducted awareness class and dental checkup for student police cadets at Govt. Girls High School on May 19th.

Our CDH conducted dental awareness checkup at St. George School, Arakunnam and samples of toothpastes were given to 480 children.

Women's Wing conducted a leadership camp for children on May 6th and they also conducted an oral hygiene awareness talk for children of Anganawadi on World Oral Health Day.

Kunnamkulam Branch

Kunnamkulam branch had a C.D.E on the topic –'Primary tooth, is it worth a save ?' by Dr Gopu Hareendralal. There was a lecture from 10.00 a.m -1.00 p.m and Questionnaire session later from 2.00 p.m to 3.00p.m.

Kunnamkulam Branch had a C.D.H on 1st April, 2018, conducted free dental check-up camp in association with Morning Stars Chamaravattom City hospital, Tirur, Reyhan Hospital and MIMS Kotakkal as part of the World Health Day. The screening camp started at 10.00 a.m and was over by 2.30 p.m and total of 120 patients were screened.

Dentist Day celebrated on March 6th and 10th at Agathimanthiram, Guruvayur. And dental check-up was done for the inmates and necessary treatments were provided at nearby dental clinics.

Womens day was celebrated on March 8th at Orimaniyur Panchayath Hall, where Dr General Health Awareness and Dental Awareness classes were provided to Kudumbasree workers or Orimaniyur Panchayath, further dental kits were also provided. Dr Devika Rajendraprasad (Gynaecologist) gave general awareness class on health.

51st Kerala State Dental Conference

Indian Dental Association
Kerala State

"Get educated and be wise..!!
Get organised and be strong.!!"

MILAN '19 - A CELEBRATION OF TEAM-WORK

This was an exhortation of Sri Narayana Guru to the marginalised groups in our society, in the late nineteenth century.

Today, this has an equal relevance, as far as dental speciality and dental practice in Kerala is concerned. We are definitely one of the marginalised sections in the medical sector and as Guru said, we need to be empowered with knowledge and be united under an organisation, to make ourselves count before the powers that be.

Today, the dental practice sector in Kerala is passing through a difficult phase, facing challenges from multiple fronts. Be it the issues with regard to the high saturation of dental graduates or the challenges posed by the various govt regulations, in the present scenario, to sustain a dental practice profitably is definitely a Herculean task.

This is the time when our collective voice needs to be heard in the right place at the right time in the right manner. And that's where our professional organization comes into play, and also the need for all dental professionals in the state, to rally behind it as one united front. Perhaps, this is the only way to make our voices heard and get our demands addressed, and the fraternity should make use of every avenue and opportunity to make it happen.

And a state conference presents an excellent opportunity to do just that.To foster and strengthen our bonds, to deliberate on gnawing issues and come out with solutions, and to get acquainted with the latest in terms of technology and innovation.

Dear friends, welcome to 'MILAN '19', the 51st Kerala State Dental Conference, hosted by IDA Malabar, that's going to unfold at Calicut, on the 4th, 5th and 6th of Jan 2019.

The venue would be the Calicut Trade Centre at Swapnanagari, in the heart of Calicut city.

THE 'MILAN' STORY...SO FAR

'MILAN' is the meeting. A meeting of bosom friends, of professional colleagues and more than anything else, a meeting of ideas to brighten the path of a community, groping in the dark.

"RE-DEFINING DENTISTRY, RE-DEFINING FELLOWSHIP"

This was chosen as the theme of 'Milan '19' for a reason.

The speciality of dentistry is on the verge of a tipping point and the scope of dental practice needs to be re-defined for it to survive. The old notions of practice and promotion have to give way for new ones, in order to equip us for this era of corporatisaion and consumerism.

'Milan '19' hopes to initiate a thought process, to redefine dentistry, as we've seen and practised it till now..

"Re-defining fellowship" is about the legendary hospitality of Calicut.

The city of Calicut is known for it's love for serving good food and a sense of camaraderie, that pervades every inch of this land.

Team Milan is committed to bring this unique flavour of Calicut in it's full splendour, to all members of IDA Kerala across the state, who would be joining us for the coming state dental conference at Calicut.

A SCIENTIFIC CONCLAVE PAR EXCELLENCE

A dental conference is at the same time, a scientific convention and a social gathering. The scientific component of 'MILAN '19' would feature some of the most sought after speakers, showcased in 'theme based' sessions.

The prestigious Jacob Zacharia memorial oration would be delivered by Dr Moni Abraham Kuriakose, the renowned onco-surgeon, who was brought in recently by the Kerala govt, to head the Cochin Cancer Centre.

THE MILAN FINISHING SCHOOL

One concept that we are trying to introduce in Milan '19, is the idea of a 'finishing' school.

Along with our pre-conference courses, there would be a series of hands-on progs, touching all basic aspects of clinical dental practice. Minor surgical procedures, suturing techniques, impression methods, crown cutting, access opening, teeth whitening, etc would be covered in a period of two days at a very economic cost, so that it would be affordable and helpful to the fresh graduates, for whom it is mainly intended.

THEME BASED BANQUET

The banquet venue of 'Milan '19' is a scenic property on the banks of River Chaliyar, the Marina Convention Centre. It's a beautiful location where the delegates can expect to experience the essence of what Calicut and IDA Malabar have always stood for. Quality entertainment, ethnic cuisines and a personalised care.

'MILAN' BECKONS..

It's said that, the key to enjoy anything in life is involvement.

Getting fully involved. Be it work, family, friends or your association. The amount of enjoyment you derive out of it, would be proportionate to the amount of involvement you've put into it.

So this is a request to all members of IDA. Be involved in the activities of the association and don't miss out on occasions like the annual state conference. Please register for 'Milan '19' immediately.

We have co-ordinators, termed " Milan ambassadors", in every local branch in the state, to assist the members with regard to every aspect of the conference. Be it registration, accommodation, transportation or whatever. You can either avail of their help or contact the conference secretariat directly for assistance.

RE-DEFINING TEAMWORK

In the end it's all about team work. The success of an association is the strength of it's team. How well it functions as a team would determine how effective it is in serving the interests of it's members.

This is a time, when IDA Kerala has to be at it's best, as a team.

Together, let's make 'Milan '19', a celebration of our team-work.