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The silver Bullet

A silver Bullet is something that acts as a magical weapon, especially the one that instantly solves a long-standing problem. Silver Diamine Fluoride (SDF) seems to do exactly that.

Untreated dental caries are a significant pediatric public health problem. The American Academy of Pediatric Dentistry (AAPD) has issued an evidence-based guideline that recommends use of 38% SDF to treat active dental caries in primary teeth in pediatric and special-needs patients. Non-invasive, interim interventions for arresting untreated dental caries have been needed, especially in underserved populations lacking timely access to restorative dental services. Such an intervention is the SDF.

SDF is an FDA-approved liquid formulation clinically applied to control active dental caries and prevent further progression of disease. While the ideal way to treat teeth with decay is by removing the decay and placing a restoration, this alternative treatment allows us to stop decay with noninvasive methods, particularly with young children and individuals who cannot be provided the ideal management protocol. As reported in a recently published meta-analysis, two-thirds of all dentinal caries lesions studied (those that had progressed into the dentin) were found to be arrested after treatment with SDF (Gao SS, et al. BMC Oral Health. 2016;16:12). When teeth with arrested dental decay are not subsequently restored with dental fillings or full coverage crowns, studies show it is advisable to reapply SDF every six months (Sharma G, et al. J Clin Diagn Res. 2015;9:ZE08-ZE11).

However, there seems to be a disadvantage that needs to be explained to patients beforehand. SDF applied to dental decay or other tissues of the mouth, lips and skin causes significant, irreversible black staining due to formation of silver oxide. Superficial black staining of the skin and oral mucosa tends to resolve within days as epithelial cells slough off. In contrast, unrestored caries lesions treated with SDF remain black permanently — a significant aesthetic problem especially in anterior teeth.

The brighter side is the fact that SDF provides immediate relief from dentinal hypersensitivity, kills pathogenic organism, hardens softened dentin making it more acid and abrasion resistant, does not stain sound dentin or enamel and can provide important clinical feedback due to its potential to stain visible or hidden lesions. Children who may have excessive decay (severe early childhood caries), young children who have difficulty cooperating for treatment, special needs patients & children with carious lesions that may not all be treated in one visit, can all benefit from the use of this product.

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Editorial

Dr. Anjana G.

Need of a scientific mind in Daily Dentistry

Dental education and dentistry at large are facing multiple challenges and we aren't left high and dry by these issues. The numbers of qualified dental graduates have increased considerably in the last decade and presently over 117,825 dentists are working in India. Though the dentist to population ratio in India is 1:10,271, the newly graduating dentists find it difficult to survive in the private sector owing to a number of reasons. Approximately only 5% of Dental graduates are working in the Government sector at present. If this continues there will be more than 100,000 dentists over supply by 2020. In the present scenario one cannot over emphasize the need for updating oneself and delivery of best quality dental treatment would be a mandate to have a successful practice.

As the saying goes "The more extensive people's knowledge of what has been done, the greater will be their power of knowing what to do."

Recording and sharing of scientific data has been the main reason for advances in diagnosis and management of diseases and the main tool in research which has led to umpteen medical inventions and the current advances in Medicine and Dentistry. Dentistry has progressed by leaps and bounds in the past decade. When an individual completes the graduate course in Dentistry he/she ideally is trained in the basic treatment procedures in dentistry. But there is a newer development happening almost every day which all of us should be updated about. So learning becomes a continuous process, be it at your professional level or regarding life skills. Learning is survival in other words and every opportunity to learn is a blessing. Professional updating, through reading scientific data, workshops or continuing dental education programs, need prioritization in daily dentistry in the present scenario.

Dr Anjana G
Editor, KDJ

Message from the President

Dr. Ciju A Paulose

Dear colleagues,

A new age calls for a new philosophy, which in turn needs to be spearheaded by the new generation.

I am proud of my colleagues, our new team, who by their relentless dedication, hard work and firm faith have time and again proved their commitment to the IDA family.

To begin on a pleasant note, allow me to greet you all by

WISHING YOU A VERY HAPPY AND EXCITING 2018.

May this year bring our organisation, fresh laurels and thereby enhance the image of IDA. Every new IDA year brings new challenges. We, as an association, must brace ourselves to face them and chalk out new strategies that keep our association performing and plan new programs that serve to enhance our knowledge and skills to serve the community.

The world keeps changing rapidly and though it is essential that we strive to match its pace, we at the same time, must not fail to inculcate elements that will help us establish ourselves as an organisation of professional excellence. It is also a vital exercise, that we need to engage in and ensure the professional advancement of our members.

In order to achieve this objective we must focus on

1) The Dental education at large and the dental students,
2) The up gradation of the knowledge and skills of dental surgeons through CDE programmes and research as well as
3) Passing the benefits of all these onto our patients and the general populace.

The last cannot be achieved without the first two.

Our primary goal this year should be to identify and cover more and more areas of clinical and academic interest to our members in order to facilitate their professional advancement, while simultaneously paving the way for optimal oral health in our state.

This year should become a model for the power of teamwork and reflect the strength of our collaboration. I firmly believe that the growth of an association is dependent on the inner discipline of its members and I sincerely hope that the performance of this year's team will serve to reinforce this inherent discipline in the minds of our members.

HOPE ASSURE, IDA CAN, IDA MARK, HOPE and HOPE-MEDI are the backbones of the IDA and apart from the numerous benefits they offer, they also strengthen the bond between members and show other organisations the true spirit of IDA Kerala State.

I would like to express my sincere appreciation to Dr. Suresh Kumar for his incessant hard work and dedication as the administrative arm of our association. I would also like to thank Dr. Anjana G and team for their tireless efforts that have gone into the creation of this journal par excellence and I wish them all they very best.

To conclude, I would like to urge each and every one of you to extend your whole hearted support to our endeavours in the forthcoming year, so that we as one, may forage ahead with confidence.

Thanking you

JAI IDA!

Dr. Ciju A Paulose
President
Indian Dental Association
Kerala State

Message from the Secretary

Dr. Suresh Kumar G

Dear Friends,

Wishing you all a great 2018

Dentistry in India is going through testing times and I cannot emphasis more the need to stand together in this difficult times.

The challenges we face are multitude and rather than reacting emotionally to these issues, we should deal with the problems sensibly with proper understanding of the issues and meticulous planning to deal with them, so that, we are benefitted and our representation becomes a mandate in the key forums. The most important aspect for this is our strength in numbers. Each IDA member should initiate fellow dental surgeons into our association. Moreover we should support and promote all the IDA Kerala State ventures like IDA CAN, IDA MARK, IDA ASSIST and HOPE ASSURE. These are initiatives which we have envisaged and embarked upon for our own benefits.

A large number of clinics have already registered in IDA CAN and we expect that more members would be coming forward to be a part of these programs so as to standardize our practice in a uniform manner and be more responsible members of the society in which we live. This project of IDA will prove invaluable as the clinical establishment bill is almost upon us.

The strength of an association is its members and I once again call upon all members to stay united and promote the cause and ideals of our association thereby strengthening the profession.

I would like to thank each and every member of our association for his or her contribution to the growth and progress of IDA, Kerala state and expect them to continue the good work for our association, as we all know that the members and their selfless contribution to the betterment of the association, only can make our association achieve newer heights.

Thank you,

Dr. Suresh Kumar G.
Secretary, IDA Kerala State

Quantitative assessment of mast cells in normal mucosa, precancerous conditions and precancerous lesions

* Girish KL, **Pradeesh Sathyan

Abstract

Context: It has been a general belief that mast cells of different phenotypes may have different roles in human health & disease. There is considerable controversy with regard to the number and distribution of the mast cells in clinically normal oral tissues as compared to the inflamed or diseased tissues. Mast cells are very close to basophil granulocytes and are considered very versatile, which presumably regulate many vital processes such as inflammation, phagocytosis, blood clotting, hypersensitivity and angiogenesis. This study was undertaken to emphasize the presence and quantification of mast cells in oral precancerous conditions and precancerous lesions.

Aims of the study: Estimation of the mast cell count in precancerous conditions, precancerous lesions and their comparison to that of normal mucosa.

Methods and Material: Ten cases of normal buccal mucosa constituted the control group whereas twenty cases of precancerous condition and ten cases of precancerous lesion constituted the study group. The precancerous condition was represented by ten cases of oral lichen planus and ten cases of oral submucous fibrosis. Ten cases of oral leukoplakia represented the precancerous lesion. Mast cells were identified in tissue specimens stained with 1% toluidine blue, using light microscope. Mast cells visible in each optical field (40x) were individually counted and the mast cell count (MCC) per optical field and mast cell density (MCD) per sq.mm was calculated. The results thus obtained were subjected to statistical analysis for obtaining significance value (p value) using unpaired t-test.

Results: The mean values of MCC/optical field were 2.51±0.84, 4.55±1.41 and 6.10±1.81 in normal mucosa, precancerous condition and precancerous lesion respectively. The mean values of MCD/sq. mm of normal mucosa, precancerous condition and precancerous lesion were 12.56±4.18, 22.78±7.03 and 30.50±9.07 respectively. Statistical analysis of the results showed a very highly significant increase of mean values ($P < .001$).

Conclusions: The study findings suggest an increase in both mean MCC/optical field and MCD/sq. mm in precancerous condition and precancerous lesion. This increase in the values was statistically significant when compared with that of normal buccal mucosa.

Key-words: Paul Ehrlich, Mast cells, Toluidine blue staining

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► Introduction:

Mast cells were first described by Paul Ehrlich in his 1878 doctoral thesis on the basis of their unique staining characteristics and large granules. These granules also led him to the mistaken belief that they existed to nourish the surrounding tissue. They are now considered to be part of the immune system.[1] Mast cells are present in most tissues characteristically surrounding blood vessels and nerves, and are especially prominent near the boundaries between the outside world and the internal milieu, such as the skin, mucosa of the lungs and digestive tract, as well as in the mouth, conjunctiva and nose.[2]

Mast cells have a diameter of about 12 microns, heterogeneous in shape and are packed with granules. They have a life span of weeks to months.[3, 4] Mast cells release preformed secretory mediators like histamine, heparin, tryptase, lipid derived mediators like leukotreines, pro-inflammatory cytokines, mutagenic cytokines and immuno-modulatory cytokines.[5] Therefore mast cells have been studied in various conditions like wound healing, chronic inflammation, keloid, pulmonary fibrosis and angiogenesis.[6, 7]

A review of previous literature on the subject shows that not many studies exist on the presence of mast cells and the possible

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role played by them in the oral lesions. It has been a general belief that mast cells may have different roles in human health and disease. There is considerable controversy with regard to the number and distribution of mast cells in clinically normal oral tissues as compared to the inflamed or diseased tissues. Normal gingival connective tissue and the lamina propria of the normal buccal mucosa contain mast cells and this has been proved by many authors.

As far as oral diseases are concerned, mast cells have been implicated in variety of diseases like periapical lesions, oral leukoplakia, oral submucous fibrosis, odontogenic cysts, gingivitis, recurrent aphthous ulcers and pyogenic granuloma. Mast cells have also been reported to be present in lichen planus, a common dermatological disorder to manifest itself in the oral cavity. The commonly occurring oral precancers like oral leukoplakia, oral submucous fibrosis and oral lichen planus have chronic inflammation in common in addition to, auto-immunity which is strongly associated with oral lichen planus.[8-10] The role of mast cell number and density in terms of prognosis and survival of patient makes the study interesting and rewarding. Hence this study has been undertaken to emphasize the presence and quantification of mast cells in oral precancerous conditions and lesions.

► Materials and methods:

The present study included ten each of clinically and histopathologically confirmed cases of oral leukoplakia, oral submucous fibrosis and oral lichen planus. Lichen planus and oral submucous fibrosis constituted precancerous condition while, precancerous lesion was represented by oral leukoplakia. Biopsies of normal oral mucosa were obtained from ten adult patients undergoing extraction of third molar with their consent, which made up the control group. From each block, two sections of 3-4 microns were obtained. One set of sections were stained by Harris hematoxylin and eosin for histopathological diagnosis and the others were stained with 1% toluidine blue for mast cells (Churukian CJ et al; 1981).[11]

► Mode of study

All the stained sections were examined under binocular research light microscope. Two observers recorded the findings of the same slide to eliminate the inter-observer differences. The observers were given different code numbers to avoid errors in interpretation; clinical history was not given before examination. The observers recorded the counting of the same slides at intervals to remove the intra-observer bias. Photomicrographs of sections showing mast cells were taken.

Groups	Average Number Of Mast Cells / Optical Field		P-value
	n	Mean±Sd	
Normal Mucosa	10	2.51±0.84	---
Precancerous Condition	20	4.55±1.41	< .001
Precancerous Lesion	10	6.10±1.81	<.05

Table 1: Mean values of MCC/optical field of normal mucosa, precancerous condition & precancerous lesion

Groups	Average Number Of Mast Cells / sq.mm		P-value
	n	Mean±Sd	
Normal Mucosa	10	12.56±4.18	---
Precancerous Condition	20	22.78±7.03	< .001
Precancerous Lesion	10	30.50±9.07	<.05

Table-2: Mean values of MCD/sq.mm of normal mucosa, precancerous condition & precancerous lesion

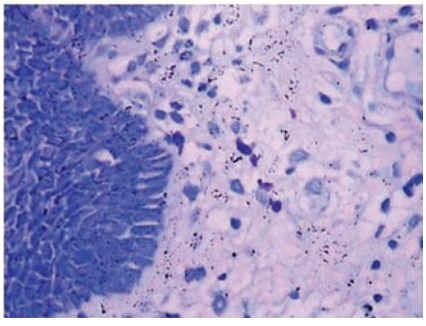


Fig. 1: Mast cells in normal mucosa (Toluidine blue staining; 40x)

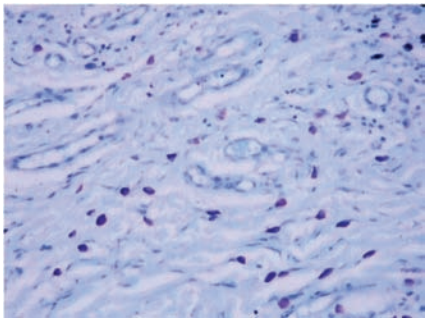


Fig. 2: Mast cells in lichen planus (Toluidine blue staining; 40x)

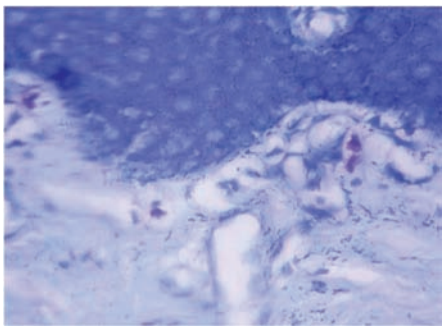


Fig. 3: Mast cells in leukoplakia (Toluidine blue staining; 40x)

Criteria to identify the mast cells

Mast cells are found in the connective tissue and are spindle to oval shaped. Their cytoplasm contains granules, composed of heparin and histamine and has the same staining characteristics as the fibroblast with hematoxylin and eosin staining. Selective stain of 1% toluidine blue is used for mast cells. Toluidine blue stains the mast cells red purple and the background blue.

Counting of mast cells

Mast cells were counted in ten random high power fields (40x) having larger number of mast cells, with one field depth from basement membrane of the epithelium and the average count per high power field was determined. Further the mast cell count was expressed per sq.mm using the formula given by Sowmya & CV Raghuveer; 1996.[12] The results thus obtained by the above method were subjected to statistical analysis for obtaining significance value using t-test.

► Results:

The mean and standard deviation of mast cell count (MCC) per optical field and mast cell density (MCD) per sq. mm was calculated for normal oral mucosa oral lichen planus, oral submucous fibrosis and oral leukoplakia cases. The results thus obtained were tabulated and subjected to statistical analysis. A high positive correlation was observed between MCC/optical field of normal oral mucosa, oral lichen planus, oral submucous fibrosis and oral leukoplakia. The mean values MCC/optical field was increased in oral submucous fibrosis (3.85±0.82), oral lichen planus (5.26±1.51) and leukoplakia (6.10±1.81). The increase in the mean values of MCC/optical field when compared to the control group (2.51±0.84) was statistically significant. A significant difference was observed between mean values of MCC/optical field of precancerous condition (4.55±1.41) and precancerous lesion (6.10±1.81) and also when compared with the control group. (Table-1 & Graph-1)

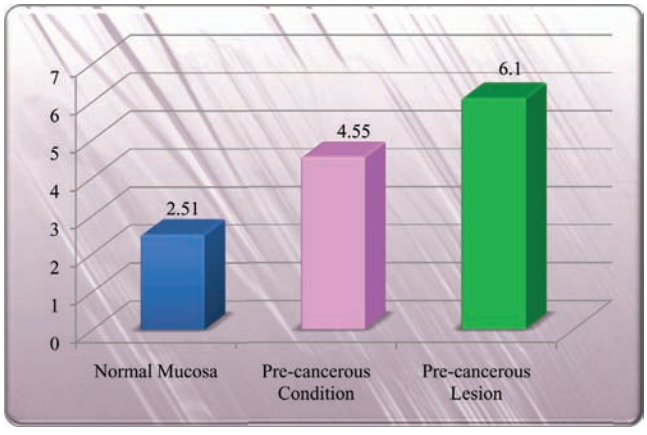
Similarly a high positive correlation was observed between MCD/sq. mm of normal oral mucosa, oral lichen planus, oral submucous fibrosis and oral leukoplakia. The mean values of MCD/sq. mm were increased in oral submucous fibrosis (19.25±4.11), oral lichen planus (26.30±7.56) and oral leukoplakia (30.50±9.07). The increase in the mean values of MCD/sq. mm when compared to the control group (12.56±4.18) was statistically significant. A significant difference was also observed between mean values of MCD/sq. mm of precancerous condition (22.78±7.03) and precancerous lesion (30.50±9.07) and also when compared with the control. (Table-2 & Graph-2)

► Discussion:

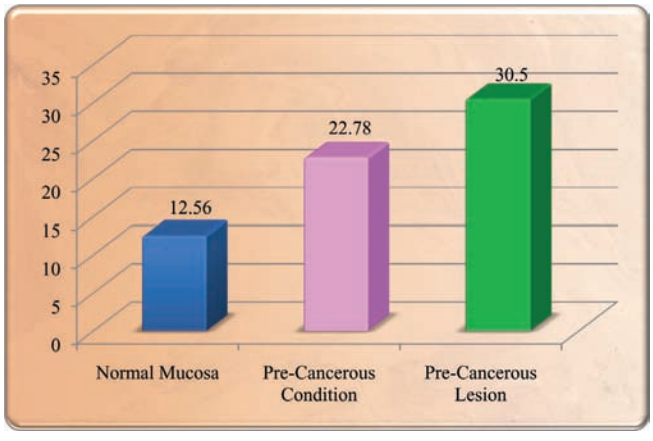
Mast cells are known as "unicellular endocrine" glands, since on discharge of mast cell granules, a number of mediators are released which include heparin, histamine and serotonin, which have major physiological and pharmacological significance.[13, 14] Many investigators have tried to highlight the role of mast cells in oral health and disease conditions. Among normal oral tissues, mast cells have been proved to be present in gingival connective tissue, tongue and lining mucosa.[15] Mast cells have also been reported in normal periodontal ligament and pulp, although in very low densities.

It has been a general belief that mast cells of different phenotypes may have different roles in human health & disease. There is considerable controversy with regard to the number and distribution of the mast cells in clinically normal oral tissues as compared to the inflamed or diseased tissues. Much interest has been shown by many authors in recent years regarding the density and distribution of mast cells in oral mucosa. In the present study the control group consisted of normal mucosa and the mean values of mast cell count/optical field and mast cell density/sq. mm were in agreement with various investigators like Bhat AP, Shapiro et al and Madhuri Ankle. [7,16,17]

Mast cells have also been implicated in the pathogenesis of OSMF. Some authors state that majority of OSMF patients



Graph 1 Mean values of MCC/optical field of precancerous condition & precancerous lesion



Graph 2 Mean values of MCC/sq.mm of precancerous condition & precancerous lesion

gave an important observation that they had a feeling of itching in oral mucosa, especially in early stages of the disease. This is probably due to release of histamine from mast cells. In the present study there was a significant rise in both the mean values of MCC/optical field and MCD/sq. mm in OSMF cases. This findings were in an agreement with the studies of various investigators like Bhat AP et al and Madhuri Ankle R et al. [7,17]

Current opinion suggests that the pathogenesis of lichen planus is a cell mediated process and bears similarity to delayed type of hypersensitivity reaction where mast cells are known to play an important role. In our present study there was a significant rise in both the mean values of MCC/optical field and MCD/sq.mm. These findings were in an agreement with the findings of various investigators like Hansson et al. [18,19]

Various investigators have concluded that the biologically and pharmacologically active agents in the mast cells contribute to inflammatory reaction seen in leukoplakia. These stimulated mast cells may release interleukin-1 which causes increased epithelial proliferation that is seen in leukoplakia and the lesion clinically appears as white patch. Histamine may cause increased mucosal permeability, which could facilitate increased assess for antigen to connective tissue. In the present study there was a significant rise in both the mean values of MCC/optical field and MCD/sq. mm in oral leukoplakia cases. These findings were in an agreement with the studies of various investigators like Madhuri Ankle R et al, Biviji et al and Michailidou EZ et al. [17,20,21]

The World Health Organization classifies oral precancerous / potentially malignant disorder into precancerous lesions which include leukoplakia, erythroplakia, palatal lesions of reverse smokers and precancerous conditions which includes oral submucous fibrosis, lichen planus, epidermolysis bullosa, discoid lupus erythematosus. In our study the precancerous lesions was represented by oral leukoplakia whereas the precancerous conditions was represented by oral submucous fibrosis & oral lichen planus. In the quantitative analysis of the mean MCC/optical field showed an increase and was found to be 4.55±1.41 and 6.10±1.81 in precancerous condition & lesions respectively. The mean MCD/sq. mm also showed an increase and was found to be 22.78±7.03 and 30.50±9.07 in precancerous condition & lesions respectively. The increase in the values was statistically significant when compared with that of control group.

► Conclusion:

It could be inferred from the present study that mast cell population was increased in both precancerous conditions and precancerous lesions studied. A search of literature reveals that studies by some authors have revealed some interesting facts about mast cells especially the chemical mediators released by their granules. The mediators in mast cells are known to vary with variation in micro-environment in various diseases. Thus it is probable that mast cells play a key role in mediating the cross talks between the external antigenic agent and the local immunologic factors.

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Laser assisted frenectomy

* Ajesh Joseph, ** Anna Abraham, *** Karthika Rajeev, ****Rekha Raghavan

Abstract

The labial frenum is a fold of tissue or muscle, connecting the lips, cheek to the jaw bone. Their high attachment may cause a midline diastema and gingival recession. Frenectomy is the removal of the frenum and is one of the essential periodontal plastic surgical procedures. Laser assisted frenectomy is much more comfortable for the patient because of sufficient hemostastis, lack of swelling, pain, less scar tissue formation and good wound healing. The use of a diode LASER is proven to be beneficial, practical, effective, easy to use and offers a safe, acceptable, alternative for frenenctomy.

Key words: Labial frenum, Diode LASER, Frenectomy, Periodontal Plastic Surgery, Healing

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► Introduction

A frenum is a mucous membrane fold which contains muscle and connective tissue fibers that attach the lip and the cheek to the alveolar mucosa, the gingiva and underlying periosteum.[1] Since the presence of an aberrant frenum is one of the primary etiological factors for the persistence of a midline diastema, frenectomy has garnered importance as a periodontal plastic surgical procedure.[2]

The abnormal frenum is clinically visualized by applying tension over the frenum to see the movement of the papillary tip or blanching which is produced by ischemia to the region. Frenal attachment has been classified as mucosal, gingival, papillary and papillary penetrating by Placek et al.[3]

Indications for frenectomy include, an aberrant frenal attachment which causes midline diastema, a frenum attached to the gingival margin which causes gingival recession and difficulty in maintain oral hygiene. Removal of frenum is also advised when there is an inadequate attached gingiva and a shallow vestibule.

Frenectomy which is the complete removal of the frenum can be performed by various techniques and modalities like conventional frenenctomy also known as classical frenectomy, Miller's technique, Z plasty V- Y plasty, electrocautery and recently LASER.[4] Different types of lasers have been introduced according to their wavelength and their interaction with hard and soft tissues in the oral cavity. Soft tissue procedures like, gingivectomy, frenectomy, depigmentation, incorporate the use of Co2, Nd YAG, argon, Er-YAG and Diode lasers.

Laser treatment has served a purpose as an alternative treatment to more conventional therapies because of advantages, like homeostasis and sterilization. For routine dental treatment pain control is quite important for patients physical and mental well being as well as effectiveness of therapy.[5-6] The Laser induces coagulation that provides hemostasis and seals the sensory nerve endings.[7]

One of the main benefits of using dental lasers is the ability to interact selectively and precisely with oral tissues, with less tissue injury, no significant complications, limited scarring and contraction and a probable biostimulation.[8] This article describes a case of frenctomy done with diode laser.

► Case presentation

A 19 year old male patient with a complaint of spacing between upper front teeth reported to the Department of Periodontotlogy and Oral Implantology, Educare Institute of

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Dental Sciences, Chattiparamba, Malappuram. The medical history was non contributory. Clinical examination using tension test revealed papillary penetrating type of frenal attachment (fig 1). Laser assisted frenectomy was planned and informed consent was obtained from the patient. After achieving adequate anesthesia the activated laser was used to release the frenum from the base of the frenal attachment using a light brush stroke motion. The laser was operated at 810 nm, at a power of 3 watts in continuous wave and contact mode. The excision was completed in 5 minutes with optimal hemostasis throughout the procedure (fig 2). Wavelength specific protective eye wear was worn by the patient, operator and the assistant. A high speed evacuation was used adjacent to the operating area to remove the laser plume. Post operative instructions were given. The healing of the surgical wound was re evaluated after one week (fig 3) which was found to be satisfactory with no evidence of infection in the surgical area. There was no pain or discomfort experienced by the patient.

► Discussion

The Diode Laser is now a viable alternative to the scalpel in soft tissue surgery. Diode is a solid active medium laser, manufactured from semiconductor crystals using some combination of aluminum or indium, gallium, and arsenic. All of the diode wavelengths are highly absorbed by pigmented tissue and are deeply penetrating, whereas it is poorly absorbed by tooth structure so that soft tissue surgery can be safely performed in close proximity to enamel, dentin and cementum.[9] Because of the photo-physical characteristics of lasers, laser irradiation exhibits strong ablation, hemostasis, detoxification and bactericidal effects on the human body. These effects could be beneficial during periodontal treatment, especially

Fig. 1 Pre- operative

Fig. 2 Immediate Post OP

Fig. 3 One Week Post OP

Fig. 4 Two Week Post OP

for the fine cutting of soft tissue as well as in the debridement of diseased tissues.[10]

The continuous wave emission mode of the diode laser can cause a rapid temperature rise in the target tissue. The clinician should use air and sometimes water to cool the surgical site and to continue to move the fiber around the treatment area.[9] When a temperature of 100°C is reached, vaporization of the water within the tissue occurs, a process called ablation. At temperatures below 100°C, but above approximately 60°C, proteins begin to denature, without vaporization of the underlying tissue. Conversely, at temperatures above 200°C, the tissue is dehydrated and then burned, resulting in an undesirable effect called carbonization.[11]

Many studies have suggested the that laser have a number of overriding advantages compared to conventional scalpel method such as, the hemostasis effect, excellent visualization of the surgical field, reduced operating time, wound sterilization, minimal scar formation and minimal pain.[12-13] Laser technique has been advocated by many clinicians, because of the added benefits such as reduced need for local anesthesia and periodontal dressing, post-operatively.[14]

All these above mentioned advantages were observed in our procedure also. There was no pain and swelling experienced by the patient and no signs of infection post operatively. Blade and scalpel frenectomy warrants the use of antibiotics and analgesics to reduce the incidence of infection and pain, which was not required in this case. On post-operative evaluation after 10 days, the surgical site showed satisfactory healing, with the patient experiencing no discomfort in that duration (fig 4).

► Conclusion

Laser-assisted frenectomy provides a multitude of benefits over the conventional blade and scalpel method, with precise tissue interaction, biostimulation, absolute hemostasis and pain control. Patient compliance during the procedure and post-operatively is excellent. Due to all these reasons, laser-assisted frenectomy can be advocated over other methods.

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LSTR: A new venture in pulp therapy

* Karthika S., ** Sageena George, ***Anandaraj, ****Fahanna Beegum

Abstract

The purpose of this report is to discuss an alternative treatment for extraction of primary molars known as lesion sterilization and tissue repair (LSTR). LSTR is a noninstrumentation endodontic treatment that involves a triantibiotic mixture in a propylene glycol vehicle, which is used to disinfect root canal systems. By this simple and noninvasive method strategically important teeth can be saved. This concept was developed by the Cariology research unit of the School of Dentistry, Niigata University, Japan. This article aims to discuss two cases performed using the same procedure.

Key words: Deciduous Tooth, Nonvital Tooth, Triple Antibiotic Paste.

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► Introduction

The most common problem faced by pediatric dentists are management of primary teeth that show signs of irreversible pulpitis or necrosis. Traditionally accepted treatment options for these teeth are Pulpectomy or extraction. A successfully restored primary tooth is a far superior space maintainer than an appliance. Pulpectomy treatment has shown success approximately 85 percent of the time, but it is very challenging due to continuous changes in the apical foramen as a result of physiologic and pathologic resorption. Pulp therapies are all invasive in nature and overinstrumentation may injure the developing permanent tooth bud. Sjogren et al found that, even after thorough mechanical and chemical cleaning of the canals, up to 40 percent of the canals may still exhibit positive bacterial cultures. These findings led researchers to investigate antibiotic options for disinfecting root canal systems. As a result the Cariology research unit of the School of Dentistry, Niigata University, Niigata, Japan, developed the concept of lesion sterilization and tissue repair (LSTR) therapy, which is a noninstrumentation endodontic treatment that employs a mixture of antibacterial drugs in a propylene glycol vehicle for the disinfection of dentinal, pulpal and periapical lesions[1]. If lesions are completely disinfected, tissue repair can be expected.

Bacterial constituents of intraoral pathology have been analyzed under strict anaerobic conditions to understand the target bacteria in LSTR endodontic treatment.[2,3] Metronidazole was chosen initially for its wide bactericidal spectrum against anaerobes commonly found in oral sites.[4] However, even high concentrations of metronidazole could not eliminate all the bacteria in the lesions. Therefore, two additional antibacterial drugs, ciprofloxacin and minocycline, were added in an effort to fully eradicate all of the bacteria and it was noted that this combination of antibiotics would also decrease the likelihood of the development of resistant bacterial strains.[5,6] Extensive in vitro and in situ studies have shown that the mixture (3-Mix) of metronidazole, ciprofloxacin, and minocyline is effective against oral bacteria, including those in the endodontic lesions of primary teeth.[7] Furthermore, this same antibiotic combination has been successful in permanent tooth disinfection and regenerative endodontic treatments. Cruz et al showed that the addition of propylene glycol and macrogol (MP) as a carrier vehicle greatly improved the penetration ability of these medications.[8,9] Takushige et al clinically applied this LSTR theory in infected primary molars and demonstrated that pain, swelling, and fistulas resolved within one week of therapy.[10,11] The purpose of this case reports is to describe lesion sterilization and tissue repair therapy for nonvital primary teeth indicated for extraction.

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► Case Description

Case 1

A five year old male patient reported to the department with chief complaint of pain in relation to upper right back tooth. The patient was having pain for past one month and there was history of night pain also. On examination there was a deep carious lesion on 54 and tooth was tender to percussion. In 55 also there was a deep cavity but the tooth was nontender to percussion. On radiographic examination it was found that two of the roots of 54 showed severe resorption. Ideally extraction was the treatment of choice. But considering the age of the patient and to avoid extraction, it was decided to try LSTR as a compromised treatment at least till eruption of the permanent first molar. Pulpotomy was decided as treatment option for 55, since the caries in that tooth was nearing the pulp chamber. Metronidazole 500mg, Doxycycline 100mg and Ciprofloxacin 250mg commercially available products were purchased and the three antibiotics were powdered separately in a motor and pestle, after removing the enteric coating of tablet as well as the outer covering of capsule. After finely powdering the antibiotics, three of them were mixed well together. Then in a clean glass slab the powder was taken and it was mixed with the solvent. The solvent we used was normal saline. Powder and solvent were nicely blended together and was made into a ball of almost 1mm diameter.

After obtaining proper anesthesia, access cavity was prepared on the tooth. Then after removing the coronal pulp, the cavity was irrigated well with saline. After drying the cavity, the triple antibiotic paste was placed into the pulpal floor. Then permanent restoration was placed over it using glass ionomer cement and stainless steel crown was placed on the same appointment. After one month the patient was reviewed and the tooth was asymptomatic.

Fig. 1 - Preoperative picture of 54

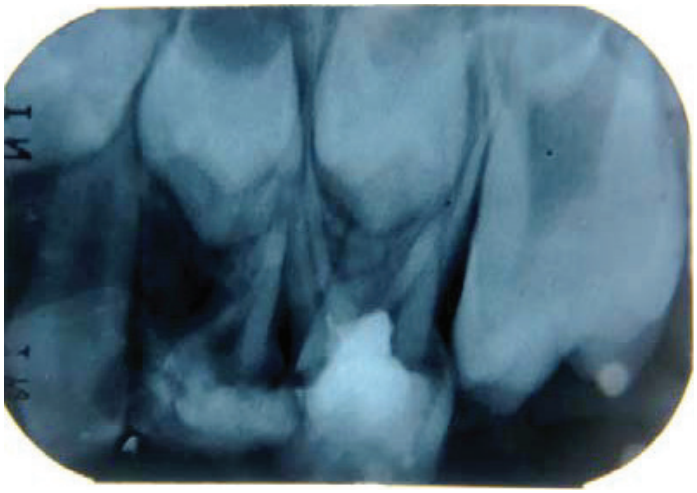

Fig. 2 - Radiograph showing root resorption in relation to 54

Fig. 3 - Clinical picture after LSTR therapy and Stainless steel crown placement

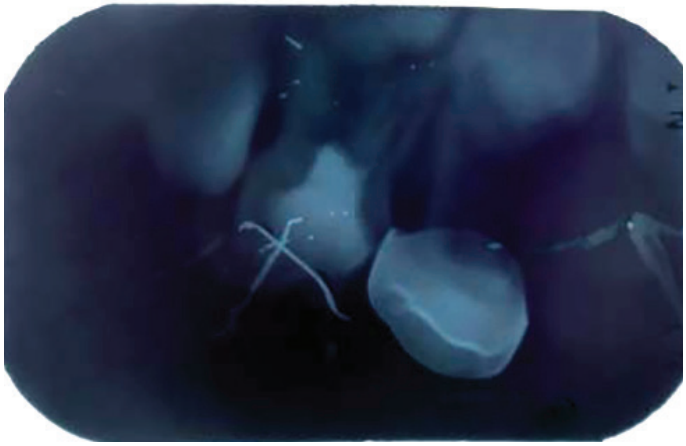

Fig. 4 - Postoperative radiograph after LSDR and Stainless steel crown placement

Case 2

A 6 year old female patient reported with pain in relation to lower right second primary molar since two months. There was an intermittent episode of pain as well as history of night pain was present. On clinical examination the tooth was having a deep carious lesion. The tooth was having mobility also. On radiographic examination it was evident that there was severe bone loss in relation to that tooth, indicating its extraction. Since first permanent molar was not fully erupted, being a strategically important tooth, it was decided to perform LSTR therapy. It was done in the same way as described for the previous case. Stainless steel crown was placed on the same appointment. After one month follow up the patient was asymptomatic.

► Discussion

To date, there have been limited evidence-based clinical studies of three mix macrogol propylene glycol (3-Mix-MP) paste employed in LSTR therapy. Jaya AR[12] reported on primary teeth with the periradicular lesions showing healing after a 24 Month follow up. Agarwal et al.[13] evaluated the success of 3-Mix-MP LSTR, pulpotomy, and pulpectomy of primary molars with carious exposure that showed no clinical or radiographic signs of pathology and found that 3-Mix-MP paste had significantly lower success rates with vital pulps. The above presented cases showed good clinical success with LSTR therapy which appear promising and support the clinical findings of Takushige et al.[1]

The main advantage of LSTR is that it is a less traumatic treatment procedure for the child. Also it helps to save those teeth that are otherwise indicated for extraction and helps it to act as the most effective natural space maintainer. This becomes especially meaningful in case of teeth which are strategically important. LSTR therapy takes less chairside time which makes it easier to perform in children who are less cooperative. It has shown success even in case of those teeth which presented with abscess also. Stainless steel crown placement can be done on the same day itself which lessens the number of dental visits.

Takushige et al. reported no side effects with the delivery of topical antibiotics, but LSTR should be avoided if a child

Fig. 1 - Preoperative picture of 85

Fig. 2 - Radiograph after LSTR therapy with evidence of root resorption

Fig. 3 - Clinical picture after SS crown placement

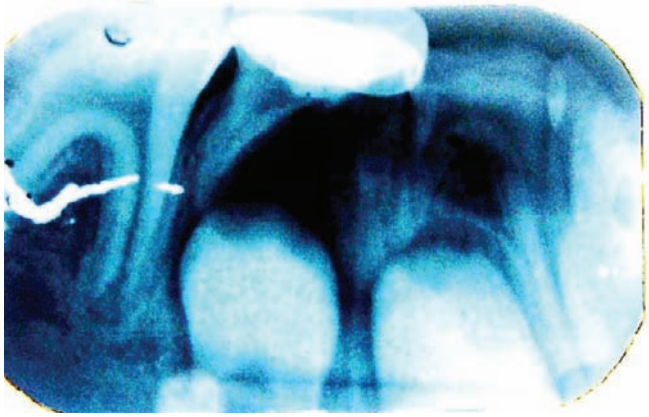

Fig. 4 - Radiograph after SS crown placement

is sensitive or allergic to any of the antibiotics or chemicals involved. If clinical symptoms do not improve or reappear, retreatment is warranted with special attention to a fresh preparation of 3-Mix-MP and a tight seal that prevents micro leakage. Further controlled clinical trials are warranted with long-term follow-up to assess the exfoliation of the treated teeth and to determine the implications, if any, to the succedaneous teeth. Additionally, for LSTR to become a reliable treatment option, the selection criteria and protocol need to be continually redefined and updated to yield the best predictable outcomes. With continued research and consistent favorable results, LSTR certainly has the potential to be a revolutionary therapy for the treatment of abscessed primary molars.

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Conservative management of large radicular cysts in children, in out-patient clinics

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Abstract

Large radicular cysts associated with infected and non-vital primary teeth in children are seen in areas were dental treatment facilities are scarce. Here a simple conservative method of management involving only extraction of the causative primary tooth and providing a space maintainer with acrylic extension in to the socket to keep the opening in to the cystic cavity in an open condition, till the cystic cavity is filled with new bone, is presented. The method is demonstrated with the x-ray records of a child who was treated in the Department of Pediatric Dentistry of KMCT Dental College. The method is named as "KRISHNA'S conservative management of large radicular cysts in children" to give it an identity and get attention among the dentists who treat children.

Key words: Cysts in children, Radicular cyst, Dentigerous cyst, Conservative management.

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► Introduction

Dental caries is one of the diseases of high prevalence in primary dentition in children. When early treatment of dental caries is delayed it results in prolonged infection, abscess etc. In rural areas or where dental treatment facilities are scarce, children are taken to a physician and prescription of antibiotics and analgesics is given. This gives temporary relief. The infected teeth seldom get continued treatment like RCT and crown or extraction and space maintainer. Thus infected non vital tooth remains in the mouth asymptomatic for a long time, resulting in the formation of radicular cyst. While working in the Government Dental College Calicut during 1991 to 2001, I had to treat one such cyst every week.

Initially we used to do cyst enucleation (Partsch II operation) under local anesthesia. This included the removal of developing premolars in the cystic area, as they become mobile and floating during removal of cystic wall. These cysts being radicular cysts, the developing premolar is pushed to one side. These cysts give the appearance of dentigerous cyst. They are actually radicular cysts due to the low grade infection from the infected primary teeth. These radicular cysts are sometimes designated as dentigerous cysts in various case reports.

We wanted to save the developing premolars, so an improved Partsch I operation (marsupialization) was designed. This method was found to be very successful during my term in Government Dental College, Calicut.

New method of management

This is an improved and modified Partsch I operation. This does not involve a time consuming surgical procedure of enucleation.

The method is to extract the offending primary tooth and to use the extraction socket as the opening of the cyst to oral cavity. In order to prevent the extraction socket from normal closing by healing; it is kept open by inserting a removable acrylic space maintainer with an extension in to the socket. The main advantages being:(1)The saving of developing premolar,(2)Very little time required for performing the treatment procedure.

Fabrication of the special appliance

After extraction of the infected primary tooth/roots, wait for 10-15 minutes for the bleeding to stop. Then an impression in alginate is taken and a cast is made (Fig: 1). The cast will have the extraction socket, as the alginate extends in to the socket while taking impression. The deeper part of the cyst cavity may be filled with a gauze pack, so that alginate does not get in to the deeper area of the cyst. In this cast a removable space

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maintainer is fabricated with acrylic extension of about 1.5 cm length into the socket, on (Fig:2 &3) same day.

Patient is instructed to wear the appliance 24 hrs and during eating so that food debris do not enter the cystic cavity. The child's mother is instructed to irrigate the cavity with saline using a syringe and needle at home two times per day, after removing the space maintainer.

► Follow up

The child is reviewed every two months and radiographs are taken every four months. When the cystic cavity is seen filled up from bottom by formation of new bone tissue, the length of acrylic extension into the cystic cavity is also reduced by the dentist during the follow up visits. Finally only the acrylic saddle covers the top part of the socket. Periodic X- rays also show the developing premolars moving towards its normal position.

► Demonstration of the method

A female child aged 6 years reported with a large periapical cyst related to 85 (Fig.4). On examination no caries was visible on 84, 85. On careful examination it was found that a small proximal caries on 85 was filled with composite resin. Composite resin is a known pulpal irritant resulting in pulpal death. When a test cavity was prepared on 85, it was found to be non vital.

Fig.5 shows the OPG of the female child with a large periapical cyst related to 85. The cystic cavity extended from 83 to 46 and to the lower border of mandible. '45' was found to be pushed towards the lower border of mandible.

So a modified and simplified Partsch I operation was planned. This modified method involves extraction of primary molar (Fig:6&7) and keeping the opening in to the cystic cavity through the extraction socket open by using a space maintainer with acrylic extension in to the socket (Fig 3).

Patient wears this appliance all the time (24 hours) including eating time so that food particles do not go into the cystic cavity. Two times in a day the appliance is removed and the cystic cavity is irrigated with saline using a syringe and needle. The child's mother is shown the method of irrigation using the syringe & needle. The parents are instructed to bring child for review every two months.

After few months the acrylic extension within the socket is reduced in length and size by grinding with an acrylic trimmer on a micromotor hand piece. After about 8 months time the bone formation can be visualized from the OPG and 45 is seen moving towards its position (Fig. 8). After 10 months, OPG shows 45 moved more towards its normal position (Fig:9). At this stage the acrylic extension in the socket is completely reduced. X ray shows the cystic cavity being filled with new bone and the second premolar (45) is seen moving into its proper position (Fig 10). Patient is instructed to wear the appliance till 45 erupt in to its position.

Fig 1: Cast with the extraction socket

Fig 2: Space maintainer with acrylic extension into the extraction cavity

Fig 3: space maintainer with the extension

Fig 4: Cystic swelling i.r.t 85

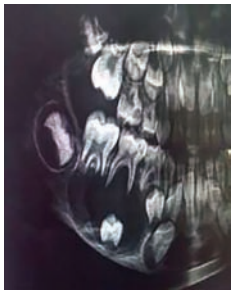

Fig 5: Pretreatment OPG

Fig 6&7: Extraction socket of 85 & extracted 85 ing occlusaly

Discussion

Radicular cyst due to the untreated caries exposed primary tooth and root stumps remaining in the mouth of children is a common clinical finding. Radicular cysts are often mistaken as dentigerous cysts. The prevalence of radicular cysts are more in areas where the people have less access to treatment and with low socioeconomic status.

In this method of improved and modified Partsch I operation, marsupialization is done as a conservative procedure followed by use of a removable appliance and irrigation of cystic cavity daily at home. After this procedure the developing premolars are able to erupt in to the normal position. K S Uloopi et al had cut a window in the buccal wall for marsupulization.[1] Mausela Carrera et al[2] extracted the offending deciduous molar and the extraction socket opening is maintained by suturing a plastic drain made of anesthetic cartridge to the socket opening. Sergio Henrique de oliveria Prrandt Filho et al[3] used a devise latex sutured to socket to keep the cystic opening open for few weeks. Ragesh kumar et al[4] used space maintainer with acrylic and wire extension in to the cystic cavity to keep the cavity open, in an inflammatory dentigerous cyst in a 10 year old child.

Packing the cavity with gauze soaked in betadine and petrolatum jelly is used by some. It is very inconvenient for patients to make frequent visits to change the pack. The enucleation and primary closure of large cyst may cause infection of the area and delayed healing.

K.S. Uloopi et al[1] had used the method of marsupialization by extracting 75 followed by placement of an acrylic obturator to maintain the patent surgical opening and to prevent food accumulation. He had given iodoform pack to prevent infection for the first two days. Nawaaz M S et al[6] extracted the deciduous molars and used an acrylic obturator with occlusal rest on Ist permanent molar. This obturator was reduced in size by periodic filing and it remained in place till 2nd premolar erupted.

Kirtaniya BC et al[7] extracted the causative non vital deciduous teeth and the extraction socket was used for marsupialization. No obturator or space maintainer was used to keep the socket opening remain open. Yet the developing premolars erupted in to the right position. For better results it is better to use a space maintainer with extension into the socket. This author had used all the methods and found this method as most satisfying. A.C.B. Delben et al[8] treated a large cystic lesion related to 51 and 61 by marsupialization followed by the placement of a removable appliance with resin extension penetrating in to the cystic cavity to help decompress the lesion.

Radicular cyst vs dentigerous cyst

Radicular cyst in children in mixed dentition period is common due to the carious and untreated primary teeth. But often these are designated as dentigerous cysts. They give a false appearance of a dentigerous cyst. The erupting premolars are usually pushed away by the cyst and they are not inside the cyst. After the procedure the premolar erupts in to its position. I have seen this happen in many cases. Enucleation procedure (Partsch II procedure) necessitates the removal of premolar as they have only under developed root and is easily dislodged while enucleating the cyst. So many dentigerous cysts reported in children are actually radicular cysts due to infection from deciduous teeth.

Literature considers radicular cyst in primary dentition to be rare.[9,10] But some factors in primary dentition can lead to underestimation of these lesions. These factors are: (1) Periapical radiolucencies relating to primary teeth tend to be neglected and mostly resolved after removal of the tooth. (2) These lesions related to primary teeth cause less severe symptoms as compared to permanent dentitions and they may remain undiagnosed. (3) Regression of the lesion following endodontic treatment. Mass etal in a survey of radiolucent lesions associated with primary molars observed that 73.5% were diagnosed as radicular cyst.[11]

According to Benn and Altini[12] the histogenesis of dentigerous cyst is in 3 ways: (1) developmental dentigerous cyst forms from dental follicle and get secondarily inflamed and the source of inflammation is usually a non vital tooth. (2) This type develops from a radicular cyst which forms at the apex of a nonvital deciduous tooth. The permanent successor erupts in to the

Fig. 8: 8 Months post treatment shows 45 mov

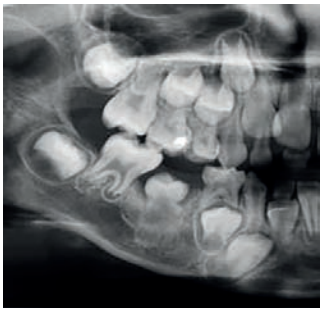

Fig 9: 10 months post treatment shows 45 in the right path of eruption

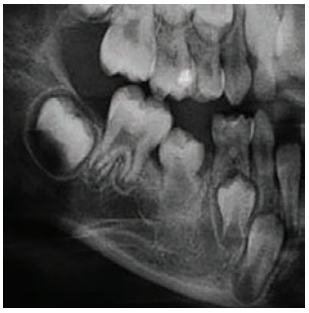

Fig 10: 12 months post treatment OPG

Fig 11: Erupting 45

radicular cyst and results in dentigerous cyst. That is extra follicular in origin. (3) In this type periapical inflammation from non-vital deciduous tooth or other source spreads to involve follicle of permanent successor, and as a result of inflammatory exudates dentigerous cyst formation occurs.

The term cyst is derived from the Greek word "KYSTIS" meaning sac or bladder. Chronic periapical lesions contain epithelial cells, believed to be derived from the cell rests of malassez (Malassez 1984) which proliferate in some lesions and are presumed to serve as the source of epithelium that lines the lumen in few lesions that develop into radicular cysts.

Development of this method of treatment

This treatment procedure had been performed and perfected by me mainly during the period from 1991-2001, while working in Calicut Dental College where we had to treat many such cases. Why there were many such cases in that particular centre was because of the fact that this tertiary centre of health care was catering to the health needs of large populations belonging to the relatively underdeveloped districts such as Kannur, Wayanad, Malappuram, Palakkad and Calicut. This backwardness in the socio-economic development was due to its geographic location, far away from the centres of governence like Trivandrum and New Delhi. Money expenditure for socioeconomic development at these places happened with great delay at trickling speed and often it stopped much before it reached the target population. Lapsing of the budgetary allocations for the development activities was a common feature because of the administrative delay starting from top to bottom. Very high infant mortality rate among the tribals in these districts and tribals dying of starvation is a news item even these days, when various government agencies and political parties are boasting of special economic programs for the development of these people.

Patient attendance in the Pediatric Dentistry Department of Government Dental College, Calicut was much larger and the number of Pedodontists available to treat them was much less in those days as compared to the centre at Trivandrum, the capital city. At Calicut there was a dire necessity to resort to treatment procedures which were less time consuming and at the same time very effective. There was no time for keeping treatment and follow up records for the purpose of publishing our findings. There has been reports on various methods of treatment of large cysts in children using methods like enucleation, marsupialization, obturator usage after decompression etc. So I find it necessary to publish my findings on this simple and effective treatment modality that can be used by even a general dentist in his outpatient clinic. In order to give an identity and a recognition to this method as a suitable procedure it becomes necessary to name it and publish it. It has many advantages.

Advantages of this method

1. Minimal time required for this procedure.

2. The surgical procedure is limited to extraction of primary teeth. So any general dental practitioner can perform this procedure. No necessity to refer the child to an Oral Surgeon or Pedodontist. No need for hospitalization and general anesthesia. Number of visits for the patients is minimal. No need of sutures, no need to visit for suture removal, or pack removal.

3. Advantageous in uncooperative children where the surgical procedure of enucleation requires general anesthesia and hospitalization. Extraction procedures are done easily under LA in uncooperative children as a routine procedure in any clinic.

On the particular name KRISHNA'S"

When I wanted to give a name to this simple procedure which gives great relief to the child patient, I wanted to give credit to the natural healing process, the inherent built-in healing mechanism that is present in the living body. Human contribution to this healing process is rather minimal. A super power has put in lot of preplanning and thinking in building the human body with its amazing physiological processes, structural characteristics, engineering principles and healing abilities. People call this power as "GOD" and the names such as ALLAH, JESUS, KRISHNA, SHIVA etc. represent the names for the "GOD" concept. Thinking on this line I thought of choosing the name KRISHNA which is a God's name in the Indian subcontinent extending from Kashmir to Kanyakumari. The greatness of the Indian culture and philosophy is that it recognizes the presence of God as a single entity, whatever name we may use to call it. It proclaims that God exists in every living and non-living object and its presence can be seen, felt and appreciated in everything around us. KRISHNA represents the name for the cause for the existence of this large universe which is unfathomable and unimaginable for the human capability. I make a humble attempt to recognize this fact. Dr Krishnan, a general dental practitioner had referred to me this case in which the procedure had been done and demonstrated for this publication.

► Conclusion

A simple and effective method named as "Krishna's conservative method of management of large radicular cysts in children" is presented. The method is illustrated and demonstrated using the x ray records of a child patient aged 6 yrs who reported to the Department of Pediatric Dentistry of KMCT Dental College in 2014. This is a simple method and can be used by any General Dental Practitioner in his outpatient clinic, without general anesthesia or hospitalization. The number of specialists are very less and the large number of children in our country are seen and treated by the General Dental Practitioners. This publication is dedicated to them.

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Dental Updates

VELScope - Widening the scope of Oral Cancer diagnosis

Today, technology has revolutionized the way dentistry is being perceived, as well as practiced.

Traditionally, if dental surgeons were referred to as the smile makers of the society, recent advances in technology have shown that there is more to that smile than just the teeth. Modern researches are coming out with amazing data today to underline why oral health is something absolutely fundamental to our overall general health. From metabolic disorders to stress management, from postural imbalances to even miscarriages, poor oral health is implicated in more and more systemic disorders today.

This is an attempt to acquaint our readers with one of the recent products of technology, which could be a useful tool in the hands of the general dentist, in detecting oral cancer at a very early stage.

Oral Cancer or Squamous cell carcinoma of the oral mucosa and related structures is one of the malignant conditions that shows a survival rate of over 80% if diagnosed during the incipient stages. Therefore in a country like India, where there is a high incidence of oral cancer, especially among the rural population, use of such a screening device in our daily practice can be of big help in identifying early changes in the oral mucosa which may otherwise be missed, and thereby improving the survival rates of hundreds of patients every year.

VELscope (Visually Enhanced Lesion scope)

This is a non-invasive oral cancer screening device which helps in identifying suspicious oral lesions with a good degree of accuracy, which in turn can be confirmed by surgical biopsy and histo-pathological studies which definitely is still the gold standard in diagnosing oral cancer. VELscope should be considered as a very efficient adjunct to examination and not a complete diagnostic tool in itself.

Concept

- When cells interact with light they become excited and re-emit light of varying colours (fluorescence) and this can be detected by sensitive detectors.
- All tissues are fluorescent due to the presence of fluorescent fluorophores within them (auto-fluorescence)
- Fluorescence spectroscopy and imaging can detect these substances and provide characteristic spectra that reflect biochemical changes occurring within tissues.

The advantages of VELscope is that it takes only 1-2mts and is painless and non-invasive with no stains or reagents required. It improves the distinction between normal and abnormal tissues and hence is a useful adjunct to visual and digital soft tissue examination.

The disadvantage, other than the cost factor, is the need for more clinical trials and studies in the Indian context, to assert its value in our practice scenario.

Conclusion

Oral Cancer screening can save lives. Early detection at the hands of a dentist could be the difference between life and death in many cases. Not all lesions can be cancerous or pathological. But if we are not trained to see beyond the teeth regularly, we may miss that one opportunity to make a difference.

The VELscope can certainly help us avoid that.

Dr Dinesh K R

Management of non-perforating internal resorption

* Smitha M. Lukose, ** Shoba K.

Abstract

Internal resorption is a relatively rare phenomenon in which the disease process begins in the root canal and destroys surrounding dental hard tissues. It is caused by transformation of normal pulp tissue into granulomatous tissue by giant cells, which resorb dentin. Contributory factors like trauma, caries, restorative procedures and idiopathic dystrophic change within the pulp are suggested etiologic factors. Diagnosis of internal resorption starts with simple clinical evaluation to advanced digital radiographic techniques. Various treatment modalities can be implemented to preserve the tooth. The purpose of this article is to report a case of internal resorption following previous fixed orthodontic treatment and its management using thermoplasticized gutta-percha obturation technique.

Key words: internal resorption, thermoplasticized gutta-percha obturation technique.

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► Introduction

Tooth resorption is a physiologic or a pathologic process resulting in loss of dentin, cementum or bone[1]. Andreasen classified tooth resorption as Internal (Inflammatory, Replacement) and External (Surface, Inflammatory and Replacement) types. Internal resorption is an inflammation process initiated within the pulp space and the process involves the progressive destruction of dentin of the canal walls as a result of odontoclastic activity. External resorption is initiated in the periodontium and initially affects the outer surfaces of the root.[2] The etiology for resorption is variable. Most common predisposing factor is various injuries to the tooth, including thermal, mechanical, and chemical[3]. Chronic pulpal inflammation from bacterial invasion, orthodontic treatment and idiopathic causes have also been proven etiologic factors.

The pathologic mechanism of internal root resorption (IRR) includes transformation of normal pulp tissue into granulomatous tissue with giant cells, which resorb dentin[4]. Resorption of dentinal walls, advances from the center to the periphery. The occurrence of internal resorption has been estimated to be between 0.01% and 1%[5]. The condition is more commonly observed in male than female subjects. The most commonly affected teeth were maxillary incisors[6,7].

Clinically, the condition usually presents as a reddish area –pink spot, which represents the granulation tissue showing through the resorbed area. Radiographs are mandatory for diagnosing internal resorption, which reveals a round to oval radiolucent enlargement of the pulp space[8,9]. The margins are smooth and clearly defined with distortion of the original root canal outline.

Internal resorption can be detected by: Visual examination based on colour change in tooth crown, radiographic examination, conventional and cone beam computed tomography, light microscopy and electron microscopy[10].

Root canal treatment remains the treatment of choice for internal root resorption since it removes the granulation tissue and blood supply of the clastic cells[11]. But the condition presents specific difficulties in instrumentation and filling. The access cavity preparation must be as conservative as possible to preserve tooth structure and avoid further weakening of the already compromised tooth. A brisk bleeding might impair visibility in teeth with active resorbing lesions until the apical pulp tissue has been cut off and removed. The shape of the resorption defect usually makes it inaccessible to direct mechanical instrumentation[12].

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The working length determination with an apex locator may not be accurate in case of resorptive perforation. A great emphasis must be placed on the chemical dissolution of the vital and necrotic pulp tissue with sodium hypochlorite[13]. The use of calcium hydroxide as an inter-appointment dressing maximizes the effect of disinfection procedures, helps to control the bleeding, and necrotizes residual pulp tissue.

The material used for obturation needs to be flowable to seal the resorptive defect. Thermoplastic gutta-percha techniques seem to give the best results respecting the canal walls. In case when the root wall has been perforated, MTA is the material of choice to seal the perforation as it is biocompatible, bioactive, and well tolerated by periradicular tissues[14].

A case report of internal resorption managed by nonsurgical endodontic treatment is discussed here.

► Case report

A 37 year old male patient reported to the department of Conservative dentistry and Endodontics, Government Dental College, Kottayam with the chief complaint of sensitivity to upper right canine tooth for the past few weeks. (Fig. 1a,b) There was no history of trauma in the past. Patient had undergone fixed orthodontic treatment 16 years back.

Clinical findings

No color change, tenderness on percussion, mobility or periodontal pocketing in relation to tooth 13 were identified.

Vitality testing by cold and electric pulp tester showed a delayed response for the tooth 13.

Radiographic findings

An irregular radiolucent area was detected at the midroot level. The radiolucency was in continuity with the root canal which was confirmed by tube shift radiographic technique (Fig. 1c).

Based on the clinical and radiographic findings and previous history of fixed orthodontic treatment, a diagnosis of internal resorption of tooth 13 was made. Since the lesion did not perforate the root surface, nonsurgical endodontic treatment was planned.

► Treatment procedure

The tooth was isolated and access cavity opened under local anaesthesia. Upon removal of pulp tissue, vital pulp was

Figure 1(a), (b) : Preoperative photograph

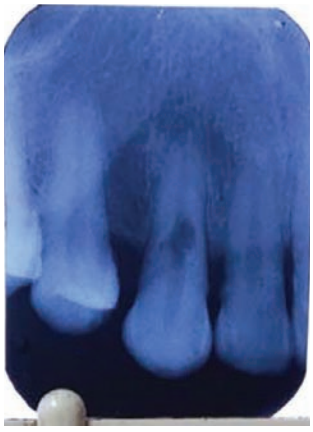

Figure 1(c) Preoperative radiograph of tooth 13

Figure 2(a) Working length radiograph

Figure 2(b) Mastercone radiograph

Figure 2(c) Post obturation radiograph.

obtained from the apical third of the canal, while the pulp was necrotic in the coronal portion.

Working length was determined by radiographic method and apex locator (Fig. 2a). Cleaning and shaping done to a master apical file size of ISO 60. Copious irrigation was done with 3% sodium hypochlorite and saline. Calcium hydroxide paste was applied as intracanal dressing for 3 weeks. After 3 weeks, the dressing was removed and the canal thoroughly irrigated and dried. ISO no. 60 guttapercha cone was selected as master cone that showed tug back at the working length. Sealer was applied by a lentulo spiral instrument. The canal was obturated by sectional obturation from the apex to the level of resorption and the remaining portion of canal was obturated by thermoplastisized gutta-percha technique (Fig2 b,c). At six months interval review, the tooth was asymptomatic and well functioning.

► Discussion

Bell first reported a case on internal resorption in 1830[15]. It is a multifactorial process associated with various factors, like physiological resorption, systemic conditions and idiopathic. In the presence of internal resorption, pulp necrosis is favorable for the tooth. As long as the pulp is vital, the resorption process will continue.

When diagnosed, immediate removal of the causative agent must be considered, to arrest the cellular activity responsible for the resorption process. It is easy to control the disease process via severing the blood supply to the resorbing tissues with conventional root canal therapy. Irregularities of the root canal system and the inaccessibility of internal resorption defect are the technical difficulties for thorough cleaning and obturation of the root canal. The persistence of organic debris and bacteria in these areas may jeopardize the long term success of endodontic treatment[16]

Various materials available for the treatment of internal root resorption include MTA, glass ionomer cement, Super EBA, hydrophilic plastic polymer (2 hydroxyethylmethacrylate with barium salts), zinc oxide eugenol and zinc acetate cement, amalgam alloy, composite resin and thermoplastized gutta-percha administered either by injection or condensation techniques[12].

In this case, a combined approach involving both hand instrumentation antibacterial irrigation and calcium hydroxide medication was performed. Sodium hypochlorite is the most commonly used irrigant during root canal treatment due to its tissue dissolving and broad antimicrobial properties. Calcium hydroxide helps to alkalinize the defect and has also been shown to have a synergistic effect when used in conjunction with sodium hypochlorite to remove organic debris from the root canal[16]. The loss of tooth structure and the non perforating internal root resorption was successfully managed by combination of lateral and thermoplasticized gutta-percha technique.

► Conclusion

Internal inflammatory root resorption is a particular category of pulp disease, usually diagnosed by clinical and radiographic examination of teeth in daily practice. Early diagnosis, removal of the cause and proper treatment of the resorbed root is mandatory for successful outcome. Regular recall is important to check the status of healing and for the overall prognosis of the tooth.

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Prosthetic rehabilitation of an edentulous patient with Telescopic Overdenture

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Abstract

Telescopic overdenture is a feasible and favoured treatment option for elderly patients with few remaining teeth. In this treatment modality the remaining teeth were endodontically treated, prepared in a dome shape and given a primary coping. The tissue surface of the overdenture houses the secondary coping. Major advantage of such dentures are the roots of the remaining natural teeth preserve the alveolar ridge, provides sensory feedback and increase the denture stability. And also, these types of dentures have comparatively more retention. This article describes a new, simple and cost effective method of fabricating tooth supported overdenture.

Key words: Overdenture, Custom made post and core, Primary coping, Secondary coping.

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► Introduction

Overdenture is a removable type of complete denture prosthesis fabricated over retained teeth, tooth roots or implants[1]. This treatment modality is been successfully practiced by dental professionals allover the world over a century. The main advantage is that the presence of healthy periodontal ligaments of the retained teeth preserves the alveolar ridge and reduces the rate of ridge resorption in the future.

Telescopic crowns were initially introduced as retainers for the removable partial dentures at the beginning of the 20th century. Also known as a Double crown, a crown and sleeve coping or as Konuskrone[2].

The retained teeth are endodontically treated and the coronal part is modified to provide support for the overdenture. These modified abutment teeth and the soft tissues together will bear the masticatory load on the overdenture prosthesis, thus protect the alveolar ridge.

Several overdenture attachments are available which can improve the function and aesthetics, but not used routinely by the professionals due to their cost and intricacies of the design. Implant supported overdenture is also an option, but not feasible to all patients due to its cost and insufficient amount of bone[3].

► Case Report

A 52 year old male patient reported to the department of Prosthodontics, Azeezia Dental College with difficulty in chewing due to missing teeth. There was no relevant medical history affecting the prosthodontic treatment. Intraoral examination revealed well-formed maxillary and mandibular ridges. Only 34 and 44 were present in the mandibular arch (Figure- 1). Radiographic examination revealed reasonably fair bone support and root length. Different treatment options available for the mandibular arch like extraction of remaining natural teeth followed with conventional complete denture, implant supported overdenture and tooth supported overdenture were explained to the patient.

The patient didn't want an additional surgical procedure and rejected implant supported overdenture. So we planned to give conventional complete denture for maxilla and tooth supported overdenture for mandible. An OPG and diagnostic cast were made before starting the treatment procedure. Vertical dimension was determined by phonetics and aesthetics, and was found to be adequate.

Then it was decided to give primary coping on endodontically treated abutment teeth and secondary coping on the overdenture. The treatment plan was presented to the patient and his consent was obtained.

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Intentional Endodontics was performed on 34 and 44. Then they were prepared in a dome shaped contour with approximately 3-4mm projecting outward the gingiva. Post space was prepared and direct method was used for fabrication of post –core patterns. Custom post patterns were fabricated directly in the root canals using plastic tooth picks and autopolymerising resin (DPI). Then copings were prepared on the abutment tooth using the same autopolymerising resin (Figure 2, 3). Post and core patterns were casted using Ni-Cr alloy in the laboratory, finished and polished and tried in the patient's mouth. Radiographs were taken before luting to confirm the marginal fit. Necessary adjustments were made on the post and then it was luted to the abutment tooth using Fuji 2 GIC (Figure 4).

Primary impressions of both arches were made with irreversible hydrocolloid impression material and special trays were fabricated on the primary casts after blocking the undercuts. Using conventional techniques border moulding was done with green stick impression compound and secondary impression made using low viscosity rubber base impression material (Flexeed). Secondary stone casts were made. Occlusal rims were fabricated and jaw relation recorded (Figure 5). Teeth arrangement was completed and try-in was done (Figure 6)

Fig. 1 Pre-operative intraoral frontal view after extraction.

Fig. 2 Intraoral view of post –coping patterns.

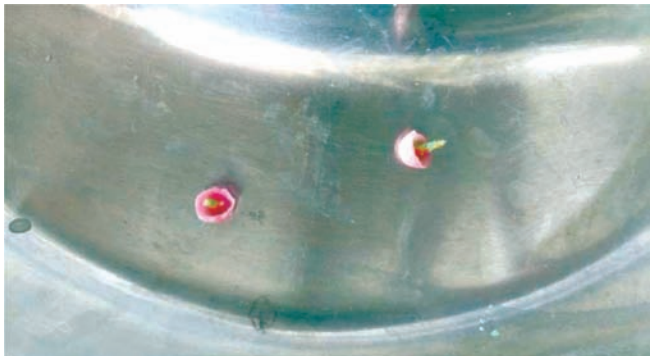

Fig. 3 Post and core patterns fabricated from autopolymerising resin by direct technique

Fig. 4 Intraoral view of the finished and polished post and core pattern luted with GIC.

Fig. 5 Occlusal rims were fabricated and jaw relation recorded.

Fig. 6 Teeth arrangement was completed and try-in was done

After that, the waxed up dentures was processed using heat cure acrylic.

One more impression of the lower arch was made with alginate for the fabrication of the secondary copings (Figure 7). Wax patterns of secondary copings were fabricated over the abutment tooth on the lower cast. Retentive beads were made with wax on the secondary coping patterns (Figure 8). Patterns were casted in Ni-Cr and tried in patient's mouth (Figure 9).

After that, space was created on the tissue surface of the mandibular denture to accommodate the secondary copings (Figure 10).

Seat the secondary copings properly over the primary copings inside the oral cavity. Then these secondary copings were picked up by adding autopolymerising acrylic resin in the space created on the tissue side of the lower denture, while maintaining upper and lower denture in occlusion (Figure 11). The excess self-cure resin that comes out of the space was trimmed. Repolishing was done. The denture was delivered (Figure 12) and patient was given instructions regarding the insertion and removal, eating and speaking as well as maintenance of the denture. Periodic follow up was carried out.

► Discussion

Owall et alin 1995 found out that 25% of RPDs fabricated were discarded during the first year due to poor retention and stability of the prosthesis[4]. This lack of retention and stability is owing to the residual ridge resorption following tooth loss[5]. Many clinical studies revealed that bone is maintained around standing teeth and implants. Since overdenture therapy attempts to preserve the few remaining natural teeth/tooth roots, it helps in the preservation of the alveolar ridge also[5,6].

Stability of the denture is enhanced by the vertical component of the retained tooth/root. Proprioceptive impulses conducted through the periodontal fibres, gives the patient a

Fig. 7 Elastomeric Impression made with post and core in the mouth.

Fig. 8 Retentive beads were made with wax on the secondary coping patterns

Fig 9 Patterns were casted in Ni-Cr and tried in patient's mouth.

Fig 10 Space created for the secondary coping on the tissue surface of lower denture

Fig 11 Secondary coping was picked up using self-cure acrylic resin.

Fig 12 Intraoral view of the finished and polished maxillary complete denture and mandibular overdenture denture.

sense of discrimination to touch and pressure, which is less with conventional complete dentures[7].

Numerous types of overdenture attachments are now available which can be used with removable complete/ partial dentures[8]. It is very important that we select appropriate design suitable for each patient. No single attachment is perfect for every case yet now. The technique used in this article is a viable option for patients with some retained teeth and who are not willing to undergo surgical procedure involved with implant placement.

In this patient custom made primary copings and secondary copings were used as simple and extremely cost effective alternative to the use of prefabricated attachments. The frictional contact between the primary and secondary copings provides necessary retention for the denture. After the prosthesis has been worn for a period of time, retention may decrease as a result of wear on the patrix and the matrix components. In this case since both the copings were fabricated in Ni-Cr loss of retention due to wear is also eliminated.

► Conclusion

Overdentures fabricated with custom made primary and secondary copings with retentive beads are simple and cost effective alternative to the use of costly prefabricated attachments with complicated designs.

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Severe malocclusion in a child treated by using simple fixed straightwire appliance by a General Practitioner

* Aneesha N.K., **E. Ramakrishnan

Abstract

Malocclusion in children causes an aesthetic problem and an early treatment is usually required to satisfy the child's wishes of a good self image. 44 to 85 percentage of children have malocclusions. Every pedodontist or a General dental practitioner should be able to provide treatments necessary for correction of malocclusions in children, as the number of orthodontists are limited at any place. In this case report the correction of class I malocclusion with anterior cross bite and crowding using a fixed appliance is presented. The procedure and results after 2 years is reported, for the benefit of general dental practitioners and pedodontists who are not undertaking such treatments. This procedure is completely done by Dr. Aneesha, a junior lecturer in the department of Pedodontics, KMCT Dental College, Mukkam, Kozhikkode.

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► Introduction

According to the world wide prevalence studies of malocclusion about 44 to 85 percentage of children who walk in to a dental clinic, have some kind of malocclusion which require proper treatment[1-7]. A study on 10-12 year old children in Kozhikkode district in 2016 showed a prevalence of malocclusion as 85 percentage[8]. It is the duty of every dentist, to take measures to meet the treatment needs of these children. Majority of the children in our country seek dental treatment from general dental practitioners, because of non availability of a specialist like a pediatric dentist or orthodontist in their locality. The situation demands a proper management of the malocclusions of children, from the general dental practitioners as well. The advancements in Pedodontics, Orthodontics, Material science and various appliance systems, have made it possible and easier for every dentist to incorporate fixed appliance therapy for helping the children with malocclusion. The removable appliance therapy has gained much popularity among the dentists, because of advantages of better oral hygiene, less chair- side time, less expenses etc. Fixed appliance therapy has gained much popularity because of their special advantages like better tooth control, lesser time for the treatment, non dependence on patient co-operation etc. However fixed appliance therapy has not been used by pediatric dentists and general dental practitioners. Fixed appliance therapy is a non invasive procedure and can be mastered by anyone who is willing to spend some time on it. It is of paramount importance that all the tools of treatment like removable appliances, fixed appliances, myofunctional appliances etc should be made available in the pediatric dental clinic as well as a general dental practitioners clinic, for the benefit of child patient. Unfortunately the treatment of malocclusions in children are not much under taken by the pedodontists or general dental practitioners. These children are generally referred to an orthodontist. The situation of nonavailability of orthodontists in many parts of the country, results in neglect of treatment needs of these children. There are only 6000 orthodontists in our country of population of 134 crores[9,10]. To help these children with malocclusions, every dentist and Pedodontist should come forward to get themselves trained through various continuing dental education programs and short training programs in appliance therapy. It is to be understood that the treatment of malocclusions in children can be accomplished even by a general dental practitioner, because the procedures are simple and easy. In this case report treatment of a child with severe malocclusion with cross bite of 12 and 22 and crowding in the lower arch, using extraction therapy of selected premolars and straight wire appliance, is presented.

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► Case report

A 12 year old boy reported to the Department of Pediatric Dentistry with a chief complaint of inwardly erupting upper front teeth. The parent also expressed their concern about the aesthetics of their child. General examination, medical and family history were non-contributory. No significant abnormality was detected during extra oral examination. He had a straight profile.

Intraoral examination showed palatally placed maxillary right and left lateral incisors resulting in bilateral single tooth cross bite (Fig. 1). The molar relation was Angle's class 1 on both sides with an over jet of 0.5mm and overbite of 2mm.

The maxillary right and left canines were found to be erupting. Mandibular arch revealed minimal crowding with 70 degree clockwise rotation of lower right canine and buccally placed lower left second premolar (Fig. 2)

Teeth present:

17 16 15 14 13 12 11 21 22 23 24 25 26 27

17 46 45 44 43 42 41 31 32 33 34 35 36 37

Upper and lower arch impressions and study models were made. Upper and lower arch were found to be U-shaped. For aligning the teeth in the arch a space equivalent to that of a premolar tooth was found to be required in the first, second and third quadrants, upon studying the study models. So the treatment plan was extraction of 14,24,35 followed by fixed appliance therapy. Instead of 34, 35 was extracted because 35 was buccally placed with space getting closed in 35 area. After extraction of 14,24,35 teeth, preformed molar bands of suitable size, with buccal tubes, were cemented on molars. MBT straight wire standard brackets with bondable mesh and a slot size of 0.022 were bonded. A 0.014 Ni-Ti arch wire was engaged on the brackets and modules were placed. 12 and 22 were not included. E-chains were applied from molars to canine hooks on both sides of the upper arch to give a light traction for distalising 13 and 23. After 2 months, when canines moved distally bonding of brackets were done on 12 and 22 and they were engaged with ligature wire to the arch wire (figure:3). Then, the palatally placed lateral incisors (12 & 22) started aligning labially.(figure:4). Later ligature wire i.r.t 12 & 22 were removed and the Ni-Ti 0.014 arch wire was engaged on the brackets on 12 and 22(figure:5). E-chain extending from 13 to 16, 23 to 26 33 to 36 was applied, for the extraction- space- closure.

Fig 1 Maxillary right & left lateral incisor erupting palatalyin bilateral single tooth cross bite.l

Fig 2 70 degree clockwise rotation of 43 and bucally displaced 35.

Fig 3 Bonding was done on 12 & 22 and brackets were engaged with ligature wire to the arch wire.

Fig: 4 Palatally placed lateral incisor started aligning.

Fig 5 Ligature wire i.r.t. 12&22 removed and Ni-Ti 0.014 arch wire was engaged on the brackets on 12 & 22.

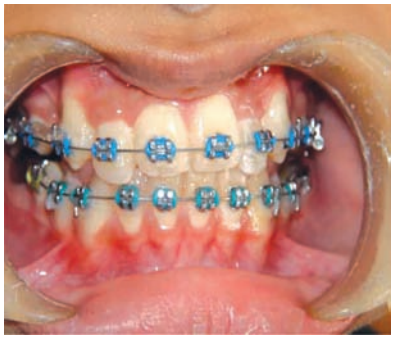

Fig. 6 0.014 Ni-Ti arch wire was replaced with 0.016 s.s. arch wire for aligning of the teeth.

After 3 months, the extraction space was completely closed and 0.014 Ni-Ti arch wire was replaced with 0.16 s.s. arch wire for aligning of the teeth (Fig 6) When the patient reported after 5 months, it was noticed that there was a space of 1mm i.r.t 13 & 15, 23& 25. Hence, class III intermaxillary elastics were given on both sides to move 16 and 26 forward (Fig. 7).

After a period of 6 months, E-chain and intermaxillary elastics were stopped. The patient was noticed to have a deep bite. For which a removable anterior bite plane-appliance was given, along with the fixed appliance (Fig. 8), accompanied by periodic review. The removable appliance with anterior bite plane helped in correction of deep bit. After 2 years de-bonding of the fixed appliance was done. The treatment results after completion was quite satisfactory to the parent, child and dentists (Fig.10).

► Discussion:

Malocclusions constitute the third largest dental health problem as per world wide prevalence studies. There is an inordinate waiting period for getting orthodontic treatment in government hospitals. Orthodontists in private sector are also overloaded with patients. The number of orthodontists available at any place in India is inadequate. The dentist population ratio in rural area is 1:150000. To meet the treatment need for correction of malocclusions, general dental practitioners have a larger role to play. They should realise that orthodontics is a subject they have learned in undergraduate course, for the purpose of providing treatment to the persons who seek treatment from them. Any additional knowledge required should be gained through CDEs, online courses, books, internets etc. In this case report, severe malocclusion in a child, is successfully treated by a graduate dentist, demonstrating that

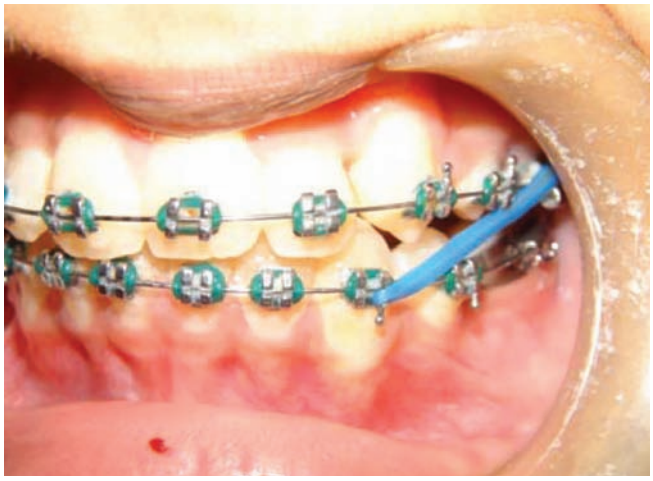

Fig. 7 Class III intermaxillary elastics were given on both sides to move 16 & 26 forward.

Fig. 8 E-chain and intermaxillary elastics were stopped &a deep bite was noticed.

Fig 9 A removable appliance with anterior bite plane was given (along with fixed appliance), to correct the deep bite.

Fig: 10 Post treatment picture after 2 years.

it can be mastered by a doctor easily. The orthodontists and the Orthodontic Society have to encourage and enhance orthodontic learning by undergraduates and general dental practitioners The undergraduate curriculum should be improved, modified and modernized to train the undergraduate students properly, so that these dentists become useful to the society. Unfortunately the orthodontists and the Orthodontic society have been showing a negative attitude in popularizing their own speciality. The DCI cannot be expected to have any concern for the adequacy in undergraduate training or the treatment needs of the masses, because they are very busy with other' important matters. The politicians are interested in declaring allocation of large amount of money for various schemes. They are not interested in making sure that the money is utilised rightly for the purpose. Usually, the tax payer's money is looted by contractors, officials, politicians and various parties. When this is the situation in governance at the state as well as central levels, inadequacies are reflected in dental health education and health care. So the doctors have to take the responsibility upon themselves to educate and empower themselves, so that the children who seek treatment get it in their clinic itself.

► Conclusion:

Correction of a class 1 malocclusion with cross bite of 12 and 22 and crowding in lower anterior was done by a graduate dentist. In India there is a population of 134 crores and only 6000 orthodontists to treat 75 percent of them with malocclusion. The dentist population ratio in rural areas is 1:150000. So, it is imperative that every general dental practitioner should educate and train himself using the available facilities to take care of malocclusions which constitute the third largest dental health problem among the people.

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ASC (antibiotic and steroid with chlorhexidine) paste -a novel drug combination in treating large periradicular lesion

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Introduction

A successful root canal therapy requires complete elimination of bacterial infection. The ultimate goal of endodontic therapy should be to return the involved teeth to a state of health and function without surgical intervention.[1] Bacterial infection of the dental pulp may lead to periapical lesions.[2] Most periapical lesions (>90%) can be classified as dental granulomas, radicular cysts or abscesses.[3] The incidence of cysts within periapical lesions varies between 6 and 55%.[4] All inflammatory periapical lesions should be initially treated with conservative nonsurgical procedures.[5] Surgical intervention is recommended only after nonsurgical techniques have failed.[6] Besides, surgery has many drawbacks, which limit its use in the management of periapical lesions.[7] A high percentage of 94.4% of complete and partial healing of periapical lesions following nonsurgical endodontic therapy has also been reported.[8-9]

This case report describes the non-surgical management of a large infected periapical cyst in a permanent molar using a novel drug combination in LSTR therapy.

Case report

A 12-year-old girl reported to department of Pedodontics and Preventive Dentistry, Royal Dental College, Palakkad with the chief complaint of pain in lower right back tooth region since 2 weeks. Her medical history was non-contributory. Pain history revealed a spontaneous, continuous and dull type of pain which aggravated while taking food and during night time.

On intra oral examination, lower right first permanent molar revealed a deep carious lesion involving enamel, dentin and pulp. Tooth was tender to vertical percussion, with absence of mobility or extrusion from its socket. Gingiva overlying the buccal aspect of the tooth showed diffuse erythema and swelling, which was tender to palpation. Obliteration of buccal vestibule was noted. There was no sinus openings or pus discharge.

On extra oral examination, right submandibular lymph nodes were enlarged, firm, freely movable and tender to palpation.

Intra oral periapical radiograph revealed diffuse coronal radiolucency of 46 involving enamel, dentin and pulp chamber, root apices were found to be open. Well-defined ovoid periapical radiolucency of size approx. 11 mm was noted along with widening of periodontal ligament space along the mesial aspect of mesial root and loss of lamina dura at mesial and distal root apices and furcation area. Borders of the lesion appeared ill-defined mesially, well-circumscribed inferiorly and slightly corticated distally. Internal structure showed uniform rarefaction with hazy trabecular pattern. Periphery of lesion showed sclerosed bone formation. Findings suggestive of infected periapical cyst Fig (1).

After evaluating all the data, non-surgical endodontic root canal treatment (LSTR) using a new drug combination - Ofloxacin, ornidazole, dexamethasone and chlorhexidine (ASC paste) was planned.

Tooth was isolated with rubber dam and access opening was done under local anaesthesia. Up on access, a thick purulent

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discharge exuded from the orifice of the canal. Canal orifices were located and working length radiograph was taken. The canals were instrumented using ProTaper rotary files up to F1 in the mesial canals and up to F2 in the distal canal in a crown down technique.[10] Apical patency clearance was done with no 10 k file. During the instrumentation the canals were irrigated copiously with 3% sodium hypochlorite solution using a 27 gauge endodontic needle after each instrument. The canals were dried with sterile paper point and then ASC paste was placed with a lentulo spiral. Followed by placement of IRM with cotton pellet beneath the restoration.

ASC paste was prepared using Ofloxacin, ornidazole(OFLOX OZ, CIPLA, Ofloxacin 200 mg+Ornidazole 500 mg), dexamethasone 0.5 mg (Dexona Zydus Cadila Healthcare Ltd. Alidac), Chlorhexidine gluconate solution 2% w/v (Asep- RC). The sugar coatings of the tablets are removed by scraping the outer surface and were then grounded into fine powder using a mortar and pestle. The powdered tablets were then weighed on a digital weighing machine in a ratio of 1:1 and mixed into a paste with chlorhexidine gluconate used as the vehicle.

The paste was changed every 3 weeks for a period of 3 months Fig (2, 3, 4). One week following the placement of the medication, the patient remained asymptomatic. After 3 months, radiograph revealed complete healing with well-defined trabeculae. ASC paste was later replaced with metapex for apexification Fig (5).

► Discussion

Modern concept emphasizes on minimal invasive Dentistry. Only when such attempts fail, should invasive surgical approaches be performed.[11] The development and progression of caries induced periapical lesions is clearly associated with the presence of microorganisms in the root canal system.[12]

Endodontic infections have a polymicrobial nature, with obligate anaerobic bacteria conspicuously dominating the microbiota in primary infections. There are various microorganisms related to intra-radicular and extra radicular infections and organisms involved in persistent infection. The endodontic pathogens that cause the primary intraradicular infections include Bacteroides Melaninogenicus, Tannerella Forsythia, Fusobacterium, Spirochetes, Streptococcus Mitisi and Sanguinis, Enterococcus Faecalis.[13]

Intraradicular microorganisms usually constrain themselves in the root canal due to the defense barrier. In specific circumstances, microorganisms can overcome this defense barrier and establish an extraradicular infection. This may lead to development of acute apical abscess with purulent inflammation in periapical tissue. The extraradicular infections are dependent on or independent of an intraradicular infection. The dominant microorganisms present are anaerobic bacteria.[13]

Various non-surgical methods have been used to treat periapical lesions which include Conservative root canal treatment without adjunctive therapy, decompression technique,[14] aspiration- irrigation technique,[15] Apexum procedure[16] and Lesion sterilization and tissue repair (LSTR).[17]

Ideally, a nonsurgical method should initially be done especially in cases where lesions are inclose proximity to important anatomical landmarks. The success of nonsurgical endodontic treatment method is based on appropriate cleaning, shaping, asepsis, and filling of the root canal. It has been reported that the sterilization of the root canal and periradicular region results in good healing of periapical diseases.[18] In order to sterilize the infected root dentine, especially the deep layers,

MEDICAMENT	MECHANISM OF ACTION
OFLOXOCIN(FLUOROQUINOLONE)	Inhibiting DNA gyrase
ORNIDAZOLE(NITROIMIDAZOLE)	Protein synthesis inhibition
DEXAMETHASONE	inhibiting phospholipase A2
CHLORHEXIDINE	Precipitation and/or coagulation of the cytoplasm of bacterial cells

Table 1 Mechanism of action of various medicaments used in ASC paste

Fig. 1 pre-operative radiograph of the right mandibular first molar with periapical radiolucency

Fig. 2 Follow up radiograph after 1 week

Fig. 3 Follow up radiograph after 3 week showing healing of the periapical lesion

Fig. 4 Follow up radiograph after 3 months showing complete healing

Fig. 5 radiograph after placement of metapex

antibacterial medicaments are useful. These compounds should reach the deeper layers of the infected dentine. Lesion sterilization and tissue repair (LSTR) therapy is a technique that allows disinfection of dentinal, pulpal, and periradicular lesions using a combination of antibacterial drugs.[19] LSTR concept was developed at the Cariology research unit, School of Dentistry, Niigata University, Japan, 2004.[20]

It is reported that the resulting sterilization with antibiotics or antiseptics result in approximately 20-40% additional cleansing / augmenting the conventional root canal debridement. In this regard, various medicaments like antibiotics and antiseptics have been discussed. [21] Though each has their own advantages and disadvantages, the selection of antibacterial drugs should be update so as to provide the best of sterilization of root canal systems.

Several combination of medicaments are tried over years. Some of the well-known combinations are

1) Metronidazole and Ciprofloxacin plus Minocycline (3-mix paste/ Triple Antibiotic paste.
2) Metronidazole and Ciprofloxacin plus Cefaclor
3) Metronidazole and Ciprofloxacin plus Cefroxadine
4) Metronidazole and Ciprofloxacin plus Fosfomycin
5) Metronidazole and Ciprofloxacin plus Rokitamycin.
6) Metronidazole and Ciprofloxacin plus Amoxicillin
7) Penicillin, Bacitracin, or Chloramphenicol and Streptomycin (Grossman's polyantibiotic paste)
8) Metronidazole and Ciprofloxacin plus Amoxicillin
9) Ledermix paste (Triamcinolone-a corticosteroid and Demeclocycline-a tetracycline antibiotic
10) Neomycin, Polymyxin, and Nystatin
11) Calcium hydroxide pastes.
12) Chlorhexidine paste

The systemic administration of antibiotics relies on patient compliance with the dosing regimens followed by absorption through the gastrointestinal tract and distribution via the circulatory system to bring the drug to the infected site. Hence, the infected area requires a normal blood supply which is no longer the case for teeth with necrotic pulps and for teeth without pulp tissue. Therefore, local application of antibiotics within the root canal system may be a more effective mode for delivering the drug.[22]

In the present study, ornidazole and ofloxacin has been used as it has a wide spectrum of bactericidal action against oral anaerobes. It has been found that during the local application if a combination drug is used, a very low dose is required, so also the side effects of drugs are minimized. Drugs, such as minocycline are found to cause pigmentation. Hence avoided that in this combination. Systemic as well as local use of corticosteroids, with or without antibiotics have been tried to prevent or reduce post-treatment pain in endodontics.[23] Smith et al stated that corticosteroids were effective in decreasing inflammation secondary to instrumentation.[24] Local delivery of corticosteroids in the root canal may bring symptomatic relief from post-treatment pain. It has also been recommended that pain associated with root canal treatment is reduced by gently forcing a corticosteroid preparation into the periapical tissues.[25]

Combinations of corticosteroids and antibiotics have various therapeutic effects, one of which is control of post-treatment endodontic pain. The various therapeutic effects are anti pruritic, anti-inflammatory, antifungal and antibacterial. Dexamethasone is a potent corticosteroid which can be effectively used to eliminate or atleast reduce the severe inflammation that occurs in endodontic treatment. Schroeder recommended that antibiotics be used along with steroids in topical formulations to prevent the potential invasion of bacteria.[26] Mechanism of action of dexamethasone is by inhibiting phospholipase A2, which reduces the production and concentration of prostaglandins and leukotrienes.[27]

Chlorhexidine is a bis – biguanide which has a broad spectrum antimicrobial activity and is active against both gram positive and gram negative microbes. Two percent chlorhexidine has been used as an antimicrobial medicament and has shown potent results against common endodontic pathogens especially E. faecalis.[28]

So in the present case report antibiotic powder is combined with steroid and chlorhexidine gluconate solution as the vehicle.

► Conclusion

Nonsurgical management of periapical lesions have shown a high success rate. The decompression and aspiration-irrigation techniques can be used when there is drainage of cystic fluid from the canals. These techniques act by decreasing the hydrostatic pressure within the periapical lesions. When there is no drainage of fluid from the canals, calcium hydroxide or the triple antibiotic paste can prove beneficial. Several combinations of antibiotic pastes have been tried clinically. In this case report a novel drug combination of double antibiotic paste with dexamethasone and chlorhexidine has been tried and proved to be successful both clinically and radiographically. So, a nonsurgical approach should always be adopted before resorting to surgery. Periodic follow-up examinations are essential and various assessment tools can be used to monitor the healing of periapical lesions.

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Prosthodontic management of a maxillary flabby ridge and a resorbed mandibular ridge

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Abstract

Abstract: "Flabby" maxillary ridges & "Atrophied or flat" mandibular ridges pose significant problems for the provision of stable and retentive dental prostheses for affected patients. Problems arise during the act of impression making; stability of the lower denture is rather difficult to achieve. The purpose of this paper is to review the impression techniques that can be used to optimise the treatment of edentulous patients with flabby maxillary ridges and neutral zone techniques for resorbed and unemployed mandibular ridges, especially for those where the stability of the lower denture is the deciding factor between success and failure.

Keywords: Impressions, Flabby tissue, Resorbed ridges, Irreversible hydrocolloid

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► Introduction

Making a definitive impression of an edentulous arch which is less than ideal, either due to bone resorption or due to the presence of flabby tissues may often appear as an insurmountable task.

Hyperplastic or flabby tissues are seen in the anterior region of the maxilla, more often than not as part of "Combination Syndrome"[1]. In a patient who has had a complete lower denture for many years,alveolar resorption continues. The end result is that the support of the denture is transferred progressively to the peripheral parts while the alveolar ridge takes less and less of the load. An attempt is being made to solve an old problem of flabby and resorbed ridges using different impression and neutral zone techniques.

► Case report

A 60 year old female patient reported to the Department of Prosthodontics and Crown and Bridge and complained of loose maxillary and mandibular dentures and asked for new complete denture fabrication. On examination, flabby tissue in the maxillary anterior region extending from canine to canine region was found. Tissue blanching was also noticed on pressure application (Fig. 1). The lower arch revealed severe ridge loss, and movable tissues were extended onto the residual ridge (Fig. 2).

Although her upper and lower complete denture was refabricated many times, she was not happy with it. Because of financial constraints and her medical history of diabetes and hypertension, she did not agree to implant overdenture therapy.

Fabrication of new complete dentures was planned for the patient. Maxillary denture with recording of flabby tissue in undisplaced condition using Hobkirk technique[2] and mandibular dentures with neutral zone technique.[4]

For maxillary ridge - The preliminary impression was made using irreversible hydrocolloid in perforated edentulous tray and the primary cast was poured (Fig. 2a). Special tray was fabricated using double spacer over the flabby tissue area and in the region of mid palatine raphe. (Fig. 2b).

After checking the propertray extensions, border molding was done in conventional manner using green stick impression compound (DPIPinnacle Tracing Sticks).Spacer wax was removed and impression was made withmedium body elastomeric impression material (Reprosil Hydrophilic

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Polyvinylsiloxane impression material, Regular body, Dentsply International). The tray was thenremoved from the mouth and impression material wasremoved in the region of flabby tissue using a scalpel (Fig. 2c).Relief holes were made and tray was loaded in this regionwith light body elastomeric impression material (Aquasil ultra LV Light body, Dentsply International) to record flabbytissue (Fig. 2d).

For mandibular ridge - Primary impressions were made using mucocompressive technique in stock trays in impression compound and casts made in type 2 dental plaster. Full wax spacer is adapted, except in area of PPS in maxillary arch and buccal shelf in mandibular arch.[4] tissue stops in canine and 1st molar region.

Custom tray fabricated in self cure acrylic. Sectional Border molding using green stick modelling compound. Final impressions made in zinc oxide eugenol using selective pressure technique and master cast is made in dental stone.

Record bases made in self cure acrylic resin and wax occlusion rims made. Jaw relations recorded. Master casts mounted. Special record base was fabricated for the mandibular arch with 2 retentive loops (Fig. 3)

Neutral zone was recorded using impression compound and green stick modelling compound in the ratio of 1:34. To record the neutral zone, the patient should be in a comfortable, upright position with the upper wax rim inserted. The mixture of green stick and impression compound was loaded on the buccal and lingual sides of the special record base. It was then rotated into the patient's mouth. Before the material sets, the patient was instructed to perform functional movements such as licking lips, sucking, puckering, smiling, grinning, swallowing,

Fig. 1 Flabby tissue in the maxillaryanterior region

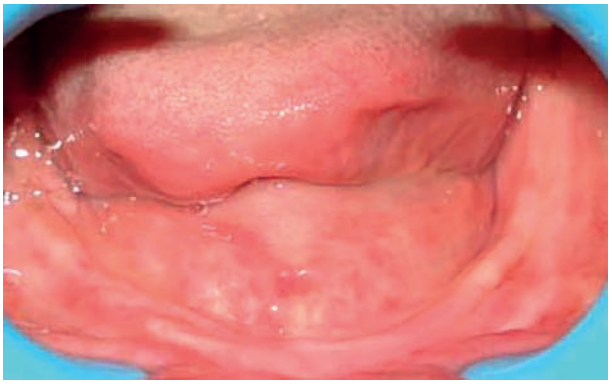

Fig. 2 Resorbed mandibular ridge.

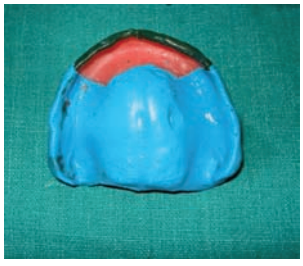

Fig 2a,b,c and d

Fig. 3 Special record base

Fig. 4 Recording of neutral zone

Fig. 5 silicone putty index

pronouncing some words, or combination of these. Theseactions should be repeated until the material has set. After setting, the displaced excess material was removed. The patient was asked to repeat the rehearsed muscular movements. Therefore, the form of the neutral zone was refined. (Fig. 4)

Tongue, lip, and cheek matrices were made of silicone putty material for preserving the neutral zone on the cast (Fig. 5). Wax was poured into the space confined by the putty matrices to make a wax rim, which exactly represented the neutral zone on the newly formed baseplate on the lower cast. The artificial teeth were positioned within the matrices. (Fig. 6)

The dentures were fabricated and try in was done and on insertion dentures had good retention and stability (Fig.7 and 8). These dentures were followed up and the new definitive complete dentures successfully improved stability, comfort, and function for the patient.

► Discussion

Impression making plays critical role in complete denture fabrication. A particular problem is encountered if a flabby ridge is present within an otherwise 'normal' denture bearing area. An impression technique is required which will compress the non flabby tissues to obtain optimal support and at the same time, will not displace the flabby tissues. A particular problem is encountered if a flabby ridge is present within an otherwise 'normal' denture bearing area. An impression technique is required which will compress the non flabby tissues to obtain optimal support and at the same time, will not displace the flabby tissues.

Liddlelow[3] in 1964 described a technique whereby two separate impression materials were used in a custom tray (using 'plaster of Paris' over the flabby tissues and zinc oxide eugenol over the normal tissues). In 1964, Osborne[3] described a technique where two separate impression trays and materials were used to separately record the 'flabby' and 'normal' tissues and then related intra-orally. Watt and McGregor[3] in 1986 described a technique where impression compound was applied to a modified custom tray and a wash impression with zinc-oxide and eugenol is made.

Materials for recording neutral zone

Tench et al[6] were the first in this field and have proposed modeling plastic impression compound as the material to be

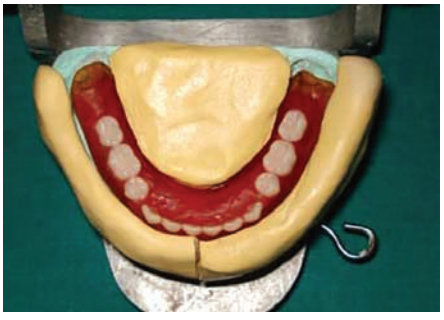

Fig. 6 Teeth arrangement

Fig. 7 Try in

Fig. 8 Denture insertion

Fig. 9 Lateral profile before and after denture insertion

Fig. 10 Frontal profile after denture insertion

used for recording the neutral zone. Although this advice is widely followed, other materials such as tissue conditioner, wax, zinc oxide eugenol impression material, silicone material, chairside relining material, and acrylic resin are also described for this technique. These materials are either used for the initial recording of the neutral zone or at the evaluation appointment.

Modeling plastic impression compound, being a thermoplastic material, is easy to manage and has theadvantages of low cost and ease of availability

Whichever materials are used for recording the neutral zone, it seems that 2 factors cannot be ignored: the neutral zone should be recorded at an established occlusal vertical dimension, and the material used for recording should be reasonably slow setting so that oral musculature shapes it intoproper contour and dimension.

► Conclusion

Fibrous and resorbed ridges pose a prosthodontic challenge with respect to the achievement of a stableand retentive dental prosthesis. Emphasis has moved away from the surgical removal of fibrous tissue, and implant retained prosthodontics may not be a suitable treatment option for many patients. Thispaper has put forth impression techniques utilizing conventional concepts albeit with contemporaryimpression materials, and neutral zone technique in order to be relevant in today's context of changing dental practices. Consideration for selection should include location and extent of unsupported tissue as well as patient's presenting complaint.

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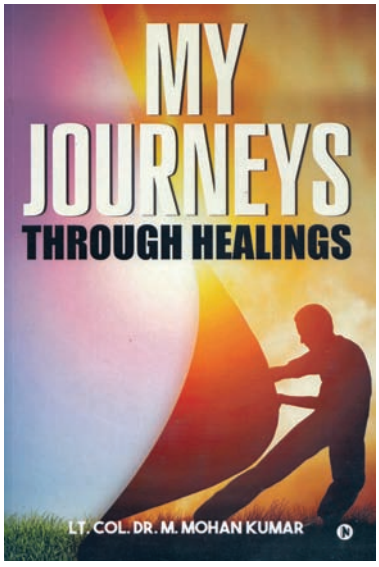
BOOK REVIEW

My Journeys through Healings

Lt. Col. Dr. M. Mohan Kumar



The book *"my journey through healings"* is penned by Lt. Col. Dr. M. Mohan Kumar who is a cancer survivor besides having multiple other ailments. It is not possible to read the whole book without tears dripping from your eyes and the emotions you feel would prevent you from reading it in one go.

The grueling episodes of healing, when there is a hole in ones eye with one eye covered and scribbling the experience with benumbed fingers needs iron will.

Interspersed are sugary sweet memories of student days, hilariously narrated. So are the lighter moments of the hospital staff in their days work.

At times the author had to write on the back side of advertisement papers as he could not fetch new sheets of paper. His family life and chilling episodes in the battle field as an ordinary Jawan are narrated well. It needs a steel frame of the mind to author a book like my Journey s through healings with a shriveling body. And to think that this book was written during the healing periods after the author went through four surgeries, including a heart surgery, removal of 2 cms of colon, and drilling of a hole in the skull is amazing.

The book is available from the Notion Press Media Pvt. Ltd. Old No. 38, New No. 6 Mc Nichol's Road, Chetpet, Chennai - 600 031

I am proud of my friend, roommate and classmate Lt. Col. Dr. Mohan Kumar for this great literary contribution. I feel that every book shelf should have this book.

Review by **Dr. K.P. Venugopal, MDS**
Prosthodontist, Vaikuntam
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Biodegradable implants for orthodontic anchorage; A new paradigm

* S Gopikrishnan, ** Dhanya Menon M.

► Introduction

"Give me a lever long enough, a place to stand and I shall lift the earth"- said the great Archimedes. A place to stand is what anchorage does in orthodontics. Anchorage in orthodontics can be defined as the resistance which the dentofacial structures offer to change in form or position under applied force. The anchorage preservation has been a perennial problem to the traditional orthodontist. Earlier, the orthodontists have used intra-oral appliances and extra-oral appliances to control anchorage while completing the desired movement of other teeth. The best known intra-oral appliances are palatal or lingual bars, the Nance holding arch and inter-maxillary elastics. But on usage of these appliances loss of anchorage leads to undesirable side-effects such as protrusion of the incisors, extrusion and tipping of the teeth and negative influence on the occlusal plane. The most frequently used extra-oral anchorage, headgear is always subjected to negative criticism regardless of its large range of applications as acceptance problems on the part of patients may result in poor compliance.

The orthodontists of earlier times have always struggled to attain efficient control of anchorage and have always dreamt of a device which can provide absolute anchorage. This dream have come true with the advent of implants. The implants have burst onto the clinical orthodontic scenario to assist the orthodontist in controlling tooth movement. New era has dawned in 'Anchorage Paradigm' with wider applications of implants in orthodontics. The incorporation of implants into orthodontic treatment made absolute and infinite anchorage possible. The primary advantage over the previously used modalities of anchorage is that the implants provide skeletal anchorage, which is undoubtedly more predictable and stable than methods requiring patient compliance.

Over years, a variety of terms have been used to describe the orthodontic implants such as mini screws, mini implants, micro implants and micro screw implants. The term 'Temporary Anchorage Devices' (TAD) are also widely used for mini screw implant as TAD seems to be the most unambiguous term. A Temporary Anchorage Device (TAD) is a device that is temporarily fixed to bone for the purpose of enhancing orthodontic anchorage either by supporting the teeth of the reactive unit or by obviating the need for the reactive unit altogether. Anchorage thus derived from the implant has been termed as indirect anchorage by Roberts. TAD's has opened a new horizon to orthodontic treatment and has increased the treatment possibility for patients and also improved the functional results of the treatment.

► Implant structure

The commonly used implant screw/plate has two parts

a. Implant head – serves as an abutment and also a source of attachment for elastics/coil springs.

b. Implant body – this is the part embedded inside the

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bone. This may be a screw type or a plate type.

► Classification of implants

Implants can be classified under the following headings

1. Based on the location – Subperiosteal
   Transosseous
   Endosseous

2. Based on the configuration design - Root form implants
   Blade/plate implants

3. According to the composition - Stainless steel
   Cobalt- Chromium- Molybdenum
   Titanium
   Ceramic

   Miscellaneous- Vitreous carbon

   Composite

   Polylactide

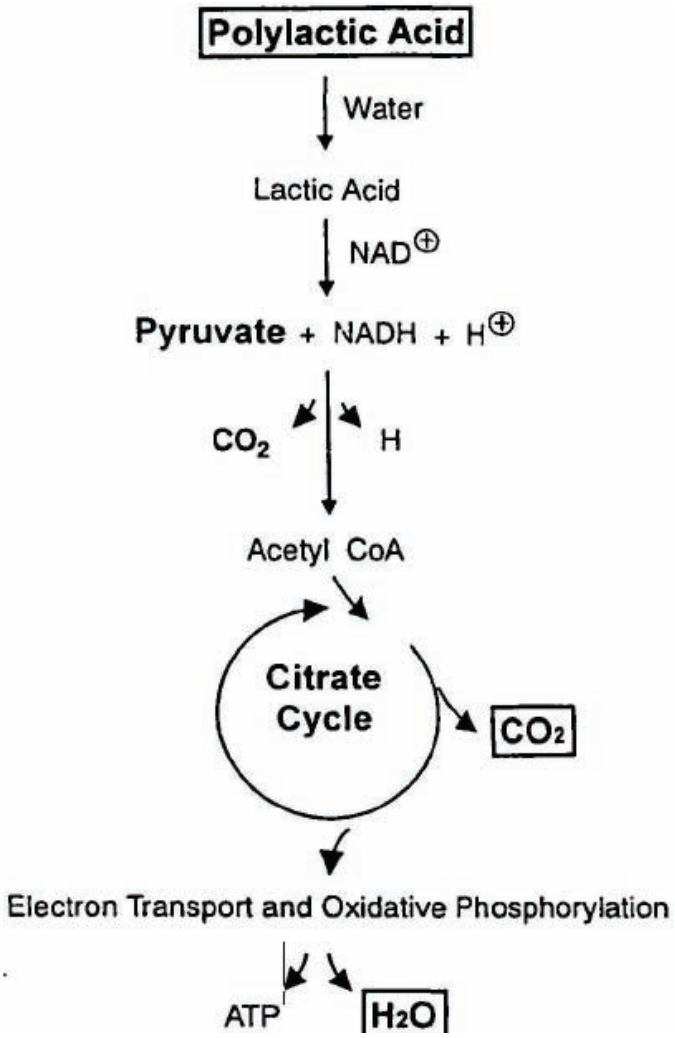
Common problems associated with metallic fixation

Problems related to rigid fixation in the growing skull include restriction of growth and passive translocation of metallic implants. Metallic fixation devices may also cause a distinct cosmetic deformity, palpability or wound dehiscence, especially if placed under a scarred, tight region as well as allergic reactions, and may interfere with radiological investigations and other imaging. Common reasons for metallic rigid fixation removal include palpable or prominent fixtures, loosening of plates and screws, pain, infection and wound dehiscence/ exposure of hardware.

Bioresorbable implants

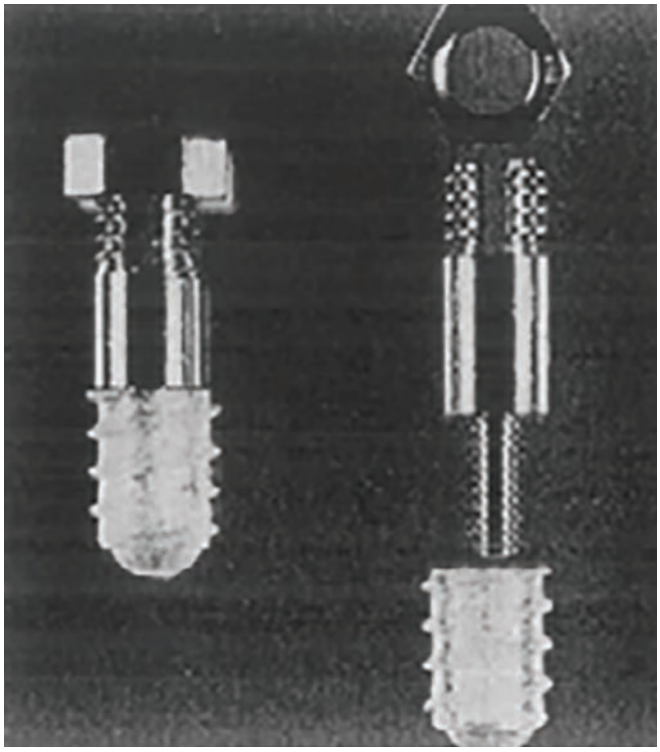
Various authors have stated that Endosseous Titanium implants are suitable as anchoring units for long term orthodontic treatment. Furthermore, the applied force may induce marginal bone apposition adjacent to implants and thus will lead to better stability of the fixtures. This suggests that implants can also be used as principal anchorage elements for complex orthodontic movements. If the implant is solely used for anchorage purposes, it has to be removed in a secondary operation after orthodontic treatment. So the ideal solution would be a stable positioned implant which could assume a stationary anchorage function for an adequate period but could then be readily removed or preferably resorb within the tissues. This objective was the basis of development of the bioresorbable implant anchor for orthodontics system (BIOS) which are made of biodegradable polylactide alpha- polyester and adapted to the respective range of indications. They should retain the required stability for a period of 9-12 months and then degraded, with no trace of residual material and without a significant foreign body reaction.

Present investigations in resorbable implants in other medical fields showed histological findings with an encapsulation of the implants by bony tissue with interposition of a thin layer of fibrous tissue occasionally. The degradation process is as follows:



► Structure

BIOS implant comprises of a biodegradable implant body and a variable metal abutment as superstructure. The metal abutment is anchored by means of a metrically-standardised internal thread located in the plastic implant. The technological innovation of this development is however, in the biodegradable poly LDL lactide copolymer (90/10 percent) implant body. It is a polymer of L- isomer poly L-lactic acid (PLA) and poly glycolic acid (PGA) in various proportions. This copolymer was widely used for some considerable time as an osteo-synthetic material



in trauma – related applications. The resorbable implant body was produced by injection molding and sterilized using Ethylene oxide. This has the advantage of reducing the number of instruments required for implantation as BIOS implants can be inserted with conventional instruments. Polyglycolic acid (PGA) with metal abutment was developed by Glatzmaier. PGA is hard, brownish crystalline polymer which is susceptible to hydrolysis.

Copolymers of PLA and PGA offer the capability of degradation rate and mechanical properties by changing the PLA/PGA ratio. If the PLA/PGA ratio is 75/25, the absorbable time period is approximately 220 days. If the ratio is 50/50, the time taken to resorb will be 180 days. If the ratio falls to be 82/18, the implant gets resorbed in 180-450 days.

Advantages of resorbable implants

1. Less stress shielding on the bone.

2. Less interference with modern imaging techniques

3. Elimination of the need for subsequent procedures to remove the implant.

Disadvantages

1. If treatment is not finished within the time period the resorbable implant will not serve the purpose.

2. Strength of the implant varies according to the site of implant placement.

► Conclusion

Resorbable implants can be applied with success for orthodontic purposes. The correct PLA/PGA ratio should be selected to obtain the maximum performance during treatment. Further studies should involve the appropriate shape for orthodontics as well as effect on the roots when the tooth is moved against the implant.

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The etiological factors associated with developmental defects of enamel

* Ajish M Saji, **Vinodkumar RB, ***Jubin Thomas, ****Amal K. Iype, **** Indu G

Abstract

The prevalence of developmental defects of enamel (DDE) in the permanent dentition ranged from 6.7% - 67.1% in developed countries and from 27% - 66.2% in developing countries. Several etiological factors have been implicated as being responsible for DDE in the permanent teeth. Although local, systemic, genetic or environmental factors have been attributed to DDE frequently they are likely to be multifactorial in nature.

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► Introduction

The development of teeth involves a highly orchestrated series of events that are strictly genetically controlled. The developmental timing, location, morphology, structure, and composition of teeth are determined primarily by cascades of molecular events that are regulated by hundreds of genes. Development of teeth begins at approximately 6 weeks in utero and continues through late adolescence, when the development of the permanent third molars is completed. Because the development of dentition is prolonged, it is susceptible to various environmental influences for many years.[1]

Developmental defects of enamel may be defined as alteration of enamel which may affect an area of one surface or may be wide spread affecting all the surfaces throughout its full thickness. They may be localized, generalized and may be symmetrical or asymmetrical. They may be quantitative in nature which is manifesting as a deficiency in adequate thickness of enamel or qualitative in nature as enamel opacities.

Prevalence of DDE

On international literature search the prevalence of DDE ranged from 6.7% to 67.1%. The least prevalence of DDE reported was 6.7% in the study done by Pasareanu M et al.[2] in 2001 to determine the presence of developmental defects of enamel in 600 schoolchildren aged between 8 and 11 years old from Lasi. The highest prevalence of DDE reported was 67.1% in study done by Sujak SL et al.[3] in 2004 to investigate the prevalence and psychosocial impact of enamel defects among 1024, 16-year-old school children on the island of Penang, Malaysia.

On national literature search the prevalence of DDE ranged from 27% to 66.2%. The least prevalence of DDE of 27% was reported by Ekanayake L et al.[4] in 2002 in the study to assess the prevalence of dental caries and DDE in Srilanka. The highest prevalence of DDE reported was 66.2% by Chauhan D et al[5] in 2013 in the study to determine and compare the prevalence and presentation of developmental defects of the enamel (DDE) of healthy school children residing in hills of Himachal Pradesh, India.

Epidemiological studies of prevalence of DDE exhibit wide range of variability in the prevalence rate. This diversity may be explained by specific characteristics and method adopted in the study such as indices used and the criteria used in the examination.

Etiological Factors

DDE are associated with wide spectrum of etiologic factors including systemic, genetic, local and environmental conditions. Systemic conditions include prenatal, perinatal and early childhood medical illness, low birth weight, regular antibiotic consumption are associated with enamel defects. Environmental factors include fluoride intake, medication and nutritional deficiencies. Hong (2005) had investigated the correlation between amoxicillin during the first years of life and enamel defects to the maxillary central incisors. Amoxicillin use from three to six months of age doubled the risk and it is significantly increased even after controlling for other risk factors such as fluoride intake, infections such as otitis media or breast feeding.[6]

Hereditary enamel defects (Amelogenesis imperfecta) may occur as a part of a generalized condition or syndrome or a defect involving many hereditary disorders of the ectodermal and combined ectodermal and mesenchymal types, such as the trichodento-osseous syndrome, incontinentia pigmenti,

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tuberous sclerosis, and junctional epidermolysis bullosa, may have marked enamel involvement. Enamel defects associated with syndromic conditions vary substantially, depending on the molecular defect and the role of the genes in formation of tooth.[1]

Disturbances during development of tooth can be manifested as enamel hypoplasias, diffuse or demarcated enamel opacities or enamel hypomineralization.[1] Enamel hypoplasia is defined as deficiency of enamel formation. It can be seen clinically as pits, grooves, or generalized lack of surface enamel. Enamel hypoplasia is clinically important because it can result in increased caries susceptibility, increased wear, tooth sensitivity and poor esthetics.[7]

Enamel opacities may be white, yellow, or brown in color with an intact surface that are usually well demarcated, and are round to oval in shape.[7] Demarcated opacities have an abnormality in the translucency but not in the enamel thickness. These lesions have a clear boundary separating abnormal from normal enamel. They may occur as a result of a disturbance in the development during amelogenesis or because of mechanical trauma during the maturation phase of enamel formation. Isolated enamel opacities do not usually lead to an increased risk for caries but can cause significant esthetic problems. Diffuse opacities are alterations in translucency and have enamel thickness unchanged. A clearly defined margin will be absent. Fluoride-induced lesions will have an undefined margin.[8]

Molar-incisor-hypomineralization is defined as the dental defect developmentally derived that involves hypomineralization of 1 to 4 permanent first molars that is frequently associated with similarly affected permanent incisors. The defect is clinically presented as demarcated enamel opacities of different color in the affected teeth, which undergo post-eruptive breakdown due to soft and porous enamel. This may result in atypical cavities or even complete coronal distortion, which require extensive restorative treatment. Due to profound sensitivity of affected teeth, children are reluctant to carry out oral hygiene effectively and to accept dental treatment, being at risk of developing dental phobias and presenting behavior management problems. Histologically the enamel which is defective is partly hypomineralized, with well-defined borders between the defective and normal enamel.[9]

DDE can have significant impact on oral health and esthetics. Enamel defects are indicative of caries and erosion in children. Most epidemiological studies have shown that the frequencies of DDE are on the rise in all population streaming their clinical significance and evidence for public health initiatives.

From different studies the range of prevalence of DDE ranged from 6.7% - 67.1% in developed countries and from 27% - 66.2% in developing countries. Epidemiological studies of prevalence of DDE exhibit wide range of variability in prevalence rate. This diversity may be explained by specific characteristics and method adopted in study such as indices used and the criteria used in the examination.

Summary

The prevalence of developmental defects of enamel (DDE) in the permanent dentition ranged from 6.7% - 67.1% in developed countries and from 27% - 66.2% in developing countries. This wide variation can be attributed to the use of different criteria and terminologies to describe enamel defects. The etiology of enamel defects may be local or systemic, genetic, or acquired in origin. The clinical presentation of DDE varies greatly depending on the etiology and severity. Single tooth defects can be attributed to a local factor, whereas in those of systemic etiology many or all of the teeth that are developing during the time of influence of the etiological factor are affected (chronological defects). Defects with a genetic etiology form a separate entity, usually affecting both the primary and permanent teeth. The knowledge of the epidemiology of enamel defects is important in order to provide basic information within a community or country and between countries. It is also important since it may contribute to the assessment and monitoring of environmental or systemic factors and for detecting possible etiological factors responsible for the occurrence of the enamel defects. It is also helpful in educating the population about the developmental defects of enamel.

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Myxoma

* Sreejith V P, **Kanur Arjun Gopinath, ***Shermil Sayd, ****Sameena Shamsudeen

Abstract

Odontogenic myxoma is a rare intraosseous neoplasm, which is benign, but locally aggressive. It is considered to be developed from the mesenchymal portion of the tooth germ. Clinically, it is a slow-growing, expansile, painless, non-metastasizing, central tumour of jaws, chiefly the mandible. It rarely appears in any bone other than the jaws.Clinically, it is a slow-growing, expansile, painless tumour, which may cause root resorption, tooth mobility, bone expansion, cortical destruction and facial distortion. Radiographically, the classic presentation is that of a multilocular radiolucency, with well-developed locules, consisting of fine trabeculae, arranged at right angles, known as the 'Tennis-racquet' or 'step-ladder' pattern. A 'sun-ray' or 'sun-burst' appearance has also been reported in the literature.

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► Introduction:

Myxoma, also known as Myxofibroma (MF), of the jaws is a rare, benign, odontogenic tumour of possible mesenchymal origin was first described by Virchow in 1863[1]. MFs are versions of odontogenic myxomas that enclose considerable amounts of collagen fibres dispersed within a myxoid stroma[2]. The incidence of such a tumour is extremely rare with approximately 0.05 new cases per million populations per year[3]. MFs exist more frequently between the ages of 10 and 30 years[4]. These tumourshave a female predilection and common site of occurrence is in the posterior aspect of mandible[5].

Smaller lesions are usually asymptomatic and discovered during routine radiographic examinations, while large lesions are often associated with painless jaw expansion and possible perforation of the cortical plate. There are some reports suggesting the rare incidence of facial deformity as well as the involvement of the maxillary sinus[6]. Radiographically, MF appears as a unilocular or multilocular radiolucency with irregular or scalloped margins which may displace or cause resorption of the roots of adjacent teeth[7]. According to the literature, clinical and radiographicdifferential diagnoses ofMFs include ameloblastoma, ameloblastic fibroma, odontogenic fibroma, aneurysmal bone cystodontogenic keratocystic tumour, central hemangioma, and other rare entities like desmoplastic fibroma. The gross appearance of the surgical specimen which displays a hard-fibrous consistency could lead the surgeons toward the hypothesis of a myxomatous lesion[2].

MFs are benign but locally aggressive odontogenic tumours which affect almost exclusively the jaws[2]. The mandible is more frequently affected than the maxilla with a predilection for the posterior region in both jaws[2]. Most of the cases reported in the literature were diagnosed between the second and fourth decades of life with a peak in the third decade[2]. Apparently, patients with posteriorly located tumours had a delayed diagnosis and bigger lesions when compared tothose with anteriorly located tumours. This is probably due to more visible disfigurement when the lesions are located in the anterior area[8].

► Management:

The choice of treatment mainly depends on variables such as mandibular or maxillary localization, the presence of a primary or recurrent lesion, age, general medical conditions and aesthetic needs of the patient. Definitive diagnosis of MFs is based on the histopathologic evaluation. In case of big lesions, a biopsy may be necessary to establish the nature of the tumour and to plan the therapeutic approach. MF is not radiosensitive

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and the surgical excision has been reported as the treatment of choice [9]. No agreement exists on the extension of surgical margins. Mainly because of the rarity of MFs, it does not seem possible to draw reliable data on prognosis after different surgical approaches.

Conservative surgery, which consists of enucleation of the lesion and curettage of the residual cavity, may have some advantages when compared with more radical approaches such as resection of the tumour together with some surrounding tissues. Such advantagesinclude areduced morbidity, the possible avoiding of reconstructive surgery, shorter hospitalization time, reduced disturbances of facial growth in children and lower costs. Nevertheless, radical treatment (e.g. en-bloc resection) is suggested bysome authors on the basis of characteristics of MFs such as the locally aggressive nature, the possible large size and tendency to recur[4, 9]. The choice of conservative surgery is also supported by the absence of evidence of malignant transformation of MFs as well as the low recurrence rate reported in some case series after conservative treatment[7].

Recurrence is probably associated with local invasion into cancellous bone beyond radiographically visible margins in absence of tumour encapsulation. Recurrence rate can apparently be reduced with a more aggressive treatment by performing a partial or complete segmental bone resection with tumour-free margins of 1.5 cm. Such a treatment can be preferred in the maxilla, where the closeness to the maxillary sinus, the zygoma and the lower part of the orbital cavity can be a critical factor in case of recurrence[5].

Nazarov K et al.[10] reported a case where a diode laser was used for the excision of the lesion in a single session under local anaesthesia. The excision was performed using a continuous mode with 4-W power setting in contact mode. In the follow-up period, the patient declared that she had no pain in the early postoperative period. The patient wasfollowed up for a period of one year and the surgical site healed uneventfully and there were no signs of recurrence.

Shivashankaraetal[11] in 2017 described a case of a 13-year-old boy with recurrence of an odontogenic myxoma of the mandible. And he concluded that the treatment plan should consider the age and sex of the patient and the site and size of the lesion.

► Conclusion

Odontogenic myxoma is a very rare entity occurring develops in the bones of the face and jaws. Its clinical, radiological, and histopathological features can compare with those of several other tumours and cysts. There is no unique protocol for the treatment to be followed. Commonly recommended treatment is conservative surgery with strict clinical follow-up because the lesion has a significant chance of recurrence. Wider surgical excision should be employed in the case of recurrence.

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CROSSDENT

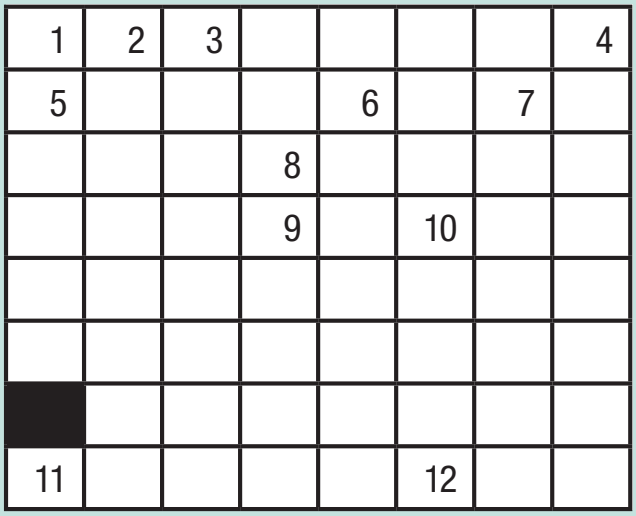
Created by **Dr Nirmal George Saibu MDS**

DOWN

1. An acute infectious disease of warm blooded mammals (dogs, bat, wolf etc)? [6 Letters]
2. Any device or tissue that is inserted partially or totally, under the body tissue? [7 Letters]
3. A malignant tumor arising from any non epithelial tissue [7 Letters]
4. Most frequent cause for the loss of consciousness is _____ [7 Letters]
6. Enlargement of thyroid gland [6 Letters]
7. A colorless odorless inflammable gas produced as a result of fermentation of organic matter (syn; Marsh gas) [7 Letters]
9. A metal receptacle usually shaped like the dental arch in which wax or plastic impression material is placed when taking mouth impression? [4 Letters]
10. A congenital discoloration of a circumscribed area of the skin due to pigmentation [5 Letters]

ACROSS

1. Muscle responsible for grinning of face [8 Letters]
5. An alloy of mercury used as a restorative material which has highest coefficient of thermal expansion [7 Letters]
8. A small filtering organs found in clusters along the lymphatic vessels and through which the lymph is drained [4 Letters]
9. A variant of color and hue [4 Letters]



11. Young female patient with trauma to upper incisors had decided to extract the tooth for replacement of tooth immediately after extraction, best type of pontic to be designed for _____ [4 Letters]
12. Characteristics that differentiate males and females in most plants and animals [3 Letters]

CROSSDENT

General Rules and Regulations for CROSSWORD CHALLENGE

1. IDA kerala state is the only organisation responsible for, this prize puzzle competition
2. It will not consider entries submitted after the closing date and time.
3. The closing date and time for this competition is on the thirtieth of APRIL 2018.
4. All contestants should participate individually in the event.
5. The competition carries prize for 1st 2nd 3rd place holders only.
6. Contestants must mention their name and submit IDA membership number.
7. There will be a unique solution for a crossword will be declared as the winner.
8. 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.
9. In the event of a tie, the contestants who have tied for the winner will be selected from them by lot system.
10. Unnecessary overwriting, lack of clarity, incomprehensibility can lead to cancelation or disqualifying the participant.
11. In case of any divergence regarding any clues or else, decision of the jury panel will be final.
12. Any type of false move/ adopting unfair means by any participant will lead to disqualification of him/her immediately.
13. All entries can be send through whatsapp or by mail to editors office
14. The winner of this prize puzzle competition will be decided by the Editor and editorial board
15. 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)

Prize Sponsored by

3M Science. Applied to Life.™

Association News

CDE Report

Dr Anil Thunoli
Chairman CDE

Dear colleagues,

It's a pleasure to serve you all for one more year and let me thank each one of you for the support extended and for the participation in the continuing education programs conducted through out the state.

Unlike other medical specialties dental private practice in Kerala has become more challenging. Mushrooming of dental colleges in our state have resulted in a tremendous increase in the number of dental surgeons and there by dental clinics. One has to achieve thorough knowledge on the subject and get updated on the treatment procedures for a better clinical practice. Other than regular CDE programs now a days ida branches are conducting clinical courses on regular treatment procedures with nominal registration feeswhich is welcoming approach to enhance the practical knowledge. I request all the members to make use of this and get updated.

This year we have planned 12 state level CDEs and the first state CDE will be conducted on April 8th. We have also planned to conduct a clinical course on Oral Implantology in association with govt dental college, Kozhikode. Hopefully it will be starting from the month of July. The Two day National CDE program on Endodontics is in list and discussion regarding this is in the final stage.

Wishing you a very good IDA year ahead....

Thanking You,

Jai IDA

Dr Anil Thunoli

CDH Report

Dr.Joby J Parappuram
Chairman,
Council on Dental Health

Dear Doctors,

This year Council on Dental health has decided to focus on public image building. We were doing a lot of public focused programs in last years but it is doubtful whether we could bring it into the public, media, as well as government. So IDA KSB has instructed all the branches that whenever they do a program, whether it is in a large or a small program, we should inform the media through a press release, both before and after the program.

Dentist Day – March 6 – This year also we have planned to celebrate international Dentist day. Every branch did it in a very good manner. State level inauguration was held at Odakkali, Perumbavoor hosted by IDA Malanadu branch. The District Medical Officer Ernakulam Dr. Kuttappan was the chief Guest. Dr. Ciju A. Paulose, President IDA KSB presided the function.

In that function, Project PaalPunchiri was inaugurated by Ms. Akshara Kishore, cine artist also the brand ambassador for the project.

PaalPunchiri – hope it will be a prestigious project of CDH this year. Thanks to Dr.Mehul, President of IDA Malabar for conceiving the idea. It is mainly focused on the youngest peer group, the anganvadi students of Kerala. All the branches are asked to go with the project. Slowly we are trying to associate with the Government also. Branches are requested to provide those emergency treatments free and a proper guidance on treatment plan. Both the students as well as the parents are educated. Also the teachers and helpers are trained in detecting the tooth related problems.

IDA Kerala Excellence Awards – this year also we have decided to giveaway the most prestigious Excellence awards to one male and one female from each branch. Branches were instructed to select and send their nominees. This year we thought of keeping this as an Award night. It was on March 10, Saturday at SreeMoolam Club, Muvattupuzha. It was a very well organised program, where we could keep the pride of a Dentist high above sky.

IDA TEAM – On focusing the target, the public image building, we are trying to co –ordinate all the activities other than dental screening camps and awareness classes under a single banner, The IDA TEAM – Together Everyone Achieves More – One Team One Mission.

The first project is already started, The Attahode, Sabarimala Project for the Nomads in that area.

The main problem now they face is the scarcity of drinking water. They used to carry water from small streams some 3 -4 kms away. Congartulations IDA Thiruvalla for identifying their needs. Another need for them is a small trunk box or suitcase where they can keep their valuables safely during the rainy season. We are providing them with a 500 ltrs water tank, and these tanks will be regularly refilled till monsoon. Also we are planning to distribute 60 – 70 suitcases among them.

World Oral Health Day: It falls on March 20, every branch is actively celebrating that. The State level program was planned to conduct at Palakkad and thodupuzha under IDA Palakkadu and IDA Malanadu, but due to the sad demese of Dr. Deepak, who is a member of IDA Palkkadu, the celebration of Palkkadu branch has postponed. But it was celebrated in a grand manner with all the respect to the departed soul at Thodupuzha under the leadership of Dr. Teery, President Malanadu, Dr.Muralikrishna, Hon. Secretary, dr. litto, Dr. Alias and Al-Azhar dental College. Flash mob, eucative skit, educative notice distribution were carried out.

Thank you all the CDH chairmans of all branches to co-ordinate the programs and reporting promptly. Let us work hard to achieve our goal One Team One Mission.

Dr Susha C N
WDC Chairperson

WDC Report

Dr Anney George
WDC Secretary

STATE PROGS OF IDA WDC - (KERALA) RELATED TO THIS YEAR'S WOMEN'S DAY (08-03-2018) OBSERVANCE

The Kerala state branch of IDA-WDC conducted both a community health prog and a scientific activity in connection with our Women's day progs this year (08-03-2018).

The Community dental health prog was conducted at "Free Birds", in Calicut city, which is an open shelter home for girls below 18 years of age.

The prog conducted with the aid of IDA-WDC Malabar branch was presided by the IDA-WDC State President, Dr Susha C.N and inaugurated by Dr Kunjamma Thomas, former principal, KMCT Dental College, Calicut.

Dr Sameera G. Nath took an awareness class and Mrs Ambili Sudheer conducted a motivation session for the inmates.

A dental examination camp was conducted there and it was decided to provide free treatment including orthodontic corrections to the inmates absolutely free of cost from our members' clinics.

All our members spent quality time at the shelter home with the girls that day and also served them food.

SCIENTIFIC PROG:-

A Continuing Dental Education (Lecture and hands-on) prog was also conducted in connection with the Women's day observance at Hotel Arcadia, Kottayam in associaion with the IDA-WDC Central Kerala branch.

The faculty was Dr Leeba Varghese, MDS and the topic, "The art and science of Isolation in Daily Dental Practice and Effective Irrigation Protocol in Endodontics".

Dr Anney George, Hon Secy of IDA-WDC Kerala presided over the function which was attended by 102 members.

IDA Kerala State Awardees List 2017

Category	Writing	To
Local Branch	Dr K G Nair Award for the Best Local Branch for the year 2017	IDA Malabar Branch
	Runner Up Award for the Best Local Branch for the year 2017	IDA Coastal Malabar Branch
	Second Runner Up Award for the Best Local Branch for the year 2017	IDA Trivandrum Branch
President	Dr Samuel K Ninan for the Best Local Branch President for the year 2017	Dr Binu Purushothaman
	Runner Up Award for the Best Local Branch President for the year 2017	Dr Dr Sony Thomas
	Second Runner Up Award for the Best Local Branch President for the year 2017	Dr Rajesh E
	Second Runner Up Award for the Best Local Branch President for the year 2017	Dr Abraham George
Secretary	Best Local Branch Secretary for the year 2017	Dr Hussain Manikfan
	Runner Up Award for the Best Local Branch Secretary for the year 2017	Dr Sreejan C K
	Runner Up Award for the Best Local Branch Secretary for the year 2017	Dr Nidhish Maulana
	Second Runner Up Award for the Best Local Branch Secretary for the year 2017	Dr. Ciju P Cherian
	Second Runner Up Award for the Best Local Branch Secretary for the year 2017	Dr. Dr. Sivaramkrishnan
	for the Best CDH Activity for the year 2017	IDA Malabar Branch
CDH Activity	for the Best CDH Activity for the year 2017	Coastal Malabar Branch
	Awarded as the Runner up in CDH Activity for the year 2017	IDA Kodungalloor
	Awarded as the Second Runner up in CDH Activity for the year 2017	IDA Central Kerala
	Special Appreceiation Award in CDH Activity for the year 2017	IDA Trivandrum
	Special Appreceiation Award in CDH Activity for the year 2017	IDA Wayanad
CDE Activity	for the Best CDE Activity for the year 2017	IDA Malabar Branch
	Awarded as the Runner up in CDE Activity for the year 2017	IDA Coastal Malabar Branch
	Awarded as the Runner up in CDE Activity for the year 2017	IDA Palakkad Branch
	Awarded as the Second Runner up in CDE Activity for the year 2017	IDA Malappuram branch
	Awarded as the Second Runner up in CDE Activity for the year 2017	IDA Quilon Branch
	Special Appreciation Award in CDE Activity for the year 2017	IDA Kottayam
	Special Appreciation Award in CDE Activity for the year 2017	IDA Kochi
	Special Appreciation Award in CDE Activity for the year 2017	IDA Palakkad Branch
CDH Activity	for the Best local branch Journal for the year 2017	IDA Attingal Branch
	as the Runner up for Best local branch Journal for the year 2017	IDA Malabar Branch
	as the Second Runner up for Best local branch Journal for the year 2017	IDA Coastal Malabar Branch
Students Activity	for the Best Students Activity for the year 2017	IDA Malabar Branch
IDA WDC	for the Best Womens Wing activity for the year 2017	IDA Quilon Branch
	as the Runner Up for Womens Wing activity for the year 2017	IDA Malabar Branch
	as the Runner Up for Womens Wing activity for the year 2017	IDA Attingal
	as the Runner Up for Womens Wing activity for the year 2017	IDA Coastal Malabar Branch
	as the Second Runner Up for Womens Wing activity for the year 2017	IDA Tripunithura Branch
	as the Second Runner Up for Womens Wing activity for the year 2017	IDA Trivandrum Branch
	Award of Appreciation	
Special	Award for Outstanding Activity for the year 2017	IDA Vatakara Branch
	Outstanding SPORTS Activity for the year 2017	IDA Central Kerala Branch
	Outstanding Cultural Activity for the year 2017	IDA Palakkad & IDA Malanad Branch
KDJ	Dr. K.L.Baby Award for the best Scientific article	Dr. Rajesh C
	Best Research article	Dr. Soumya Rajan
	New Innovations in Dentistry	Dr. Ravichandran
	New Innovations in Dentistry	Dr. Himanath K
	Best Case report Post Graduate Category	Dr. Mahesh Raj V.V
	Best Case report Post Graduate Category	Dr. Dhanya Krishnan

Trivandrum Branch

IDA Trivandrum Branch -Installation Ceremony 2018

The Installation ceremony of Dr. Arun Ramachandran as the President of IDA Trivandrum branch was held on Sunday, January 21st at Hotel Fortune South Park from 6pm-10pm.

Shri. M.Vijayakumar, Former Speaker-Kerala Legislative assembly was the Chief Guest. Dr.SabuKurian, Imm: Past President, IDA Kerala State was the Guest of Honour. Dr.SureshKumar, Hon.Secretary, IDA Kerala State also attended the ceremony. Dr. Aseem H, Hon.Secretary delivered the vote of thanks.

CDE Programmes: The First CDE Programme of IDA Trivandrum branch on the Topic: "Master Strokes of Advanced GeneralDental Practices" by Dr.P.K. Anand was held on Sunday, February 25th at Hotel SP Grand Days, Trivandrum from 10am-5pm. 112 members attended the programme.

CDH Activities: 1. IDA Trivandrum branch started it's CDH campaign on 11.02.2018, a Dental camp was organized by the CDH Wing of IDA Trivandrum in Murukan Colony, Edappazhanji in association with Satyasaisevasamithi.

2. A Dental Camp was conducted at Government Model School LPS, Thycaud by CDH Wing of IDA, Trivandrum Branch on 15-02-2018. The Dental Camp was formally inaugurated by a former student of the school, Cine actor Sri.Nandu. An awareness class was conducted for the students & teachers by DrArun Ramachandran.

3. On the Occasion of "Life Style Day" on February 17th 2018, IDA in association with YES Bank conducted Oral screening camps in all YES Bank branches nationwide. IDA, Trivandrum Branch CDH Wing also conducted an Oral Screening Camp in YES Bank branch in Spencer Junction, Trivandrum.

4. CDH wing of IDA Trivandrum along with Sevabharathi conducted an Oral screening camp &Oral awareness talk on Sunday February 18th 2018 at Rajajinagar, Chengalchoola Colony from 10 AM -1PM. Awareness talk was given by Dr. Arun Ramachandran.

Dr. Ayyappan, Dr.Preetha, Dr. Anish Mohammed, Dr.Sreejith, Dr. Arjun, Dr.Sujith, Dr. Vishnu Gopal, Dr.Sajayan, Dr. Aseem H & Capt. Dr. Pramod participated in the camp. An Endocrinologist DrRajmohan also participated in the camp for medical checkup.

5. Dental awareness Classes & Dental Screening Camps were carried out by CDH Wing of IDA Trivandrum Branch at Tribal Settlement area in Kotoor Forest suburbs of Trivandrum on 22-02-2018. One of our IDA Executive member, Dr. Ayyappan donated a Dental chair to the Tribal Girls Orphanage.

Dental Screening was carried out in the Agasthyakuteeram BalikaSadanam Tribal Girls Orphanage and Oral health kits were distributed. A Dental awareness class was conducted by Dr. Preetha for the inmates of the Orphanage. Dental Screening was carried out for the children in Pothode Tribal School. DrAyyappan, DrPreetha and CaptDrPramod participated in the programme.

6. A Dental Awareness Class and Oral Screening for 98 children were carried out at Government LPS, Mudavanmugal on 22-02-2018 by Dr. Kamalalekshmy of the CDH Wing of IDA, Trivandrum Branch.

CLINICAL CLUB: The First Clinical Club for 2018 was conducted on Tuesday, February 13th at IDA Hall, Innu apartments from 8pm-9pm by Dr. Dixit Raj MDS on the topic "Button down your treatments with the supporting tissues"-a Perio insight into general practice.

WOMEN'S COUNCIL ACTIVITY: The First Women's Council meeting of IDA Trivandrum branch was held on Sunday, February 18th at IDA Hall, Innu apartments along with a talk on the Topic:"Women in Dentistry". An interactive session with the senior lady dentists of Trivandrum.40 lady members attended the programme.

EXECUTIVE COMMITTEE MEETINGS: The First Executive committee meeting of IDA Trivandrum branch was held on Thursday, February 1st at IDA Hall, Innu apartments.

The Second Executive committee meeting of IDA Trivandrum branch was held on Wednesday, February 28th at IDA Hall, Innu apartments.

AWARDS: IDA Trivandrum branch received 3 National Awards-2017 in various categories

1. Dr.Sony Thomas (IDA Runners up Trophy)- Best Local Branch President; 2. Appreciation Award-Maximum Membership Growth Award; 3. Appreciation Award-National Anti-Tobacco Day-New Initiative

IDA Trivandrum branch received 5 State Awards-2017 in various categories

1. Third Best Local Branch; 2. Second Best Branch President-Dr. Sony Thomas; 3. Special Appreciation-CDH Activity; 4. HOPE; 5. Third Best Women's Dental Council

Eranadu Branch

IDA Eranad's Women's day special programs

IDA Eranad conductd two DENTAL CAMPS & Two Oral Awarness Classes for School Students and Mothers

•Women's Day programs officially Inagurated ny Dr Asainar, Hon. Secreatary of IDA Eranad @AMLP SCHOOL, Wandoor

•Inaguration of Oral Hygien Kits distribution for students and Mothers are Inaguruted by Dr. SHAMNA SABU,
WDC Chairperson, IDA Eranad

•Oral Awarness Classes done for Mothers By Dr Sabu Rahiman MDS @Wandoor, Dr Yahiya MDS @Perinthalmanna
Dr Fousiya, Dr sajna javed and Dr Shabeer did oral screening
IDA Eranadu

we Celebrated the DENTIST DAY on March 6th The Celebration startd with a free dental check up camp At Edakkara 1.30 Pm

The Same day evening we honourd the first President of IDA Eranad Dr Chiramel Joy thomas@Manjeri

Manjeri Muncipal Chairperson Smt.VM SUBAIDA was Chief gust

IDA ERANAD conducted Selfie contest as part of the Dentist day, winners:

Nedumbassery Branch

Ida Nedumbassery, branch installation ceremony was done on 14 th, January 2018 by state president Dr Ciju A Paulose.

Dr Teny Mathew was elected as the president, Dr Seby the secretary and Dr Toffee paul, treasurer for the year 2018.

The release of our journal reflections was also done on the same day by state CDH chairman Dr Rajesh.v.

Meeting was followed by ganamela and dinner.

Wayanad Branch

The 13th Installation ceremony of IDA branch was held on 4th February 2018 Sunday, at Kabani Resorts, Pulpally. Mr. N Mohandas (Retired Chief Election Commissioner of Kerala) was the chief guest. Dr. Ciju A Paulose, President IDA Kerala State, was the guest of honour and Dr.Suresh Kumar(Secretary, IDA Kerala State) the keynote speaker.

Dr. Ciju A Paulose installed the new President Dr.Rajesh T Jose, followed by installation of new office bearers.

Dr.Rajesh T Jose briefed about the new projects on Oral cancer screening and school dental education. The meeting was then adjourned for dinner and entertainment programmes.

FIRST EXECUTIVE COMMITTEE MEETING

First executive committe meeting was held on 14th February 2018 at Hotel Rest Inn, Kenichira.

The Committee decided to celebrate Women's day and Dentist's day.

Coastal Malabar Branch

The installation ceremony was held on 3rd december 2017 at hotel juju international payyanur. Dr P.K Jayakrishnan welcomed the gathering and secretary Dr Sreejan C.K presented the report of activities for the last ida year. Dr ranjith raveendran introduced incoming president Dr. A.V. Madhusoothanan and Dr Rajesh .E installed Dr. A.V. Madhusoothanan as new president of our branch.

The chief guest for the function was Dr P.P. Venugopalan, former dean, kannur medical college and dr santhosh sreedhar, national vice president, ida was the guest of honour. Hon. Secretary Dr Sreejan C.K proposed the vote of thanks.

Cde programme – Conducted 2 cde programmes on 1st january 2018 and 7th february 2018.

The faculty for the 1st cde was Dr M.S.Prathap, prof, dept of conseravtive dentistry, yenepoya dental college and topic was "post endodontic restorations". Dr K. Sudhakaran, principal pariyaram medical college inagurated the cde club.

The faculty for the 2nd cde programme was Dr Joby peter, prof& hod, dept of pedodontics, malabar dental college and topic was "peadiatric endodontics for general practitioners". The faculty spoke briefly about the various pulp therapies dr ahamed shafi handed over the memento and Dr Sreejan C.K presented the certificate to the faculty.

CDH activities: Conducted 3 cdh activities on 10th december 2017 at akashaparavakkal old age home, kanhangad, on 17th december 2017 at tagore memorial library, kunnaru, payyanur and on 10th january 2018 at nss up school, kankol, payyanur. Minor treatment procedures like extractions and restorations were carried out and free samples of toothpaste and tooth brush with oral hygiene pamphlets were distributed to the patients.

Association News

Thrissur Branch

January: The Annual General Body Meeting was held at Hotel Elite International on 3rd January 2018. A total of 85 members were in attendance

Installation of the New President, Dr. Davis Thomas and his team was done, the Oath being read by Dr. PG Francis.

CDH Activity: A Dental Screening Camp was conducted Venue: Vidya Engineering College, Thalakkottukara, Thrissur

Date: 25th January 2018.

Members participated: Dr. Davis Thomas, Dr. Arjun V Dev (CDH Convenor), Dr. Alex Mathew, Dr. Nisesh Parayil, Dr. Rajeev KG, Dr. Vijith J, Dr. Nayana Gopalakrishnan, Dr. Franil Francis.

Total No of people screened: 300

Other Activities: Half Marathon "Run Thrissur Run"- 21Km, 10Km, 5 Km

Organized by: Round Table 88 Date: 20th January 2018

Motto: For Health

Members participated: Dr. Davis Thomas, Dr. Namitha Prasad, Dr. Martin Wadakkan, Dr. Ajmal Fasaludeen, Dr. Leeson John, and Dr. Tameem A

February:

CDH Activity

A dental Screening camp was conducted

Venue: Al Fitrah Pre-school, Kokkalai, Thrissur

Date: 22nd February

Members Participated: Dr. Davis Thomas, Dr. ArjunV Dev (CDH Convenor), Dr. Ashitha Shijar, Dr. Shijar, Dr. Tameem A

Total No of students screened: 40




Kasargod Branch

1. Executive committee meeting was held on 2nd January 2018, at IMA hall Kasargod.

Issues and programmes to be conducted in the year 2018 were discussed.

2. Installation ceremony was conducted for the office bearers of 2018 on 12th January 2018,

Friday, at IMA hall Kasargod

3. CDE programme was conducted on Orthodontics For You on 12th January 2018, Friday at

IMA hall Kasargod. Total of 51 members participated in the programme.



Attingal Branch

INSTALLATION PROGRAMME

IDA Attingal Branch conducted it's installation programme on17th December 2017. Dr Ramesh S has installed as new President.

Our Chief Guest was Dr Sabu Kurien, President of IDA KSB. Our Guests of Honour were Dr Anitha Balan, Principal GDC Trivandrum, Dr Ciju A Poulose, President Elect IDA KSB and Dr Suresh Kumar G Hon: Secretary of IDA KSB.

CDE: Conducted one CDE programme on11 the Feb.

Topic: Overview on Dental Implantology.

Faculties: Dr Sherin A Khalam and Dr Febel Huda. 70 participants attended

CDH: Observed national dentist day in two schools

1)Mulamana VHSS, Vamanapuram, Trivandrum.

2)Navabharath English Medium Higher Secondary School

Observed World Cancer Day at Vinayaka English Medium School.

Conducted two more camps, one at Sree Narayana College, Chempazhanthy and another at KVUPS, Pangode.

WOMEN'S WING: Women's Wing of IDA Attingal Branch conducted a camp at Tribal Nursery School at Anappara.

IDA Attingal Branch CDH wing and Women's Wing have jointly honoured Sis:Lissy and her team at Snehatheeram Charitable society, Mithirmala on 8 th March for their untiring efforts to taking care of 120 mentally ill ladies.

Kodungallur Branch

Installation ceremony & Family meet 2018

The installation ceremony and family meet Of IDA Kodungallur was held on 13 th January 2018 at Seashore Residency, Kodungallur. Dr Sabu Kurien IDA Kerala State president was the chief guest. Dr Sunitha Pradheeksh, First Lady President of IDA Kodungallur branch and other office bearers were installed.

Executive Committee Meeting.

1, First & executive meeting was held on 24/01/2018 & 21/02/2018at Hotel Relax Muzris,21 members attended

2, Third executive meeting along with Dentists day Celebrations was held on 06 /03/2018 at Lions Club Hall, Irinjalakuda,22members attended.

CDE Program

First CDE program along with the first General body meeting was held at IMA Hall, Kodungallur on 8/02/2018

Faculty: -Dr Gopu Mds, Pedodontics Topic: - "Managent of a problamatic Child in the Dental Office". It was attended by 66 doctors.

3 credit points were allotted by the dental council.

CDH Program: -

Our branch conducted 4 CDH activities which included 4 dental check up camps and dental awareness class with free oral hygiene kit distribution. Ida kodungallur along with shalabam trust and Malabar Dental College conducted treatment camps.

Our members Dr Plato Palathingal and Dr Laju Mahesh bagged the IDA excellence award constituted by IDA Kerala state.

Pathanamthitta Branch

Installation 2018: Installation of Ida Pathanamthitta branch for the year 2018 was held on 7 January 2018 at Hotel Hills Park Pathanamthitta. Chief guest to the program was Dr Ciju Paulose, president of Indian Association, Kerala branch. Dr Suresh Kumar was the guest of honour. Dr Ciju paulose inaugurated the program and activities for the year 2018. President Dr Hema Rajesh installed the newly elected president Dr Sujith PR and his team of office bearers. Almost 100 individuals attended the program including branch members and their families. Neighbouring branch members, special invitees from various clubs like lions and JCI, members from neighbouring branches had made their presence to make the event a grand success the meeting was followed by dinner Fellowship and where is cultural programs by members and their families.

Executive meeting: We had our executive meeting on January 22nd. Had full attendance for that meeting.

CDE: We conducted a CDE on February 11th and will a have upcoming CDE on March 18th. February CDE was taken by Dr Civy Pulayath as staff training program. Had a good attendance for the program. We also conducted cooking class for our womens wing on the same day.

CDH: We conducted two CDh program. The first CDH program was at SNVUPS Kumbazha. The second one was conducted at govt LP school, chittar.

Dental Excellence Award: Dr Praveen kumar and Dr Shibi Jose were nominated from our branch for the awards.

Quilon Branch

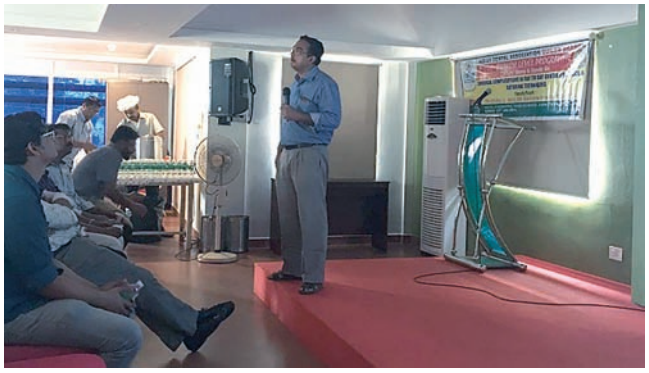
JANUARY: The first CDH programme of IDA Quilon branch, a medical and dental check up camp, highlighted with an awareness talk on " the importance of dental care in children" by Dr Aswathy .R (Consultant Pedodontist) was conducted for 141 student police cadets (SPC), parents & teachers on 19th January'18 at Meenakshi Vilasam Govt.Vocational Higher Secondary school, Punthalathazham, Qln from 9.00 am to 2.30 pm. Appropriate diet plan, Oral hygiene instructions, proper brushing techniques were discussed during the interactive session. The chief guest of the programme was Sri Ashokan - Crime branch ACP & District Nodal Officer (SPC). Free samples of toothpastes were distributed. The programme was graced by the presence of Past State Secretary Dr Shibu Rajagopal

IDA Quilon presented two eminent faculties who delivered two brilliant lectures. The first faculty "Dr Sooraj S, Consultant-KIMS hospital, Trivandrum, delivered a extensive lecture on the topic " SURGICAL COMPLICATIONS IN DAY TO DAY DENTAL PRACTICE" & the second faculty for the post noon session: " Dr Mathew P Varghese, Assistant professor PMS Dental College Trivandrum delivered a lecture on the topic " SUTURING TECHNIQUES & TRANSALVEOLAR EXODONTIA"

FEBRUARY: The second CDH Programme, of IDA Quilon branch was conducted on 22nd February 2018 at Holy Cross Pratheeksha Special School (Rehabilitation centre), Neendakara, in relevance to CHILDREN'S MENTAL HEALTH WEEK. Four activities were conducted: A Dental Check Up Camp, Oral health kit distribution, a Medical Check up camp & a Counselling Session by renowned Consultant Psychologist Sri Khan Karicode (consultant Pscychologist on Radio Benziger (FM 108.7) & counsellor at Family Court, Quilon) for the parents of children with special needs.

The programme was graced with the presence of Dr Biju Kumar SD (past VP KSB)& had the active participation of 6 doctors, 45 students (4 yrs to 45 yrs), teachers & staff of school

The second programme of IDA WDC, Quilon branch was conducted on 22nd February 2018 at Holy Cross Pratheeksha Special School (Rehabilitation centre), Neendakara in relevance to CHILDREN'S MENTAL HEALTH WEEK .



Palakkad Branch

Installation Ceremony of IDA Palakkad district branch for the year 2017-18 was held on January 2018 at Hotel Udaya 8pm. IDA Kerala state Honorable secretary Dr Suresh was the chief guest for this function.

IDA Palakkad district branch celebrated dentist's day on March 6th, Tuesday at Hotel Sayoojyam Residency from 7pm onwards. Senior dentist Dr Sumathy Chandru was honored, followed by a fantastic Inspirational talk by Dr Alex Kurian.

CDE: - The First CDE of the year "Introduction to Fixed Orthodontics"was held on February 18th, Sunday by Dr Neeraj MDS and Dr Mohammed Harris MDS

CDH: - January 2018

Our CDH program was kick started with Dental Screening camp in Bharat Matha High school followed by a teachers training program

CDH:- February 2018

The WDC wing of our branch gave a Cancer awareness class at Murali Welfare School on World Cancer Day.

A Motivational talk 'Brain Mystery' was organized by WDC for the benefit of Exam Going Batch at Mission School which was attended by more than 500 SSLC students

Valentine's Day Celebration for spreading the essence of love to innocent smiles was organized at Govt LP School with donation of Lunch Plates, Toothpaste and Sweets to all students, followed by a Dental Awareness Class.

CDH:- March 2018

On Account of Dentist Day Celebration on March 6th Dental Screening and Awareness Class was given to 10 Aganvadis around Palakkad district.

Malappuram Branch

IDA MALAPPURAM branch installation ceremony for the year 2018 was held on january21 Sunday at sangam auditorium tirur. IDA Kerala State branch president Dr Ciju V Paulose was the chief guest and installing officer for this function. Tirur municipal chairperson Adv Gireesh was the guest of honour. The president Dranilkuriyakkose addressed the gathering and requested the full hearted support of each and every member, he detailed about the future programmes and action plan for 2018. HON Secretary Dr Mahesh k joy deliverd vote of thanks

The programme was well attended by more than 60 ida members with their families

IDA MALAPPURAM conducted two executive committee meeting

The cdh wing of idamalappuram conducted 5 screenigand awareness camps at various parts of district

THE DENTISTS DAY OBSERVATION was held on march 6 at old age home tavanur. Free treatment and drugs were distributed for the inmates of old age home tavanur. Theprogrammes were conducted at the charity dental clinic installed and run by the idamalappuram branch

On the same day a free dental checkup camp for the students of palathingalamupschool, arund 300 students were examined. The inauguration of the dental camp was done by the president Dranilkuriyakkose

MIDA LOTUS THE WOMENS WING of idamalappuram celebrated the womwens day in march 8 at meswomens college tirur. The president Dranilkuriyakkoseingurated the function, Drarafathuneesa given the message of womensday. Druthara give the awareness class. Drmuthaz had come up with an art exhibition, followed by a free dental check up camps for the students.

Alappuzha Branch

The installation ceremony of the new office bearers for the year 2017-18 under the leadership of President Dr Aji Sarasan was organized at the Majlis Muziris hall, East of Powerhouse bridge, Alappuzha on 14.01.2018 from 7pm with Hon. Secretary IDA Kerala State Dr Suresh Kumar G as the chief guest.

The first CDE programme " Kids Dentistry, No Kidding" was conducted on 04.02.2018 at Rotary Hall Greencity, S L Puram, Kanjikkuzhy, Alappuzha by Dr Navya Menon MDS

Report of CDH Activities of IDA Alappuzha

The first CDH Activity of IDA Alappuzha was a screening camp conducted at TD LP school on 31.01.2018 from 9:30 Am onwards. Dr Aji Sarasan the President of IDA Alappuzha, DR Jeevesh P K, Hon Treasurer and Dr Vishnu Prasad, CDH Convener participated in the camp.

Second CDH Activity

It was organized by IDA Alappuzha on 04.02.2018 World cancer day with a Talk on " Cancer Victims and how to help them face the reality" by Dr Prasannachandran rtd DMO. And also a caption message writing by the members of the branch.

The THIRD CDH Activity of IDA Alappuzha

We conducted an Oral Cancer awareness program at the venue of "KAlolsavam " fot mentally challenged children organized by The Alappuzha District Parents Association for Mentally Handicapped Children at SDV Girls High School on 10.02.2018. Dr Aji Sarasan, Dr Mili James, Dr Prasanth Jacob Cherian, Dr Jeevesh P K and Dr Sarath kumar R participated in the oral health awareness campaign.

The dentist day celebration of IDA Alappuzha was conducted on 6.03.2018 in association with Government Dental College Alappuzha as poster presentation and public awareness campaign at private bus stand and S D college.

The womens day celebration of ida Alappuzha was organized at Rotary Hall of Cherthala Town and practicing Lady dental Surgeons were awarded a certificatefor the same. Dr Anjana G, IDA Kerala State Editor was the chief guest of the program. We also conducted a short clinical club along with this on the topic of Biological width and Dr Priya Rajendran was the faculty for the program.

Association News

Tripunithura Branch

Installation of Dr Kunal Viswam and team was on January 15th with Dr. Sabu K. R as the Secretary and Dr. Anoop Kumar as the Treasurer. Tripunithura MLA Adv. M. Swaraj was the chief guest for the installation programme. There were Cultural programmes followed by DJ and dinner.

IDA Tripunithura celebrated Dentist Day on March 6th by honouring our first Kerala State President Dr. M. K. James.

Then at Toc-H Institute of Science and Technology, Arakunnam the Dentist Day celebration was inaugurated by our state CDH Chairman Dr. Joby Parapuram. There was an interactive session and awareness classes were taken by Dr. Civy and Dr. Kavita, which was followed by smiling competition for the students.

IDA Tripunithura represented for the state football match held at Trissur on March 18th.

We conducted four CDH activities and the WDC conducted four programmes.

Our President Dr. Kunal and Secretary Dr. Sabu K. R. had attended the President-Secretary seminar on February 24th at Muvattupuzha and also for the 1st State

Executive Meeting on February 25th.

Malabar Branch

1. Installation Ceremony of New Office Bearers: Installation of the office bearers of IDA MALABAR Branch 2017 -18 was held on 7th January 2018 at Hotel Malabar Palace Kozhikode at 10.30am. Dr.Mehul R Mahesh was installed as the new president of IDA Malabar Branch by Dr.SabuKurian (Hon President IDA Kerala State) was the Chief Guest and installation officer.Vote of Thanks were delivered by Dr. Hussain Manikfan Hon. Secretary IDA Malabar branch followed by lunch.

2, CDH No.1(06/01/18): Dental Check up Camp, awareness class and distribution of dental kit was done at MMLP School Parappil, Feroke, Kozhikode.

3. CDH No.2 (10/01/18): IDA Malabar conducted Oral Screening, Awareness class and Distribution of Dental Kits at Love Shore School for Diferently Abled at Mukkam Kozhikode.

4. CDH No.3 (10/01/18): IDA Malabar conducted Oral Screening, Awareness class at Devagiri AMI Public School, Kozhikode.

5. CDE No.1. Basic Life Support (21/01/18): First CDE of IDA Malabar branch 2018 was held on 21/01/18 at IDA Hall Ashokapuram Kozhikode. Topic of the CDE was Basic Life Support and Faculty was Dr. FabithMoidheen (Chief Dept. of Emergency Medicine Baby Memmorial Hospital Kozhikode.

6. Launching of PaalPunchiri (22/01/18): The project paalPunchiri was launched by IDA Malabar on 22/01/18 with the challenge of completing at least Phase I, by March 6th our Dentist Day. Phase I included the Kozhikode rural segment of ICDS (Integrated Child Development Scheme) which had around 180 Anganvadis spread across 3 panchayaths and 1 municipality.

7, CDH No.4 Observation of World Cancer Day (04/02/18): IDA Malabar observes world cancer day by conducting Oral Cancer Screening and awareness class to the people of Payannakal atGovt Vocational Higher Scondary School Payanakkal.

8, CDH No.5 (04/02/18): IDA Malabar conducted Oral Screening and awareness class at Devagiri CMI Public School on 04/02/18.

9. CDH No.6 (13/02/18): IDA Malabar conducted dental check up and awareness class at Hope Shore Special School Kadalundi. Dental health kits were didtributed to students.

10. Observation of Life Style Day (17/02/18): IDA Malabar branch in association with IDA Head office and Yes Bank conducted oral screening camp for the staff and walk in costumers at Yes bank Simax Tower Kozhikode.

11. Inaguration of MDS NEET Coaching class second Batch (18/02/18): MDS NEET coaching class for second batch was inaugurated at IDA hall by Dr. Kunjamma Thomas followed by honouring of last year topper Dr. Amritha Ravindran and orientation session on NEET preparation – Methods and Obstacles.

12, CDH No.7 (25/02/18): IDA Malabar in association with JCI Kondoty Chapter, conducted dental check up camp, awareness class and distributed dental health kit for the children with special needs at Global integrated Rehabilitation and development Centre Kondotty.

13. DENTIST DAY OBSERVATIONS

IDA Malabar observes Dentist Day by conducting four programmes,

CDH No.8 Orientation Class on Oral health care for the staff of Govt. Mental Health Centre Kozhikode. The programme was inaugurated by Dr. Kunjamma Thomas and orientation class was taken by Dr. Mehula R Mahesh.

CDH No.9 Dental Checkup Camp and Awareness class at Chevayur AUP School Kozhikode. Around 400 students were eaxamined.

14, CDH No.10 (08/03/18): IDA Malabar in association with dept. Of community medicine Govt Dental College Calicut conducted dental checkup, awareness class, treatment and distribution of dental health club at Love shore school Mukkam.

15, Women's Day Celebrations: IDA Women's Dental Council Malabar branch hosted IDA Kerala State Women's day celebrations by conducting four programmes.

Tellicherry Branch

INSTALLATION OF THE NEW OFFICE BEARERS 2018

Installation ceremony was held on 10th february 2018 at ima hall thalassery. programme started at 7pm. Dr Joseph C.C, past IDA Hope secretary was the chief guest. Dr. Latha johny welcomed the gathering. Dr. Joseph C.C installed Dr. Prathima as the new president of ida thalassery branch. Other officer bearers were also installed. Felicitations were given by Dr. abdul samad and Dr.salam. Mementos and gifts were presented. Dr. Libin Chandra, the secretary of IDA tellicherry delivered the vote of thanks, followed by entertainment programmes by the students of kannur dental college, music night and dinner. It was a well attended function by our members and family.

CDH ACTIVITIES: Two dental camps were held on 4th march at Mannayad LP School and Panoor UP school. Dental awareness class and oral screening were held and oral hygiene kit was distributed. it was combined with IMA tellicherry and other local athorities.following doctors attended the camp Dr Prathima sumal, Dr Libin chandra, Dr Rani, Dr Sunith, Dr Jibin, Dr Ali, Dr Shaheen niaz, Dr Jamsheer, Dr Athira, Dr. Anju and Dr sahla. In total 400 patients were examined in both camps.

Kottarakkara Branch

1. Installation of Dr Santhosh K Tharian & his team on 14th January 2018, at hotel Shilpa Regency KTR. Dr Biju Kumar S D, State VP was the chief guest & kalabhavan Prajod cine artist was the guest of honour.

2. Dental check up camp at GENIUS CENTRAL SCHOOL Thadikkadu on 14th February 2018.

3.Amazing assistants dental assistants training programme by Dr Civy V Pulayath on 4th March at Hotel Shilpa Regency KTR

4.1st CDE -TIPS and TRICKS IN PRACTICE MANAGEMENT by Dr Civy V Pulayath on 4th March at Hotel Shilpa Regency KTR

5. Dentist day celebration held at PROVIDENCE HOME, ELAMPAL, PUNALUR.

6. Women's day celebration held at SNEHATHEERAM CHARITABLE SOCIETY, VILAKKUDY, KOTTARAKARA.

Central Kerala Kottayam Branch

We conducted our installation on 07/01/2018 at Kottayam Club Annex Kumarakom. DrBabu Sebastian Vice Chairman MG University was the chief guest of the day and Dr SubashMadavan 1st Vice President of IDA Kerala State was the Guest of Honour& the installing officer. Installation programme was well attended.

CDE: First CDE on 14/01/2018 on Invisible Aesthetics by DrSantoshRavindran. It was a full day programme 110 members attended the CDE.

Second CDE on 25/02/2018 on Post& Core ByDr P C Jacob. It was a full day programme.

Third CDE conducted on 11/03/2018 by DrLeeba Varghese on Isolation in daily dental Practice was a full day programe

CDH: We conducted eight CDH activities till now in different schools and orphanages in and around Kottayam.

Dentist Day celebrations

- Started with a flag hosting of Central Kerala Kottayam at Pala
- Dental check up and awareness programme at FIRE FORCE KOTTAYAM at 9am
- Dental treatment camp at MARY SADANAM PALA at 10am
- Dental check up and awareness program at MUNICIPAL BUS STAND KOTTAYAM at 2pm
- Honouring senior dental surgeons who has completed 45 years in dentistry with a banquet night and dinner at 8 30pm

Association News

Kochi Branch

1. The AGM & Installation of IDA Kochi branch was done in a grand ceremony on December 3rd 2017 in the presence of Hibi Eden, MLA and celebrity guests Mr Sajoy Varghese and Ms Prayaga Martin and guest of Honors Dr Sabu Kurien, President IDA kerala state, Dr Ciju A Paulose, President Elect IDA Kerala State and DR O V Sanal, Member, Kerala Dental Council,

Dr Arun Babu took over as the president from Dr Anjana G, with Dr Balu Soman as the Secretary and Dr Ajith P as the treasurer.

2. IDA Kochi hosted the 50th Kerala State Dental Conference, Suvarnolsavam on the 26th, 27th and 28th of January, 2018 at The Bolgatty Palace Hotel, Kochi. It was inaugurated by the Hon, Chief Justice of the Kerala High court, Jayashankar Nambiar. It was a grand event with over 2500 registrations.

3. CDH Activities: IDA Kochi Conducted 6 Check up and treatment camps which benefitted about 350 patients at Maradu, in association with Mithra equal opportunity trust, at Palluruthy Snehabhavan, Saraswathi Vidya Mandhir Mattancheri, Sree Dhanvanthari Hall, Palluruthy Veli, and at Palluruthy with lions club.

Oral health awareness day: Check up camp at Yes bank, Vytilla and M G Road branches

Dentist day Celebration and check up camp @ Palluruthy relief settlement

Ida Kochi branch conducted it's Dentist day program by organizing a free dental check up camp for inmates of Palluruthy relief settlement which is a mental asylum.

40 people benefited from this, medicine were also provided

Thiruvalla Branch

The Installation Ceremony of Ida was held on November 26th 2017 at Hotel Club 7, Thiruvalla. Dr. K.N. Thomas was sworn in as President, Dr.Simon George as secretary and Dr. Thomas Jacob as Treasurer. The Chief guest was Dr. Sabu Kurian and Guest of honor was Dr.Shaji K Joseph. More than 80 members attended the function. It was followed by cultural programs and a sumptuous dinner. .

CHRISTMAS CAROLS-For the first time IDA Thiruvalla went for Christmas carol rounds on two days December 12th and December 14th. We were able to visit more than 35 houses of our members. A variety of Carol songs were sung by our members. The Carol rounds helped us to strengthen the bonds between the families of our members.

CDE PROGRAM: The first cde of Ida Thiruvalla was held on March 4th at Hotel Club 7 Thiruvalla. The Topic of the CDE was Pediatric Endodontics And Crowns-Faculty Dr.S Rupesh. The CDE was on procedures we do on a normal basis in our clinic. The Cde was very well appreciated. More than 70 members attended the Cde.

CDH PROGRAM: IDA Thiruvalla celebrated Dentist Day by conducting a mega Cdh program in the tribal areas at Attathodu on March 11th.Shri Raju Abraham MLA Inaugurated the function. Dr. K N Thomas presided over the function. State CDH Convenor Dr Joby J Parapuram, Program coordinator Dr. Saji Kurian, Past president Dr. Samuel K Ninan and Secretary Dr. Simon George and other dignitaries spoke on the occasion. 20 Litres of Drinking Water along with cans, Food kits and Clothes were personally given by hand by the 20 doctors who visited thier respective homes which was spread over an area of 15 kms near Attathodu. We could see the joy on their faces as they received these most Essential Basic Amenities. The full day program from morning to evening was covered by ACV Tv and will be telecast. I hope our kind Gesture will be an inspiration to others also.

IDA EXCELLENCE AWARDS

Dr. Rajeev simon K and Dr. Seema Joseph received the awards on march 10 th at muvattupuzha.

North Malabar Branch

The installation of new office bearers under the leadership of dr leena murali was conducted at Sunshine Heritage Kannur. Dr Santosh Sreedhar, national vicepresident was the chief guest and Dr Raveendranath, National CDE Chairman was guest of honour

The first executive meeting was convened on 5th february 2018 in which various sub committees were formed. The CDE and CDH conveners outlined their programmes for first three months. The editor planned to bring out a soft copy newsletter ' densinfo' quarterly

The first cde programme was conducted on 11th february 2018 on the topic "making a good impression-alginate" by dr mathai joseph k mds prosthodontics which was acredited with 6 KDC points.

The first CDH programme was conducted on 11th February 2018 at Pallikunnu, which was done by IDA North Malabar along with Pallikunnu residents association.

February 24th & 25th president and secretary attended preside -18 at moovattupuzha. The representatives to state attended the second state executive meeting.

The soft copy of "densinfo"newsletter was launched by Dr Faisal C P, as soft copy PDF file on 26th february

Second executive meeting was convened on 2nd March 2018 in which the membership growth, hope assure, CDE and CDH programmes, dentistday celebration and womens day celebrations were discussed. Two names were nominated for IDA excellence awards Dr Leena Murali and Dr Binujith Salvose respectively. It was decided to compete for the state football tournament

The dentist day celebrations were conducted on 6th March 2018. Prenoon sectionwas conducted in "Solace Mythri"old age home Kakkad Kannur. Dr Leena Murali, Dr Jayasree, Dr Reshma, Dr Mary Renjini,

Dr Lolitha, Dr Shyba, Dr Bhavya, Dr Anilkumar P K checked and screened the patients. Postnoon section was conducted in "Amalabhavan" were the patients were checked and screened by Dr Leena, Dr Jayasree, Dr Reshma, Dr Loliyha, Dr Shyba, Dr Shoma Anil, Dr Anilkumar P K, Dr Aswini, Dr Rajani Murali and Dr Anil Thunoli.

Womens day was celebrated on 8th March by having lunch with the kids of Asraya special school.

Dr Shoma Anil, Dr Mary Renjini and Dr Tameem. One day food was offered to "attazhakootam" food freezer Kannur.

Second CDE programme was conducted on 11th March 2018 at IMA hall Talap, Kannur on the topic "Esthetic & Post Endo Restorations, current choices, by Prof. Dr. Narasimhan Bharadwaj, Dept. of Conservative and Endodontic dentistry.

a remembrance,.....

Dr V M Veerabahu,
79 years, 1939-2018.
President- Indian Dental Association 2002-03,
Hon.Secretary Indian Dental, Association 1986-2001
Vice President - IDA Head Office – 1979
President- Tamilnadu State Branch
President- Coimbatore-Nilgiris Branch
Hon. Secretary - Tamilnadu State- 1973
Founder & Secretary - Coimbatore-Nilgiris
President Tamilnadu Dental Council

In the death of Dr. Dr V M Veerabahu on 27th March 2018 at coimbatore, IDA has lost one of its greatest leaders, one who was a source of inspiration to many a person. He was an amazing leader who will always be remembered him as a visionary, fighter, nurturer and a very resilient man with strong ethics. His courage and determination is something we will always carry with us .It is hard to find suitable words to pay a tribute to this truly remarkable leader.

After finishing his BDS from the Madras Medical College in 1960 he went on to become a member of the Indian Dental Association. The leader in him made him the founder of IDA Coimbatore in 1972. Within years, the very name Dr. Veerabahu became synonymous with everything about dentistry in in whole state of Tamil Nadu, and as a recognition for the determination and grit in him, became the Honorary Secretary of Tamil Nadu State. Dr Veerabahu was elected as the Vice-President of the IDA Head Office in 1979.

The year 1986 was indeed a remarkable year for him as he became the Honorary General Secretary of Indian Dental Association. Dr Veerabahu's presence and activities was felt at all levels in the association throughout the country. This commanding yet controversial leader held office for 3 terms (15 Years). He also made his mark in the international arena by representing IDA in various forums, His several trips abroad reaped fruit when the dream of FDI- International Dental Congress was hosted in India in 2004.

Most of us rather remember the voice (those loud orders) and the not bothered attitude against his detractors. He was a very passionate man towards IDA who was approachable to one and all. The IDA Trust building in Coimbatore is a culmination of a vision dear to his heart. It is indeed an immortal monument and an outstanding reflection of his illustrious career.

His novel approach in conducting low cost CDE programmes with distinguished academicians and clinicians was clearly the high point in his interaction with the members especially down south."A model worth emulating". Most of the acclaimed speakers of today owe it to him for the platform he had provided to them.

His last days clearly epitomised his attitude towards life and the factors that made him the bold and astute administrator that he was. It was no surprise that he had the resolve to overcome his prolonged ill health to the very end .

Late Dr Veerabahu is survived by his wife Smt.Kasthuri , Son Dr.Raja an Opthalmologist in UK and Dr Vani, A Dental Surgeon in Coimbatore.

"Death leaves a heartache no one can heal, love leaves a memory no one can steal."

IDA Kerala State salutes the services Dr VEERABAHU has contributed to the association and the profession.