47th Karnataka State & 6th Inter State Dental Conference
SMARTDENT 2019
dentistry in sugar city
Dec 12th - 15th | 2019
PES Engineering College, Mandya

SOUVENIR BOOK

Principal Sponsor
Colgate

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Message

I am glad to know that, INDIAN Dental Association Karnataka, Mandya branch is organising its "47th Karnataka state dental and 6th interstate dental conference" with theme "SMARTDENT" on 12th to 15th of December 2019 at PES Engineering college Mandya.

In the changing scenario of oral health care delivery, this is a welcome development in public dental health sector in India to share a very important responsibility, which makes it imparting for all of us to develop a comprehensive system of dental education, training and skill development so that we can assure the people in the most effective way. IDA with its reach all over the country, can do much by way of spreading the message of improved dental and health science.

I am sure that this scientific events and trade exhibition on this conference will attract a large number of delegates from every part of the country.

On this occasion as "ORAL HEALTH" is gate way for "OVERALL HEALTH", I wish IDA Conference a grand success at Mandya.

(Dr. M.V. Venkatesh)
Deputy Commissioner,
Mandya District, Mandya
Message from President

It gives me an immense pleasure and honor to be part of Karnataka IDA branch and serving as state president. I am proud and glad that Namma Mandya is hosting. 47th Karnataka state and 6th interstate conference, IDA Mandya has been working so hard and being so innovative in organizing this conference and setting up pre conference courses and scientific paper and poster presentations for all graduates and also Inviting amazing guest speakers who are going to speak on topics which will be helpful for the general dental practitioner's and also specialists.

I want to thank my very good friend Dr. Datta Mylavantham from USA Dr. Sandesh Mayekar and all other speakers who are my very good speakers. who have guided us in this conference and devoted their precious time, to make this conference a grand success.

I congratulate and wish IDA team members of Mandya Branch all the very best for all the upcoming endeavors.

Thank you,

Dr. H P Prakash
PRESIDENT
Co Chairperson
Message from President

I would like to congratulate IDA Mandya for organizing 47th State Dental Conference and 6th Interstate Dental Conference. I am glad to know such eminent speakers are coming and would like to thank all the sponsors for gratitude and active participation in the conference. I would like to wish you all the very best for the conference for the grand success. I really appreciate Dr.Prakash IDA state president KARNATAKA

For a wonderful work he has done in his Tenure

Regards,

Dr. Sudhakar
Message from Syndicate Member

I would like to congratulate IDA Mandya for organizing 47th State Dental Conference and 6th Interstate Dental Conference. I am glad to know that Sri Sri Sri Dr. Nirmalananda Swamiji is our chief guest for the conference and very eminent and international speaker Dr. Sandesh Mayakar and Mrs. Sandesh Mayakar by a private jet on his own. I appreciate their enthusiasm in spreading knowledge among the fraternity and many more eminent speakers are coming. I would like to wish you all the very best for the conference and wish them it be a grand success.

Regards,
Dr. Shivsharan
Member DCI
Syndicate Member
Message from Co-Chairman

Dear Friends,

It gives us immense pleasure and honor to extend a very warm and cordial invitation to you on the occasion of 46th state and 6th interstate dental Conference to be held at Mandya from 12th to 15th december 2019.

On behalf of the Indian Dental Association;Mandya branch we wish to welcome all the delegates and faculties from all over India and abroad to the sugar city in Mandya for this annual scientific extravaganza. Over the years, the science discussed in this annual event is appreciated by one and all.

The organizing team of Ida Mandya 2019 has taken a lot of effort in preparing the scientific program. We wish to congratulates them for putting it all together wonderfully. The conference is action packed with a galaxy of speakers from India and abroad. This will be a scientific feast to cherish for a lifetime.

We look forward to your whole hearted support and participation to make this conference a memorable experience for all of us.

With warm wishes

Dr. H R Arunananda

Co Chairperson
Warm greetings on behalf of IDA Mandya branch

The IDA Mandya branch is organising and hosting 47th Karnataka state & 6th interstate dental conference on 13-15 December, 2019 at PES Engineering college Mandya with a Theme of SMART DENTISTRY-2019. Our team is trying to make the biggest IDA event of the year. The team which has started and successfully gaining the dentist delegates registration by visiting to various IDA local branches in Karnataka and providing a great trade opportunity to all our trade partners and Exhibitors. As such big event is taking place at Mandya which is knowingly called as sugar city, even the delegates are most awaiting for the conference. To leave the mark of success our team is committed to make this event affluent for the delegates and an admirable business opportunity for dental material manufacturers, distributors and dental equipment dealers and pharmaceutical companies.

The venue PES Engineering college is technologically advanced, and state of art convention centre well located in the heart city centre of Mandya city covering the area about 35 acres. It boosts of top notch facilities and best services, interior technology and offerings at par with International standards. Exhibition is organised in the grand hall called Chowdaiah conventional hall with an covering area of 12000 sqft which is fully ventilated with all facilities and this shows the commitment of organising committee to settle for nothing less than the best for traders. Trade exhibitors can expect a good promotion and profit of the company as organizers totally respect their expectations and working thoroughly to satisfy traders. The registrations charges are kept in many categories this will ensure registrations in great numbers and footfall of about 1500 delegates is expected. We request all the traders to save the dates 13-15 December 2019.

All offers for sponsored scientific programme lectures, preconference courses) are invited and they will be considered on priority basis if received well in advance.

Assuring for our best cooperation and affluence attendance and the indelible business opportunity for our trade partners. At most we would like to tell our traders don't miss this conference.

We remain, yours sincerely
Dr. Suman Kalyan K
Organising Secretary
Speakers

Dr. Ramachandra Oration
Dr. Jagadeesh C
Smart Dentistry

International Speaker
Dr. Datta Malyavantham
Dream Practice - Vision to Reality

TEDX Speaker
Dr. Prakash H P
Digitalisation of Dentistry

Dr. Sandesh Mayker
Financial aspects in Dentistry and Practice Management

Dr. Girish Kumar R
Negligence in Dental Practice

Dr. Prafulla Thymathi
Never Changing Concepts in Clinical Dentistry

Dr. Jagadeesh C
Smart Dentistry

Dr. Prakash H P
Digitalisation of Dentistry

Dr. Ravindra Savdi
Never Changing Concepts in Clinical Dentistry

Dr. Girish Kumar R
Negligence in Dental Practice

Dr. Sagar Abichandani
Digital Smile Designing Achieving Beauty

Dr. Ashok L
Oral potentially Malignant Lesion What is your role?

Dr. Utkarsha
Metamorphosis... Transforming Yourself

Air CMDE Dr. Balakrishnan Jayan
Dental Sleep Medicine
Upper Airway Sleep Disorder - Dentistry’s Role

Dr. Veerendra Kumar S C
Cortical & Basal Implants

Dr. Sanjay Asnani
Simplify Immediate Implantology

Dr. Nilan Shetty
Breaking the Barriers A Paradigm shift in Orthodontics

Dr. Lingesh
BPS Dentures

Dr. Vintha Manjunath
A Blenders Pride
# 47th Karnataka State & 6th Inter State Dental Conference

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ANTIMICROBIAL POTENTIAL OF 20% ETHANOLIC PAPAYA LEAVES EXTRACT AGAINST CANDIDA ALBICANS AND ENTEROCOCCUS FAECALIS - AN IN-VITRO STUDY

Presenter - Dr Arathi Rao
Co-author: Ellana J Joseph, Karuna YM, Ramya Shenoy, Suprabha BS,

Context: Medicinal plants signify a rich source of antimicrobial agents. Plants are used medicinally in many countries and are sources of various potent and prevailing drugs. Carica papaya is a known medicinal plant in that it comprises constituents that can be used for therapeutic purposes.

Aim: To assess antimicrobial potential of 20% ethanolic papaya leaf extract against Candida albicans (C albicans) and Enterococcus faecalis (E faecalis). Settings and Design: Laboratory setting and Experimental design.

Methods and Material: In first part of study 20% ethanolic papaya leaf extract was prepared in the laboratory of Pharmacy College. 20% ethanolic papaya leaf extract was then subjected to microbiological assay to determine its zone of inhibition using Agar disk diffusion test and Minimum Inhibitory concentration (MIC) using Serial broth dilution method against C albicans, and E faecalis.

Results: 20% ethanolic papaya leaf extract showed: a) Maximum zone of inhibition of 12 mm against C albicans b) Maximum zone of inhibition of 12 mm against E faecalis. b) MIC of 2.5% and 1.25% against , Candida albicans and Enterococcus faecalis respectively.

Conclusion: 20% ethanolic papaya leaf extract possess antimicrobial potential against both pathogens used in the study.

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<td>Dr. Rajini M R, Dr. Jayachandra</td>
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<td>Dr. Satish Kumar S S, Dr. Venugopal Swamy, Dr. Santosh Kumar</td>
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Background: Secondary caries or recurrent caries is defined as a primary carious lesion detected at the margins of the existing restoration. The management of such caries effected restorations is by replacement or repair. Repair should be preferred over replacement as the strength of tooth reduces as a result of repeated replacement of restorations. Also, it would be a financial burden to the patient and time consuming for the dentist. Hence prevention of recurrence of carious lesion becomes an important step.

Aim of the study: To compare the microleakage in teeth restored using SDF and Dental Varnish under amalgam restoration.

Materials and Methods: 20 premolar teeth were used in the study. Class I cavity was prepared and restored using silver amalgam. In group 1 dental varnish was used under restoration and in group 2 silver diamine fluoride was used. All samples were tested for microleakage using methylene blue assay and evaluated under stereomicroscope.

Results: Group 1 samples showed minimal microleakage as compared to group 2 with p value *****
RESTORING THE UNRESTORABLE- A MULTRIX APPROACH; A CASE REPORT

Presenter - DR S.SUMALATHA

A CASE REPORT The main objective of all endodontic procedures is to remove the infected tissue and bacteria throughout the canal and obtain a hermetic seal between the periodontium and root canal foramina. ReRCT is indicated when the first root canal treatment has failed. Root perforations are an undesired complication of endodontic treatment which result in loss of integrity of the root, and adversely affect the prognosis of the treatment. It is an artificial opening in the tooth or its root, created by the clinician during entry to the canal system that results in a communication between the root canal and periodontal tissues. Most common cause of perforation is iatrogenic during or after root canal treatment. According to Arens and Torabinejad iatrogenic perforations occur due to lack of knowledge in dental anatomy, improper use of endodontic instruments, atypical tooth position in the dental arch etc. These root perforations complicate the treatment and if not properly addressed results in poor prognosis of the tooth. When this is not possible by an orthograde approach surgical technique is used to facilitate retrograde approach.

Results: This case report presents a successful management of root perforation, open apex and periapical pathology using a multimodal approach.
AN IN VITRO COMPARISON OF ANTIMICROBIAL EFFICACY OF TRIPLE ANTIBIOTIC PASTE, CALCIUM HYDROXIDE AND ACACIA NILOTICA (BABBULA) AGAINST ENTEROCOCCUS FAECALIS, STREPTOCOCCUS MUTANS AND CANDIDA ALBICANS AS INTRACANAL MEDICAMENTS.

Presenter - DR. PRERNA KEDIA

Aim: The aim of this study is to compare the antimicrobial efficacy of Triple antibiotic paste, Calcium hydroxide and Acacia nilotica (Babbula) against Enterococcus faecalis, Streptococcus mutans and Candida albicans as intracanal medicaments.

Materials and methods: The triple antibiotic paste mixture (metronidazole, ciprofloxacin and minocycline), calcium hydroxide, Acacia nilotica (Babbula) were weighed and mixed with polyethylene glycol and agar well diffusion method was employed to study the antimicrobial efficiency against Enterococcus faecalis, Streptococcus mutans and Candida albicans.

Results: All the intracanal medicaments showed zone of inhibition against Enterococcus faecalis, Streptococcus mutans and Candida albicans. Among all intracanal medicaments used in the study Triple antibiotic paste produced maximum zone of inhibition followed by Babbula and least by Calcium hydroxide.

Conclusions: Triple antibiotic paste showed the best antimicrobial efficacy followed by Babbula and least by Calcium hydroxide against Enterococcus faecalis, Streptococcus mutans and Candida albicans. More phytochemical studies need to be done. Further evaluation of concentrated extracts of Acacia nilotica (Babbula) could yield better results.

*****
IN-VITRO EVALUATION OF INTERMEDIATE IRRIGANTS FOR REMOVAL OF PARA CHLOROANILINE FROM THE ROOT CANALS

**Presenter** - Prithvi Shetty

**Co-author**: Dawood,

**Introduction**: The purpose of root canal treatment is to eliminate bacteria from the infected canal system and to prevent recontamination. The most common irrigant used in root canal treatment is sodium hypochlorite (NaOCl), and alternative irrigants such as 2% chlorhexidine gluconate (CHX) have been recommended as a less toxic alternative. Our study focuses on the spectrophotometric analysis of parachloroaniline (PCA) formed during the NaOCl and CHX are mixed and thereby using intermediate irrigant solutions to prevention of orange brown precipitate.

**Method**: Spectrophotometer works on the principle of Beer Lambert’s Law in which $\lambda$ max determination of PCA was done using a wavelength scan between 350nm to 550nm. Furthermore, three different intermediate irrigant solutions were tested to analyse the efficient solution system for prevention of the orange brown precipitate. Group A fresh lime juice extract, group B 14.25% EDTA and group C 70% ethanol was used.

**RESULTS**: Group A (lime group) exhibited the least OD value among all the experimental groups followed by group B (14.25% EDTA) and group C(70% Ethanol) and also statistically proved.

**CONCLUSION**: Spectrophotometric analysis showed freshly prepared lime juice extract was found to be very effective in prevention of PCA precipitate followed by 14.25% EDTA and 70% ethanol. Thus, this study gives and insight about the analysis and novel ways of prevention of PCA during root canal treatment.

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This paper reports a case of recurrent periapical cyst treated with cyst enucleation, apicoectomy, root end obturation using bio dentine wrt upper left lateral incisor and canine. For regeneration of alveolar bone alloplast combined with Advanced Platelet Rich Fibrin plus membrane was used. A PRF Plus Membrane was chosen because of its known advantages like wound healing promotion, graft stabilization, additional release of highest growth factor mainly platelet-derived growth factor (PDGF), transforming growth factor (TGF)-β1. The 45 year old patient was followed up at 2 weeks and 4 months. Radiographic evidence showed progressive refilling of defect with bone.
During the first half of the 20th century, silicates were the only aesthetic direct restorative materials. Owing to dissolution, discoloration, loss of translucency, lack of adequate mechanical properties and through principle breakthroughs in 1940s & 1950s they came to be replaced by acrylic resins, sophisticated to include fillers and coupling agents to improvise on their properties. Composite restorative materials represent one of the many successes of modern biomaterials research, since they replace biological tissues in both appearance and function. These advancements have transformed treatment plan, mechanical and biocompatible properties, technique, prognosis, research and patient satisfaction in clinical practice. Now there is an entire cosmos of composites that have come a long way from its inception. This paper reviews all the advancements in these composites since its beginning; the conventional composites to the recent advances in the material-Biomimetic dentin replacement materials (EverX flow), nanotechnology (Filtek supreme XTE) and hybrids; there is so much more to these polymers than ever imagined. All the variants are clinically imperative in dentistry, irrespective of the branch. This paper also contrasts the facets of individual polymers and accentuate on review of available literature on the biomimetic materials and restorative technique using short fiber reinforced composite and to give a comparative overview of this method with traditional composite techniques in terms of their biomechanical stability.

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Background: Endodontic treatment aims at complete disinfection of the entire root canal system antibacterial chemicals or disinfectants. Most commonly used intracanal irrigant having excellent antimicrobial property is NaOCl (sodium hypochlorite). However, it has unpleasant taste and is caustic to tissues that come in its contact. Current era revolves around the usage of herbal extracts. Phytomedicines have been used as anti-inflammatory, anti-biotic, analgesic, sedative and also as endodontic irrigants.

Aim of the study: The present study aims to evaluate the antimicrobial efficacy of herbal extracts namely Neem leaf extract, Tulsi leaf extract and Aloe Vera pulp extract to compare their efficacy with sodium hypochlorite using Enterococcus faecalis as the test organism.

Materials and Methods: Neem leaf extract, Tulsi extract, Aloe Vera extract and 3% Sodium hypochlorite were tested for their antimicrobial activity against Enterococcus faecalis (ATCC 29212) using agar diffusion method. The test was performed using brain heart infusion media and Enterococcus faecalis broth. Later zones of inhibition were measured for each extract. The antimicrobial efficacy is being analyzed statistically.

Results: Awaited. Clinical Significance: Alternative, inexpensive simple and effective means of sanitization of root canal system that is cheaper, safer and easily acceptable by the patients.

Guide: Dr. Geeta Hiremath, Dr. Deepa Hanamaraddi

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AIMS AND OBJECTIVES: The aims and objectives of the present study was to compare and evaluate the analgesic efficacy of transdermal patch and oral diclofenac sodium during postoperative period in patient undergoing single visit root canal treatment.

MATERIALS AND METHOD: A total of 40 patients requiring single visit root canal is grouped as follows: Group I : Diclofenac sodium 50 mg will be given before root canal . Group II : NuPatch® 100 mg will be placed for one day which is to be applied on the wrist region Group III :Placebo(multivitamin tablet) will be given before root canal Pain Intensity and pain relief were assessed preoperatively,postoperatively, six, twelve and twenty four hours using pain score chart consisting Visual Analog Scale by the respective patients

RESULT:The comparative evaluation of pain intensity at different time points among the three groups was found to be not significant on preoperative period The pain intensity among the groups was statistically significant on immediate postoperative period ,6 hours, 12 hours and 24 hrs .Diclofenac tablet group showed greater pain relief compared to transdermal patch and placebo.

CONCLUSION :Within the limitation of the study we concluded that oral diclofenac tablets showed both statistically and clinically better pain control when compared to transdermal patch.

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IRRIGATION ON ROOT CANAL THERAPY

Presenter - PRAVEEN D

Abstract:
Irrigation on Root canal therapy (ORAL PRESENTATION) Abstract: Irrigants play a major role in Root canal therapy. It's a major adjuvant in biomechanical preparation to flush out the organic components from three complex canal system. There are various irrigants from traditional normal saline to the most advanced MTAD solutions adapting various techniques.

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Minimum Invasive Dentistry

*Presenter - PALAK KAUL*

**Abstract:**
Minimum invasive dentistry is a modern dental approach for the management of caries, utilizing caries risk assessment and focusing on the early prevention and interception of the disease. Moving the focus away from the restoration of teeth allows the dentist to achieve maximum intervention with minimum invasive treatment. The four core principles of MID can be considered to be:

1. Recognition
2. Reduction
3. Regeneration
4. Repair.

**Results:** Effective implementation of MID involves integrating each of these four elements into patient assessment and treatment planning.

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Abstract:
It is well known that we face lots of problems due to our paper-based concept of clinical records. Hence, we bring out an upgraded attempt to get out of all this misery just by a single unique ‘smart card’. Inspiration being our banking system. This idea includes shifting of information from papers to a paperless database. Starting from simple demographic data to doctors’ authorisation and patients’ consent. “Making everything off the papers”.

Results: Solving all the problems from misplacing of files to fuss of searching it, making all of this just a click away! By doing so, it is not only a contribution to dentistry and welfare of the patient but it’s a huge contribution to save our mother Earth. Specialised approach and personalised care are our motto.

*****
Management of fractured tooth crown – A multidisciplinary approach in the Management of Ellis class III fracture - A Case report

Presenter - DR. KAAVYA SHANKER

Abstract:
Patient named Madhu Aged 30 yrs reported with fractured tooth crown, on examination it was found that the patient had a fall from his bike 20 days back. He had suffered from spinal cord injury and was admitted to a private hospital in Mysuru. After completing the spinal cord surgery he has reported to JSSDCH Mysuru. On intra oral examination it was found that he had 1.Ellis classIII fracture of 12 2. root fracture of 21 3. Ellis class VI fracture of 21 4.Ellis class VIII fracture of 11 5. fracture lines in maxillary anterior region of the- pre maxilla. RCT was done for 11 and post and core build done with composite resin and for 12 MTA was used as direct pulp capping agent. The avulsed crown was placed back using composite resin as luting agent. Extraction of 21 was done under Local Anesthesia. Crown lengthening was done in relation to 12, 11 and metal ceramic crowns were given. Patient was recalled and reviewed.

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'Effective usage of Delta/Theta waves as an anxiolytic agent in pre-operative dental procedures in pediatric patients’ - A review

**Presenter** - Maitreyi Shekhar Mahajan

**Co-author**: DR. Kaveri Hallikeri

**Abstract:**
Use of sound for healing dates back to very early records. From the early 1900’s, research has been undertaken to examine the effects of music and sound on the human physiology. The therapeutic effects of music have promoted the studies of effect of music on pain and anxiety on a variety of patient population. In most of these studies, listening to modulated sounds/music has resulted in decreased blood pressure, heart rate, and reduced anxiety in response to stressful procedures. A binaural beat is an auditory illusion perceived when two different pure-tone sine waves, both with frequencies lower than 1500 Hz, with less than a 40 Hz difference between them, are presented to a listener dichotically. Binaural beats perception originates in the inferior colliculus of the midbrain where the auditory signals are integrated. By exposing the brain to these waves that create low frequency tones in the EEG, these soundwaves create shifts in the brainwaves that promote states of deep relaxation. Preoperative anxiety is common and often very significant in children. Managing an anxious pediatric patient often becomes a difficult part of the procedure. This paper mainly showcases how Delta/Theta waves are a non-invasive, non-pharmacological, harmless method of inducing anxiolysis that can be used as an effective adjuvant with other behavior modification techniques used to manage pediatric cases in dental practice.

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"HAND-ARM VIBRATION ON DENTISTS WITH READY RECKONER: A CROSS SECTIONAL STUDY."

Presenter - DR. SHREYA ITTINA

Co-author - Dr. Shubhalakshmi, Dr. Apoorva

INTRODUCTION: Dentists employ vibrating hand-held tools during dental procedures, known as “hand pieces”. The hand-held drive unit can be fitted with a range of tool heads, for example for cavity preparations, crown preparations, burnishing etc. It is well known that prolonged (i.e. for several years) exposure to vibration is harmful, and can cause various types of hand dysfunction. Most common are a loss of sensibility, blanching and decreases grip force in the hands that is, Hand-Arm Vibration Syndrome (HAVS). The vibration spectra of hand pieces used in dentistry contain high frequency components. The high speed hand piece is a precision device for removal of tooth tissue efficiently and rapidly with no pressure, heat or vibration. The slow speed hand pieces resulted in heat, pressure and vibration mostly resulting in death of the pulp and the clinicians were looking for higher speeds not only to speed up the procedures but also to avoid injury to the pulp. Therefore, Hand and finger dysfunctions and a high relative risk of getting a vibration injury have been reported among dentists.

AIM: To study the daily vibration exposure experienced by the dentists while using the vibrating hand-held tool during the dental procedure.

OBJECTIVE: • To understand the vibration transmission and the health risks among the dentists who are exposed to vibrating hand-held tools on a daily basis. • To analyze the values of vibration magnitude and duration of the vibrating tool using the exposure point system. • To determine the exposure action value & exposure limit value by the Ready Reckoner.

METHODS: Source of data: A cross sectional study will be conducted among the dentists above 10 years of working experience in and around Mangalore, Karnataka, India. Method of data collection: Data will be collected using a questionnaire which will be developed and checked for face validity. Google forms will be used and Google form link will be sent to the dentists to answer the 16-item questionnaire with close-ended questions designed to assess the perceptions of the dentist and the ethical implications involved. The respondents are required to grade their responses on a 2 point scale with the options yes and no. The values attained will be analyzed through the exposure point system. The study will estimate the dentist’s daily exposure for comparison with ELV and EAV using the Ready Reckoner. Sampling Method: Based on the study conducted by S.H.Bylund, L.Burström, A.Knutsson (April 2002) assuming p=30% with 95% confidence interval and 10% allowable error (L) Sample size estimated for the study is 84. Further assuming 10% non-response rate, the final sample size estimated for the study is 92. RESULT: The study is in progress.

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INTRA-ORAL SCANNER.

**Presenter** - Dr Paridhi Gupta

**Co-author:** Dr Bhagyalakshmi A, Dr. Mihir Kulkarni

**Abstract:**
INTRA-ORAL SCANNER Intraoralscanners (IOS) are the devices which aid in capturing direct optical impressions in dentistry. The 3D surface models of the dento-gingival tissues are result of optical impression, and virtual alternative to traditional plaster models. Such Intraoral scanners find their application in prosthodontics, orthodontics and implantology. Some of the disadvantages of traditional impressions over optical impressions are: patient experiences gag reflex and choke, volumetric changes of impression materials and expansion of dental stone that can cause errors. Whereas, Optical impressions are accurate and precise. Hence any Optical impression helps reduce patient’s discomfort by simplifying clinical procedures as they are time efficient and potentially eliminate plaster models. IOS aid in easy treatment plan, reduced chair-time and minimum storage requirements as well as better communication with both dental technician and patients. Clinical applications of intraoral scanners include inlays, onlays, coping and framework, single crown and FPDs, smile designing, fabrication of posts and cores, RPDs, obturators, diagnostic procedures as well as in patients with undercuts or in case of patients with implants (complex impressions). This presentation throws light on the Recent technology, i.e 3D iTero scanner, one of the advanced intraoral scanner. This can capture many pictures in few seconds and assemble them in an accurate 3D image of hard and soft tissues of the oral cavity of a patient. Thus intraoral scanners could probably play an important role in making dentistry smarter than ever. Author: Shivani C K Co-Author: Dr. Mihir Kulkarni

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Abstract:
Clinicians with decades of experience or the students of dental history can look back at the advances in dentistry and state clearly that dental profession has experienced an exciting amount of technological growth. Digital technologies have been progressively introduced in almost all modern life aspects. Today a practicing dentist needs to be abreast with latest development in technology to be able to sustain himself in the cut throughout competitive field of dentistry. A successful clinical dental practice requires high level of competence in both manual and communicative skills. Improved instruments and better designed dental units are the two examples. Hence, the role of digitalisation in practice management has become very essential for a successful clinical practice. The present article aims to provide an insight into digitalisation in dental practice management.

Author: SOUMYASHREE S M. Co-author: Dr. VENKATESH S PALANKAR. (Dept of Orthodontics & dentofacial orthopedics)
APPLICATION OF STEM CELLS IN DENTISTRY

Presenter - Dr. Priyanka Nitin

Co-author: Dr. Sreeshyla HS, Dr. Jaishankar HP, Dr. Usha Hegde, Dr. Nitin V Muralidhar,

Abstract:
Stem cells are unspecialized cells that develop into the specialized cells that make up the different type of tissue in the human body. They have the ability to renew themselves through mitotic cell division. Stem cells are found in all stages of a human life. Dental tissues have been investigated for many years as a potential source for stem cell isolation. Important criteria for dental tissue stem cells are: healthy pulp, intact blood flow, absence of infection and other pathologies. A rich source of mesenchymal stem cells is represented by dental tissues; the periodontal ligament, the dental pulp, the apical papilla and the deciduous tooth. Stem cells in dentistry can be used in the regeneration of dentin, tissue of periodontium and bone joint tissue of the craniofacial region. It appears that the dental stem cells isolated from the dental pulp and periodontal ligament are the most powerful cells. A multispeciality approach involving cell biologist, pharmacologists and bioengineers are required to harness the vast potential of stem cell therapy.
Abstract:
The estimated worldwide population of visually impaired is 285 million and among them 19 million are children. There are two types of visual disability, namely low vision (partially blind) and absolutely nil vision (totally blind). Visually impaired children daily face challenges for bearing their everyday skills. The oral health of children who are visually impaired can be disadvantaged, since they are often unable to adequately apply the techniques necessary to control plaque. The maintenance of oral hygiene among these visually impaired children may be quite challenging, and there is utmost need for oral health supervision.

Aim: To assess the oral health status of visually impaired children.

Methods: A total of 46 individuals from a blind school in Hassan city were included in the study. Oral health status was assessed according to WHO. Data collected was statistically analysed.
Abstract:
Interferons are a group of signalling proteins secreted by nucleated cells in response to viral infections. They play a key role in mediating antiviral responses in modulating immune response. Interferons principally act in a paracrine fashion on the cells in the immediate vicinity. The main signalling pathway involves tyrosine phosphorylation and activation of signal transducers. Interferons are used in treating various disorders like malignant melanoma, hepatitis, HIV related Kaposi’s sarcoma, leukemia, etc. This Paper highlights the signalling pathways and use of Interferons in the management of various diseases in the oro facial region.
BOTULINUM TOXIN IN DENTISTRY

*Presenter* - Ashmika Nambiar

*Co-author: Dr. Anjali Narayanan Dr Brinda Suhas Godhi*

**Abstract:**
Horizons of treatment options in dentistry are broadening rapidly. Botulinum toxin (BT), commonly known as Botox, a potent and lethal neurotoxin produced by clostridium botulinum bacteria. There are seven types of BT; A, B, C, D, E, F&G. Only types A&B are used clinically, with the former being more popular. The idea for a possible therapeutic use for BT was first developed by the German physician Justinus Kerner in 1820. In 1895, a Belgian bacteriologist; Emile Pierre van Ermengem discovered the pathogen clostridium botulinum. Presently BT is gaining momentum in dental practice. It is a minimally invasive method for refractory condition or invasive protocol. It has been popularly accepted in treating eye disorders, muscular spasms, aesthetic procedures like facial wrinkles, however it has been documented to be successful in variety of conditions like temperomandibular disorders, bruxism etc. We aim to present the basics of Botulinum toxin and some of its applications in dentistry.

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PULP CAPPING THERAPY

Presenter - Jeevan A S

Abstract: The core of the conservative dentistry and endodontics evolves around the preservation and the vitality of the complex pulp and dentin aspect. Pulp capping is a routinely adapted procedure in tooth therapy. Broadly it could be direct pulp capping and indirect pulp capping with various therapeutic materials usage.

Name of presenter: Jeevan Contact number: 8971948598 IV DS student, GDCRI Bellary

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Efficacy and Feasibility of Frontozygomatic Angle Approach for Extra Oral Maxillary Nerve Block in Oral Surgery

Presenter - DR KIRAN RADDER

Abstract:
Pain control is an integral part of minor oral surgery and maxillary/mandibular nerve block have proved promising in achieving the same and are routinely performed in an outpatient setting. Although intra-oral regional anesthesia using nerve blocks are the most common method to anesthetize the areas of oral surgery, patient’s discomfort and potential complications associated with multiple pricks for multiple extractions in a single quadrant particularly in maxilla, has motivated the clinicians to employ the extra-oral nerve block techniques. There are various techniques outlined for rendering local anesthesia of the maxillary nerve through extra-oral approach and could be classified as supra-zygomatic and infra-zygomatic techniques. But supra-zygomatic approach from frontozygomatic angle is among the safest of all recommended approaches to the foremen rotundum. This prospective clinical trial was an attempt to evaluate the feasibility and efficacy of extra-oral frontozygomatic angle approach to block the maxillary nerve in patients undergoing extractions of maxillary teeth in an out patient setting.

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A Hospital-based retrospective study to analyze clinicopathological features of Oral Squamous Cell Carcinoma

Presenter - ANUSHA G HEGDE

Background: Oral squamous cell carcinoma (OSCC) ranks among the top three cancers in India. The present study was conducted to assess the clinico-pathological findings in patients with OSCC.

Materials & methods: The present retrospective study comprised of 142 cases of OSCC of both genders. All the cases were classified on histopathological basis into Well-differentiated, moderately- differentiated and poorly differentiated OSCC.

Results: Out of 142 patients, males were 92 while females were 50. Age group 20-40 years had 30 males, 12 females, 40-60 years had 36 males and 28 females and >60 years had 26 males and 10 females. The difference was significant (P<0.05). 82 cases were well-differentiated OSCC, 47 were moderately differentiated and 13 cases were poorly differentiated OSCC. The difference was significant (P< 0.05). 42 cases were of tongue, 39 were of floor of mouth, buccal mucosa 25, gingiva 17, palate 11 and retromolar pad 8. The difference was non- significant (P> 0.05). Significant results were obtained while assessing the clinic-pathologic distribution of OSCC cases.

Conclusion: Authors found that OSCC is increasing day by day. Tobacco habit is the main cause. There is varied clinical and histological profile among patients.

Key words: Clinico-pathologic, Oral squamous cell carcinoma, Tobacco

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Efficacy and Feasibility of Frontozygomatic Angle Approach for Extra Oral Maxillary Nerve Block in Oral Surgery

Presenter - BILAL AKBER AL SAYED

Abstract:
Pain control is an integral part of minor oral surgery and maxillary/mandibular nerve block have proved promising in achieving the same and are routinely performed in an outpatient setting. Although intra-oral regional anesthesia using nerve blocks are the most common method to anesthetize the areas of oral surgery, patient’s discomfort and potential complications associated with multiple pricks for multiple extractions in a single quadrant particularly in maxilla, has motivated the clinicians to employ the extra-oral nerve block techniques. There are various techniques outlined for rendering local anesthesia of the maxillary nerve through extra-oral approach and could be classified as supra-zygomatic and infra-zygomatic techniques. But supra-zygomatic approach from frontozygomatic angle is among the safest of all recommended approaches to the foremen rotundum. This prospective clinical trial was an attempt to evaluate the feasibility and efficacy of extra-oral frontozygomatic angle approach to block the maxillary nerve in patients undergoing extractions of maxillary teeth in an out patient setting.
KERATOCYSTIC ODONTOGENIC TUMOR- A CASE REPORT

Presenter - DR. LOITH D

Abstract:
Keratocystic odontogenic tumors formerly known as Odontogenic Keratocyst is a benign cystic tumor of dental origin and are the third most common cysts, which are locally aggressive and has a tumor like tendency to recur post surgical treatment. It arises from the odontogenic epithelium (dental lamina) left from tooth development stages, mainly thought to arise from rests of Serres. It is most commonly seen in the posterior part of the mandible Here we present a case report of a patient who presented to us with an extra oral swelling which was of a very short duration and with minimal clinical presentations. A thorough knowledge and good clinical skills will allow us to diagnose these cysts and tumors at the earliest and institute immediate treatment. The clinical, radiographic and histopathological correlations are essential for proper patient treatment and follow up

Result: An early diagnosis is essential so as to minimize the local damage because of the inherent aggressive nature of keratocystic odontogenic tumor

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Management of dental trauma - Awareness among medical professionals in Hassan District, Karnataka

*Presenter* - Dr. Anand Devaraj

*Co-author*: Dr. Kavyashree G, Dr. Girish babu K L

**Introduction**: Medical professionals frequently come across cases of orofacial trauma when associated with generalized trauma. During trauma medical professionals are forced to concentrate only on emergency care and general health of the patient, which is very crucial, thus neglecting dental health. Thus, leading to irreparable damage to the oral hard and soft tissue. Appropriate emergency management of dental trauma by the medical professional could drastically improve the prognosis of traumatized tooth.

**Aim**: To assess the knowledge, attitude and practice of management of dental trauma among medical professionals in Hassan, India.

**Material and Methods**: One hundred medical professionals participated in this study. The tool for data collection was a questionnaire developed by adapting the works of previous studies. Medical professionals were given 20 minutes to complete the questionnaire. The data obtained was subjected to statistical analysis.

**Results**: Most of the medical professionals had no knowledge on management of dental trauma

**Conclusion**: Medical professionals should possess sufficient knowledge on management of dental trauma before referring to dentists.

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PLATELET RICH FIBRIN - CURRENT KNOWLEDGE AND PERSPECTIVES FOR USE IN VARIOUS CLINICAL APPLICATIONS

**Presenter** - PRATHIBHA SRIDHAR

**Co-author:** DR KAVITHA PRASAD, DR K RANGANATH

**Abstract:**
The development of bioactive surgical additives to regulate the inflammation and increase the speed of healing process; is one of the great challenges in clinical research. In this sense, healing is a complex process, which involves cellular organization, chemical signals, and the extracellular matrix for tissue repair. The understanding of healing process is still incomplete, but it is well known that platelets play an important role in both hemostasis and wound healing processes. Platelets' regenerative potential was introduced in the 70’s, when it was observed that they contain growth factors that are responsible for increase collagen production, cell mitosis, blood vessels growth, recruitment of other cells that migrate to the site of injury, and cell differentiation induction, among others. One of the latest innovations in oral surgery is the use of platelet concentrates for in vivo tissue engineering applications: 1) platelet-rich plasma (PRP) and 2) platelet-rich fibrin (PRF). Platelet concentrates are a concentrated suspension of growth factors found in platelets, which act as bioactive surgical additives that are applied locally to induce wound healing. PRF consists of an autologous leukocyte-platelet-rich fibrin matrix, composed of a tetra molecular structure, with cytokines, platelets, cytokines, and stem cells within it, which acts as a biodegradable scaffold that favors the development of microvascularization and is able to guide epithelial cell migration to its surface. Also, PRF may serve as a vehicle in carrying cells involved in tissue regeneration and seems to have a sustained release of growth factors in a period between 1 and 4 weeks, stimulating the environment for wound healing in a significant amount of time. The clinical application include: Periodontal bone defects. Localized osteitis. Palatal wound healing after harvesting a free gingival graft. As a potential scaffold in pulp revascularization procedures of necrotic immature permanent tooth. In multiple extractions to preserve the alveolar ridge height. Bone regeneration around immediate implants, inside the alveolar defect. Reconstruction of large bone defects after cancer surgery. Studies have demonstrated safe and promising results, without contradictory findings, related to the use of PRF alone or in combination with other biomaterials. It has several advantages and possible indications to be used both in medicine and dentistry. Currently, platelet-rich fibrin seems to be an Platelet-rich fibrin accepted minimally invasive technique with low risks and satisfactory clinical results.

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Conservative Management of Cystic tumors of the Jaws by decompression followed by enucleation: A cohort study

Presenter - Dr Parimala Sagar

Co-author: Dr Kavitha Prasad, Dr K Ranganath, Dr Vineeth, Dr Sejal, Dr Prathibha

Abstract:
Benign cystic tumors of jaws are commonly encountered. Treatment options of these benign tumors may be conservative like decompression, marsupialisation, enucleation, enucleation followed by chemical cauterization, cryotherapy with liquid nitrogen and LASER application or Radical which involves jaw resection. Most clinicians consider wide jaw resection as the treatment of choice because of its high rate of recurrence specially the KCOT. Though the recurrence rate with resection is considered to be 0%, it is associated with functional morbidity and psychological trauma. Hence we studied 40 cases of benign cystic tumors with conservative management i.e, Decompression followed by enucleation. We aimed to study the effectiveness of decompression of cystic lesions of the jaws and correlate the changes clinically and radiographically, so that conservative approaches are useful as predictable treatment methods that reduce the need for jaw resection. The subjects were followed-up to report for any recurrence for a period of 10 years. Statistical analysis using Chi Square test of significance with P≤0.05 was considered for statistical significance.

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QUALITY OF BONE REGENERATED AFTER FRESH FROZEN BONE GRAFTING IN LARGE CYSTIC DEFECTS: A HISTOPATHOLOGICAL AND SCANNING ELECTRON MICROSCOPE STUDY

Presenter - Dr Vineeth Kumar K

Aim: To compare the quality of regenerated bone in the pathological area with the adjacent normal native bone via histological, ultrastructural and chemical characteristics study.

Methodology 5 patients with Fresh Frozen bone grafting after cyst enucleation were included in the study. Re-entry procedure was done at least six months after the grafting. Bone samples were collected from the site of grafting and the adjacent native normal bone with the help of trephine bur. Samples were subjected to routine histological analysis and ultrastructural/chemical analysis with the help of SEM/EDX detector machine.

Result Histological analysis showed signs of healthy osseous tissues with negligible necrotic zone in the regenerated bone sample along with similar rate of bone remodelling in both the groups. Ultrastructural features were persistent with presence of both empty and filled osteocytic lacunae with live osteocytes in both groups, however chemical analysis showed significant increase in weight and atomic percentage of calcium in regenerated bone as compared to that of adjacent native normal bone.

Conclusion The results of the present study using multi-model approach such as ultrastructural, chemical and histological comparison among the regenerated bone and adjacent native normal bone showed near similar characteristic features. Thus FFB can be considered as a viable alternative to autogenous bone in promoting the bone formation in the pathological defects eliminating the donor site morbidity.

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HUMAN AMNIOTIC MEMBRANE

Presenter - Dr Sejal

Co-author: Dr Kavitha Prasad, Dr K Ranganath,

Abstract:
Regenerative medicine is a new field based on the use of stem cells to generate biological substitutes and improve tissue functions (HAM), restoring damaged tissue with high proliferability and differentiability. Human Amniotic Membrane has been used in medicine for more than 100 year. Since 1910, HAM has been used sporadically in clinical practice to encourage epithelisation in burns, as graft over skin ulcers, facial abrasions and in intra-abdominal and reconstructive surgery. The amniotic membrane (AM) is considered an important potential source for scaffolding material. Amniotic membranes are efficiently used as allografts for treating skin burns; open and nonhealing ulcers; pressure sores; and surgical, infected, and traumatic wounds. Reconstruction of a buccal mucosal defect after excision of speckled leukoplakia using HAM has been reported with a promising result. HAM has been tried in the reconstruction of temporomandibular joint ankylosis because it prevents fibrosis and reankylosis when used as an interpositional material. Amnion has been tried as a graft material after vestibuloplasty where it prevents secondary contraction after surgery and maintains postoperative vestibular depth. The use of this novel biological membrane is rising in various fields of tissue engineering, medicine, regeneration biology, and stem cell research.
DESMOPLASTIC AMELOBLASTOMA IN MAXILLA: A REPORT OF RARE CASE WITH REVIEW OF LITERATURE AND CLASSIC HISTOPATHOLOGY

Presenter - Dr R Sumukh Bharadwaj
Co-author: Dr Vidya G D, Dr Meghana Manjunath

Abstract:
Ameloblastoma is a very rare odontogenic tumor of the oral cavity, with different histological variants. One of the types of ameloblastoma is desmoplastic ameloblastoma (DA) which has 4-5% of incidence. Here we review and reported the desmoplastic ameloblastoma is the least of occurrence of all the variants of ameloblastoma. The uniqueness of this lesion can be further enlightened with respect to its site of occurrence, the radiographic feature and the histological appearance different from the classical type of ameloblastoma. This case report focuses on a DA that occurred in the maxilla of 25-year-old women and explains about clinical, CT scan, histopathological finding, and treatment plan. The patient is undergoing routine follow-up and is presently free of disease. From this case, the clinicians should remember to consider the desmoplastic ameloblastoma as differential diagnosis, if a patient complaint of swelling in and around the premolar region of the maxilla.

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ROLE OF PLATELET RICH PLASMA (PRP) IN EXTRACTION SOCKET HEALING

**Presenter** - Dr. Shreyank G

Abstract:
Platelet rich plasma (PRP) is a new approach to tissue regeneration and healing. PRP is a biological product defined as portion of the plasma fraction of autologous blood with platelet concentration above the baseline. PRP contains not only a high level of platelet but also various growth factors like platelet derived growth factor (PDGF), transforming growth factor β (TGFβ), vascular endothelial growth factor (VEGF), Epidermal growth factor (EGF), fibroblast growth factor (FGF). PRP also includes monocytes, macrophages, fibroblast and endothelial cells. These growth factors help in better socket healing, implants, surgical scar healing and periodontal surgery. Its use has been effective in various fields like dermatology, plastic surgery, musculoskeletal field and many more. It has been seen to decrease the healing time with improved bone density than the control. With reduced healing time, waiting period for reconstructive dental work is also reduced. PRP being an autologous product, which is prepared from the patient’s own blood, eliminates any risk of cross contamination, disease transmission or immune response considering all measures are kept aseptic.
AWARENESS OF ORAL MALODOR AND ORAL HYGIENE PRACTICES AMONG MEDICAL AND DENTAL STUDENTS

**Presenter - Dr. Bhargav. K. H**

**Introduction:** Oral malodor or halitosis refers to the unpleasant breath arising from a person’s oral cavity. In 90% of the cases, it is caused due to intra-oral factors like tongue coating and dental plaque. Oral malodor is a global problem affecting people of all age groups and is deemed by many as a psychosocial stigma that can affect a person’s social life.

**Aims:** To determine the prevalence of oral malodor among the medical and dental students of Melaka Manipal Medical College, Manipal and to assess their knowledge about oral malodor and oral hygiene practices.

**Method:** A pre-validated questionnaire consisting of multiple choice questions about oral malodor was distributed among the participants. For each question, the participants were to choose appropriate response from the provided list of options. Data collected was subjected to statistical analysis using Chi-square test. A p-value <0.05 was regarded as statistically significant.

**Results:** The prevalence of self-reported oral malodor was high (60%) among students of both genders but their knowledge regarding malodor was limited. Oral hygiene practices of both male and female students were good with majority of them brushing twice a day.

**Conclusion:** As the preclinical students of today are the health professionals of the future, it is important to enhance their knowledge about the potential causes and consequences of oral malodor. They should strive to keep their mouth free from oral malodor and be a role model for their patients and the society on the whole.

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Paper ID: KSDP085

Liquid biopsy of cancer: a multimodal diagnostic tool in clinical oncology

Presenter - BHAVYA BHARATHI.M

Abstract:
Oral cancer is one of the leading cancers in South-Asian countries, with high morbidity and mortality. Cancer has become a big health threat problem around the world. The two main techniques of traditional tumor clinical diagnostic are pathology and medical imaging. Pathological diagnosis technology mainly includes tissue biopsies, serological indicators test and molecular pathology test.

Medical imaging methods for clinical application include ultrasonic testing, X-ray imaging, CT, MRI, PET-CT. The inevitable disadvantages of imaging lags behind tumor progression. Biopsy is gold standard till date in detecting the histopathological type of a neoplasms and its degree of differentiation. Sometimes it becomes difficult to produce biopsy material due to inaccessibility of tumors, physical pain involved after the procedure, surgical complications, financial burden and lack of trained clinicians.

Cell free nucleic acids such as cell free DNA and RNA are present in body fluids of all individuals. The expression profile of cfNAs varies between different disease states, so liquid biopsy has potential as a minimally invasive method for detection of disease, including malignan neoplasms.

Liquid biopsy refers to the sampling of non-solid biological tissue, most commonly of blood, but also saliva, urine, cerebrospinal fluid and other body fluids. There is a growing trend towards exploring the use of a minimally invasive “liquid biopsy” to identify biomarkers in a number of cancer.

Result: This Review will explore how tumour-associated mutations detectable in the blood can be used in the clinic after diagnosis, including the assessment of prognosis, early detection of disease recurrence. Keywords: cancer, circulating tumor DNA, liquid biopsy.

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Assessment of Bifid Mandibular canal in Bangalore Population – a digital radiographic study.

Presenter - Dr veeranna madlur

Background: The presence and configuration of the bifid mandibular canal are considered to be of great clinical interest in surgical procedures like extraction of the impacted third molar, implant placement, and orthognathic surgery in the mandibular area. Failure to identify anatomical variations of the mandibular canal can result in complications like traumatic neuroma, paraesthesia, and bleeding. Orthopantomograph is the commonly used radiograph to visualize the mandible.

Objectives: The objective of this study was to classify the different routes of the bifid mandibular canals (BMCs) and correlate the morphological variations with age and gender.

Methodology: The study consisted of 300 orthopantomographs selected from the archives of the department in the age group ranging from 10 to 90 years including both the genders. BMCs were identified, drawn and classified according to the classification of Langlais et al. The data will be subjected to statistical analysis and the prevalence of bifid canals and their relationship with age and gender will be assessed.

Results and conclusion: Results are awaited

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Evaluation Of Accessory Canals/Foramen In The Mandible – A CBCT Study

Presenter - Charlene Fernandes

Co-author: Rochelle Perpetual Daniel Sequeira, Dr. Kiran Kumar

Background: Cone-beam computed tomography is a new diagnostic tool that has revolutionized diagnosis and treatment planning in the dental field as it permits clear visualization of the osseous structure. Numerous unnamed accessory foramina have been described in the jaws especially on the lingual aspect of the mandible, midline of the mandible, lateral to the lingual foramina and the canine premolar region. A thorough understanding of the prevalence and distribution of the accessory canals is clinically important to avoid neurovascular complications during surgical procedure involving mandible.

Objective: The purpose of the present study was to investigate the prevalence, distribution and the relation of the accessory canal/foramen with the mental foramen using cone beam computed tomography.

Methods: A retrospective analysis of 133 CBCT scans for patients of both gender and with the age range of 11 to 60 years were performed, after applying the exclusion criteria only 105 CBCT images were analysed in axial, sagittal and coronal sections. The measurements were subjected to statistical analysis.

Results: The accessory canal/foramen was observed in 40 % of patients which was on either buccal or lingual aspect, seen predominantly in females (52.4%) when compared to males (47.6%) and more prevalent on the right side when compared to left side. Conclusion: In light of these findings, the clinicians should carefully evaluate for the presence of accessory canals/foramen prior to any surgical intervention to prevent undue consequences.

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Prescription solecisms- A Cross sectional Study

Presenter - Dr.K.Gowthami

Abstract:
Prescription is a written order by a physician to the pharmacist to prepare and/or dispense specific medication for a specific patient. Prescriptions may be entered into an electronic record system and transmitted electronically to a pharmacy. Alternatively, a prescription may be handwritten on pre-printed prescription forms, or even on plain paper, prescription may be transmitted to the pharmacist orally by telephone; this may increase the risk of error. Handwritten Prescriptions are notorious for being often illegible, even though some of the individual letters are illegible, the position of the legible letters and length of the word is sufficient to distinguish the medication based on the knowledge of the pharmacist. When in doubt, pharmacists call the medical practitioner. Some have advocated the elimination of handwritten prescriptions altogether and computer printed prescriptions are becoming increasingly common. Prescribing errors can take many forms, but commonly involve incorrect doses, illegible details. Hence, the present study was done to assess and evaluate various forms of prescription errors in routine medical and dental practice. A cross-sectional survey of the 171-prescription received by the patients that were written by general practitioners, consulting physicians and dentist in the Coorg region were included. The prescribing doctors were unaware that their prescriptions were being audited. The prescriptions obtained therein were photocopied and returned to patients. The photocopies of the prescription were scored and analysed. To minimize errors doctor should be educated on rational drug prescription. It’s necessary that we develop and use standardized “ideal” format for all prescriptions.

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Abstract:
Gold nanoparticles (AuNPs) are small gold particles with a diameter of 1 to 10 nm, emerging as promising agents for cancer therapy and are being investigated as drug carriers, photothermal agents, contrast agents and radiosensitisers. AuNPs serve as carriers for drugs to targeted region of the body when attached to biomarkers can mark and locate tumours regions hidden throughout the body cavity. It’s not in excited state electrons flow freely, however when subjected to specific frequencies of light the particles polarise this oscillation heats up to nanoparticles this is the basis of photo thermal effect. AuNPs injected into bloodstream bind to cancerous tissue, embedded infrared frequencies are use to cite the particles in temperature damages surrounding tissue and induces cell death. This paper highlights the newer mode of treatment in patients with malignancies

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Abstract:
Cone Beam Computed Tomography (CBCT) is the most advanced three dimensional imaging modality in dentistry. It is capable of visualizing the unseen corners in dental procedure planning and may at times provide decision making or decision changing information. With more advancement in the softwares, CBCT is playing a vital role in escalating dentistry to a new echelon. This paper intends to elaborate the contributions of CBCT towards digital dentistry.

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Abstract:
Oral Cancer is the sixth most common cancer in the world. It is known that early detection of cancer is vital for successful diagnosis and prognosis of the disease. The Indian picture is very dismal with 80% of cancer diagnosed only in the advanced stage. Oral cancer affects people from the lower socioeconomic status of society due to a higher exposure to risk factors such as the use of tobacco, poor diet and poor oral hygiene. These patients have inadequate access to trained healthcare providers with very limited healthcare services, leading to delayed presentation at advanced stages of oral cancer. Hence early detection of oral cancer offers the best chance for long term survival and has the potential to improve treatment outcomes and make healthcare affordable. Gold standard for assessing the oral precancerous lesion is light microscopic features of the dysplastic surface epithelium through assessment of overall architecture of epithelium. This accuracy is purely based on clinico-pathological acumen and expertise of the oral pathologist concerned and in turn leads to interobserver variations.

Machine learning also synonymously called as artificial intelligence or deep learning, has shown promise in feature extraction, image analysis both for the chairside and histopathological investigations and has been extensively taking over the diagnostic paradigm to a higher level. This review paper discusses various applications of machine learning algorithms for early detection, classification and survival prediction of oral cancer which can hasten the diagnostic delay caused by conventional techniques.
Radiolucent lesion of the mandible - A histopathological prospective

**Presenter** - Dr. Gautami Kaimal

**Co-author:** Dr. Kavery Hallikeri

**Abstract:**
Radiolucency of the jaw could be due to odontogenic cyst, tumor, non odontogenic mesenchymal tumor either benign or malignant. Clinical and radiographic features will include numerous differential diagnosis. But histopathological examination will aid in arriving at final diagnosis to give definite treatment to the patient.
Here we present case of 50 years, male patient reported with pain in the lower left back teeth region since a month. Intra oral examination revealed proximal caries with 36 and swelling in relation 36 & 37 obliterating the vestibule. Radiographic findings were irregular periapical radiolucency with loss of normal bony trabeculae. Osteomyelitis was the provisional diagnosis. Bone biopsy revealed bony trabeculae with sheets of plasma cells in the marrow region. Predominant population plasma cells were immature with a fine nuclear chromatin and single prominent nucleolus. These features were suggestive of plasmacytoma. Further investigations were done to rule out multiple myeloma. For the treatment patient was referred to HCG.

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Early detection of precancer (premalignancy) is of great clinical significance in the management and treatment of cancers affecting the oral cavity. In contrast to prevalent clinical practices, optical spectroscopic techniques provide noninvasive and real-time information free from artifacts that may arise due to cutting, freezing, and staining of the tissue. These optical techniques are sensitive to the biochemical and morphological properties of tissues, such as cellular metabolic rate, vascularity, intravascular oxygenation and alterations in tissue morphology, which helps in precisely locating neoplastic mucosal changes.

Diffuse reflectance spectroscopic diagnosis of cancer is based on the local architectural changes occurring at the cellular and subcellular levels and vascularization that affects the elastic scattering properties of the tissue. In DRS, light enters into the tissue and undergoes a combination of multiple elastic scattering and absorption. The radiation emitted from the tissue provides information about tissue absorbers and scatterers, which are believed to change with tissue transformation. Diffuse reflectance (DR) spectroscopy is a simple, low-cost, and noninvasive modality with potential for distinguishing oral precancer Sascan Meditech Pvt Ltd, Bangalore has designed and developed a hand-held OralScan Camera for non-invasive and real time screening and detection of oral potentially malignant disorders (OPMD) as part of a project funded by BIRAC, Gov. of India, under the BIG program.

In this backdrop, this clinical study was planned to test and assess the capability of the OralScan device to screen and detect OPMD and to locate the optimal site for tissue biopsy. As the DR ratio values would be correlated with pathological results of tissue biopsy, it would be possible to develop a robust algorithm, which can be validated through blind trials to determine the diagnostic accuracy of the device. This work presents the results of clinical trials conducted in 25 patients to detect oral precancer using this ratio.
Abstract:
Burning mouth syndrome is a condition characterized by chronic orofacial pain without any mucosal abnormalities or other organic disease. There are numerous synonyms for this ailment such as stomatodynia, stomatopyrosis, glossodynia, glossopyrosis, sore mouth, sore tongue, oral dysesthesia, and scalding mouth syndrome. Patients usually present with burning, stinging, or numbness of the tongue or other areas of oral mucosa. The complex etiology and lack of characteristics signs and symptoms makes the diagnosis difficult. As a result of which managing such patients become a herculean task. Moreover, lack of understanding of the disease leads to misdiagnosis and unnecessary referral of patients. In this review, we discuss currently hopeful management strategies, including central neuromodulators and solutions for applying non-pharmacology approaches. Moreover, we emphasize the important role of patient education and anxiety management to improve the patients’ quality of life. A combination of optimized medication with a short-term supportive psychotherapeutic approach might be a useful solution.

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Abstract:

It is the benign growth of new bone over an existing bone. It can occur in many parts of the body. They tend to develop during adolescence and gradually enlarge over time. They are usually self-limiting and painless. In some cases, it causes severe pain and requires surgical removal. The definite aetiology of exostosis is not known, but some causes include genetic factors, environmental factors, masticatory hyperfunction, bruxism, sleep apnoeas and TMJ dysfunctions. Occlusal stress is when the occlusal forces exceed the adaptive capacity of tissues resulting in tissue injury. This is called trauma from occlusion. The T-Scan shows occlusal contact timing and force distribution of teeth while BioEMG measures muscular functions of the head and neck.

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Oral squamous cell carcinoma (OSCC) is the most common cancer of the oral cavity. Oral cancer is usually first diagnosed when it becomes symptomatic and by this stage, approximately two-thirds of patients would already have advanced disease leading to poor prognosis. The early diagnosis of oral premalignant lesions prevents their progression to an invasive carcinoma, thus requiring minimal intervention and improving both the survival rate and quality of life. Histopathological examination is considered as the gold standard in diagnosing oral lesions. Therefore, the selection for a biopsy site is highly significant.

The technique of colposcopy enables evaluation of changes in surface topography and vascular patterns of the lining mucosa thus, aiding in selecting the most appropriate site of biopsy ruling out the possibility of taking biopsy from the most representative area supposed to reveal epithelial dysplasia. Colposcopy aptly serves as a new beam of hope in early detection of premalignant and malignant oral mucosal lesions owing to its high precision, versatility, user friendly and noninvasive properties. Although this method should be evaluated in further clinical studies in terms of its accuracy and efficacy and a comparative evaluation should be carried out with other existing methods, but colposcopy can definitely aid in better diagnosis and thus helping provide better patient care.

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DENTAL DNA FINGERPRINTING

Presenter - Dr sanjeed kabeer

Abstract:
The role of DNA behind all cell activities is a discovery that made development and advances in molecular biology possible. DNA, the language of life yields information beyond our imagination both in health and disease.
The development of methods and techniques to study processes at the molecular level has led to new and powerful ways of isolating, manipulating and exploiting nucleic acids. DNA fingerprinting is the result of such an endeavor.
DNA fingerprinting unravels all the mysteries associated with oral cavity and its manifestations during diseased conditions. This technique is increasingly used in various aspects of Forensic Odontology. The role of dental restorations, prosthesis and radiological identification as the main techniques of forensic odontology has declined lately, whereas molecular biology and laboratory procedures are rapidly increasing in efficiency and availability.
The tooth is the most valuable source to extract DNA since it is preserved by the armor of dentin and enamel. Hence offers best source of DNA of great durability and a reliable genetic type for forensic sciences. This paper summarizes the DNA fingerprinting techniques with special emphasis on forensic odontology.
Keywords: DNA fingerprinting, Forensic odontology, Polymerase Chain Reaction, DNA analysis.
Abstract:
Nevoid basal Cell Carcinoma syndrome also known as Gorlin-Goltz syndrome is an infrequent multisystemic, autosomal dominant disorder of mesoectodermal development, with primary manifestation in skin, hair, bones and teeth. Mutation in the PTCH1 gene causes the spectrum of developmental abnormalities. This syndrome may be diagnosed early by a dentist by routine radiographic examination in the first decade of life, since the odontogenic keratocysts are usually one of the first manifestations of the syndrome in 78% of the cases and they could be detected in patients younger than 10 years of age. Here we present a case of Gorlin-Goltz syndrome in a 13 year old boy who was successfully treated and is under follow up.
Vascular Endothelial Growth Factor (VEGF) or also known as Vascular Permeability Factor (VPF) is a multifunctional cytokine.

The discovery of VEGF has revolutionized our understanding of vasculogenesis and angiogenesis as it is the main driver of angiogenic process in both physiologic and pathologic conditions. The role of VEGF until recent years was limited to growth of endothelium.

Recently, the application of VEGF in the treatment of oral cancer, wound healing, fractures of the jaw, orthodontic tooth movement, in implants, revascularization of severed human dental pulp are some of the arenas in dentistry where its role can be found.

Elucidation of the molecular regulation of VGEF and its transformative development of multiple therapeutic pathways which target VGEF directly or indirectly or along with a combination therapy is one of the recent interests among researchers.

This paper highlights the importance of understanding VGEF in further treatment modalities and research.

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Abstract:
Fibro-osseous lesions are a diverse group of processes that are characterized by replacement of normal bone by fibrous tissue containing a newly formed mineralized product. One such disease is fibrous dysplasia. Fibrous dysplasia is a skeletal developmental anomaly of bone forming mesenchyme that manifests as a defect in osteoblastic differentiation and maturation. Fibrous dysplasia is caused by mutation in the GNAS1 gene (guanine nucleotide binding protein). It occurs as three main types - Monostotic form, Polyostotic form, craniofacial form. 70-80% of fibrous dysplasia are monostotic. Here we highlight a case of monostotic fibrous dysplasia in the left maxillary posterior region in a 15 year old female patient.
Abstract:
Peripheral giant cell granuloma is a solitary enlargement appears in gingiva or alveolar process, which is dark red in colour, asymptomatic and aetiology is unknown. These are epulis and have origin from the periodontal membrane or mucoperiosteum of the alveolar bone. A young child or elderly person of around fourth to sixth decades are affected, females are more vulnerable to peripheral giant cell granuloma than male in the ration of 2:1. This more commonly seen in the mandible than maxilla, with a rapid growth rate. Radiographic evidence may or may not exhibit of the involvement of underlying bone. A conservative excision can be done, which have excellent prognosis. Here we present a case of Peripheral giant cell granuloma.

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RATIONAL USE OF ANTIBIOTICS IN DENTISTRY:A CAUSE OF CONCERN

Presenter - Jaishankar

Co-author: Anne Mary, Amrita Guided By: Dr.Sreeshyla H.S

Introduction: Antibiotics are the wonder drugs to combat microbes. In addition to their essential role in the clinics, antibiotics are used in a huge array of non-medical applications. However overuse threatens their efficacy due to the promotion and spread of antibiotic resistant bacteria. Antibiotic resistant microorganisms [ARM] have been described as “nightmare bacteria” that “pose a catastrophic threat” to people in every country in the world.

The increasing resistance problems of recent years are probably related to the over- or misuse of broad-spectrum agents. There is a clear need for the development of prescribing guidelines and educational initiatives to encourage the rational and appropriate use of drugs in dentistry.

Aim and objectives: To understand the rationale of antibiotic usage in dentistry To understand antibiotic resistance and their causes. Mechanism of antibiotic resistance Global action plans to control antibiotic resistance Challenges faced for the control of AMR and the possible outcomes

Conclusion: The lack of newer antibiotics is a worldwide problem and is certainly a challenge for India. Tackling AMR is the present necessity and its challenge requires significant efforts from all stakeholders involved. This issue has been slow to gain momentum but is now dominating the national conscience.

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AN UNUSUAL CASE OF INTRAVASCULAR ORAL NODULAR FASCIITIS
– A CASE REPORT / REVIEW

Presenter - VANISHRI C HARAGANNAVAR

Co-author: Roopa S Rao

Abstract:

The term spindle cell lesion, or tumor, is a purely descriptive one. Due to its overlapping clinico-radiographical and histopathological features make this lesion a diagnostic challenge not only for the clinicians but for pathologist as well. Nodular Fasciitis (NF) is a rapidly growing soft tissue myofibroblastic lesion that represents a tumour like mass with low recurrence rate of 1-2%. The deceptive clinical behaviour coupled with nonspecific histologic features makes this lesion challenging to diagnose. Accurate diagnosis is important to avoid unnecessary and mutilating surgeries as the behavior of this lesion can mislead to sarcoma. The confirmatory diagnosis can be done on subjecting the biopsy tissue to the panel of Immunohistochemical(IHC) markers. Upto 20% of cases are reported to occur in the head and neck region but these lesions in the oral cavity are extremely rare and tend to affect children more. The present case is unique because of its occurrence in older age group, its intraoral location and confirmation was done using special stain and panel of IHC markers vimentin, smooth muscle actin, muscle specific actin, desmin, CD34, S-100 and Ki-67

Keywords: Muscle specific actin, Nodular Fasciitis, Smooth muscle actin, Vimentin

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Morphological analysis of various rugae patterns in south Indian sample population.

**Presenter - Dr. Selvamani M**

**Aim:** The aim of this study was to analyze and identify differences in the palatal rugae patterns and Gender wise distributions in three different populations.

**Materials and Methods:** Ninety maxillary study models (30 from each group including males and females) were examined in the age group ranging from 18 to 25 years. The palatal rugae pattern was analyzed for shape.

**Results:** After analyzing the rugae patterns among the groups, the most common pattern was the wavy pattern (53.57%) followed by curved (18.22%) and straight (13.66%). The least was circular (1.3%). When compared between sex, the most common pattern was found to be wavy (male – 54.3% and female – 53.09%), while the curved pattern was more common among the females (21.09%) than males (13.97%). The straight pattern was more common among males (18.8%) than females (10.18%). The least common pattern was found to be the circular in both sexes which accounted for around 1%.

**Conclusion:** This study shows no two palates are identical in terms of their rugae pattern. Palatal rugae possess unique characteristics as they are absolutely individualistic. The study also confirms that the “wavy” type of palatal rugae pattern was the most predominant among these three populations. Keywords: Palatal rugae, pattern, study model

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OBJECTIVE: The aim of this presentation is to report a case of palatal Mucoepidermoid carcinoma (MEC) mimicking a mucocele, to highlight the main differential diagnosis, and to point out the need of a biopsy to establish the diagnosis even in a suspicion of benign reactive lesions.

CASE REPORT: A 20 year old female was referred to our hospital for evaluation of a palatal swelling noticed since 3 years. Intra-Oral examination revealed a painless, bluish, smooth, diffuse, round to ovoid submucosal nodule, in the left hard palate. Considering the clinical presence, diagnostic hypothesis comprised of mucocele and pleomorphic adenoma. An excisional biopsy was executed, as the FNAC report concluded with an acute inflammatory lesion. Histological analysis of the specimen showed conclusive diagnosis of low grade MEC. The case was managed through a complete surgical excision. At present, she has been followed up without any signs of recurrence.

CONCLUSION: Early diagnosis of MEC, may guide an adequate therapeutic management and, consequently promote a favourable prognosis.

Author: Ms Prateeka Veerapur (3rd BDS student) Co-author: Dr Niranjan KC (Associate Professor)
INFILTRATING ANGIOMATOSIS OF LIP - A CASE REPORT

Presenter - Dr. Gautami Kaimal

Co-author: Dr. Kaveri Hallikeri, Lakshmi Bagoor

Abstract:
Angiomatosis is a rare lesion in the head and neck region. Infiltrating angiomatosis is a diffuse vascular lesion which involves multiple tissues such as subcutis, muscle, bone, adipose tissue, minor salivary gland, etc. It is seen in the first two decades of life with a female predominance. Either it presents as congenital or acquired. It clinically mimics hemangioma or vascular malformation and its surgical removal is difficult because of its infiltrative nature and thus has a high recurrence rate (90%). We report a case in a 30-year-old female patient presented with swelling in the lower lip present since childhood and with progressive increase in size. A swelling present on lower lip measuring around 4*3 cm in size, bluish red in color extending into the labial vestibule with diffuse margins and soft in consistency. USG of lower lip was suggestive of vascular malformation. Excisional biopsy was performed and histopathological examination showed proliferating large irregular vessels extending from the lamina propria of the mucosa to the dermis of skin suggestive of infiltrative angiomatosis. Histopathological features aid in final diagnosis and differentiate from other lesion.
DENTAL TISSUE REGENERATION: FACT OR FICTION

Presenter - DR. PRERNA KEDIA

Co-author: URMY, Dr. VEDA HEGDE

Abstract:
Research in the field of tissue regeneration using stem cells & tissue engineering have gained a lot of attention world-wide in the recent past. Stem Cells have been extensively researched due to their great clinical potential, easy accessibility, and less invasive harvesting. Several preclinical investigations conducted so far indicated the extensive potential of the stem cell in tissue repair and regeneration of dental tissues as well as other organs. On the other hand, tissue engineering which is considered multidisciplinary, uses three key elements for tissue regeneration: scaffolds (extracellular matrices) - natural or synthetic; cells, and growth factors. Though, dental research has made some progress with respect to the above, many obstacles still exists that limits its practical application. This review focuses on the potential of stem cells and tissue engineering in regeneration of Enamel and Dentin, creating a more natural way for the teeth to repair by itself. Also this can be far less invasive treatment option for patients in near future. Although a range of materials such as composite, resin and ceramics and amalgam have been developed for the restoration of enamel and dentin, they have failed to achieve permanent repair because of imperfect combination between these foreign materials and native dental tissues. This is an extremely interesting and novel approach which shows a great promise that could undoubtedly be a progressive step in the treatment of Dental disease.

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MULTIPLE SWELLINGS OF THE JAW: ENROUTE TO SOLVING THE PUZZLE

Presenter - Dr Geeta Maruti Dodamani

Co-author: Dr Girish Babu KL, Priyanka Nadiger, Dr. Kaveri Hallikeri

Abstract:
Solitary swelling of the jaws is common feature as a clinical manifestation of odontogenic tumor and cyst, whereas the multiple swelling of the jaw is a rare condition. 38 yrs female patient reported to the OPD with complain of swelling in the lower right side of the jaw. Further intraoral examination revealed mild bony swellings in 3 quadrants. The Orthopantamogram (OPG) revealed multiple well defined radiolucencies with well corticated margins seen involving sites of the mandible and maxilla. Impacted teeth are also seen within the radiolucency. Cytology from FNAC showed abundant flakes of keratin, desquamated cells, neutrophils, lymphocytes and macrophages cytological diagnosis was keratinizing lesion, suggestive of odontogenic keratocyst. Multiple odontogenic keratocyst are known associated Gorlin Goltz syndrome. We discuss the features of syndrome and syndromic and nonsyndromic odontogenic keratocyst.
A rare case of eosinophilic ulcer with pseudoepithelomatous hyperplasia

Presenter - S vaishnavi pai

Co-author: Rohit Kumar sandile, Dr Prashant prabhu

Abstract:
An eosinophilic ulcer is a rare, chronic, benign and often self limiting lesion of the oral mucosa. The ulcer most frequently occurs on the tongue and is characterised by the presence of indurated borders resembling malignancy. It is considered to be a reactive lesion with a benign clinical course and has been known by a number of terms, including eosinophilic ulcer, eosinophilic granuloma of the tongue, traumatic granuloma, atypical histocytic granuloma and traumatic ulcerative granuloma with stromal eosinophilia (TUGSE). Although trauma is considered as an aetiological factor, less than 50% of patients recall the history of trauma. Pseudoepithelomatous hyperplasia is a reactive epithelial proliferation seen in response to a wide variety of conditions including infections, neoplasia, inflammation and trauma. It is characterised by hyperplasia of epidermis and adnexal epithelium and it may mimics squamous cell carcinoma. The main clinical feature of eosinophilic ulcer is a lesion surrounded with uncertainty regarding its nature, aetiology and pathogenesis. Here we are presenting a rare case report of an eosinophilic ulcer with pseudoepithelomatous hyperplasia on the tongue.

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Odontogenic Keratocyst: A diagnostic approach

**Presenter** - Maitreyi Shekhar Mahajan

**Co-author**: DR. Kaveri Hallikeri

**Abstract:**
It is a common developmental cyst characteristically producing keratin and potential for growth, expansion and local invasion. It can arise sporadically and solitarily in jaws of middle-aged individuals. It is distinctive among jaw cysts given its tendency toward recurrence and aggressive clinical behavior. Each case must be evaluated individually and to consider the risk of recurrence and potential of tissue damage. A diagnostic approach to cyst includes clinical, radiographic, FNAC, and histopathological examination to arrive at definitive diagnosis to provide appropriate treatment and prognosis. Cell block method aids in more meticulous diagnosis which non-surgical procedure over the FNAC. We present a case of unilocular radiolucency with sclerotic border extending from 33 to 37 region and causing displacement of 37, resorption of root and thinning of lower border of mandible in a 23 yrs male patient. We highlight the diagnostic approach with cell block method over FNAC in the diagnosis of OKC to provide the correct treatment and prevent the recurrence.

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Piezoelectric surgery- an innovative approach to osteotomies

Presenter - Adhit dabas

Abstract:
Piezoelectric surgery is a novel technique for bone surgery that reduces the risk of damage to surrounding soft tissues including nerves, vessels, mucosa and bone. The instrument used is known as the Mectron piezoelectric device and it vibrates at a frequency of 20-30hz, these micro vibrations allows for a selective cut of only mineralised tissue, ensuring precise cutting action in a blood free site along with improved wound healing. This smart technology protects the surrounding tissue at the same time reducing the patient’s post-operative discomfort as compared to the conventional technology which used the manual and motorised instrumentation. This state of art technique is the inception of a new age of minimally invasive oral surgery.

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Abstract:
Smart biomaterials are those which possess intrusive, stimulating effects on cells and tissues by engineering the materials responsiveness to internal or external stimuli such as pH, temperature, ionic strength and magnetism to promote damaged tissue repair and regeneration. Its application includes periodontal tissue regeneration, smart materials that can respond to the infection, stimulate the innate regenerative capability and mimic the original architecture and function of periodontium. One disadvantage is that there has been only a relatively small number of systems of smart biomaterials reported to date, thus limiting the choice of available compositions. Therefore, future efforts are required to develop more novel compositions with improved and better controlled smartness and to translate invitro properties to effective invivo tissue repair and regeneration.

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Narrow Band Imaging

Presenter - Amritha Krishnadasan

Abstract:
An insight into oral cavity Narrow band Imaging (NBI) is an optical image enhancing technology that allows a detailed inspection of vascular and mucosal patterns providing the ability to predict microanatomy during real-time endoscopy. NBI system is based on the principle of producing blue light which penetrates less deeply into the tissues of precancerous and cancerous lesions compared to that of conventional white light and helps to get a much better view of superficial structures without the use of any special dyes. Its application includes early detection of oral potentially malignant and malignant lesions, targeted surveillance and guided biopsies, to select optimum therapy and to guide endoscopic resection. NBI with magnifying endoscopy (NBI-ME) could also help predict likelihood of snoring and severity of obstructive sleep apnea (OSA) as well as response to treatment. NBI guided diagnosis and biopsies can be considered in cases of chronic oral granulomatous diseases. NBI can be used in guided surveillance of oral inflammatory diseases. Despite all these advances this field still faces major challenges in application into clinical practice due to need for standardization of diagnostic criteria and cost effectiveness. However robust potential of NBI guarantees its evolution into a reliable tool in diagnosis and therapy in the near future.

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Abstract:
Biofilms are intractable, firmly attached structures associated with drug resistant infections and surface destruction. However, the recently designed magnetically driven robots named Catalytic Antimicrobial Robot (CAR) efficiently kills, degrades and removes such biofilms. CARS are composed of iron oxide nano particles with dual catalytic magnetic functionality. These smart robots are driven with an external magnetic field which not only remove biofilms but also prevent their regrowth, thus making it superior to the existing conventional methods. These biohybrid robots hence reduce the requirement of several dental appointments needed for complete biofilm removal and are an excellent contribution to the field of smart dentistry.

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Abstract:
The most important skill required of all dental practitioners is the ability to provide safe and effective local anesthesia (LA). The injection of local anesthetic is perhaps the greatest source of patient fear and inability to obtain adequate pain control with minimal discomfort remains a significant concern of dental practitioners. In the age of smart technology a dentist can administer local anaesthesia with minimal pain and maximum patient comfort with the aid of vibrotactile devices, computer controlled local anaesthetic delivery systems and jet injectors to name a few. This paper presentation gives us a peek into the working behind the technology that will make the future of painless anaesthesia a reality.
Abstract:
Phosphaturic Mesenchymal Tumour (PMT) is a rare neoplasm in which the tumour cells produce Fibroblast Growth Factor 23 (FGF-23) associated with oncogenic osteomalacia due to phosphaturia. However, pathological findings of PMT are often non-specific and variable especially in tumours that are seen in upper and lower extremities followed by the head and neck region. Besides osteomalacia, clinical presentation includes bone pain and multiple bone fracture. Locating tumours responsible for tumours induced osteomalacia is often challenging. The diagnosis is often delayed due to non-specific nature of the symptoms and lack of clinical suspicion. Although complete tumour resection confers a good prognosis in most patient, surveillance for recurrence and metastasis is necessary. Oral phosphate can alleviate symptoms and metabolic imbalance. We present a case of a 32 year old male patient who presented with osteomalacia related symptoms and was found to have a painless swelling in the posterior third area of the right hard palate. The tumour was excised and the serum level of FGF-23 reverted back to normal, hypophosphatemia normalizes and clinical symptoms greatly improved. Results suggest that over expressed FGF-23 primary tumour in palate was the cause of osteomalacia.
A LARGE EXPANSILE LESION IN THE MANDIBLE

Presenter - VINAYAK M RAVISHANKAR

Co-author: JOEL CARDOZO, DR. VEDA HEGDE

Abstract:
Juvenile ossifying fibroma first described by Sir Benjamin as an "Osteoid fibroma" with atypical calcification. However it was Sir Johnson who coined this lesion as "Juvenile Ossifying Fibroma". Juvenile Ossiying Fibroma is a benign bone forming neoplasm occurring in children and adolescents, predominant in males. Although a benign entity, juvenile ossifying fibroma is characterized by locally aggressive behaviour and high potency to recur. Two distinct microscopic patterns have been described: A Trabecular variant and a Psammomatoid variant. Early Detection and prompt treatment are required to obtain favourable outcome. We present this rare entity in a 9 year old child involving the posterior mandible with characteristic clinical and histopathological presentation.

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Abstract:
HIV and AIDS are among the greatest public health challenges around the globe. Adults of the developing countries are the main victim of the disease contributing to 95% of the total world’s HIV infection and 90% death. India has the third largest HIV epidemic in the world. The WHO estimates that youths ages 15 to 24 comprise 50% of all new HIV infections. Research communities across the world has spent time and resources to find a cure. Surviving a century of various methods of ending the virus, HIV is an immortal organism which is winning all the wars waged against it. This paper traces the journey of HIV across a century.
HEALTH CARE ASSOCIATED INFECTION – A STUDY OF VULNERABILITY AMONG DENTAL STUDENTS

 presenter - SREESHTA HS

Co-author: PRIYANKA NITIN, USHA HEGDE

Abstract:
Doctors are highly vulnerable for cross-infections, transmitted from the doctor to the patient or the vice versa. Dentists being constantly exposed to saliva, are at the risk of contacting the infection and thus succumbing to disease. Infectious mononucleosis (IM) is one such disease, to which the dentists are at the threat. Not many studies exist indicating the seroprevalence of IM among dentists globally and none in the Indian Scenario. Hence, study was undertaken to assess the seroprevalence of IM and thus create awareness among dental students. Blood samples were drawn and assessed for seroprevalence of IM using Rapid IM test Immutox kit. Absence of any agglutination indicated negative result. The prevalence of IM among dental students was low yet its presence in 9% of students cannot be overlooked. This could be either due to improper follow of universal precautions of sharing of objects such as lip balm, water bottles, straws etc. The study suggests following precautionary measures to overcome such unforeseen mishappenings.

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Paper ID: KSDP005
Comparative Evaluation Of Facial Soft Tissue Thickness in Different Skeletal Malocclusion - A Cephalometric Study

Presenter - DR.PRADEEP SUBBAIAH

Co-author: DR.RAGHUNATH.N, DR.DHAKSHAHINI MR


AIM OF THE STUDY: To determine the soft tissue thickness of orthodontic patients with different skeletal malocclusions in Kerala population To understand the ethnic norms in the soft tissue profile in Kerala population

METHODOLOGY: Lateral Cephalograms of 30 dental students belonging to Kerala State with mean age 20.28±2.88 were taken (10 class I, 10 Class II and 10 class III) INCLUSION CRITERIA No previous H/O orthodontic treatment Average growth pattern EXCLUSION CRITERIA Horizontal or Vertical growth pattern The skeletal type was determined based upon the ANB angle The 3 skeletal types were classified as: Class I, ANB angle 1 - 5 degrees (10 subjects) Class II, ANB angle greater than 5 degrees (10 subjects) Class III, ANB angle less than 1 degrees (10 subjects) LANDMARKS GLABELLA 2. NASION 3. RHINION 4. SUBNASALE 5. LABRALE SUPERIUS 6. STOMION 7. LABRALE INFERIUS 8. LABIOMENTALE 9. POGONION GNATHION Statistical analysis Descriptive analysis was done to evaluate mean, standard deviation and standard error The comparisons among the skeletal classes were performed using one-way ANOVA

Conclusion: Multiple Comparisons were done using a Post Hoc test These results highlight the fact that a thorough anthropological analysis of the skull, including an assessment of the skeletal classes and peculiarities of occlusion, is necessary before starting an orthodontics, Corrective jaw Surgery or craniofacial reconstruction A larger study is needed to obtain a more accurate comparison. Although the present sample was small, trends in interrelationships of thickness for each skeletal class were apparent

Results: Pilot studies such as the present are useful for forensic researchers and forensic artists in facial reconstruction Another area in which research is needed is the difference in soft tissue thickness between those who have undergone surgical treatment of the maxilla and mandible.

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A COMPARATIVE STUDY TO DETERMINE THE STABILITY OF PALATINE RUGAE IN PRE AND POST ORTHODONTIC TREATMENT

*Presente* - ANUSHA G HEGDE

A comparative study to determine the stability of palatine rugae in pre and post orthodontic treatment

**Author** – Anusha G Hegde

**Aim and Objectives:** To assess the palatal rugae pattern in pre and post orthodontic treated study models to determine their uniqueness and stability.

**Methods:** Study models of 10 patients were taken which was divided into two groups. Group I consisted of study models of 5 patients with extraction while Group II included study models of 5 patients without extraction therapy. The distance was measured using digital Vernier caliper on study models between the following points and the same were noted down: Transverse distance between the first medial rugae, Anteroposterior distance between first and second right medial rugae, Anteroposterior distance between second and third right medial rugae. The average values of the three readings in each were taken and the data was subjected to statistical analysis using SPSS software version 22.0

**Result:** Statistically significant result was found in the transverse distance between the first medial rugae among extraction and non-extraction cases when compared in pre and post orthodontic therapy. On the contrary no statistically significant result was found when extraction group was considered pre and post orthodontically and same followed with non-extraction group.

**Conclusion:** According to this study the transverse distance increased between first medial rugae post orthodontic therapy, hence considering it as a stable point becomes questionable. The right first and second medial rugae seemed to be more stable in terms of linear measurement.

**Keywords:** Palatal Rugae, Extraction, Non-Extraction

A comparative study to determine the stability of palatine rugae in pre and post orthodontic treatment

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**Keywords:** Palatal Rugae, Extraction, Non-Extraction

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Paper ID: KSDP011
A comparison of force decay between elastomeric chain, coil spring and tie-backs in various alcohol concentration found in mouth rinses. - An invitro study

**Presenter** - Dr Asma Fatima

**Co-author**: Dr Prasad Konda

**Background**: The ability to close space efficiently in Orthodontics is of major clinical importance. Elastomeric power chain, coil spring and tie-backs are commonly used in Orthodontics to facilitate tooth movement and in closure of spaces. Many mouth rinses which are used by the patients contain alcohol, which could affect the properties of the materials resulting in the force decay.

**Aim**: To evaluate the effect of different alcohol concentrations found in mouth rinses on the force decay of different retraction materials.

**Materials and methods**: A study was done to test the effect of alcohol exposure on orthodontic elastomeric chain, NiTi coil springs and tie-back. A total of 135 specimens were divided into one control group and two test groups submerged in artificial saliva at 370°C. Two test groups each of them exposed to different alcohol containing mouth washes (Listerine and Povidine-iodine) for 60 seconds twice a day and the control group was exposed only to deionized (DI) water for 28 days. Force measurements were taken at six time points (initial, 7 days, 14 days, 21 days, and 28 days) using a digital force gauge.

**Results**: The comparison between the tensile strength was made by digital force gauge and p-value (≤ 0.05) for tensile strength was derived by ANOVA test, multiple comparisons and Tukey’s correction. The results of the analysis indicate that all test groups showed significantly more force decay than the control group.

**Conclusion**: Mouth washes containing alcohol used during orthodontic treatment have effect on the force degradation of retraction products. Key words: NiTi coil springs, tie-backs, elastomeric chain, mouth rinses.

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Presenter - Dr Safiya Sana

Co-author: Dr Anna C Vaz

Background: To analyse the design and prevalent element of two types of Indigenous mini screw implants (SK Surgical, Maharashtra, India) of 8mm length and 1.3mm diameter under Scanning Electron Microscopy (SEM) and to validate its clinical usage.

Methods and Material: Two types of mini-implants (Stainless Steel and Titanium) from the same manufacturer were scanned with the SEM and analysed with the Sigma Scan Image Analyzer Software for its structural design namely, external diameter, core diameter, thread depth, pitch of the screw. Its elements were assessed using Energy Dispersive Spectroscopy. Statistical Analysis: Data were assessed using SPSS, version 15.0. Descriptive Statistics were used for variables according to the groups.

Results: The mini-implants were seen to have a external diameters of 1.4165 ± 0.0093 mm (SS) and 1.4674 ± 0.0093 mm (Ti); Internal diameter 1.007 ± 0.0202 mm (SS) and 1.0022 ± 0.0293 mm (Ti), pitch 0.3485 ± 0.1251mm (SS) 0.3570 ± 0.0158 (Ti); cutting edge 0.1173 ± 0.0214 (SS) and 0.1039 ± 0.0384 (Ti). Elemental Analysis: SS implants: Iron (70.41 ± 0.65), Chromium (17.58 ± 0.60), Silicon (0.59 ± 0.27), Nickel (9.39 ± 0.67), and Molybdenum (2.02 ± 0.44). The Titanium here is an α alloy as it comprised of an α stabilizer (Al-4.10%) and Ti (more than 90%).

Conclusions: The evaluated indigenous mini-implants are wanting in design and composition. After evaluating these facts, indigenously manufactured implants can be chosen to use for economic reasons, the stainless steel mini-implant would be a preferred choice.

Key-words: mini-implants, structural design, elemental analysis
Aim: A cross-sectional study to determine the correlation between the sum of the mesiodistal widths of the permanent mandibular incisors and combined mesiodistal widths of the permanents mandibular and maxillary canines and premolar in North Karnataka population and to examine the applicability and accuracy of Tanaka Johnston method of prediction.

Materials and methods: The study was conducted on children of age varying from 11-16 years in the Department of Orthodontics and Dentofacial Orthopaedics from 2013 to 2019. Sum of the mesiodistal widths of mandibular incisors were measured and widths of maxillary and mandibular canines and premolars were calculated using Tanaka Johnston analysis. Statistical analysis used: The difference of the means of analysis variables between two independent groups was tested by unpaired t test. Bivariate correlation analysis using Pearson’s correlation coefficient (r) was used to test the strength and direction of relationships between the interval levels of variables. Results: The results show the presence of a sexual dimorphism in the widths of maxillary and mandibular canine and premolar widths. The comparison of mesiodistal width of sum of incisors and actual combined widths of canine and premolars for maxillary as well as mandibular arches showed a statistically significant difference irrespective of the gender.

Conclusion: The Tanaka Johnston analysis in its original form is not accurate enough to be applied to the North Karnataka population and new regression equations were formulated for North Karnataka Population.

Keywords: Mesiodistal dimensions, Tanaka Johnston mixed dentition analysis.
Paper ID: KSDP024

ASSESSMENT OF EXTERNAL APICAL ROOT RESORPTION (EARR) DURING ORTHODONTIC TREATMENT

Presenter - RESMI

Objective: To assess and compare external apical root resorption in maxillary and mandibular arch during orthodontic treatment.

Materials and methods: This study was conducted in the Department of Orthodontics and Dentofacial Orthopedics V S Dental College and Hospital, Bangalore. Ten patients who underwent orthodontic treatment from the department were included in the study. Assessment of root length were done using pre and post panoramic radiographs. Root length were calculated in maxillary and mandibular incisors and molars by measuring the distance from CEJ to root apices. EARR was calculated as the difference between the pre and post treatment root length in mm.

Results: Wilcoxon Signed Rank test was used to compare the mean EARR(in mm) between Maxillary & Mandibular Incisors as well as Molar. Result showed maxillary central incisor and maxillary first molar showed maximum resorption. Incisors showed greater resorption in both the arches. On comparing maxillary tooth to its opposing mandibular tooth maxillary teeth showed more resorption(with p value =0.04).

Conclusion: Incisors showed greater resorption in both maxillary and mandibular arch. Maxillary incisor showed more resorption than mandibular incisor. Maxillary molar showed more resorption than mandibular molar.

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Aim and Objectives: The aim of the study was to find out the correlation between chronological, dental, and skeletal age.

Materials and Methods: Lateral cephalograms and orthopantomograms of 30 subjects of age ranging 10–14 years were obtained for the estimation of skeletal and dental age. Dental age was assessed using Demirjian’s method, skeletal age was assessed using the cervical vertebrae maturation method of Hassel and Farman. Statistical analysis was carried out. Student’s t-test and Spearman’s coefficient correlation were used to correlate the relation between chronological, skeletal, and dental age.

Results: The Spearman’s correlation coefficient was 0.777 (p < 0.05) between chronological and dental age, 0.516 (p < 0.05) between chronological and skeletal age, and 0.563 (p < 0.05) between dental and skeletal age.

Conclusion: There is a good correlation between chronological and dental age in South Indian population. A moderate correlation between chronological and skeletal age as well as between dental and skeletal age.

Keywords: Cervical vertebral maturation method, chronological age, Demirjian’s method, dental age, skeletal age

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Aim: To compare the upper and lower pharyngeal airway width in Class II malocclusion patients with low, average, and high facial growth patterns.

Materials and Methods: Pre-treatment lateral cephalometric radiographs of 10 Class II subjects were used to measure the upper and lower airway spaces. The subjects were aged between 12 and 25 years with no pharyngeal pathology at initial visit. The sample was divided into three groups according to the vertical facial pattern: Normo divergent (n = 30), hypo divergent (n < 30), and hyper divergent (n > 30). The assessment of upper and lower airway spaces was done. ANOVA test and Tukey test were used to compare the upper and lower pharyngeal space among the vertical patterns.

Results: Skeletal Class II subjects with hyper divergent facial pattern showed statistically significant narrow upper pharyngeal width when compared to normo divergent and hypo divergent facial patterns. (p<0.05). No statistically significant difference was found in the lower pharyngeal width in all three vertical facial growth patterns.

Conclusion: It is important to assess the pharyngeal airway space in class II patients, especially hyper divergent growth pattern.
CLEAR ALIGNERS- MOVE TOWARDS A NEWER, BETTER SMILE

Presenter - Dr Geeta Maruti Doddamani

Co-author: Dr Girish Babu KL

Abstract:
Fixed braces have been the conventional and effective orthodontic appliance for over a hundred years. However due to the esthetic concern, tooth colored brackets and lingual orthodontics gained popularity for a few decades. Their use gradually declined due its own disadvantages. In recent years a more esthetic and comfortable orthodontic treatment technique -“Clear Aligners” has been introduced. This system uses series of custom made removable aligners with the unique smart force technology that gradually moves teeth to the ideal position. There is also concern among orthodontists regarding the efficacy of this system as research in field has shown controversial results. Hence the aim of this presentation is to review this newly introduced system, Clear Aligner: its application, advantages, disadvantages and limitations.

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COMBINING INTERMAXILLARY ELASTICS AND LIP REPOSITIONING TECHNIQUE FOR CORRECTING CLASS II MALOCCLUSION ASSOCIATED WITH EXCESSIVE GINGIVAL DISPLAY

Presenter - Dr. Mayank Trivedi (1st Author)

Co-author: Dr. Priya Chaurasia, Dr. Raghunath N, Dr. Alekya Akasapu

Abstract:
Orthodontic correction of malocclusion associated with excessive gingival display presents with challenges in the way of aesthetics, especially while correcting a problem which is beyond the boundaries of orthodontics alone as the issue to be addressed is not skeletal in its origin. Aim of this case report was to attain an aesthetically pleasing profile by employing orthodontic treatment for correcting the malocclusion and to mask the gummy smile without undertaking any major jaw repositioning procedure. These two objectives were achieved by using class II elastics for dentoalveolar correction and lip lengthening technique for correcting excessive gingival display that resulted in delivering a favourable profile and satisfaction to the patient. Keywords: Profile, Excessive gingival display, Dentoalveolar correction, Class II elastics, Lip lengthening.

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Abstract:
An automatic system in the field of surgery and other medical fields make us wonder if any application of robot can play an equally important role in orthodontics as well. In the field of orthodontics high powered computers and advanced robotics continue to grow. The system combines 3D imaging, alloys which are exotic and robotics. With the advent of this new technology it is being claimed that the main drawback of orthodontic treatment being longer treatment duration can be reduced, not by moving the dental units faster but by making them move more efficiently.

The procedure involves scanning of teeth and then the scanned information is fed into the system. When the robots come into the scenario, they include two pincers which will help guide the teeth in a particular pattern by heating and bending the wires accordingly. The visualization of treatment can be done beforehand and hence this gives us an opportunity for treatment planning in depth.

Robotics in orthodontics means that the treatment can be shifted from being qualitative to quantitative. Three aspects such as new structure, control and sensor technique, and computer-human interaction technique. However, the technology is new and more research is yet to be carried out.
Abstract:
We can’t deny the fact that we all thrive to look young so called less than our age. In this era of passion to look beautiful, various new technologies are emerging to enhance and improve the physical appearance of people. There is a new treatment option making its way into dental field. Botox is emerging as one such popular treatment to improve various dental conditions. It is an alternative treatment modality working through chemo denervation method with non-surgical and minimal invasive use of BTX-A injection. Botulinum toxin of the anaerobic bacteria, clostridium botulinum and acts by preventing the release of acetylcholine. Botox is showing quite promising results in management of a muscle generated dental disease and to treat functional or esthetic dental conditions. This presentation explains the basic of botulinum toxin and some of its uses in dentistry.
Abstract:
TMJ parafunction results primarily from stress in central nervous system. Patients clenches and grinds teeth to achieve stability and comfort which can result in mandibular overclosure and severe dental attrition, these abnormal neuromuscular forces can be 3 to 4 times greater than regular chewing force, which can lead to symptoms such as facial pain, headache, ear pain, limited or painful opening of the jaw, clicking or popping in the jaw joints, clenching of the teeth. Neuromuscular deprogramming is designed to eliminate noxious occlusal contacts and promote harmonious masticatory muscle function. Deprogramming restrains the muscles (masseter, temporalis, pterygoid) so that they are in most relaxed position and the condyle in the most retruded position.
This poster is to focus on how neuromuscular deprogramming can be achieved in the number of ways to make the patient asymptomatic.

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Platinum Sponsor

Paper ID: KSDP070

ASSOCIATION BETWEENFRONTAL SINUS MORPHOLOGY AND CERVICAL VERTEBRAL MATURATION

Presenter - Dr POOJA MASTAMMANAVAR

AIMS AND OBJECTIVES: To evaluate the association between frontal sinus morphology and cervical vertebral maturation and to determine its validity in assessing the different stages of adolescent growth spurt.

MATERIALS AND METHODS: A cross-sectional study was performed on the pretreatment lateral cephalograms of 36 subjects aged between 8 and 21 years. The sample was divided into 6 groups based on the cervical vertebral maturation stages. Frontal sinus index and the cervical stages, both were evaluated on the same radiograph. The Kruskal-Wallis test was applied to compare frontal sinus index values at different cervical stages, and post hoc Dunnett T3 test was applied to compare frontal sinus index values between adjacent cervical stages for each sex. The Kendall tau-b values were used to assess the correlation between the cervical stages and the sinus index.

RESULTS: A significant association was found between frontal sinus height, width and cervical stages in both sexes. A weak negative correlation was found between sinus index and cervical stages in male subjects, no correlation was found in females. The post hoc analysis showed that the values of the sinus index were comparable between any 2 adjacent cervical stages.

CONCLUSION: There is significant association between frontal sinus morphology and cervical vertebral maturation but the frontal sinus index cannot be used to identify the prepubertal, pubertal, and postpubertal stages of the adolescent growth spurt. KEY WORDS-Frontal sinus index, cervical vertebrae, growth spurts

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ORTHODONTIC SOFTWARES

**Presenter** - Dr POOJA MASTAMMANAVAR

**Abstract:**
Orthodontists are the most progressive of the dental specialists, quick to embrace new technologies for enhancing clinical efficiencies and practice workflow. Orthodontic software innovations, whether for imaging and clinical applications or for managing the business side of a practice, have led the consistent need for more powerful computing requirements for more than four decades. The right orthodontic software helps to digitize orthodontic procedures and ensure you stay organized. The software also makes it possible to provide digital treatment options, as well as to analyze movement of the dentition. Orthodontic digital treatment planning systems typically feature cephalometric analysis, digital imaging, intraoral and extraoral image capture, morphing capability to show patients what their teeth could look like after treatment, case presentation, treatment planning capability and oral maxillofacial surgery applications. Orthodontic 3D modeling enables to simulate a patient’s mouth and formulate various treatment options. Softwares can be used to make highly accurate customizable appliances for each patient enabling the orthodontist to deliver more effective treatment. Through these systems, you can provide patients with visuals to help them see why they should go forward with orthodontic or surgical-orthodontic treatment. Keeping in step with technology for more than half a century, orthodontics will surely continue forward at the same pace, setting the standard for all the other dental specialties and raising the bar for dentistry in general.

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Paper ID: KSDP072

EFFECTIVENESS OF MANDIBULAR ADVANCEMENT IN MANAGEMENT OF OBSTRUCTIVE SLEEP APNEA

Presenter - DR S. SUMALATHA

AIM: To evaluate the effectiveness of mandibular advancement in management of obstructive sleep apnea by means of systematic review.

METHODS AND MATERIALS: Articles were identified through a literature survey using following databases: PubMed, Google Scholar, Science Direct and Elsevier. A total of 10 articles were reviewed regarding the mandibular advancement in management of obstructive sleep apnea and then the studies were assessed qualitatively.

RESULT: At present there are several mandibular advancement appliances, which has been showed excellent resolution of symptoms. It is important however for these patients to undergo regular medical referral to monitor their condition and switch to an alternative treatment plan if required. Thus there can be no doubt that orthodontist has a vital role to play in identifying as well as treating OSA patients. It would thus be important for orthodontists to make themselves aware of the procedures and responsibilities involved in multidisciplinary management of OSA.

CONCLUSION: In rapidly industrializing country like India, with snoring rates of obesity, it is quite likely that prevalence of Obstructive Sleep Apnea is far higher than detected and rising rapidly. The Orthodontist, in concert with trained medical person can render valuable service in diagnosis and treatment of OSA. KEY WORDS: OSA, Mandibular advancement, systematic review.
Aims and Objectives: To investigate the relationship between craniofacial measurements obtained from cephalometric radiographs and analogous measurements from profile photographs.

Materials and Methods: Lateral cephalograms and standardized facial profile photographs were obtained from a sample of 20 subjects. Intraclass correlation coefficients (ICCs) were calculated from repeated photographic measurements to evaluate method reliability. Analogous cephalometric and photographic measurements were compared to assess Pearson correlation coefficients. Linear regression analyses were conducted between the measurements that achieved correlation coefficients greater than r 5 0.7.

Results: The reliability of the photographic technique was satisfactory. Most measurements showed ICCs above 0.80 and highly significant correlations (P # .001) with cephalometric variables. Among all measurements used, the A’N’B’ angle was the most effective in explaining the variability of its analogous cephalometric, mainly for female subjects (r 2 5 0.80). The FMA’ angle showed the best results for vertical assessment (r 2 5 0.65).

Conclusion: The photographic method has proven to be a repeatable and reproducible tool provided that a standardized protocol is followed. Therefore, it may be considered a feasible and practical diagnostic alternative, particularly if there is a need for a low-cost and non-invasive method.

Key words: Photography; Cephalometry; Diagnosis
Aim: To compare the upper and lower pharyngeal airway width in Class II malocclusion patients with low, average, and high facial growth patterns.

Materials and Methods: Pre-treatment lateral cephalometric radiographs of 10 Class II subjects were used to measure the upper and lower airway spaces. The subjects were aged between 12 and 25 years with no pharyngeal pathology at initial visit. The sample was divided into three groups according to the vertical facial pattern: Normo divergent \((n = 30)\), hypo divergent \((n < 30)\), and hyper divergent \((n > 30)\). The assessment of upper and lower airway spaces was done. ANOVA test and Tukey test were used to compare the upper and lower pharyngeal space among the vertical patterns.

Results: Skeletal Class II subjects with hyper divergent facial pattern showed statistically significant narrow upper pharyngeal width when compared to normo divergent and hypo divergent facial patterns. \((p<0.05)\). No statistically significant difference was found in the lower pharyngeal width in all three vertical facial growth patterns.

Conclusion: It is important to assess the pharyngeal airway space in class II patients, especially hyper divergent growth pattern.
Abstract:
Black triangles are interdental spaces that are seen due to lack of sufficient interdental papilla. Lay people consider black triangles to be the third most unesthetic dental problem with caries being first and improper marginal crown fit being second. Some of the etiological factors of black triangles are gingival biotype, aging, distance from crest of alveolar bone to contact point, crown shape, distance between roots and their angulation, interproximal contact point, morphology of embrasure areas and most importantly orthodontic treatment. Most commonly black triangles are noticed in patients with crowded teeth. In most cases, due to crowding the gingiva is receded interdentally and is prevented from reaching normal height. Once orthodontic therapy is provided, the crowding is relieved, but the black triangles become more obvious. Black triangles have a major effect on esthetics and with esthetics becoming a major and in some cases the only concern, proper efforts to reduce the visibility of the black triangles by a team of dentists is necessary. Even though black triangles are as small as 3mm they hamper an individual’s social progress. Many treatment techniques have been put forth to reduce black triangle visibility and it is necessary to discuss the same to familiarize orthodontists, periodontists and restorative dentists about the available procedures and the need for them to work as a team.
Objective: This study was conducted to assess the masseter and mentalis muscle thickness in non-orthodontic subjects with class I, class II with high and low mandibular plane angle and class III skeletal malocclusion and then to evaluate the association between the thickness of masseter and mentalis muscles with a different skeletal pattern.

Materials and methods: This was a single-blinded study conducted on 40 subjects (14 males and 26 female), age ranging from 15-25 years with various malocclusion and no history of orthodontic treatment. The thickness of both masseter and mentalis muscle was measured bilaterally using ultrasonography, and recordings were made both in relaxed and under a contracted state. Lateral cephalograms were taken and 2 cephalometric parameters were analysed for each subject to assess their skeletal pattern and accordingly divided into 3 groups as class I(n=10), class II subdivided as high(n=10) and low(n=10) mandibular plane angle and class III(n=10) skeletal malocclusion and then their association to muscle thickness was evaluated. Results — For statistical analysis, one-way ANOVA and Tukey’s Post Hoc test were employed. P-value was set at p<0.001. ANOVA test for masseter and mentalis revealed a statistically significant differences between group 1, group 2A and 2B and group 3. Tuckey’s Post Hoc test when applied for mentalis revealed a statistically significant difference was observed between group 1 vs group 2a, group 2a vs group 2b, group 2a vs group 3 and for masseter muscle in a relaxed state showed statistically significant difference between group 1 vs group 2a, group 2a vs group 2b, group 2a vs group 3. And for masseter muscle in the clenched state showed a significant difference between group 2a vs group 2b.

Conclusion: The study concluded that the thickness of the mentalis muscle was higher in group 2a when compared to group1, group 2a, group 3 in a relaxed and clenched state. The masseter muscle showed greater thickness in group 2a in relaxed position when compared to group 1, group 2b, group 3 and masseter muscle in group 2a was thicker in clenched position only with group 2b.

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ORTHODONTIC TOOTH MOVEMENT AND PLATELET RICH PLASMA

Presenter - Dr. Shreyank G

Abstract:
Tooth movement and associated biological reaction have long been a topic of interest for research. With increasing number of adult patients seeking orthodontic treatment, many techniques have been introduced to achieve tooth movement at a faster pace but in a normal physiological manner. Accelerated orthodontic tooth movement is becoming of increasing importance in orthodontics due to a large number of patients requiring shorter duration of treatment as their main concern. Most of the topics for acceleration of tooth movement revolve around Regional accelerated phenomenon (RAP) which induce osteoclastogenesis and increases the pace of tooth movement. Many invasive procedures, noninvasive procedures and biochemical adjuncts have been put forth for acceleration. One such important and tissue regenerative procedure is the use of platelet rich plasma (PRP). It is an autologous concentration of human platelets in a small volume of plasma and also contains seven-fundamental growth factors. The mechanism of action of PRP is by degranulation of cellular alfa-granules, consisting of growth factors and cytokines which are activated during the clotting process. When PRP is injected submucosally, it promotes periodontal regeneration through various mechanisms. Although the synthesis of PRP is technique sensitive it can improve the quality of the treatment outcome by influencing the bone quality and enhancing the rate of tooth movement. Considering that PRP injection is cost effective compared to other procedures for acceleration of tooth movement, it is the best technique for reducing duration of orthodontic treatment.

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A SYSTEMATIC REVIEW OF RAPID MAXILLARY EXPANSION IN PRE AND POST PUBERTAL SUBJECTS.

Presenter - Dr AJITH G V

Aim: To Evaluate The Discrepancy In Transverse Dimension In Pre And Post Treatment Subjects Using Rapid Maxillary Expansion


Result: In Total Six Articles Were Reviewed. There Was An Increase In Lateral Nasal Width And Maxillary Width In Pre Pubertal Subjects By 3.4mm And 2.8mm Respectively. On The Other Hand The Post Pubertal Subjects Showed Only Increase In Lateral Nasal Width By 1.3mm.

Conclusion: There Is A Shortage In Terms Of Literature When Rapid Maxillary Expansion Is Considered. Also The Evidence Supporting The Transverse Increase In Maxilla And Lateral Nasal Width Is Weak, In Pre Pubertal Subjects. In Post Pubertal Subjects It Is Less.

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ASSESSMENT OF THE ORTHODONTIC TREATMENT NEED AND COMPLEXITY OF MALOCCLUSIONS AMONG 14-24 YEAR OLD INDIVIDUALS WITH HEARING IMPAIRMENT IN MYSORE, DISTRICT OF KARNATAKA

Presenter - Dr Vikram Kumar Jain S

Co-author: Dr Thimmaiah U K, Dr Marattukalam K T

Aim: To assess the malocclusion severity, orthodontic treatment need and complexity among Deaf and Hard of Hearing (DHH) population in Mysuru using occlusal indices.

Materials and Methods: 200 individuals between 14 and 24 years of age were selected for the study from special schools and training centers in Mysuru after obtaining approval from the concerned authorities. Mean age of the study population was 18.6±3.4 years. Intraoral photographs and alginate impressions were taken for all individuals participated voluntarily with informed consent. Study models were fabricated and assessment was done by analyzing individual study models and photographs by single examiner using PAR, IOTN and ICON index for scoring the malocclusion. 10% of the study models and photographs were randomly selected and reassessed at 6 week interval for intra-examiner reliability.

Results: High level of intra-examiner reliability was found with all three indices. Among the studied population, 62% of DHH individuals have severe malocclusion according to PAR index, 51.5% off DHH individuals were in great need of orthodontic treatment according to Dental health component of IOTN index and 27% of DHH individuals had complex malocclusions according to ICON index. Only 6.5% of DHH individuals had great need of orthodontic treatment for aesthetic impairment.

Conclusion: Deaf and hard of hearing population in Mysuru were found to have higher prevalence of malocclusion with almost half of the population in need of orthodontic treatment for their dental health.

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Aim and Objectives: The objective of this study was to evaluate whether the calcification stages of maxillary canine, mandibular second molar, and mandibular third molar can be used for assessment of growth phase.

Materials and Methods: The study group consisted of 30 subjects. Pre-treatment digital panoramic and lateral cephalometric radiographs of the patients were analysed. The patients’ age was ranging from 9 to 18 years. Right maxillary canine, mandibular second molar and third molar were used as a sample. The teeth mineralization was assessed using modification of Gleiser and Hunt method. The skeletal maturation was assessed by the cervical vertebrae maturation (CVM) method.

Results: A significant association was found between CVM stage 2 and maxillary canine (UC) stage 4, mandibular second molar (LM2) stage 4, and mandibular third molar (LM3) stage 1. CVM stage 3 corresponded with UC stage 5, LM2 stage 5, LM3 stage 2. CVM stage 4 matched with UC stage 5, LM2 stage 6 and LM3 stage 3. The highest correlations between CVM and calcification stages were in the group of the maxillary canine (P < 0.05) and mandibular second molar (P < 0.05).

Conclusion: The calcification stages of UC, LM2, and LM3 as indicators of skeletal maturity could be used as a reliable skeletal maturity indicator, until this method is verified with a larger sample group.

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Update available; NEXTGen Orthodontic Clinic

Presenter - SURYAjit SAINI

Co-author: DEEPTHI SHIRI

Abstract:
Ever imagined living your life without a Smartphone? Or never updating your apps? Can you afford to run your applications, ignoring the update notifications? Life seems so stagnant once your Smartphone crashes down! Ever wondered what if the landlines would have been the end of telephonic evolution? We would have never got the taste of the technology which today makes our lives smart and smarter with every update! No wonder why Smartphones are self proclaimed “SMARTS” in their names! The debate is quite similar. Every aspect of life has been and is evolving with generation; dentistry being no exception! Now just think about your old dental clinic set up. No wonder a successful orthodontic treatment is achievable using the conventional orthodontic aids, but the treatment achieved is not a “SMART” approach to a successful result. Technology has helped evolve to a smarter generation of dental era. “SMART” approaches help save time, and give successful treatment outcomes faster while maintaining precision and accuracy. “SMART” approaches increase the working efficiency and open the window to multitask for the operator. No wonder life is made easy and comfortable! This paper presents state of the art use of these “SMART” technologies in managing an orthodontic clinic at every step from patient dealing, record maintenance, to diagnosis, analysis and treatment planning! CBCT radiographs, 3D scanners, E-models, digital analysis, customised brackets, indirect bonding, NiTi wires, photobiomodulation, remote treatment monitoring, trending aligners, cloud storage, E-wallets, being a few “SMART” approaches; an insight to the NEXTGen orthodontic clinic!

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Is lower incisor extraction admissible??

*Presenter - Dr Prashanth R*

**Abstract:**
Extraction versus nonextraction debate is still continuing since 1900s. Some cases demand extraction of premolars, but the decision making is difficult in the border line cases with good facial esthetics. Lower incisor extraction becomes a therapeutic alternative to premolar extractions in lower anterior crowding cases with good facial esthetics and well occluded posterior teeth. Diagnostic setup reveals the posttreatment occlusal possibilities and hence the most important step in the diagnosis and treatment planning of these cases. Lower incisor extraction decision would be a better option in cases with anterior Bolton’s discrepancy. This paper explains about the indications, contraindications and advantages of lower incisor extraction in the Orthodontic treatment.

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Clinical and Radiographic Evaluation of Mineral Trioxide Aggregate and Amniotic Membrane
Pulpotomy In Primary Molars: A Randomized Clinical Trial

**Presenter** - Dr Arathi Rao

**Co-author:** Ellana J Joseph, Karuna YM, Ramya Shenoy, Suprabha BS

**Background:** Pulpotomy aims at restoring the function of the tooth by removal of the coronal inflamed pulp and maintaining the healthy radicular pulp in the root canal. Conventionally mineral trioxide aggregate (MTA) has been used as pulpotomy agent, but this material too has few drawbacks. Amniotic membrane is a stem cell rich

**Aim:** To compare and evaluate clinical and radiographic outcome of MTA and amniotic membrane at 1 month, 3 months, 6 months and 12 months when used as pulpotomy agents.

**Design:** The study consisted of Group I (MTA) and Group II (Amniotic membrane) consisting of ten primary molars in each group. Following pulpotomy the teeth were evaluated clinically and radiographically at 1 month, 3 months, 6 months and 12 months.

**Results:** Clinically all the samples in Group I and Group II were asymptomatic with no signs of failure. Radiographically periodontal ligament widening was seen and was statistically significant (p value-0.00). Interradicular bone destruction was seen in both the groups and this was statistically significant at the end of 12 months with a p value of 0.00.

**Conclusions:** Amniotic membrane can be used as an alternative to MTA for the pulpotomy treatment in primary teeth.

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Introduction: The development of Nickel Titanium (Ni-Ti) instruments brought a change in the traditional endodontic treatment which led to the introduction of rotary endodontics. However the available file systems are manufactured to use in permanent teeth. Use of these files in primary teeth may lead to lateral perforations as they have a shorter, thinner, curved roots and ribbon shaped morphology compared to permanent teeth. To meet the demand of pediatric endodontists, recently an exclusive pediatric rotary file has been introduced.

Aim: To evaluate the clinical efficiency of newly introduced pediatric rotary files.

Objective: To evaluate and compare the quality of obturation in primary teeth following root canal preparation with pediatric rotary files, conventionally used rotary Nickel-Titanium files and hand Nickel-Titanium files.

Materials and Methods: A total of 30 primary molars requiring root canal treatment were selected from children aged between 4-8 years. Intra oral examination and standardized intra oral periapical radiographs was taken for the teeth with possible indication for pulpectomy. Following access cavity preparation, pulp extirpation and determination of working length, teeth was divided into 3 groups (Group 1. 2 & 3), consisting of 10 teeth each. In group1, group 2 and group 3, cleaning and shaping of root canals was done using pediatric rotary files, conventional rotary Ni-Ti files and hand Ni-Ti K files, respectively. Zinc oxide eugenol cement was used as obturating material in all the groups.

Rotary lentulo-spiral method was used for obturation of teeth. Radiographic evaluation of quality of obturation was scored according to criteria given by Bawazir et al. Data collected was statistically analyzed.
Lobstein disease - A case report

Presenter - Dr. Sharon Jose

Abstract:
Osteogenesis Imperfecta (OI) or brittle bone disease is a heterogeneous rare connective tissue disorder commonly caused by mutations in the collagen type 1 gene. Its hallmark feature is bone fragility with a tendency to fracture from minimal trauma or from the work of bearing weight against gravity. The fracture heals readily but the new bone is of similar imperfect quality. The other common features includes blue sclera, dentinogenesis imperfecta, hyperlaxity of ligaments and skin, hearing impairment, presence of wormian bones on skull radiographs and fragile skin. It may occur in one out of 20,000 to one out of 60,000 live births, affecting both males and females. Diagnosis of OI is straightforward in individuals with a positive family history or in whom several typical features are present, but can be difficult in the absence of affected family members. Hence here we are presenting a case report on the dental management of patient with osteogenesis imperfect type III.

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"Spread a ray - Infections at bay" chronic dentoalveolar abscess with extra oral sinus in a 12 year old female patient: A case report

Presenter - Dr. Hrishida P

Abstract:
The advent of laser therapy has opened new vistas for quick, easy, efficient and effective dental procedures and has revolutionized the treatment modalities in Pediatric Dentistry. An old proverb “a stitch in time saves nine” holds very true especially in children where early diagnosis and treatment can save the affected teeth. The outcome of root canal treatment is based on efficient disinfection of the root canal system and prevention of reinfection. Current chemomechanical methods do not always achieve these goals, and insufficient root canal disinfection is the main reason for endodontic failure. Due to high energy content and specific characteristics of laser light, laser treatment has been proposed for disinfecting the root canal system. Laser light can penetrate areas of canals where irrigating and disinfecting solutions cannot reach, like secondary canals and deep dentinal tubules and can eliminate microorganisms. It is considered that Nd:YAG laser has a bactericidal effect and can penetrate up to a depth of 1.000 μm. Hence, this case report reviews the effect of Nd:YAG for the root canal disinfection in a 12yr old female patient with chronic dentoalveolar abscess due to dentinal caries with extra oral sinus in mandible.

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Abstract:
Radicular cyst is defined as a cyst arising from epithelial residues (cell rests of malassez) in the periodontal ligament as a consequence of inflammation, usually following the death of the dental pulp. Dental caries is very common in children however radicular cysts affecting deciduous dentition appear to be rare with the incidence being as low as 0.5-3.3%. It usually originates as a sequel to a periapical inflammatory process, following chemical, physical or bacterial injury. Due to its chronic etiology the cyst usually appears towards the later stage of life. The incidence of radicular cyst is greater in the third to sixth decade and shows a slight male predilection. Here we present a case of a 6 year old boy who had come to our department with a chief complaint of pain and swelling in 84, which was diagnosed as radicular cyst. Treatment consisted of extraction of 84, marsupialization was done. Histopathological examination of the lesion confirmed the diagnosis of a mandibular radicular cyst in relation to 84.

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Abstract:
The knowledge about tumours of oral cavity and adjacent structures constitutes an important part of Dentistry because of the role which the dentist plays in diagnosing and treating such lesions. Although tumours constitute only a small number of pathologic conditions, they are of great significance due to their ability to jeopardize the health and longevity of the Patient. Oral Squamous Papilloma is one such benign lesion of Squamous epithelial origin presenting as a slow growing painless lesion manifested as Papillary or exophytic growth. Most commonly seen in adults rarely affects children. So, here we present a case of Squamous Papilloma in a 9 year old child, its Review and Management.
Abstract:
Probiotic has been used as a prophylactic agent for tooth decay. Prebiotics has a potential to enhance the activity of probiotic organisms. The aim of this study was to evaluate and compare the effect of probiotics, prebiotics & synbiotics on the salivary Streptococcus Mutans counts & salivary IgA concentrations. Methodology: Children of age group 6-9 years with DMFT score of 5 and above were divided into three groups of 10 each: Group 1 (prebiotics), Group 2 (Probiotics) and Group 3 (synbiotics). The microbiome therapy was done for a period of 1 month twice daily. The S.mutans count & IgA concentrations were assessed pre & post intervention. The obtained result was subjected to statistical analysis. Results: There was no significant difference between the prebiotic & probiotic groups. Statistically significant difference was noted between the synbiotic & the pre biotic & probiotic groups. Conclusion: Synbiotics can be used as a preventive regimen for dental caries.
YOGA - MANAGING DENTAL ANXIETY IN CHILDREN

**Presenter** - A. SAI NIKHITA

**Introduction**: Yoga enhances the physical and mental health of an individual. It has shown to decrease anxiety and calm the mind. Yoga could be used in managing dental anxiety in children.

**Aim**: To evaluate and compare the effectiveness of Yoga in managing anxiety in children

**Methods**: Forty children between 7-11 years, showing anxiety were divided into two groups. Children in the experimental group performed yoga before treatment. Children were assessed for anxiety with Frankel’s scale and pulse oximeter before and after intervention.

**Result**: obtained were subjected to statistical analysis

**Results**: There was significant reduction in anxiety level following the practice of Yoga

**Conclusion**: Yoga exercise can be used as a valuable tool in reducing Dental anxiety in children.

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COMPARATIVE EVALUATION OF SHEAR BOND STRENGTH OF VARIOUS GLASS IONOMER CEMENTS TO DENTIN PRE-TREATED WITH AND WITHOUT DENTIN CONDITIONER.

Presenter - Dr Richa Rachel Jobji

Co-author: Dr Shakuntala B.S

AIM: To compare and evaluate the effect of dentin conditioning on glass ionomer cements with de-ionized water, chlorhexidine and aqueous extract of miswak.

METHODOLOGY: The study was carried out on 60 extracted primary molars randomly divided into 3 equal groups of 20 each. The buccal/lingual surfaces were reduced until dentin was exposed and consequently restored. Group A specimens were restored with GIC + 1% de-ionized water. Group B with GIC+1% chlorhexidine and Group C with GIC + aqueous extract of miswak. Each group was subdivided into 2 subgroups of 10 samples each. i.e A1 and A2,, B1 and B2,C1 and C2.The samples in subgroups A1,B1 and C1 underwent dentin conditioning before restoration; while subgroups A2,B2 and C 2 were directly restored. Hundred cycles of thermocycling was done for all samples and then subjected to shear bond strength analysis. The results were statistically analysed using independent t test and one way ANOVA followed by post hoc Tukeys test.

RESULTS: The shear bond strength among unconditioned groups was highest in Group A2 (3.550 ±0.204 MPa) compared to B2 and C2 and was statistically significant and Group B1 showed maximum shear bond strength(3.014±0.202) compared to A1and C1 and was statistically significant.

CONCLUSION: The following conclusions were estimated : Among the un-conditioned subgroups ,GIC + de-ionized water showed better results compared to other groups. In the conditioned subgroups , GIC+ miswak demonstrated better results compared to other groups.

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Introduction: Probiotic has been used as a prophylactic agent for tooth decay. Prebiotics has a potential to enhance the activity of probiotic organisms.

Aim: The aim of this study was to evaluate and compare the effect of probiotics, prebiotics & symbiotic on the salivary Streptococcus Mutans counts & salivary IgA concentrations.

Methodology: Children of age group 6-9 years with DMFT score of 5 and above were divided into three groups of 10 each: Group 1 (prebiotics), Group 2 (Probiotics) and Group 3 (symbiotic). The microbiome therapy was done for a period of 1 month twice daily. The S.mutans count & IgA concentrations were assessed pre & post intervention. The obtained result was subjected to statistical analysis.

Results: Significant reduction of S. mutans was seen in all three groups. There was significant difference in reduction between the groups.

Conclusion: Prebiotics can be used as an effective preventive regimen for dental caries.

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Managing the Young with "The Smart" ancient technique

**Presenter** - A. SAI NIKHITA

**Introduction**: Yoga enhances the physical and mental health of an individual. It has shown to decrease anxiety and calm the mind. Yoga could be used in managing dental anxiety in children.

**Aim**: To evaluate and compare the effectiveness of Yoga in managing anxiety in children

**Methods**: Children showing anxiety were divided into two groups. Children in the experimental group performed yoga before treatment. Children were assessed for anxiety with Frankel’s scale and pulse oximeter before and after intervention.

**Result**: Obtained were subjected to statistical analysis

**Results**: There was significant reduction in anxiety level following the practice of Yoga

**Conclusion**: Yoga exercise can be used as a valuable tool in reducing Dental anxiety in children.

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Win a smile

Presenter - Prathibha M Raykar

Co-author: Dr Rajesh T Anegundi

Abstract:
A number of conditions can result in esthetically unacceptable problems like dental caries, trauma, discoloration mainly on anterior teeth, early loss of teeth which in turn results in lack of confidence, phonetic problems, overall psychological depression and hindrance in social interaction with other children of same age. And the reason for all these problems is modern lifestyle mainly concerned towards junk food, carbohydrate and sugar intake. With recent advancements in the field of esthetic dentistry we can restore the lost tooth structures so that the child's confidence can be boosted. This presentation highlights about the available esthetic materials to bring back the smile on child.
Public Perception, Prevention and Smie Rehabilitation in Dental Fluorosis

Presenter - Nikhila Kubsad

Co-author: Dr Kaveri Hallikeri

Abstract:
Fluoride usage makes the teeth more resistant to caries by forming fluorapatite crystal. In communities where the natural levels of fluoride exceed 2 ppm causes fluorosis. Dental Fluorosis is a common disorder characterized by hypo-mineralization of enamel caused by ingestion of excessive fluoride during enamel formation. It is a cosmetic condition that affects the teeth, caused by overexposure to fluoride during the first 8 years of life. After the teeth erupt, the teeth of those affected by fluorosis may show mild to severe discoloration. Depending on the intensity of grading of fluorosis, it appears as a range of visual changes in enamel causing degrees of intrinsic tooth discoloration. Fluorosis in a child may be perceived as having “Dirty” or “Rotten” teeth, which can cause significant damage to a child’s self-esteem and emotional well-being. It is important to identify and know the different sources of fluoride intake by children to evaluate which sources represent the risk for the development of dental fluorosis. More importance should be given to prevention at all the levels taking different advanced measures rather than letting a preventable problem become prevalent in among an estimation of 66.6 million people in around 19 states of India suffering from it. Aesthetic Rehabilitation options for dental fluorosis depend directly on severity of the fluorosis. These Available, Alternative and Advanced treatment options are the things that are going to be conveyed in this presentation.

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ASSOCIATION OF SELF PERCEIVED HALITOSIS AND ORAL HYGIENE HABITS AMONG COLLEGE STUDENTS

**Presenter** - Dr. Anjali Reji

**Co-author**:

**Objectives**: To assess self-perception of halitosis among college students. To assess the oral hygiene habits related to halitosis among college students. To assess the association of self perceived halitosis with oral hygiene habits related to halitosis among college students.

**Methodology**: A descriptive cross sectional study was conducted amongst students of 5 degree colleges in Kodagu district, Karnataka. Ethical approval, permission from concerned authorities and informed consent from participants were obtained prior to the start of the study. Self administered questionnaire consisting of 16 questions was distributed among the participants.

**Results**: Among 303 participants, 24.8% participants had self-perceived halitosis. Among them, 17.2% experienced bad breath on waking up; 11.6% responded that they were told by others that they had bad breath; only 3% of them had visited a dentist for bad breath. Statistically significant association was found between self-perceived halitosis and frequency of brushing (p=0.007), time taken for brushing (p=0.003) and the use of mouthwash (p=0.00).

**Conclusion**: Even though the prevalence of self perceived halitosis is 24.8%, the number of self reported cases is minimal (4.6%). Hence there is a need to increase the awareness among college students regarding the importance of a dentist/doctor, who can play a vital role in the management of halitosis through proper investigations, diagnosis and identification of causal factors involved in the etiology of the condition. AUTHOR Dr. Anjali Reji

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Paper ID:KSDP101

Pre- And Post-Treatment Experiences Of Fear, Anxiety, And Pain Among Mild Chronic Periodontitis Patients Treated By Ultrasonic Scaling Versus One-Stage Full-Mouth Disinfection Among South Indian Population: A Questionnaire Study.

**Presenter - Dr. Shanmugapiya.P . A**

**Co-author: Dr. Prof Krishna Kripal,,,**

**Introduction:** Non surgical periodontal therapy consists of ultrasonic scaling and full mouth disinfection. Ultrasonic scaling is conventionally done in weekly sessions performed quadrant wise. The full mouth disinfection approach aims to prevent re infection of already treated periodontal sites by pathogens that reside on other sites and thus improve the effectiveness of non surgical periodontal treatment. Anxiety, fear and pain experiences represent significant problems in the dental practice and are significant factors that discourage the demand for treatment. Thus it interefers in the management of patients during dental treatment.

**AIM:** To evaluate clinical effects of two different forms of non surgical periodontal therapy, ultasonic scaling versus one stage full mouth disinfection to the patient based on questionnaire such as Dental fear survey, Dental anxiety scale and Visual Analogue scale.

**MATERIALS AND METHODS:** Dental fear survey, Dental anxiety scale questionnaires and Visual analogue scale were applied to 30 patients were randomized into two groups. Group 1 consists of 15 patients who underwent ultrasonic scaling, Group 2 consists of 15 patients who underwent full mouth disinfection. Periodontal clinical parameters viz; plaque index, gingival index, probing pocket depth and clinical attachment level were monitored at baseline and after 4 weeks.

**RESULTS AND CONCLUSION IS AWAITED.**

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Abstract:
An Endo Perio lesion has been one of the most common problems associated with the tooth. The simultaneous involvement of pulpal problems and inflammatory periodontal disease can complicate diagnosis and treatment planning. The ultimate goal of periodontal therapy is regeneration of tissues destroyed by periodontal disease. Delivery of growth factors in the local environment holds a great deal in adjunct to bone grafts. Platelet rich fibrin (PRF) is considered as second generation platelet concentrate, consisting of viable platelets, releasing various growth factors. One of the most common mishaps that occur during routine endodontic treatment is the separation of instrument inside the root canal. Prognosis for a tooth retaining a separated instrument depends on the presence of a periapical lesion, the microbial load of the root canal during the time of separation and the quality of the obturation. The present case describes an Endo perio lesion with respect to 27 which had an endodontic file separation in the palatal root, The palatal root amputation was done and a combination Xenograft along with PRF was used for regeneration and tried to restore the function of the tooth and the follow up done for 12 months clinically and radiographically.

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Mast cells: Boon or Bane??

**Presenter - Dr. Shruti Paradkar**

**Background:** Mast cells are the locally residing immune cells, involved in inflammatory conditions through the release of biologically active substances capable of phagocytosis, processing and presentation of antigens to T cells. They are one of the cells existing in periodontal tissues, having identified in healthy as well as inflamed gingiva. Data suggests that these cells also have an important role to play in the pathogenesis of the type II diabetes. However literature suggesting their role in diabetes associated periodontitis is scarce.

**Aim:** This pilot study intended to quantify and correlate the relationship of mast cells in healthy gingiva and in gingiva of diabetic and non-diabetic patients with chronic periodontitis.

**Materials and method:** The study involved a total of 36 subjects. 12 case each of periodontally healthy subjects, non-diabetics with chronic periodontitis and type II diabetics with chronic periodontitis. The gingival tissue specimens collected from the above subjects were processed by immediately fixing in 10% neutral buffered formalin, followed by toluidine blue staining in order to study the mast cells.

**Results:** Mast cell counts were found to be more in the chronic periodontitis patients with type II diabetes in comparison with non-diabetics with chronic periodontitis and periodontally healthy individuals. The results derived from our study although, were statistically insignificant.

**Conclusion:** The results derived from this pilot study, propose a need of further investigation of mast cell contribution in diabetes associated periodontitis.

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Effect of SFA (Single Flap Approach) In Combination With PRF (PLATELET-RICH FIBRIN) and DFDBA (DEMINERALIZED FREEZE-DRIED BONE ALLOGRAFT) VERSUS SFA AND DFDBA in the Regenerative Treatment Of Intraosseous Defects Using Surgical Loupes - A Randomized Contr

Presenter - Dr. Razia Haidurs

Co-author: Dr. Razia Haidurs, Dr. Deepa G Kamath,,

Background: An important prerequisite for periodontal regeneration is the stabilization of root surface adhering blood clot in a biological environment, which is protected from microbiologic and mechanical challenges. Use of conventional flaps in intraosseous defects results in lack of primary closure of the interdental space, membrane exposure and flap dehiscence. MIST (Minimally invasive surgical technique) decreases the surgical trauma, reduces the surgical field while still providing limited although adequate surgical access. SFA (Single flap approach) is a novel, simplified, minimally-invasive surgical approach to access intraosseous periodontal defects with limited or no palatal extension. Bone regeneration in DFDBA is due to the exposure of BMPs and in PRF is due to presence of growth factors & fibrin matrix acting as scaffold for undifferentiated mesenchymal cells.

Methods: 10 patients with intraosseous defects were treated with either SFA+DFDBA or SFA+DFDBA+PRF. Clinical parameters like Plaque index, Gingival index, Sulcular bleeding index, Probing pocket depth, Clinical attachment loss, Buccal recession, interdental recession, Keratinized tissue width, gingival thickness, Defect fill and defect resolution were assessed at baseline & 6months.

Results: In addition to a significant gain in CAL gain & reduction in PD, additional use of PRF to SFA in group I resulted in a limited post-operative b-REC and an increase in KTW and GT which may support the stability of gingival profile.

Conclusion: This study suggests that regenerative strategy based on minimally invasive approach such as SFA combined with PRF and DFDBA is also a suitable treatment modality when dealing with intraosseous defects.

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Abstract:
Radicular cyst is one of the most commonly occurring cyst in the oral cavity it is usually preceded by trauma or an infectious condition which is followed by enlargement. In recent times there are several treatment procedures that are being applied in order to improve the postoperative condition and to accelerate the process of healing and regeneration in the affected site. A 32-year-old patient reported to our OPD with the chief complaint of swelling in the upper front side of the face since 2-3 months, on investigating it was diagnosed as Radicular cyst which was initially treated by endodontic treatment of the involved tooth followed by enucleation with curettage of the cyst further an apicoectomy was done. Finally a PRF and bone graft was placed for aesthetic rehabilitation.
Abstract:
In the era of modern dentistry, successful periodontal therapy often requires the augmentation or resection of the osseous contours around teeth. Traditionally, osseous surgery has been performed by either manual or motor-driven instruments. The minimally traumatic surgical approach using piezoelectric device has been introduced in the field of dentistry and has gained wide popularity. Piezosurgery is a novel technique invented by Professor Vercellotti in 1988 to overcome the limitations of traditional instrumentation in oral bone surgery by modifying conventional ultrasound technology. The advantages of this technique are precise and selective cutting of bone with frequencies acting only on hard tissues, the avoidance of thermal damage, and the preservation of soft-tissue structures. Through the application of piezoelectric surgery, implant-site preparation, autogenous bone harvesting, bone crest splitting, removing of failed implants, sinus-floor elevation, lateralization of the inferior alveolar nerve and many other surgeries can be done. Ability of piezosurgery to minimize postoperative oedema and ecchymosis has also been documented in literature. Piezoelectric surgery offers a wide range of new possibilities to perform customized and minimally invasive osseous surgery. This clinical overview gives a short summary of the current literature and outlines the advantages and disadvantages of piezoelectric bone surgery in periodontics and implant dentistry. Overall, piezoelectric surgery may be clinically superior to other methods that utilize mechanical instruments when applied in an evidenced based manner.

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VACCINE FOR PERIODONTITIS- PREVENTION IS ALWAYS BETTER THAN CURE

Presenter - Sahana K

Co-author: Spoorthy R, DR Sreeshyla,

Abstract:
Vaccine for periodontitis- prevention is always better than cure. The treatment for periodontitis has been same for years i.e scaling and root planing to remove plaque and sometimes surgery in severe cases. But even with dedicated patient compliance and dental intervention , disease can progress and teeth can be lost. Though there are many etiological factors causing periodontitis, porphyromonas gingivalis is one of the main causative organism. Hence it is necessary to arrest the destructive activity of Porphyromonas. gingivalis, the proven culprit causing inflammation of periodontium at an early stage of the disease. Therefore here is a smart way to deal with it. A new vaccine that can probably mean the end of periodontitis is worthy of giving a thought. The protection is characterized by antigen (KAS2-A1) specific IgG1 antibody and Th2 cell response towards experimental periodontitis seen in animal studies. Furthermore parenteral and intraoral administration of KAS2-A1 specific polyclonal antibodies protect against P. gingivalis induced bone resorption by inhibiting: proteolytic activity, binding to host cells / proteins and co-aggregation with other bacteria. Human trials are being carried out to ensure the feasibility of this vaccine. Therefore vaccination of humans with chronic periodontitis as an adjunct to scaling and root planning should help prevent re-emergence of P. gingivalis in subgingival plaque and thereby prevent dysbiosis and disease progression. This will result in improved long term outcome and make management much easier and less costly. AUTHOR - HARSHITHA ANTHONY. Co-AUTHOR- Dr.MIHIR. KULKARNI(Dept. of periodontics)
DENTAL IMPLANT - BIOACTIVE SURFACE MODIFIERS

Presenter - JYOTI S PATIL

Co-author: DR. MIHIR KULKARNI,

Abstract:
Dental implant - bioactive surface modifiers The replacement of missing teeth with endosseous dental implant is considered as an effective and acceptable treatment method. There is enhanced interest in the planning and advancement of implants to reduce failure and improve longevity. The use of microrough surface topography has increased the biochemical properties of the implant-bone interface. Several strategies for improving biocompatibility and osteogenic capacity of metal implants bring developed ranging from surface modification by inorganic mineral coating to biocoating of implant surfaces. Even though conventional implants have an excellent clinical performance there is need to reduce healing time and have better tissue response. The real test in implantology today is to join current information in material science, tissue engineering and biology to confer metal implant surface fit for ideal osseointegration and in the mean time giving epigenetic signs to cells in the periimplant tissues to induce appropriate natural reactions and support osseointegration. The main aim is to present brief updates on the various coating materials utilized to improve the surface chemistry of dental implants.

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Abstract:
In the era of modern dentistry, successful periodontal therapy often requires the augmentation or resection of the osseous contours around teeth. Traditionally, osseous surgery has been performed by either manual or motor-driven instruments. The minimally traumatic surgical approach using piezoelectric device has been introduced in the field of dentistry and has gained wide popularity. Piezosurgery is a novel technique invented by Professor Vercellotti in 1988 to overcome the limitations of traditional instrumentation in oral bone surgery by modifying conventional ultrasound technology. The advantages of this technique are precise and selective cutting of bone with frequencies acting only on hard tissues, the avoidance of thermal damage, and the preservation of soft-tissue structures. Through the application of piezoelectric surgery, implant-site preparation, autogenous bone harvesting, bone crest splitting, removing of failed implants, sinus-floor elevation, lateralization of the inferior alveolar nerve and many other surgeries can be done. Ability of piezosurgery to minimize postoperative oedema and ecchymosis has also been documented in literature. Piezoelectric surgery offers a wide range of new possibilities to perform customized and minimally invasive osseous surgery. This clinical overview gives a short summary of the current literature and outlines the advantages and disadvantages of piezoelectric bone surgery in periodontics and implant dentistry. Overall, piezoelectric surgery may be clinically superior to other methods that utilize mechanical instruments when applied in an evidenced based manner.
Abstract:
Guided Bone Regeneration (GBR) Technique is a reconstructive procedure employed to reconstruct the vertical and horizontal bone height which is indicated when minimal residual bone (atrophic & resorbed ridge) is left for implant placements. The stability of implants is enhanced by vertical and horizontal bone augmentation, which is assisted with use of barrier membranes. This facilitates the separation of non-osteogenic components (gingival fibroblasts, epithelial cells) from interfering with the bone augmentation. Different membranes used for this particular case are Titanium mesh and Platelet Rich Fibrins (PRF).Titanium mesh is tented on the deficit site, which creates a space beneath the tented membrane thereby completely isolating the defect to be regenerated from the overlying soft tissue. A fibrin clot formed serves as a scaffold for the growth of progenitor cells, which are driven to the wound site from adjacent bone marrow. Stability of clot is assured with sutures, mini bone screws etc. PRF consists of an autologous leukocyte-platelet-rich fibrin matrix composed of cytokines, platelets, and stem cells, which acts as a biodegradable scaffold and favours the development of micro-vascularisation by stimulating the growth factors as the site of deposition thereby ensuring enhanced osteoconduction in a most biocompatible manner. This paper highlights a (GBR assisted Implantation) case report of a subject treated at Bapuji Implant Centre, Bapuji Dental College & Hospital with reinforced Titanium mesh and Platelet Rich Fibrins membranes. Treatment outcome aims at assessing the bone growth achieved, reduced healing period and the healthy gingival condition post operatively.

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Abstract:
Over the years, there has been an extensive development in the field of dentistry with one very intriguing technology making great moulds which is LASERS. From the end of 20th century until now, there has been continuous upsurge in the development of laser based dental devices based on photo-mechanical interactions. Lasers used in dentistry includes gas and solid lasers which further categorize into CO2, Diode lasers, Nd –YAG, Er-YAG, Er,Cr:YSGG lasers. Diode lasers can be used for gingivectomy/gingivoplasty, frenectomy, depigmentation, decontamination, oral medicine applications like aphthous ulcer therapy, biopsies, dentinal desensitization, second-stage implant exposure & laser-assisted new attachment procedure. The vivid use of diode lasers in periodontology has led to several advantages over the conventional methods such as relatively bloodless surgical and post-surgical course, ability to coagulate, vaporize, or cut tissue, sterilization of wound tissue, minimal swelling and scarring, no requirement of suture, little mechanical trauma, reduced surgical time, decreased post-surgical pain and its high patient acceptance. Photodynamic therapy involves the use of low power lasers to kill microorganisms using photosensitizer drug as an adjunct to mechanical therapy in eliminating periopathogenic bacteria. Low level laser therapy enhances the proliferation of fibroblasts, osteoblasts and epithelial cells. This conservative technique has created a firm footing in the anti-aging trend that is spanning the globe and is extremely safe and effective with a proper understanding of laser physics.

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Abstract:
Osseointegration of dental implants may be affected by a variety of factors. As early as 1981 Albrektsson et al demonstrated the six major parameters of osseointegration, mainly: the implant material, the implant surface, the implant design, the condition of the bone at the host bed, the surgical technique and the loading conditions. One of the most important factors that affect osseointegration is the primary stability of the implant. A new promising technique, named osseodensification, has been recently developed that creates an autograft layer of condensed bone at the periphery of the implant bed by the aid of specially designed burs rotating in a clockwise and anti-clockwise direction. The purpose of this review is to quote a new bone drilling concept, namely osseodensification, for the placement of endosteal implants to increase primary stability through densification of the osteotomy walls.
Masticatory Efficiency of Removable Maxillary Single Complete Denture vs All On 4 Maxillary Single Complete Denture.

Presenter - BHAVYA BHARATHI.M

Abstract:
Clinical experience confirms the fact that most edentulous patients are not satisfied with removable dentures as the best dentures are a poor substitute for the natural dentition. Many patients who wear removable dentures encounter difficulty adapting to their prostheses. Mastication is the initial step in the digestive process and necessary for effective nutrition, health and a quality of life. An understanding of mastication is very important and the treatment of all edentulous patients necessitates considerable efforts. There are several factors determining the chewing result. The teeth are important in the masticatory system. They form the occlusal area where the food particles are fragmented. This fragmentation depends on the total occlusal area and thus on the number of teeth. Another important factor in mastication is the bite force. The bite force depends on muscle volume, jaw muscle activity, the coordination between the various chewing muscles, the quality of the occlusion, the motion of the mandible and the functional condition of the temporomandibular joints (TMJ). The neuromuscular control of chewing also plays an important role in the fragmentation of the food. Of the various modalities of treatment available to improve that experience, the present emerging trend is the placement of implant retained fixed prosthesis. The present case study uses the combination of EMG, T-scan and Jaw Tracking to evaluate the quality of masticatory function.

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COMPLICATIONS IN DENTAL IMPLANT PRACTICE: OUR EXPERIENCE

Presenter - Dr. Vinanithi P.V

Co-author: Dr. K. Ranganath

Abstract:
Dental implants have gained increasing popularity over the years as they are capable of restoring the function to near normal in both partial and completely edentulous arches. With substantial evidence available, fixed implant-supported prosthesis are acknowledged as a reliable treatment option for the replacement of single or multiple missing teeth. While dental implants are increasingly becoming the choice of replacement for missing teeth, the complications associated with them are progressively emerging too. Complications associated with implant practice can be surgical, implant-related or prosthesis-related. Surgical complications include haemorrhage, nerve injury, cortical plate perforation, sinus perforation, damage to adjacent teeth, displacement of the implant into the maxillary sinus, sinking of the implant into medullary portion of mandible. Implant related complications can be biological or biomechanical. Biological problems include pain, infection (peri-implant mucositis, peri-implantitis), exposure of implant threads and loss of osseointegration. Biomechanical problems include fracture of screws and fracture of implant body. Prosthesis related biomechanical problems are fracture of prosthesis and loosening of the implant body and functional problems are related to appearance, speech and mastication. We would like to share our experience regarding the complications that we encountered in our implant practice and its management.

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COMPARISON OF INTRAORAL DIGITAL IMPRESSION TECHNIQUES: A REVIEW

Presenter - Dr. Aarushi Anand

Abstract:
Digital impressions by intraoral scanning (IOS) have become an increasingly popular alternative to conventional impressions. Intraoral scanners may use proprietary acquisition and manufacturing processes. This review aimed to evaluate the accuracy of the available IOS systems for dental impressioning, and to identify the influencing factors on accuracy. The literature search was completed to retrieve all the studies that investigated the IOS accuracy when used to scan teeth. This review will provide a summary of the currently available intraoral scanners. In comparison to conventional impressions, the IOS systems can be reliably used for diagnostic purposes and short-span scanning. However, for whole arch scanning, the IOS is susceptible for more deviation. The use of these products is increasing rapidly around the world and presents a paradigm shift in the way in which dental impressions are made. Several of the leading 3D dental digital scanning systems are presented and discussed in this review. The studies indicated variable outcome of the different IOS systems. While the accuracy of IOS systems appears to be promising and comparable to conventional methods, they are still vulnerable to inaccuracies. Digital impressions by intraoral scanning (IOS) have become an increasingly popular alternative to conventional impressions. Intraoral scanners may use proprietary acquisition and manufacturing processes. This review aimed to evaluate the accuracy of the available IOS systems for dental impressioning, and to identify the influencing factors on accuracy. The literature search was completed to retrieve all the studies that investigated the IOS accuracy when used to scan teeth. This review will provide a summary of the currently available intraoral scanners. In comparison to conventional impressions, the IOS systems can be reliably used for diagnostic purposes and short-span scanning. However, for whole arch scanning, the IOS is susceptible for more deviation. The use of these products is increasing rapidly around the world and presents a paradigm shift in the way in which dental impressions are made. Several of the leading 3D dental digital scanning systems are presented and discussed in this review. The studies indicated variable outcome of the different IOS systems. While the accuracy of IOS systems appears to be promising and comparable to conventional methods, they are still vulnerable to inaccuracies.
RECENT ADVANCES IN CAD-CAM IN PROSTHODONTICS-A REVIEW

Presenter - DR. Aayush Oswal

Abstract:
A variety of CAD/CAM systems have been applied to the total process for fabricating restorations. Rapid evolution of CAD-CAM has led to a dramatic impact on all disciplines of dentistry especially in the fields of prosthodontics and restorative dentistry. The integration of these technological systems with advances in biomaterials, such as zirconia high strength ceramics, has led to major alterations in education and patient care. The advantages of CAD/CAM technology are included into three main protocols including digital impressions, digital models, and virtual articulators and facebow. It must be noted that there are significant and broad variations in acquisition systems, CAD design mechanisms, and CAM fabrication processes. In dentistry, the major developments of dental CAD/CAM systems occurred in the 1980s. There were three pioneers in particular who contributed to the development of the current dental CAD/CAM systems Dr. Duret, Dr. Moermann, Dr. Andersson. However, recently lot of advancements and modifications have happened in CAD-CAM for providing better results in aspect of strength and esthetics. this review paper focuses on all the recent advances in CAD-CAM in prosthodontics.

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Local Drug delivery system in dentistry with the use of denture base.

**Presenter - Dr Suma**

**Abstract:**
A drug delivery system (DDS) is defined as a formulation or a device that enables the introduction of a drug in the body and improves its efficacy and safety by controlling the rate, time, and place of release of drugs in the body. Sustained release dosage forms are designed to achieve a prolonged therapeutic. During the last 2-3 decades there has been remarkable increase in interest in sustained release drug delivery system by discovering of new polymeric materials suitable for prolonging the drug release. Many studies have been conducted in orthopedic and coronary conditions but very few in dentistry. The oral cavity is one of the routes for drug administration both locally and systemically. Hence the aim of the study is to study the use of denture base for local drug delivery.

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Knowledge, attitude and practice towards eye safety among general dental practitioners

**Presenter - DR PRASANTA MAJUMDER**

**Background:** The objective of the study was to compare and assess knowledge, attitude and practices towards eye safety among dental surgeons in Tripura.

**Methodology:** An online Questionnaire (contained 21 questions) was sent via Google forms link to all dental surgeons of Tripura including all dental specialist and general dental practitioner’s in the month of February 2019. Dentists were requested to respond on behalf of themselves and their patients regarding any ocular trauma occurred because of inadequate eye protection during his/her practice. Only completed forms were subjected to statistical analysis and results were analysed.

**Results:** Out of a total 196 registered dental surgeons 181 (93 male, 88 female) surgeons replies were received. Eye protection was routinely worn by 66·8 %, but their choice was not always adequate and not worn for all procedures. Protection was not offered to patient in 31 ·9 % of practices, forty-three per cent of reported instances of ocular injury in their practices, 83% responded that eye infection can transmit form person to person, only 33% reported, they disinfected protective glass regularly, 89% agreed dental practitioner need more awareness on eye safety.

**Conclusion:** It was concluded that eye protection use by all dental staff and patients was below the recommended guidelines. Risks encountered within the dental environment do cause harm to the unprotected eye which can be greatly reduced or even eliminated by improving the uptake of suitable eye protection.
Do Social Determinants Influence Parents Health behaviour and Oral Health Status in Children: A Descriptive Study

Presenter - Dr Deesha Kumari

Co-author: Dr Bless Annie Philip, Dr Thara Chandran, Dr Shilpa M, Dr Mithun K,

Background: Addressing the rising oral disease burden globally necessitates the need for oral health promotion with consideration of factors at grass root level. The present study was undertaken to assess the influence of social determinants on the oral health of children aged 12 and 15 years in Bangalore.

Methods and Materials: A cross-sectional study was conducted among 432 School children aged 12 and 15 years. Children were administered the questionnaire on social determinants of health and were instructed to get it filled by their parents. Oral health examination was conducted using DMFT index. Descriptive and Inferential statistics like Bivariate analysis determined the association of Social Determinants and Health Outcomes.

Results: The bivariate analysis revealed that Family Strength, Mother’s education and Father’s occupation was significantly associated with the Oral Disease prevalence among children as perceived by parents. On clinical examination the mean DMFT score of children was 1.17±1.689 and was significantly associated with the family income, Family Strength and Mother’s education (p=0.031).

Conclusions: Social determinants influence the various aspects of oral health care in children. This necessitates the need for inter-sectoral measures to be implemented taking into account the social determinants at upstream and downstream levels initiating effective oral health promotion.

Key words: “Oral health”, “Social determinants of Health”, “School Children”.

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A Cross Sectional Study To Assess Oral Health Related Quality Of Life And Knowledge Regarding Risk For Oral Diseases In Diabetic Adult Patients Visiting A Teaching Hospital, Bengaluru.

Presenter - Dr. Thara Chandran

Co-author: Dr. Nagashree Savanur Ravindrnath, Dr. Deesha Kumari, Dr. Bless Annie Philip,

Aim: Diabetes mellitus has been increasing at an alarming rate worldwide that recently the World Health Organization declared the disease an epidemic. The current study was conducted among 20 – 60 years aged diabetic patients visiting a teaching hospital in Bengaluru. The study aimed to assess the oral health related quality of life and knowledge regarding oral diseases among the study participants.

Materials and methods: This cross sectional study assessed 270 participants who gave informed consent. A pre-validated questionnaire consisting of 10 items assessed the knowledge of diabetic patients. Oral Health Impact Profile 20 was used to assess the oral health related quality of life. Statistical analysis: Chi-square test was done to find the association between gender, knowledge and oral health related quality of life. Logistic regression analysis was done to assess knowledge and different dimensions of oral health related quality of life. SPSS version 23.0 was used for the statistical analysis and p < 0.05 was considered statistically significant.

Results: In the study population, 37.4% were females and 62.6% were males. The mean age for the entire sample was 47.2 years. A significant association was found between knowledge and oral health related quality of life. Participants who had a good knowledge on increased risk for oral diseases had an overall high oral health related quality of life. (Odds ratio = 2.4, 95% confidence interval = 1.39 – 4.15).

Conclusion: The dental professional needs to raise awareness of the importance of maintaining good oral health in diabetic patients. Also, it is recommended that referring to a dentist could be a part of diabetes treatment protocol.
Paper ID: KSDP157

ARE OUR YOUNG ADULTS AWARE ABOUT THE GLOBAL AGENT OF DEATH-TOBACCO?

**Presenter** - Dr. Darshana Bennadi

**Abstract:**
Tobacco consumption is increasing every year. For tobacco control—the Government of India has led down Legislation and enforcement laws for tobacco control. Health care professional and paraprofessional are actively involved in educative programmes for school children, youth and adults. But still not able to curb its use. Hence the study had been undertaken with an aim to assess knowledge and practices of tobacco use among young adults of Tumkur. Methodology: Cross sectional questionnaire study was conducted among young adults (18-35yrs) of Tumkur University.

**Results & conclusions:** Awaited.

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Abstract:
CRISPR (pronounced “crisper”) stands for Clustered Regularly Interspaced Short Palindromic Repeats. The name refers to clusters of DNA sequences that are found at regular intervals in the genome of living organisms. Cas9 is an RNA guided DNA endonuclease enzyme that acts like a pair of molecular scissors to cut strands of DNA. CRISPR-CAS9 system will be able to identify the causative genes in many oral pathologies and disorders. CRISPR Gene editing technology with its ability to identify, delete or replace genes can improve the prognosis of periodontal disease, dental caries, tooth agenesis, cancers of the head and neck, orofacial pain, temporomandibular disorders, and craniofacial morphometrics of the oral cavity that arises due to viral and bacterial factors. This review paper highlights the endless possibilities for the diagnosis and treatment of genetic diseases using CRISPR technology. Continuous efforts should be made to understand and adopt technology to improve dental care space.

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Abstract:
In various medical fields, the use of image navigation technology has facilitated performance of surgery with maximum accuracy and minimum invasiveness. Computer aided surgery techniques have been proposed for the preoperative planning and intraoperative guidance. Several researchers have reported efficaciousness of these systems with regard to achieving satisfactory results. The main advantage of computer aided surgery is the higher possibility of less amount of errors. Innovative imaging technology in the form of augmented reality techniques that can merge virtual images in the real environment has been recently introduced to help dentists visualize surgical sites that can’t be directly observed. An autostereoscopic 3-dimensional augmented reality surgical navigation system was developed using real 3-dimensional image overlay based on the integral videography technology, which can provide a full parallax naked-eye 3-dimensional view with depth perception for multiple observers. Augmented reality provided a more effective and accurate approach for oral and maxillofacial surgery. In this paper, concepts such as action learning and blended learning are described, and a glimpse of the future is presented as artificial intelligence (AI), and machine learning will undoubtedly revolutionize educational and treatment methodology in dentistry.

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Dental marketing

Presenter - Ritika Agarwal

Co-author: Dr Rajesh .T. Anegundi

Abstract:
Information techknowledge has become our integral part of life. In today's world everyone is influenced by googling for any information. So the health industry is also influenced by digital marketing. Dental marketing has become part of professtional service rendered. In conclusion, marketing continue to be a domain with potential professionalism. Here this paper presents various aspects of dental marketing.
Paper ID: KSDP020
Assessment, Knowledge and Awareness of Oral Cancer among Tobacco selling shop keepers in Mysore city

Presenter - Sahana K
Co-author: Spoorthy R, DR. Sreeshyla

Abstract:
Oral cancer refers to uncontrolled growth that develops in any part of the oral cavity. Despite advances in the diagnosis and treatment of the oral cancer, the proportion the oral cancer cases diagnosed at an early and localized stage is still below 50%. Statement of the problem Even though there are recent advances in detection and treatment of oral cancer, delayed presentation due to lack of awareness of the public about oral cancer is a major problem. There are only few studies done in this regard to assess awareness of oral cancer among tobacco selling shopkeepers. Purpose and significance of research The shopkeepers are like, the basic healthcare providers who can in turn be great educators and propagate the massage for social cause. This study consists of a set of questions which was asked to the shopkeepers in selected areas of Mysore city to assess their knowledge level and awareness. Persons willing to participate and above the age of 18 were included in the survey. The data was collected and the results and statistics were calculated and this is shown in the paper presentation.

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KNOWLEDGE, ATTITUDE AND PRACTICE TOWARDS EYE SAFETY AMONG GENERAL DENTAL PRACTITIONERS

Presenter - DR PRASANTA MAJUMDER

Abstract:
The objective of the study was to compare and assess knowledge, attitude and practices towards eye safety among dental surgeons in Tripura. Methodology: An online Questionnaire (contained 21 questions) was sent via Google forms link to all dental surgeons of Tripura including all dental specialist and general dental practitioner’s in the month of February 2019. Dentists were requested to respond on behalf of themselves and their patients regarding any ocular trauma occurred because of inadequate eye protection during his/her practice. Only completed forms were subjected to statistical analysis and results were analysed. Results: Out of a total 196 registered dental surgeons 181 (93 male, 88 female) surgeons replies were received. Eye protection was routinely worn by 66·8%, but their choice was not always adequate and not worn for all procedures. Protection was not offered to patient in 31·9% of practices, forty-three per cent of reported instances of ocular injury in their practices, 83% responded that eye infection can transmit form person to person, only 33% reported, they disinfected protective glass regularly, 89% agreed dental practitioner need more awareness on eye safety. Conclusion: It was concluded that eye protection use by all dental staff and patients was below the recommended guidelines. Risks encountered within the dental environment do cause harm to the unprotected eye which can be greatly reduced or even eliminated by improving the uptake of suitable eye protection.

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Knowledge and Attitude of Dentists towards Violence against Healthcare Professionals – A Questionnaire Study

Presenter - Dr. Sahana Alwar M K

Co-author: Dr. Brinda Godhi

Abstract:
As dentistry has moved into the 21st century the general public has become more attentive to their surroundings, especially towards the medical field. In India, assaults against healthcare professionals have increased dramatically over the past few years, and it is the need of the moment to learn how to tackle such situations. It is necessary for all medical professionals to stay updated on current scenarios, recent trends, existing and updated laws and regulations. Awareness of violence against healthcare professionals has been poorly documented in most countries and localities. Once the awareness has been properly documented steps can be taken to reach out and address the issue. In this study individuals were given self administered questionnaires consisting of close ended questions written in English to assess the awareness and attitude of dentists towards violence against healthcare professionals. Using this data we aim at improving the knowledge and awareness of dentists on violence against healthcare professionals, its various causes, trigger factors, management and preventive measures.

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Effectiveness of dental unit water line treatment with 0.12% chlorohexidine gluconate and 0.2% hydrogen peroxide - An invivto study.

Presenter - Aditi Shenoy M

Co-author: Dr Shreshta Shetty

Introduction: The entire foundation for delivering good health care facilities lies with the maintenance of good infection control. The air-water syringes through which the air and water that travel through small plastic tube are extensively contaminated by microbial biofilms. Microorganisms of at least 40 different species have been identified including: oral streptococci, Pseudomonas spp., Enterobacteria, Candida albicans, Legionella pneumophila and non–tuberculous Mycobacteriunm spp. Planktonic forms of microorganisms and pieces of biofilm are shed from the Dental Unit Waterlines (DUWLs) and are then transferred directly into the mouths of patients during dental procedures and represent a potential source of infection for both patients as well as Dental Health Care Personals.

Aims: To evaluate and compare the effectiveness of chlorohexidine gluconate (0.12%) and hydrogen peroxide (0.2%) in reducing the (microbial colony/ bacterial load) count in Dental Unit Waterlines.

Method: Two dental units A and B were chosen for study from a dental college in Mangalore. Unit A and Unit B contained tap water prior treatment. A total of two samples were collected as a baseline measure before the study began. Unit A was treated with 0.12 % chlorohexidine Gluconate, CHX and unit B was treated with 0.25% hydrogen peroxide for 48 hours. Next morning before the start of the clinical day, flushing was done till the blue coloured CHX solution no longer flowed out indicating removal of residual disinfectant from the lines. Flushing was done for additional two mins and water sample was collected at the end of the day. Another sample will be collected at the end of one week after treatment.

Result: the study is ongoing.

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Abstract:
The Fit for School (FIT) Programme is an initiative, implemented by the Ministries of Education in four Southeast Asian countries, first in Philippines and later adopted by Cambodia, Laos and Indonesia. It integrates school health with water, sanitation and basic oral as well as general hygiene, promoting an Essential Health Care Package (EHCP) for school children that focuses on the most prevalent diseases of children and their prevention: respiratory tract infections, diarrhoea, STH infections and tooth decay. This paper aims to present a narrative review of the available evidence based literature concerning the significance of the FIT programme on attendance, and common diseases of children; as well as its relevance in the Indian context.
NON SURGICAL MANAGEMENT OF A FRACTURED INSTRUMENT IN A MANDIBULAR MOLAR: A CASE REPORT

**Presenter - Dr Deeksha Anilkumar**

**OBJECTIVE:** Retrieval of a fractured instrument from a mandibular molar.

**CASE DESCRIPTION:** A 37yr old female patient reported to the Department of Conservative Dentistry and Endodontics with the chief complaint of pain in the lower left back tooth. Root canal treatment was indicated and initiated. During the cleaning and shaping procedure, an endodontic file got separated between the middle third and apical third of the root canal. The fractured instrument was retrieved using ultrasonic instrument. A confirmatory radiograph was taken. The root canals were then well sealed and obturated.

**DISCUSSION:** The instruments fractured in the middle third or apical third becomes a challenging task for the clinician to retrieve as it was in this case. The file was initially bypassed using a hand file. Staging platform was created to maximize visibility and to gain radicular access. Further small tipped ultrasonic instruments were used at low intensity which slowly loosened and floated out the instrument out of the canal.

**CONCLUSION:** Presently separated instruments can be retrieved because of the technological advancements in vision, ultrasonic instrumentation, and micro tube delivery methods. This case report demonstrates the successful use of ultrasonic instrument for the retrieval of fractured endodontic instrument during the root canal treatment.

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Dentistry has entered a modern era of practice. Minimally invasive treatments of dental hard and soft tissues requiring high finesse are finally possible with Er:YAG Laser. They enhance and improve upon procedures that are traditionally performed using burs or scalpels and offer a wide range of clinical applications with greater precision of control. Er:YAG lasers interact with the water of both dental soft and hard tissue. Dental treatments performed using lasers are also patient friendly as they avoid the dreaded “drill” and provide a bloodless field during soft tissue procedure. Consequently, clinicians routinely observe rapid healing with minimal postoperative pain. There is not a discipline in dentistry where lasers are not helpful. With all its benefits and wide application, Starting from minimally invasive preparations in Restorative dentistry, smear layer removal for improved bonding, treatment of dentinal hypersensitivity, adjunct to Endodontic disinfection, Periodontal procedures like crown lengthening, gingivectomy, Oral surgical procedures, Implant dentistry and Photobiomodulation, the modern dental practitioner should consider the use of Er:YAG Lasers in routine dental practice. This poster highlights cases performed using Biolase Waterlase(Er:YAG YSSG) laser in the field of Conservative dentistry and Endodontics.

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Smart technologies for smart smiles

Presenter - SURYA JIT SAINI
Co-author - DEEPTHI SHIRI

Advances in information, communication and health technologies triggered a paradigm shift in modern dentistry. Recently, dentistry started to follow smart medicine trends. Recent advances and inventions of newer technologies have enabled clinicians across the globe to deliver smart dental care to patients. Various specialities have their own innovative means through which they are able to deliver efficient treatment plans to patients such as digital smile design programmes, caries detecting softwares in smartphones, portable CAD CAM usage, computer guided implant placement, robotic surgeries, artificial intelligence and precision medicine in dentistry, 3D printing in surgery, implantation, reconstruction and in endodontic procedures, biomaterials and nanotechnologies in tissue engineering and endodontics. Making the basic principles and modern technologies hand in glove, patient education, decision making in diagnosis, faster delivery of treatments and better prognosis and excellent treatment outcomes are achieved. This poster briefly explains these technologies which are used for quality treatment delivery in dental practice.

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3D printing- a futuristic tool

*Presenter* - Nowshiya MZ

3D printing is a process of making a three dimensional object by placing material in layers. It is also called as additive manufacturing. The various methods employed in 3D printing are stereo lithography, photo polymer jetting, fused deposition modelling etc. In endodontics and conservative dentistry 3D printing methods can be used to get straight line access in calcified canals, to obtain a surgical stent for accurate location of root apex, for smile designing, for atraumatic autotransplantation, for study models, for making of indirect restorations like inlay, inlay and extra coronal restorations. Though 3D printing is extensively used in dentistry, its application in the field of endodontics and conservative dentistry are limited to case reports. Hence further research in the field will make 3D printing a futuristic tool.

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SMART SEAL: THE MODERN OBTURATION TECHNIQUE

Presenter - MOHAMMED HASSAN

Co-author - PRAGNA S, AISHWARYA ANAND, ASHWIN SURANA MD, SHILPA BD, RAJESHWARI K

The field of operative and endodontic dentistry is evolved and improved in various aspects, be it Rotary instruments, various File systems, Operating microscopes or Irrigation devices. Regardless of the vast development in the field, there is no such improvement seen in the procedure of obturating the root canal. The use of gutta-percha cone system is not completely effective due to lack of biocompatibility, procedure sensitivity and lack of sealing.

To overcome these limitations, a new root canal obturating system called SMART SEAL is introduced. SMART SEAL is a newly introduced obturating system which is based on polymeric technology. The hydrophilic nature of Smart Seal absorbs moisture in the root canal and expands, resulting in the filling of root canals including spaces, lateral and accessory canals. The main advantage of this obturating system is the resourcefulness of the product, thus enabling the conception of points to most of the available different file systems used routinely in daily practice. This poster will present in detail about Smart Seal applications in endodontics.

Keywords: Root canal sealer, Smart Seal, Polymeric Technology

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DIGITALIZATION IN DENTISTRY

Presenter - WASEEMUDDIN TIRANDAZ & TEJASWINI N JAIN

Dentistry has evolved in the past 25 years primarily attributed to advances in science-technology and biomaterials. Like any other field dentistry has undergone revolution in digitalization. Nowadays, all aspects of clinical practice including the admission of the patients, collecting and storing the patients records, acquiring and processing of data to patients diagnostic information, treatment planning, acquisition of data to form three-dimensional (3D) images, to the final treatment all are aided digitalization. Digitalization improves efficiency and reduces time. Educational software and intelligent assistants will increasingly support the need for decision making in clinical practice. "Finally we can say that digital revolution has changed the world and dentistry has no exception ". hence our poster is a brief review of digitization in the field of dentistry.

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CARVING THE CURVES: A CASE REPORT ON POSTERIOR COMPOSITE CARVING

Presenter - DINESH G. PAWAR

Co-author-ADRIRI DATTI

Patient education and concern for aesthetics have added an additional feather in popularising composite resin as material of choice among youth, teens and dentists. Primary goal in composite restoration is to achieve tight contact, proper contour and aesthetics while restoring a cavity. Reproducing the exact occlusal topography requires dexterity and can be done using certain indirect techniques like stamp technique, putty impression technique, clear acrylic resin and flowable composites etc. Such indirect technique consists of taking an impression of the tooth, prior to cavity preparation for replicating the exact occlusal anatomy through negative imprint of the anatomical shape of the occlusal surface. Moreover, it facilitates to achieve aesthetic, functional results and decreases contamination between layers, fastens the procedure allowing a little or no occlusal adjustment. Replicating the exact occlusal anatomy reduces the risk of occlusal discrepancies in turn reducing the prevalence of TMJ disorders and other diseases of stomatognathic system occurring in a long term following a restoration. Hence, the poster is going to be a case series of various techniques used to replicate the occlusal anatomy.

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The success of endodontic treatment is directly associated with the control of microorganisms in infected root canals. Irrigants play an important role in cleaning and shaping of the root canals. Sodium hypochlorite is a popular and effective intracanal irrigant and has been used in dentistry over several years. Sodium hypochlorite is very commonly used because of its ability to dissolve necrotic and vital pulp tissues and its effectiveness against broad spectrum of microorganisms. However, if it comes in contact with vital soft tissues outside the canal system it can produce serious toxic effects such as haemolysis, ulceration, and tissue necrosis. Although sodium hypochlorite is usually considered safe, a few cases of mishap during dental treatments, especially during endodontic procedures have been reported in the literature. This poster explains the potential complications of sodium hypochlorite and their managements.
ABSTRACT: The demand for aesthetic restorations and advances in oral health has revolutionized restorative dentistry today. Despite the fact that the current restorative materials have improved biomechanical properties, they still have certain drawbacks such as polymerization shrinkage stress induced during and after insertion of the material. The pitfalls of direct restorations are heeded by the advent of indirect restorations especially when used in wide and proximal lesions of posterior teeth. Regardless of the excellent precision obtained through indirect restorations, these procedures are not very popular as they require a lot more time and a minimum of two clinical appointments. That is why we are introducing a new technique called semi-direct restorations. In this technique the cavity preparation is done for an indirect restoration and composite is placed in the cavity without etching and bonding the tooth. Once cured, the restoration is dislodged from the cavity. Finishing and polishing is done outside the mouth. The restoration is cemented back into the cavity using a resin cement. Though in this technique the chair side time is extended, the advantage is that it has the benefits of both direct and indirect restorations. The proximal finishing is comparable to an indirect restoration and the entire procedure can be completed in one clinical appointment like a direct restoration. This technique could revolutionize the future of composite resin restorations!

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ABSTRACT Cryotherapy literally meaning “cold therapy” sometimes referred to as cryosurgery is a procedure used to destroy tissues of both benign and malignant lesions by the freezing and re-thawing process. One of the most common dental diseases is the dental caries that is multifactorial and irreversible in nature, which when left untreated causes pulpal and periapical pathoses. Recent advances enable vital pulp cryotherapy and intra-canal cryotherapy that could reduce the inflammation and relieve the pain. Cryotherapy has also been employed for treatment of intractable TMJ or facial pain, mucosal lesions-benign, pre-malignant, or well circumscribed malignant lesions, vascular lesions, gingival melanin pigmentation and so on. This poster highlights the various applications and advances of cryotherapy in management of dental diseases or infections.
Failures in composite restorations

Presenter - Dr. DILEEP KUMAR C N

Composite resin restorations have almost completely replaced amalgam in the last 50 years. Their ease of use and esthetics has made them very popular among practitioners today. However this material is very technique sensitive and the prognosis of these restorations depends to a large extent on the operator’s skill. The reasons for failures in composite restorations are many. Some of which are improper case selection, isolation, wear resistance, cavity preparation, placement of composites, curing, finishing & polishing, polymerization shrinkage & contraction stress related to polymerization shrinkage, water sorption, solubility, discoloration of restoration (staining), elution of material from restoration, marginal failures, secondary caries, and fracture of the restoration, post-operative sensitivity, and micro-leakage. This poster aims at highlighting these reasons for failures and how we as clinicians can avoid them.
The need for the introduction of materials which induced a biological response was necessary in various fields of dentistry. These bioactive materials act directly on vital tissues and induce growth factors and different cells which promote its healing and repair. They create a bond with the surrounding tooth structure and release ions to allow remineralisation. These bioactive materials have evolved over the years with varying compositions and applications. This poster summarizes the concept of bioactivity, compares the various available bioactive materials and showcases the advancements in this class of dental materials.
Forensic Odontology

Presenter - DR KALYANI CHOUDHAR

Forensic odontology is the proper handling, examination and evaluation of dental evidence, which will be presented in the interest of justice. It is a branch of Forensic sciences that uses the skill of the dentist in personal identification during mass calamities, sexual assault and child abuse to name a few. The theory behind this field of dentistry is that no two mouths are alike and that teeth leave recognizable marks. This article will give you a collective review on the evolution, various methods and applications of forensic odontology, which plays a major role in providing required information, which will help the legal authorities to recognize negligence, fraud or abuse and identification of unknown individuals.

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Forensic Odontology

Presenter - S vaishnavi pai

Co-author-Rohit Kumar, sandile, Dr Prashant prabhu

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SPACE AGE DENTISTRY

Presenter - Dr arun joy

SPACE AGE DENTISTRY Aeronautic dentistry is a specialised branch of dentistry which deals with the study of application of dentistry in aeronautically based environment. As advancement continues to grow, the health of those who are in Space is a growing area of study. Astronauts are subjected to conditions in a zero-gravity space capsule. It is fundamentally different from the earth. It can be extremely harsh on teeth and may present a problem for future exploration. Dental concerns of a space mission are a part of a much larger team effort which is not to be overlooked. It is quite possible that dental risks could rise significantly. Oral health is of primary concern for astronauts and goes hand in hand with general health. The changes in gas volume inside the body’s rigid cavities, associated with the changing atmospheric pressure, can cause several adverse effects known as Barotrauma. It may be due to sinusitis, pulpitis, recurrent caries, dental and periodontal cysts or abscesses. Barodontalgia is a toothache due to variation in barometric pressure, in an asymptomatic tooth. Often, it is an exacerbation of pre-existing subclinical oral disease. Aeronautic Dentistry is an evolving branch of dentistry. An intensive study program has been designed aimed at uncovering safe and efficacious use of dentistry in aeronautic environment. The primary goal is prevention, yet even with the highest standards, the potential for dental emergencies in space still exists. As man’s capacity for exploration and development increases, the future holds great prospect in working towards the maintenance of oral health of those who may travel beyond the limits of earth.

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VIRTUAL WORLD OF DENTISTRY

Presenter - Dr. Aarushi Anand

VIRTUAL WORLD OF DENTISTRY Computer based techniques play an important role in all aspects of our daily life as well as in dentistry. With the advanced development of information technology (IT), dental solutions lead by computer and internet technologies have made significant progress all over the world. Digital dental solutions will be the trend for the professional dental field in the future. However, progress in computer based technologies including virtual reality simulators, augmented reality and computer aided design/computer aided manufacturing systems have resulted in new modalities for instruction and practice of dentistry. Virtual reality dental simulators enable repeated, objective and assessable practice in various controlled situation. Superimposition of 3D virtual images on actual images in AR, allows dental surgeon to simultaneously visualise the surgical site and superimpose informative 3D images of visible regions on the surgical site to serve as a guide. The use of Computer aided design/ computer aided manufacturing systems for designing and manufacturing of dental appliances and prosthesis has been well established. These technologies help to increase efficiency and enhance the patients experience in ways that we still cannot fully imagine. In this poster I will be covering various aspects and application of computer technology and their potentials, and limitations in promoting dental education, training and practice in the field of dental rehabilitation and dental surgery.

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WHEN IT CAN SAVE THE EARTH IT CAN SAVE YOU TOO

Presenter - Riffath fathima

Co-author-Priyanka Dr, sheela

when it can save the earth it can save you too My poster presentation is on healozone Its efficient because there is no drilling, L.A,PAIN,chemical toxicity etc It is used in dental caries,herpes labalis,wound healing etc Conclusion- ozone has many advantages over other dentistry techniques and restorations

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ARTIFICIAL INTELLIGENCE IN DENTAL HORIZON CAROL VENISSA CORDA ABSTRACT AS IN TIME WITH TREMENDOUS INCREASE IN DOCUMENTED INFORMATION AND PATIENTS DATA, INTELLIGENT SOFTWARE FOR COMPUTING THIS DATA HAS BEEN THE NEED OF THE HOUR FROM SCHEDULING APPOINTMENTS, IMAGETECHNOLOGY, MEDICINE, DOCUMENTING PATIENTS INFORMATION, ARTIFICIAL NEURAL NETWORKING, ACCURATE DIAGNOSIS, INTRODUCTION OF AUGMENTED REALITY AND VIRTUAL REALITY IN DENTISTRY. ARTIFICIAL INTELLIGENCE HELPS THE NON-SPECIALISTS TO GAIN EXPERT LEVEL INFORMATION. IN ADDITION TO DIAGNOSIS OF VISUALLY CONFIRMED DENTAL CARIES AND IMPACTED TEETH, STUDIES APPLY ARTIFICIAL NEURAL NETWORKING TO DENTAL TREATMENT THROUGH ANALYSIS OF COMPUTED TOMOGRAPHY, MAGNETIC RESONANCE IMAGING. ARTIFICIAL INTELLIGENCE SOFTWARE ASSISTS THE PRACTITIONER IN DECISION MAKING AND ACTS AS CLINICAL DECISION MAKING SUPPORT SYSTEM. ON AND ABOVE THIS TECHNOLOGY IS HELPING THE PATIENTS TO BE HIGHLY CONCIOUS CONCERNING ORAL AND MAXILLOFACIAL DISEASES AND RISK OF FACTORS INVOLVING IT, EVEN PERSUADES THE PATIENTS TO SEEK EARLY TREATMENT. THUS ARTIFICIAL INTELLIGENCE APPLICATION-BASED DENTISTRY IS NOT A MYTH BUT TURNING INTO A REALITY. ALTHOUGH NUMEROUS SCI-FI MOVIES DEPICT THE INVASION OF ARTIFICIAL INTELLIGENCE ON HUMANKIND, ALL OPTIMISTIC HUMAN MIND END UP WITH THE VICTORY OF HUMAN KIND ON ARTIFICIAL INTELLIGENCE. KEYWORDS: ARTIFICIAL INTELLIGENCE, CLINIAXIAL DECISION MAKING SUPPORT SYSTEM, ARTIFICIAL NEURAL NETWORKING, AUGMENTED REALITY, VIRTUAL REALITY.

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ARTIFICIAL INTELLIGENCE IN DENTISTRY

Presenter - GAYATHRI K NATH

Artificial intelligence has a wide variety of use in the upcoming health care system. In last few years we have reached the tipping point where data has ceased to be the constraint-so much in fact, that today the constraint as shifted to a larger scale. We has reached a point that if we can imagine, chances are it is not far from possibility. Artificial intelligence in healthcare it the use of applications to approximate human cognition in the analysis of complete medical data. Machine learning algorithms can process more information and perform more patterns than the human counterparts. AI is less susceptible to bias and better at judging probabilities, it saves time for dentist by automation of process. Daily use of AI in dentistry includes- cephalometric analysis, automated caries detection AI applications will persuade the dental every day life and will change the way dentist work. The introduction of AI will be the beginning to the era of 21st century dentist.
happy sedation

Presenter - Riffath fathima

Co-author- Dr sheela, Dr.rammurthi

The objective is to highlight the use of painless local anesthesia which eliminates the fear of visiting a dental clinic and easier for pedodontic patients Its advantages over the classical method of administering local anesthesia Methods and materials required for this Its application and technique Conclusion- how painless LA would make a difference in the patients and doctors experience inside the dental clinic

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THE RULE OF THE 5 TRIANGLES: IMPLANT PLACEMENT- WHEN & WHY?

Presenter - Mohan M S

Co-author - Monisha V B

To achieve excellence when placing immediate implants, the diagnosis and planning of the case must be precise. There are 5 key aspects to be considered during the decision-making process, to help prevent blunders that can lead to difficult esthetic situations:

(I) the presence of a buccal plate, (II) primary stability, (III) implant design, (IV) filling of the gap between the buccal plate and the implant, and (V) tissue biotype. These are the 5 triangles. There are four categories (Type I–IV) for implant placement treatment option according to case. Type 1 - immediate implant placement in extraction socket on the same day. Type 2 - early implant placement after 4-8 weeks with soft tissue healing. Type 3 - early implant placement after 12-16 weeks with partial bone healing. Type 4 - late implant placement after > 6 months with complete bone healing.

The clinician today has the possibility to choose from four different treatment options for postextraction implant placement. In the anterior maxilla, the esthetic outcome and its long-term esthetic stability is of paramount importance which is the most important goal of implant therapy, followed by proper function and phonetics. Based on a much improved knowledge about tissue biology in post-extraction sites, well defined selection criteria are available today, to select the most appropriate treatment option. Today, all four treatment options can be recommended when these selection criteria are followed.

Name of poster: 1. Mohan M S (9482100285) 2. Monisha V B (8088176656) IV BDS students GDCRI, Ballari

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Oral cancer incidence is on the rise and amplifying the global burden especially when diagnosed at later stage. Treatment has always been a challenge and 5 year survival rate has only marginally improved. The present treatment modalities have severe morbidity and mortality. Photodynamic therapy (PDT) is a treatment modality that involves administration of a light-sensitive drug, known as a photosensitizer, followed by light irradiation of an appropriate wavelength that corresponds to an absorbance band of the sensitizer. In the presence of tissue oxygen, cytotoxic free radicals that are produced cause direct tumor cell death, damage to the microvasculature, and induction of inflammatory reactions at the target sites. PDT offers a prospective new approach in controlling this disease at its various stages either as a stand-alone therapy for early lesions or as an adjuvant therapy for advanced cases. This poster intends to explore the applications of PDT in Oral cancer therapy.
INTEGRATIVE DENTISTRY- A SMART AMALGAMATION OF THE ANCIENT AND THE MODERN HEALTH SYSTEMS

Presenter - Dr. Premalatha BR

Quite often we come across patients who express their interest in mind body complimentary therapies to treat their health conditions. Alternative and complimentary medicines (CAM) are into practice since ancient times and are practiced even today worldwide. Alternative medicines are nowadays incorporated in many fields including dentistry. Oral diseases have gained an importance and are considered as a major health problem worldwide. Oral cancer, dental caries, and periodontal diseases are among the most important global oral health problems. The global need for safe, effective and economical preventive and treatment options for oral diseases arises from the increase in disease incidence, resistance of pathogenic bacteria to antibiotics and chemotherapeutics, opportunistic infections and financial considerations in developing countries. Although new treatments and technologies for dealing with health problems are plentiful, nonetheless more and more patients are now looking for simpler, gentler therapies for improving the quality of life and avoiding iatrogenic problems. We often forget that modern scientific medicine reaches only a relatively small group of people. Allopathic medicine is too expensive and capital intensive for a developing country like India. Traditional medical systems are easily accessible, cheaper and relatively safer than other conventional medicines. The techniques and natural phytochemicals used in traditional medicine are considered as good alternatives to synthetic chemicals. Systematic exploration of CAM may lead to development of novel preventive or therapeutic strategies for oral health, thus ushering in a new era of Integrative Dentistry which will amalgamate the best practices from both traditional and modern systems. The present poster throws light on the complementary and alternative medicines that can be integrated into modern dentistry.

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Synchronous odontogenic cysts in maxilla and mandible - A rare case report

**Presenter** - DR prasanta majumder

The simultaneous occurrence of odontogenic cysts and tumors or other non-odontogenic lesions have already been described as combined lesions. However, we are unaware of any report in the English literature of simultaneous occurrence of bilateral dentigerous cyst and orthokeratinized odontogenic cyst (OOC) occurring as completely distinct lesions. This report shows a case of synchronous dentigerous cyst and OOC, located on posterior regions of the maxilla and mandible, but in distinct sites in a 26 year old male.

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AIDS/HIV is a global epidemic. According to UNAIDS, in India, around 2.1 million are HIV positive as of 2017. In the absence of effective cure to this disease, it can be very easily prevented by IEC (information, education, communication) activities regarding behavioral changes. This prevention will reduce the economic burden on the country. Intense research is underway to find an effective cure. Until then palliative treatment is the best option. These treatments have side effects which bring down the quality of life. People living with HIV are seeking alternative avenues which can improve their life. These complementary and alternative medicines may or may not be useful in helping people living with HIV. This review tries to provide a summary of various alternative modalities which are being followed all round the world, their efficacies, scientific backing which can prove their ability & reliability in alleviating the suffering of people living with HIV.
Role of Salivary Biomarkers in Diagnosis of Oral Cancer

**Presenter** - Darshan Chandramouli

**Co-author** - Hersh Ganeshkar, Dr. Kiran Kumar

Oral squamous cell carcinoma (OSCC) is one of the most common cancers worldwide. It forms about 45% of all cancers in India. The Human saliva contains proteins, peptides, electrolytes, organic, and inorganic salts secreted by salivary glands and the complimentary contributions are from gingival crevicular fluids and mucosal transudates. The use of saliva in early diagnosis of cancer is a promising approach. This is due to its non-invasive sampling procedure and easy sampling technique. Biomarkers are the molecular signatures and indicators of normal biological, pathological process, and pharmacological response to treatment. Some of these biomarkers include salivary genomic markers, salivary transcriptome markers, salivary protein markers and salivary microbiota. Hence, they may provide useful information for detection, diagnosis, and prognosis of the disease. Tumour markers may also be measured periodically during cancer therapy. This review aims at giving an overall perspective of salivary biomarkers identified in oral cancer by means of molecular biology approaches.
Oral cancer is the most common cancer of the oral cavity with high morbidity and mortality, the main reason being delay in the diagnosis. Multiple factors including lack of awareness among public are attributed as the prime cause. With this background, a study was conducted among general public of Mysuru city to assess the awareness level of oral cancer, its risk factors and clinical appearance. Sampling was stratified random in nature. Persons above the age of 18 years were involved in the study. Predesigned, pretested, structured questionnaire was distributed among volunteering subjects. The questionnaire included questions to assess the subject’s awareness on oral cancer, knowledge of signs/symptoms and the risk factors of oral cancer. Socio-demographic information such as age, sex, occupation, address and educational level was also recorded. The study showed lack of awareness among the general public, including the major risk factor like use of tobacco products. The lack of awareness on clinical appearance was very evident, which in turn may be the prime cause for delay in the report of patient. The results of the study indicated the prime need for education among the general public regarding oral cancer.
TONGUE PRINTS- A FORENSIC BIOMETRIC AUTHENTICATION TOOL

Presenter - DR SPOORTHY R KASHYAP

Co-author - DR PRIYANKA NITIN, DR SHREESHLA, DR SAHANA K

BACKGROUND AND OBJECTIVES: In an era of digital age where everything is becoming online, biometric authentication is the path way to ensure safety, privacy and confidentiality of an individual. There are many biometric systems that are currently in use and also being researched. Tongue print is a new biometric authentication tool that is unique and cannot be forged easily because no two tongue prints are similar. The present study aims to evaluate the common morphological features of the tongue and its variations in males and females.

MATERIALS AND METHODS: The study sample included 20 participants. The participants were subjected to visual examination following which digital photographs of dorsal surface of the tongue where taken. Alginate impression of the tongue were made and casts were prepared using dental stone. The photographs and the casts were analyzed separately for the surface morphology.

RESULTS: The most common morphological features on the dorsum tongue was the presence of the central fissures. Multiple vertical fissure were observed in males whereas single vertical fissure was a common findings in females. The tongue was predominantly U-shaped in males and V-shaped in females.

To conclude, tongue print being a unique record that cannot be forged will serve as a better biometric authentication tool and since it is personalized and constant, it can be used for forensic identification purposes too.

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**Introduction and Objectives of study** The advent of mini-implants in Orthodontics for anchorage has enhanced the treatment outcome immensely. However the location of the implant is a significant factor in achieving an absolute anchorage. Thus a careful identification of the implant site is very important while planning an orthodontic treatment. The objective of this study is to determine the optimal sites for orthodontic mini implant placement using CBCT.

**Methodology** 15 CBCT scans of patients were taken which comprises of 9 females and 6 males with the age groups of 15-19 and 20-24 were taken and analysed. The inter radicular and buccolingual thickness of alveolar process were measured on both the arches at 4 different heights i.e. 2mm, 4mm, 6mm and 8mm from the CEJ. In the hard palate the overall thickness was measured from the posterior border of incisive foramen posteriorly at 4mm intervals and laterally from the mid palatal suture at 2mm intervals.

**Results** Posteriorly the optimal sites are between first molar and second premolar in the maxilla at 6mm and mandible at 8mm level. Anteriorly the optimal sites are between lateral incisor and canine in both the arches at about 6mm level. In the hard palate the optimal site is around 4mm from the posterior border of incisive foramen and near to the mid palatal suture. Females have significantly thicker palate than males. Thus placing the mini implants in the optimal position improves its stability and retention which enhances its role in providing absolute anchorage.

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GENE THERAPY

Presenter - RESMI K

Gene therapy gives a promising future for clinical dentistry. It includes introduction of genetic material into cells to compensate for abnormal genes or to make a beneficial protein. Gene therapy can be classified into two; somatic and germ line gene therapy. Somatic gene therapy involves changes in the target cells, that are not transferred to the next generation while in germ line gene therapy, the modified genes are transferred to the next generation. Depending on the delivery method of the vector, gene transfer can be done by two techniques in vivo gene transfer and ex vivo gene transfer. Applications of gene therapy in dentistry include management of orofacial pain, hypofunctioning salivary gland and carcinomas mainly squamous cell carcinomas, aids in bone and tooth repair and also orthodontic tooth movement. In orthodontic tooth movement Local RANKL gene transfer leads to acceleration of orthodontic tooth movement and Local OPG gene transfer leads to inhibition of orthodontic tooth movement.

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NANOTECHNOLOGY IN ORTHODONTICS

Presenter - DR S.SUMALATHA

NANOTECHNOLOGY IN ORTHODONTICS Nanoparticles are insoluble particles smaller than 100 nm in size and the set of technologies that enables manipulation of these particles on an atomic, molecular and supra molecular scale is termed as nanotechnology. This poster presents an insight into various types of nanoparticles and their application in the field of orthodontics. Successfully employed nanoparticles in use are: silver, gold, alloy, magnetite, maghemite, copper, chitosan, quaternary ammonia, zinc compounds, titanium dioxide. Applications of nanotechnology in orthodontics: Nano coatings on arch wires and brackets to reduce friction, fabrication of hollow wires, orthodontic brackets, Nano particles as antimicrobial agent, nitrogen doped titanium dioxide brackets, fluoroapatite fluorohydroxyapatite nanoparticles, chitosan nanoparticles, fluoride releasing nanoparticles. Future applications of Nano technology: Nano robots in orthodontics, Nano indenter, bio mems/nems for orthodontic tooth movement, Nano LIPUS devices, smart brackets with nano mechanical sensors. Biosafety of nanoparticles and materials is a subject of concern demanding focus on further studies of the toxic effects to ensure the ethical usage in oral cavity.

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MINI- IMPLANT ASSISTED RAPID PALATAL EXPANSION IN ORTHODONTICS

Presenter - DR. PRERNA KEDIA

Maxillary transverse deficiency is a highly prevalent malocclusion seen in all ages, both primary and permanent dentition. If treatment is not done on time, it can aggravate and evolve into a more complex malocclusion, hindering facial growth and development. Conventional rapid palatal expansion (RPE) is a reliable treatment for correcting this transverse maxillary deficiency in young patients. However, it may lead to dental tipping and risk of periodontal problem which may be undesirable, limiting its application to young patients after the pubertal growth spurt. Surgically assisted rapid palatal expansion (SARPE) is done in skeletally mature patients. However, it is an invasive method, due to which adult patients do not opt for it. The morbidity, risks and cost related to surgical treatment is high. The use of Mini implant-Assisted Rapid Palatal Expansion (MARPE) appliance is gaining popularity as it can potentially avoid surgical intervention in treatment of maxillary transverse deficiency in young adolescent patients. MARPE also has minimal dento alveolar side effects.

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An automatic system in the field of surgery and other medical fields make us wonder if any application of robot can play an equally important role in orthodontics as well. In the field of orthodontics high powered computers and advanced robotics continue to grow. The system combines 3D imaging, alloys which are exotic and robotics. With the advent of this new technology it is being claimed that the main drawback of orthodontic treatment being longer treatment duration can be reduced, not by moving the dental units faster but by making them move more efficiently. The procedure involves scanning of teeth and then the scanned information is fed into the system. When the robots come into the scenario, they include two pincers which will help guide the teeth in a particular pattern by heating and bending the wires accordingly. The visualization of treatment can be done beforehand and hence this gives us an opportunity for treatment planning in depth. Robotics in orthodontics means that the treatment can be shifted from being qualitative to quantitative. Three aspects such as new structure, control and sensor technique, and computer-human interaction technique. However, the technology is new and more research is yet to be carried out.
ALIGNERS IN ORTHODONTICS

Presenter - Dr arun joy

In this advanced world there are many recent advances in orthodontics also aligners is one of them. It is an orthodontics system used to align the teeth using a series of clear retainers, known as aligners. Its considerations are the cost, slight speech impediment in patient’s compliance to wear the retainers, grinding and clenching of teeth, staining in coffee and tea drinkers. Its pros include control of tissue inflammation, excellent plaque removal, and decreased mobility after the treatment in patients with severe periodontitis and horizontal bone loss. Treatment efficacy lies in the hands of the patient as the appliance can easily be removed. Bodily movements are not possible. Although clear aligners do provide an esthetic alternative to traditional fixed orthodontic appliance, they are limited in the amount and the velocity with which they may reposition the teeth. Aligners are comfortable, esthetic and practical alternative to traditional fixed orthodontics Inference: Switch to aligners rather than avoiding anesthetics braces treatment.

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NANOTECHNOLOGY IN ORTHODONTICS

Presenter - DR S.SUMALATHA

Nanoparticles are insoluble particles smaller than 100 nm in size and the set of technologies that enables manipulation of these particles on an atomic, molecular and supra molecular scale is termed as nanotechnology. This poster presents an insight into various types of nanoparticles and their application in the field of orthodontics. Successfully employed nanoparticles in use are: silver, gold, alloy, magnetite, maghemite, copper, chitosan, quaternary ammonia, zinc compounds, titanium dioxide. Applications of nanotechnology in orthodontics: Nano coatings on arch wires and brackets to reduce friction, fabrication of hollow wires, orthodontic brackets, Nano particles as antimicrobial agent, nitrogen doped titanium dioxide brackets, fluoroapatite fluoroxyapatite nanoparticles, chitosan nanoparticles, fluoride releasing nanoparticles. Future applications of Nano technology: Nano robots in orthodontics, Nano indenter, bio mems/nems for orthodontic tooth movement, Nano LIPUS devices, smart brackets with nano mechanical sensors. Biosafety of nanoparticles and materials is a subject of concern demanding focus on further studies of the toxic effects to ensure the ethical usage in oral cavity.

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Diagnosis of Orthodontic Extractions using Artificial Neural Network

**Presenter - Dr. Rohith M.S.**

During the orthodontic treatment the decision to extract and the teeth to be extracted is an important part as extractions are irreversible. A wrong decision could result in undesirable results or the treatment might not be finished. Therefore, an important decision about extraction is required. Orthodontists usually decide this with the help of dental models, clinical evaluation, photographs, radiographs based on their knowledge and experience. There is no formula for treatment plan and so the decisions are according to their past learning and experience. Moreover differences can occur between experienced and less experienced clinicians. So, another approach would be necessary. One approach is machine learning using neural network system. The human neural network consists of neurons that are linked at the synapse to send information. By repeated learning, each synapse linkage can be reinforced or weakened. In machine learning with neural network neurons link the input to the output and each neuron is linked at the synapse. This can be used for creating a pattern based on the cephalometric values which are fed in by which it correlates and learns it. When a new set of values are fed, it can provide a diagnosis regarding the premolar extraction.

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NEUROMUSCULAR DEPROGRAMMING IN ORTHODONTICS

Presenter - DR. LO HITH D

TMJ parafunction results primarily from stress in central nervous system. Patients clenches and grinds teeth to achieve stability and comfort which can result in mandibular overclosure and severe dental attrition, these abnormal neuromuscular forces can be 3 to 4 times greater than regular chewing force, which can lead to symptoms such as facial pain, headache, ear pain, limited or painful opening of the jaw, clicking or popping in the jaw joints, clenching of the teeth. Neuromuscular deprogramming is designed to eliminate noxious occlusal contacts and promote harmonious masticatory muscle function. Deprogramming restrains the muscles (masseter, temporalis, pterygoid) so that they are in most relaxed position and the condyle in the most retruded position. This poster is to focus on how neuromuscular deprogramming can be achieved in the number of ways to make the patient asymptomatic.
ORTHODONTIC SOFTWARES

*Presenter - Dr POOJA MASTAMMANAVAR*

Orthodontists are the most progressive of the dental specialists, quick to embrace new technologies for enhancing clinical efficiencies and practice work flow. Orthodontic software innovations, whether for imaging and clinical applications or for managing the business side of a practice, have led the consistent need for more powerful computing requirements for more than four decades. The right orthodontic software helps to digitize orthodontic procedures and ensure you stay organized. The software also makes it possible to provide digital treatment options, as well as to analyze movement of the dentition. Orthodontic digital treatment planning systems typically feature cephalometric analysis, digital imaging, intraoral and extraoral image capture, morphing capability to show patients what their teeth could look like after treatment, case presentation, treatment planning capability and oral maxillofacial surgery applications. Orthodontic 3D modeling enables to simulate a patient’s mouth and formulate various treatment options. Softwares can be used to make highly accurate customizable appliances for each patient enabling the orthodontist to deliver more effective treatment. Through these systems, you can provide patients with visuals to help them see why they should go forward with orthodontic or surgical-orthodontic treatment. Keeping in step with technology for more than half a century, orthodontics will surely continue forward at the same pace, setting the standard for all the other dental specialities and raising the bar for dentistry in general.

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Botox: Broadening the limitations of Dentistry

Presenter - Dr Bosy Thankam Mathew

Co-author- Dr N Raghunath

Botox is a revolutionary cosmetic procedure used extensively in medicine, dermatology, ophthalmology and recently the dental field. Botox has been primarily used in cosmetic treatment for lines and wrinkles on the face, Botox is a neurotoxin derived from bacterium clostridium botulinum. The toxin inhibits the release of acetylcholine (ACH), a neurotransmitter responsible for the activation of muscle contraction and glandular secretion, and its administration results in reduction of tone in the injected muscle. Botulinum toxin type A (BTX-A) (Botox, Allergan, Irvine, CA, USA) has been studied since the late 1970s for the treatment of several conditions associated with excessive muscle contraction. Botox has made its move to the dental field. Its main usage in dentistry is for the treatment of Temporo-Mandibular disorders, or TMD. Problems such as grinding, clenching, jaw pain, migraines can now be efficiently treated with simple Botox injections and dramatic improvements can be expected. Smile esthetics has become a major concern among patients and orthodontists. The display of excessive gingival tissue in the maxilla upon smiling, or “gummy smile,” is both an oral hygiene and cosmetic issue with no simple remedy. The most common surgical corrections currently used are the LeFort I maxillary osteotomies with impaction for skeletal vertical maxillary excess, and gingivectomies for delayed passive dental eruption with excessive gingival display. With the invention of Botox some gummy smiles caused by muscle hyperfunction can now be treated non-surgically in one, short office visit.

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Digitalising dreams into reality - DIGITAL ORTHODONTICS

Presenter - Dr Paridhi Gupta

Dr Bhagyalakshmi A.

Digitalisation has been the talk of the town since the impact of mobile phones in our life. From diagnosis to treatment planning, performing robotic surgeries all have improved significantly with the help of technology. Digital technology made its way into dentistry and orthodontics way back in 1974. Every aspect of orthodontics is now booming with technology. Digital photography and radiography have replace their analogues. It is now common to perform virtual treatment planning as well as translate the plans into treatment execution with digitally driven appliance manufacture and placement using various CAD/CAM techniques from printed models, indirect bonding trays and custom made brackets to robotically bent wires. Furthermore, online forums are rapidly replacing scientific societies and it is now possible to not only to monitor treatment but to control it.

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EX-SMART: Maxillary Expansion Getting Smarter (MARPE)

Presenter - Dr Nithin Varghese Joy

The field of orthodontics deals with malocclusions in all planes of space- anteroposterior, vertical and transverse out of which discrepancies in the transverse plane are the least discussed. A decrease in the arch width requiring maxillary expansion is one of the key areas where the role of orthodontics is vital. Traditionally maxillary expansion has been carried out using conventional techniques involving slow & rapid maxillary expansion of which Rapid Palatal Expansion is widely in use. Conventional RPE appliances transmit forces using teeth as handles leading to unavoidable alveolar bone bending & dental tipping which in most circumstances is undesirable. This is where a new, smarter and efficient mode of expansion- MARPE (Miniscrew Assisted Rapid Palatal Expansion) gains its relevance, especially in older individuals due to nearly ossified mid-palatal suture causing a reduction in the extent of true skeletal expansion achieved. This poster is an attempt to enlighten the dental fraternity with this novel method (MARPE) wherein discrepancies in the transverse plane can be better addressed with true skeletal effects rather than with dental side-effects.

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ACCELERATED OSTEOGENIC ORTHODONTICS

Presenter - Dr veeranna madlur

With an increasing number of adult patients coming to the orthodontic clinic, the orthodontic professional is constantly looking for ways to accelerate tooth movement. Surgical intervention to affect the alveolar housing and tooth movement has been described in various forms for over a hundred years. However, it is the spirit of interdisciplinary collaboration in orthodontics has expanded the realm of traditional orthodontic tooth movement protocols. A novel treatment procedure to maintain periodontal integrity and to shorten the treatment time had been introduced by Dr. William Wilcko (orthodontist) and Dr. Thomas Wilcko (periodontist) known as Accelerated osteogenic orthodontics (AOO) popularized as Wilckodontics. Accelerated osteogenic orthodontics (AOO) is a clinical procedure that combines selective alveolar corticotomy, particulate bone grafting, and the application of orthodontic forces. This procedure is theoretically based on the bone healing pattern known as the regional acceleratory phenomenon (RAP). AOO results in an increase in alveolar bone width, shorter treatment time, increased post treatment stability, and decreased amount of apical root resorption. Tooth movement can be enhanced and cases completed with increased alveolar volume providing for a more intact periodontium and increased bone support for teeth and overlying soft tissues, thereby augmenting gingival and facial esthetics.

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Piezo-corticision assisted Orthodontics

Presenter - Dr. Apoorva Jha

Piezo-corticision assisted Orthodontics The past decade has seen a surge in innovations pertaining to the field of orthodontics aimed at shortening the length of the treatment for the adult patient. Today we are presenting an innovative, minimally invasive surgical technique designed to help achieve such a goal and perhaps, more importantly, help solve orthodontic challenges through timely bone density modification. Piezo-corticision is an orthodontically guided surgical procedure. It has evolved from being initially a minimally invasive surgical alternative to conventional corticotomies to a more sophisticated philosophy where the orthodontist is given the tools to control the anchorage value of teeth by selectively altering the bone density surrounding them, using the piezoelectric knife at key time intervals, in an effort to successfully solve orthodontic challenges. Piezo-corticision gives the periodontist and the orthodontist another tool to expand their scope of practice.

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In fixed orthodontics, brackets and archwires are significant plaque stagnation sites, so conventional oral hygiene is more difficult. This can lead to demineralization, which may present within 4 weeks of appliance placement. Assessing a patient’s standard of oral hygiene at each visit is part of the routine clinical assessment, and regular oral hygiene reinforcement should be given as required. Direct visual assessment is the most commonly used method of assessing plaque with ordinal indexes, such as Silness and Loe, enabling quantification. Similarly, demineralization is usually assessed by direct vision, which can be criticized because considerable mineral loss may be sustained before a white mark becomes visible. A Quantitative Light-induced Fluorescence-Digital device (Inspektor Research Systems BV, Amsterdam, The Netherlands) combines an SLR camera with light sources and filters to produce Quantitative Light-induced Fluorescence (QLF) and white light (WL) images. The QLF technique is based on the property of enamel to autofluoresce when illuminated by visible light. During demineralization, minerals are replaced by water.

**Result**: resulting in a reduced fluorescence radiance compared with sound enamel. The fluorescence image of enamel with incipient lesions can be digitized and then the loss of fluorescence in the lesion can be quantified in comparison to the fluorescence radiance level of sound enamel. QLF can be considered a propitious tool in detecting white spot lesions in early orthodontic therapy.

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Temporary Anchorage Devices in Orthodontics: A Paradigm Shift

*Presenter - Dr ROHINI. T*

Over the recent years, we have witnessed that there is an increase in the usage of Mini-screws in Orthodontic therapy as a temporary anchorage device, because of their absolute anchorage, easy positioning, easy removal and finally for their low cost. Ortho-implants are not osteo-integrated, they are biocompatible and resistant to orthodontic forces applied. The results are equivalent or superior when compared to conventional systems as well. They can be used both in adults and children with partial or complete dentition.

**Objective:** To evaluate the utility and clinical efficacy of the skeletal anchorage devices to determine the most effective system of bone anchorage for orthodontic tooth movement.

**Methodology:** For the purpose of this poster, articles published in the literature were reviewed and searched in electronic databases, such as PubMed, Cochrane Library, Science Direct from 2000 to 2019 about mini-plates, mini-screws, palatal implants and dental implants as orthodontic anchorage.

**Discussion:** To obtain total control of the anchor during teeth movement, mini-screws are more efficient in terms of absolute anchorage compared with the traditional methods used. There are concerns about the oral hygiene practices during the treatment phase, because poor oral hygiene with an adjacent inflammation of the oral soft tissues to the head of the mini-screws could determine a potential risk which leads to failure of the therapy.

**Conclusions:** In modern orthodontics, advent of TADS (Temporary Anchorage Devices) lead to identification of therapeutic alternatives to traditional methods of anchorage, making it possible for orthodontic movements that are not possible with traditional biomechanics. The usage of TADS would allow the orthodontist an extension of the therapeutic possibilities, with encouraging results in the correction of malocclusions.

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A BOON TO PROSTHODONTICS Prosthodontics is continuously evolving consequent to the rapid advancements in dental biomaterials science, clinical and laboratory techniques and technologies, education, research, therapeutics, literature, and interdisciplinary developments. Are the current developments innovative enough to address the future changing clinical, educational, and research needs? In recent years, nanomaterials have captured more and more attention because of their unique structures and properties. The word “Nano” refers to Nanoscale particles. The concept of “nanomaterials” formed in the early 1980s, referring to zero-dimensional, one-dimensional, twodimensional, and three-dimensional materials with a size of less than 100 nm. It has been shown that the performances of many biomaterials used in prosthodontics have been significantly enhanced after their scales were reduced by nanotechnology, from micron-size into nanosize. On the other hand, many nanocomposites composed of nanomaterials and traditional metals, ceramics, resin, or other matrix materials have been widely used in prosthodontics because their properties, such as modulus elasticity, surface hardness, polymerization shrinkage, and filler loading, were significantly increased after the addition of the nanomaterials. Nanomaterials used in dentistry can be metals, ceramics, polymers, implant modifications, composite materials, and studies prove that they show the novel properties when compared with conventional materials. An ample number of mechanical and physical properties of dental materials could be amended by smearing nanotechnology concept. This poster epitomizes a general gestalt of the use of nanoparticles in prosthodontics.

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RAPID PROTOTYPING: A FUTURE IN ORTHODONTICS

Presenter - Dr AJITH G V

Rapid prototyping (RP) is the name given to the host of related techniques that are used to fabricate the physical models based on computer-aided design and computer-aided manufacturing. RP technology allows the building of a medical model layer by layer, reproducing almost every form of the external and internal anatomic structure. It has rapid speed, better design communication, and easy detection of flaws. Data for RP will be obtained from the magnetic resonance image/computed tomography scan slice images and they are converted into digital image which in turn is transformed to standard triangulation language file and afterward layer by layer construction is done by different techniques such as stereolithography, fused deposit modeling, selective laser sintering and inkjet printing to form the physical model. The applications of this digital technology in orthodontics includes diagnosis and treatment planning, fabrication of orthodontic removable appliances, impression trays for indirect bonding, and surgical template for implant placement, prototype model is employed in various orthognathic surgeries, it has been used for the custom manufacture of lingual orthodontics appliances and also to produce a distractor during distraction osteogenesis. Its advantages include rapid fabrication, minimal time, easy handling, better visualization, reuse of design, and repeated verification, however, the clinical judgment still remains vital. There is a divergence in the applications of RP for an orthodontist, and the future looks more promising if we use it innovatively.

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SIX MONTH SMILES......IS IT FOR YOU?

Presenter - DR. SHREYA ITTINA

Abstract: Six month smiles braces is a type of bracket and wire orthodontic correction for straightening the front upper and lower teeth in approximately six months; although treatment times vary depending on individual misalignment problems. The Six Month Smiles treatment incorporates the very latest in orthodontic technology and methods which will reposition your teeth quickly and safely. As the treatment’s main focus is the teeth shown during a smile you are not waiting for all the teeth in your mouth to be moved. To achieve this specially designed wires made from nickel titanium are used to ensure that the treatment is fast and effective. The Six Month Smiles treatment can be used to correct many orthodontic problems including: Crowding – the teeth are close together giving them a crowded appearance. Overbite – the front teeth overlap considerably. Spacing – there are large, unsightly gaps between the teeth. Overjet – the front teeth jut out. Underbite- the lower teeth protrude. Openbite – when you bite your teeth together they will not touch. Misplaced Midline – the middle lines of both sets of teeth aren’t in alignment with each other. Crossbite – the teeth do not bite on the right side of each other. As you can see there are many orthodontic problems that can be corrected by following the Six Month Smile treatment. Although it has a myriad of uses, every treatment option follows with certain drawbacks, Some of the limitations of six months smiles could be as follows: Retainers are required after treatment just with other conventional orthodontic treatments. Wires are not totally invisible. Some treatments may take slightly longer than six months. Not all patients are suitable candidates for short term braces. Though cheaper than invisible braces, quick braces cost more than traditional metal braces.

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BLACK TRIANGLES

Presenter - NEEHARIKA

Black triangles are interdental spaces that are seen due to lack of sufficient interdental papilla. Lay people consider black triangles to be the third most unaesthetic dental problem with caries being first and improper marginal crown fit being second. Some of the etiological factors of black triangles are gingival biotype, aging, distance from crest of alveolar bone to contact point, crown shape, distance between roots and their angulation, interproximal contact point, morphology of embrasure areas and most importantly orthodontic treatment. Most commonly black triangles are noticed in patients with crowded teeth. In most cases, due to crowding the gingiva is receded interdentally and is prevented from reaching normal height. Once orthodontic therapy is provided, the crowding is relieved but the black triangles become more obvious. Black triangles have a major effect on esthetics and with esthetics becoming a major and in some cases the only concern, proper efforts to reduce the visibility of the black triangles by a team of dentists is necessary. Even though black triangles are as small as 3mm they hamper an individual’s social progress. Many treatment techniques have been put forth to reduce black triangle visibility and it is necessary to discuss the same to familiarize orthodontists, periodontists and restorative dentists about the available procedures and the need for them to work as a team.

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BREAKING BOUNDARIES WITH MICRO IMPLANTS

Presenter - Dr. Shreyank G

The most revolutionary change brought to orthodontics is the usage of micro implants. Orthodontists are accustomed to using teeth and other auxiliary appliances as anchorage units for various purposes. With micro implants providing a better stability in the bone, they have been considered the most superior form of anchorage. Anchorage control is an important factor for the success of orthodontic treatment. There have been attempts to devise suitable anchorage methods. The conventional methods does not provide reliable anchorage because patient compliance is an important factor. Orthodontic micro implant plays an integral role in providing anchorage for orthodontic tooth movement. A Temporary Anchorage Device (TAD) is a device that is temporarily fixed to the 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, and is subsequently removed after use. They can be located transosteally, subperiosteally, or endosteally; and they can be fixed to bone either mechanically (cortically stabilized) or biochemically (osseointegrated). Importantly, the incorporation of dental implants and TADs into orthodontic treatment made possible infinite anchorage, which has been defined in terms of implants as showing no movement (zero anchorage loss) as a consequence of reaction forces.
Orthodontic treatment is the reorganization of skeletal and/or dental tissues. Nowadays, there is an increased tendency for researches to focus on accelerating methods for tooth movement due to the huge demand for adults for a shorter orthodontic treatment time. Unfortunately, long orthodontic treatment time poses several disadvantages like higher predisposition to caries, gingival recession, and root resorption. This increases the demand to find the best method to increase tooth movement with the least possible disadvantages. Consequently, researchers introduced few methods to accelerate the velocity of the tooth movement without any drawbacks. These kind of methods used in orthodontics were popular as accelerated orthodontics. Accelerated orthodontics could be possible by mechanical stimulation or device assisted therapy, surgical therapy and by the use of pharmacological agents. The purpose of the present poster was to describe and evaluate the methods used in accelerated orthodontics.
CUTTING EDGE IN ORTHODONTICS

Presenter - Dr. Shreya Singh

With the rapid accumulation of orthodontic knowledge in recent years, there is increased worldwide interest in a concise yet comprehensive course of study that encompasses recent advances in orthodontics. The changing needs and demands of the patient have led to Technological innovations are crucial for the advancement of the art and science of clinical dentistry. The recent advances in impression materials and techniques, the advances in imaging and diagnostic technologies, the newer wires, brackets, adhesives and curing units will be discussed in the paper. The upcoming technologies like Insignia, Incognito, Clear Aligner Therapy are also included. Further research in Nanotechnology and stem cell research can lead to a brighter future of orthodontics. There is an increasing demand for reduced treatment duration, so the methods to accelerate the treatment are a necessity of the hour. The challenge to our profession today is to improve the quality of oral health while satisfying the developing needs. The combined efforts of dental education, dental research, and dental practice will be needed to maintain the quality of our present system and to meet newer challenges. However, it is important that these tools should be cost-effective so that the benefits of these technologies can be extended to all sections of society including economically disadvantageous populations and those living in remote locations.
SELF LIGATING BRACKETS- DEMYSTIFIED

**Presenter - Dr. Shreya**

SELF-LIGATING BRACKETS- DEMYSTIFIED Introduced in the early 20th century, self ligating brackets are not new to orthodontics. They have undergone a revival over the past years with a variety of new appliances being developed. A self-ligating bracket is "a bracket which utilizes a permanently installed, moveable component to entrap the arch wire." They are a ligatureless bracket system that has a mechanical device built into the bracket which can be reopened and closed. The cap holds the archwire in the bracket slot and replaces the steel/elastomeric ligature. With the self-ligating brackets, the moveable fourth wall of the bracket is used to convert the slot into a tube. Although self-ligating brackets might have a great impact over orthodontics, it is important to know the real advantages involved in their mechanical performance. It should be clear that self-ligating brackets are a new tool which permits one more clinical option for both the clinician and the orthodontic patient. Despite the initial euphoria about these brackets, an evidence based dentistry should always prevail. Further studies are still needed to evaluate the effects of the expansion promoted by this type of appliance. Cook and O’ Connor stated: " Human knowledge is always frail and subject to revision. That should make us humble and exceedingly careful in claiming neither too much nor too little."

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AN OUTLOOK ON OBSTRUCTIVE SLEEP APNOEA BY A DENTIST

Presenter - SOUMYA KARNA

CO-Author- VIDUSHI KAUSHIK

OBJECTIVE: This poster will provide an overview on the management of obstructive sleep apnea in orthodontics.

INTRODUCTION Obstructive Sleep Apnoea is a common disorder characterized by repetitive partial or complete episodes of nocturnal breathing cessation due to airway constraint. It can present with many severe symptoms such as excessive daytime somnolence and is associated with hypertension, ischemic heart disease, and cerebrovascular disease. Many patients can also develop cognitive and neurobehavioral dysfunction, and has a remarkable effect on the quality of life. The risk factors that include are snoring, male gender, middle age, obesity, and a variety of craniofacial features like, retro or micrognathia and bruxism oropharyngeal features such as enlarged tonsils and macroglossia, low lying soft palate. The diagnosis of this condition can be made by history, physical and oral examination focusing on occlusion, parafunctional habits, wear facets, amount of overbite and overjet present and temporomandibular joint status, and nocturnal monitoring of respiratory sleep such as polysomnography, oximetry.

CONCLUSION Different treatment options are now available for an effective management of the condition, such as, continuous positive air pressure therapy, surgical treatment. Oral appliances used by dentists include tongue retaining device, mandibular advancement device, soft palate lifting device, silencer, Karwetzy U clasp activator. An effective approach and implementation of educational programmes will improve the management of condition. This poster will throw light on the Obstructive sleep apnea and its management.

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Faster orthodontics-smarter orthodontics One of the disadvantages of orthodontic treatment is prolonged treatment time. Long treatment durations are associated with dental caries, periodontal problems, root resorption and poor oral hygiene. The current orthodontic research mainly focuses on reducing the overall treatment time of the patient. This involves inclusion of acceleration techniques from other branches of dentistry to enhance tooth movements which can reduce overall treatment time by 30 to 50% without compromising the outcome. Accelerated tooth movement is preferred for its benefits like shorter treatment duration, differential tooth movement, reduced side effects and improved post treatment stability. The present E Poster attempts to give an overall picture of the various techniques advocated to reduce the treatment time without reducing the efficiency.

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Smart Orthodontics

Presenter - Dr Aishwarya Ramkumar

In a today's fast paced world where time constraint is a major concern, using smarter and faster techniques without compromising the quality of the treatment outcome is of paramount. This has made researchers look for newer avenues and develop smarter materials and techniques for treatment. Smart orthodontics aims at not just reducing chair time and operator fatigue but also at improving treatment outcomes. Use of aesthetic materials, customized appliances among other materials improves patient compliance helps in creating beautiful smiles.
Diagnosis and treatment planning has always been an important step during orthodontic treatment. The use of radiographs has been of extreme importance for planning treatment outcomes and prognosis. From the use of IOPAR to the recent advent of CBCT, radiographic diagnosis has come a long way. The use of these newer aids improves treatment outcome and helps in accurate patient diagnosis.
infinite reasons to smile

Presenter - Dr sanjeeb kabeer

ABSTRACT: New orthodontic products and treatment systems often claim to produce better, faster, and more efficient results, but rarely is any independent scientific validation performed. SureSmile™ (OraMetrix, Richardson, Tex) is a computer-aided treatment concept introduced in 1998, but not released commercially until around 2005. In the present context, the SureSmile (SS) method is used to facilitate orthodontic finishing. The SS process digitally captures three-dimensional (3D) images of the teeth and brackets. Computer software develops a 3D therapeutic model of the patient’s dentition, and a virtual treatment plan (VTP) is formulated, which then guides a computer-aided robot to bend and reprogram the form of nickel-titanium (NiTi) archwires, to move the teeth into desired positions. Since its development in 1997, Invisalign® technology has been established worldwide as an esthetic alternative to labial fixed appliances. The primary benefit of the Invisalign system is the superior esthetics during treatment compared to metal braces. Other advantages of the system include the ability to remove aligners to eat, brush and floss, and the superior comfort and ease of use. Innovations based on fundamental biomechanics, biomaterials and orthodontic knowledge and experience have enabled practitioners to treat highly complex cases with excellent clinical results. The ability of the system is progressing rapidly and improvements are being introduced nearly every year.

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VISUAL COMMUNICATION IN ORTHODONTICS

Presenter - Dr Nishanth A N

Dr Nishanth A N

VISUAL COMMUNICATION IN ORTHODONTICS

The word photography comes from Greek word meaning “to write or draw with light.” Photography has played a significant role in medicine from the very beginning. One of the first photographs taken over 150 years ago was a microscopic picture of human bone. Digital photographic technique has been available since 1981. Photography also plays a major role in orthodontics. The aims of dental photographs are documentation and evaluation of craniofacial and dental relationship, Assessment of soft tissue profile, Monitoring of treatment progress, etc. Times have certainly changed. Now, with more and more emphasis from the orthodontic community on the achievement of balanced facial harmony and smile esthetics for our patients, in addition to the traditional orthodontic goals of a well-aligned and functional dentition, the need for proper clinical photographic records of the orthodontic patient has become more obvious and essential for proper treatment planning and follow up. Clinical photographs allow the orthodontist to carefully study the existing patient’s soft-tissue patterns during the treatment planning stage. We can assess lip morphology and tonicity, the smile arc and smile esthetics from various angles. We can also assess the degree of the incisal show upon smiling. Thus, they allow us to study the patient in a so-called “social” setting, and all that without the patient ever being present. Such information greatly aids the orthodontist in formulating the best possible treatment plan for each patient, and for monitoring in subsequent follow-ups. Intra-Oral Photographs: The major purpose of the intraoral photographs is to enable the orthodontists to review the hard and soft tissue at clinical examinations. To record hard and soft tissue condition as they exist before treatment

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Managing pain and anxiety in patients has always been an essential part of dentistry. Unfortunately, anxiety and fear that arise prior to and/or during the injection procedure remains a barrier for many children from receiving dental treatment. In recent years, researchers have developed alternative methods which enable dental anaesthesia to be less invasive and patient friendly. The most known alternative methods of delivering anaesthesia in dentistry are: topical anaesthesia, electronic dental anaesthesia, jet-injectors, iontophoresis and computerized control local anaesthesia delivery systems. Needle free injection technology (NFIT) encompasses a wide range of drug delivery systems that drive drugs through the skin, virtually nullifying the use of hypodermic needle. This technology bypasses the chances of needle stick injuries and avoids other complications including those arising due to multiple uses of single needle. Better patient compliance too has been observed. Needle free technologies are capable of delivering a wide spectrum of medicinal formulations into the body with the same bioequivalence as that which could have been achieved by drug administration by a two-piece syringe system, without inflating unnecessary pain to the patients, and is especially a boon to the paediatric population. Keywords: local anaesthesia, needle free technology, injections, computerized injections, electronic dental anaesthesia.
Glow in Pediatric Dentistry

Presenter - Dr. Bhargav. K. H

We are the creators of beautiful smiles. Treating infants and children is a rewarding experience. Pedodontists try to create a pleasant memory of the dental visit for children by using novel, minimally invasive technologies to help the child establish good dental habits and visit the clinic again with a positive behaviour. Children being very anxious of the noise produced by rotary instruments has to be considered. We can think of the most advanced and a non invasive technology in pediatric dentistry. Pedodontist always strive to establish a positive attitude towards the dental treatment in a child visiting the dental clinic, and this can be done with the help of smart and advanced technologies. Lasers are one of the advances in pediatric dentistry.

Keywords: Glow, Creators, Non invasive, Pediatric Dentistry, Lasers.

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Dental caries is the second most common infection affecting human race. Inspite of through understanding of caries process and etiological factors, it still remains one of the foremost epidemiological challenge. Many studies have established the fact that streptococcus mutans is one of the organisms responsible for dental caries. One of the newer and ongoing researches for preventing and managing dental caries is replacement therapy. Recombinant DNA technology that comes under gene therapy has its applications in various fields and its multidisciplinary applications made man’s life better especially in the field of medicine. Using this technology, streptococcus mutans is genetically engineered. This transgenetic strain of streptococcus mutans brings the revolution in cariology- SMaRT Therapy: Streptococcus Mutans and Replacement Therapy. Can this transgenetic strain of streptococcus mutans bring revolution in cariology?

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Transport media for an Avulsed Tooth

Presenter - P. Jayasri Sivani

Author: Dr Brinda S Godhi

Tooth avulsion, characterized by complete displacement of the tooth from its socket, accounts for about 0.5–16% of all cases of dental trauma. When an injury occurs, the avulsed tooth should be replanted immediately to prevent further injury to periodontal ligament (PDL) cells in the future. Immediate replantation rarely occurs since factors such as the emotional stress of parents and lack of access to a dentist tend to delay definitive care. If immediate replantation cannot be accomplished, the ability of PL progenitor cells to reproduce and recolonize the wound may be extended by prevention of desiccation and storage in physiological media. Viable periodontal ligament (PL) cells are required for PL healing of avulsed teeth following replantation. Recent research has led to the development of storage media that produce conditions that closely resemble the original socket environment, with adequate osmolality, pH, nutritional metabolites and glucose. This is a review on the literature on the different storage media available for the storage of avulsed tooth.

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Caries is ubiquitous and a dynamic process. In spite of a knowledge explosion in cariology, dental caries still remains a misunderstood phenomenon. In order to effectively use the wide range of preventive and management strategies, it is imperative to look beyond those black and white spots that manifest on the tooth surfaces. Concepts of cariology has also changed drastically from past to present be it in aetiology, prevention, diagnosis, treatment and management of dental caries. Although many researches has been carried out in this field, there still remains many untapped areas. My poster depicts the changing trends in aetiology, diagnosis and management of dental caries.

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The objective of periodontal surgery is to restore periodontal health and to prevent further relapse. Traditionally scalpels were used in periodontal surgery. The local drug delivery systems are assessed with regard to their functional characteristics, effectiveness as a monotherapy, as compared to scaling and root planing, and ability to enhance conventional therapy. The objective of this case series is to analyze the pre and post-operative results obtained between conventional periodontal flap surgery and local drug delivery using tetracycline fibres. Ten chronic periodontitis patients with probing pocket depth of more than 5mm and horizontal bone loss in the upper quadrant and lower quadrant were selected in this study. Scalpel periodontal surgery was planned for the upper quadrant and local drug delivery in the lower quadrant. Post-operative results based on clinical parameters and patient perspectives were recorded. Clinically, significant improvement in probing pocket depth and clinical attachment levels were observed in both the sites.
The absence of permanent teeth can be treated by means of dental implants and prosthesis. Tooth autotransplantation as an alternative can be considered. Autotransplantation is the repositioning of the autogenous teeth to an extraction socket or edentulous site. There could be many reasons for missing teeth including congenital loss. The reported prevalence of congenital absence is 3.5% - 6.5%. Treatment options for missing teeth are based on the comprehensive evaluation. Implant restoration is an alternative but not advisable for the young because growth will adversely affect the outcome of the treatment. In the adolescent, space maintenance of the edentulous site for the future implant replacement had risks. Patients' compliance with retainers is unpredictable and even if the crown position is maintained, the roots tend to migrate into the implant site. Moreover, alveolar ridge constriction occurs overtime. Autotransplantation before a donor root is completely formed can be very reliable and provides the young patient with a natural tooth that can function normally and be esthetically superior to prosthetic restoration.
Clinical experience confirms the fact that most edentulous patients are not satisfied with removable dentures as the best dentures are a poor substitute for the natural dentition. Many patients who wear removable dentures encounter difficulty adapting to their prostheses. Mastication is the initial step in the digestive process and necessary for effective nutrition, health and a quality of life. An understanding of mastication is very important and the treatment of all edentulous patients necessitates considerable efforts. There are several factors determining the chewing result. The teeth are important in the masticatory system. They form the occlusal area where the food particles are fragmented. This fragmentation depends on the total occlusal area and thus on the number of teeth. Another important factor in mastication is the bite force. The bite force depends on muscle volume, jaw muscle activity, the coordination between the various chewing muscles, the quality of the occlusion, the motion of the mandible and the functional condition of the temporomandibular joints (TMJ). The neuromuscular control of chewing also plays an important role in the fragmentation of the food. Of the various modalities of treatment available to improve that experience, the present emerging trend is the placement of implant retained fixed prosthesis. The present case study uses the combination of EMG, T-scan and Jaw Tracking to evaluate the quality of masticatory function.
Redefining Splints

**Presenter - Dr. Priya Mukherjee**

**Co-author - Dr. Aishwarya R. Patil**

Occlusal splint therapy may be defined as “the art and science of establishing neuromuscular harmony in the masticatory system by creating a mechanical disadvantage for parafunctional forces with removable appliances. It is basically a device, usually made of hard acrylic, which fits over the occlusal and incisal surface of the teeth in one arch, creating precise occlusal contact with the teeth of opposing arch. It may be used for occlusal stabilization, for treatment of temporomandibular disorders, or to prevent wear of the dentition. Hence according to use it may be referred as a bite guard, night guard, an interocclusal appliance or even an orthopaedic appliance. Because the management of patients with temporomandibular disorder is controversial it attracts suggestions from widely differing viewpoints. Therefore, when considering the use of splints, one should avoid the “one aetiology, one diagnosis and one treatment” approach. A combination of various treatment plans may often be employed in the management of patients suffering from symptoms of TMD including counselling, drug therapy, physiotherapy and splint therapy, often producing a better cumulative result than any individual options used in isolation. Hence, the aim of the poster is to recognize the basic science behind temporomandibular joint function and dysfunction, the evaluation of TMJ and the application of splints in rectifying the same - WHEN, WHERE AND HOW?

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SMART APPS IN ORTHODONTICS

**Presenter - DR RAMYA T C**

Smartphones have created new opportunities to integrate mobile technology into orthodontic clinical practice. The word ‘App’ is an abbreviation of application. An “App” is a specialized program downloaded onto the smart mobile device which then connects via internet portal, to a library of apps. The users can browse the library and search for specific apps that serve their needs. These apps serve as an ideal tool for quick reference, owing to their portability, ability to update and speed. As medical and dental apps have been one of the fastest growing categories of programs and include various programs designed specifically for orthodontics. For orthodontics, there is now a wealth of information available. There are various Apps which are currently available in Google as well as Apple play store for orthodontists and patients. Smartphones have made it easier and convenient for accessing orthodontically relevant information at a click of a button. The use of this technologies can be a boon both for the orthodontists and the patients as they help in treatment planning as well as in enhancing the treatment outcome.

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Stress in Oral Health and Disease

Presenter - Dr Sanjay C J

Co-author - Dr Karthikeya Patil

A word “stress” is often used nowadays to describe one’s emotional state. Stress is a state of the body (and mind) in which the demands of the situation surpass one’s resources available to cope with those demands. According to Selye stress involves a biological strain of an organism, which is caused by various somatic and/or mental stimuli. The role of mental and psychosocial factors in oral diseases has been proved in several studies. In fact, poor oral health has long been theorized to cause the dysfunction of other critical physiologic systems. A growing body of evidence has come to support the existence of such an “oral-systemic” relationship. This relationship has been demonstrated for some diseases more so than others, including respiratory infections, osteoporosis, childhood obesity, cardiovascular disease, and type II diabetes. A shared impetus for the development of both oral and systemic disease may be the presence of stress. As a common risk factor for both diseases of the oral cavity as well as for non-communicable diseases (e.g. cancer, cardiovascular disease, diabetes, and respiratory disease), the minimization of stress has become an integral component of novel systemic healthcare promotion techniques, such as the common risk factor approach. Chronic stress is likely to contribute to the progressive, long-term development of oral disease through at least two distinguishable pathways. First, stress can motivate individuals to cope in unhealthy ways that foster oral disease (e.g., substance use, including illicit drugs, alcohol and tobacco, poor diet, and sedentary behavior). Second, chronic stress contributes to high allostatic load that can lead to the dysfunction of physiological systems critical to homeostasis, and thus, affect the underlying mechanisms of disease progression, more generally. This poster reviews the most common stress associated oral diseases which are to be dealt in day today dental practice.

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PHOTOBIOMODULATION IN DENTISTRY - 'LIGHTING UP’ THE ORAL HEALTH

Presenter - JULIA V MATHEW

Co-author-Dr. POOJA C YAVAGAL

Introduction Photobiomodulation (Low Level Laser Therapy, Cold Laser Therapy) is application of laser or light emitting diodes with wavelengths ranging from 600nm- 1000nm to target tissues to improve tissue repair (skin, wounds, muscle, tendon, bones, and nerves) reduce Inflammation and produce analgesia. Its application in dentistry includes treatment of oral mucositis (predominantly radiation induced), denture stomatitis, gingivitis, periodontitis and dentin hypersensitivity. It promotes postoperative wound healing, dentin formation and Osseointegration of Implants along with acceleration of orthodontic tooth movement its analgesic potential is used to treat pain associated with Herpes Simplex Virus lesions and Temporomandibular Pain Dysfunction. At optimum wavelengths it increases the ATP production in cell mediated by Cytochrome C Oxidase and increases production of growth factors thereby promotes repair and healing of tissues. At high doses it inhibits ATP production in C-fibres and A delta nerve fibres and brings about analgesic effects. PBM is a novel, non-invasive and painless therapy which has created a paradigm shift in science of healing and regeneration of tissues with applications being humongous in the field of Dentistry. "Healing comes when we choose to walk away from darkness and move towards light." - Dieter Utchrof

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Gold nanoparticles in cancer therapy

**Presenter** - Dr.Devalaraju Meghana, Intern.

**Introduction**

Gold nanoparticles (AuNPs) are small gold particles with a diameter of 1 to 10 nm, emerging as promising agents for cancer therapy and are being investigated as drug carriers, photo thermal agents, contrast agents and radio sensitisers.

AuNPs serve as carriers for drugs to targeted region of the body when attached to biomarkers can mark and locate tumours regions hidden throughout the body cavity. It's not in excited state electrons flow freely, however when subjected to specific frequencies of light the particles polarise this oscillation heats up to nanoparticles this is the basis of photo thermal effect. 

AuNPs injected into bloodstream bind to cancerous tissue, embedded infrared frequencies are use to excite the particles in temperature damages surrounding tissue and induces cell death. This paper highlights the newer mode of treatment in patients with malignancies.

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Primary dentition plays an important role in child’s growth and development, not only in terms of speech, chewing, appearance and prevention of bad habits but also in the guidance and eruption of permanent teeth. Mesial migration of teeth often occurs due to premature loss of primary teeth and proximal carious lesions resulting in loss of arch length which may manifest as malocclusion in permanent dentition in the form of crowding, impaction of permanent teeth and supraeruption of opposing teeth.

If premature extraction or loss of teeth is unavoidable, the safest option to maintain arch space is by placing a space maintainer. Space maintainer can either be removable or fixed. Fixed appliances are however preferred due to patient compliance. Many conventional fixed appliances have been developed like- Lingual arch, Nance palatal arch, Band and Loop, Distal Shoe etc. However all these need a strong abutment tooth on which the band can be adapted and wire can be fabricated. In cases where there is early exfoliation of both the adjacent primary molars and unerupted permanent molars, maintenance of space becomes important yet difficult.

In such situations a modified distal shoe will help. Modification includes extending the wire from contralateral banded primary 2nd molar to ipsilateral banded canine, extending it further down till inside the socket upto the erupting molar. The same wire is continued up and extended till the ipsilateral banded canine.

This an effective, simple and convenient method of guiding as well as maintaining space for the developing permanent teeth.
Effect Of plaque control measures in COPD Subjects:

Presenter: Anitha Subbappa
Co-Author- Nandlal Bhojraj, Mahesh P A

Objectives: Gingival inflammation, a loss of connective tissue and bone is characterized by periodontal diseases. If untreated would lead to teeth loss. There is increasing evidence of the relationship between periodontitis and systemic diseases, including cardiovascular diseases, adverse pregnancy outcomes, diabetes mellitus and respiratory diseases. The fourth leading cause of death in the world is due to chronic obstructive pulmonary disease (COPD). The World Health Organization predicts it to be third by 2030. As per various observational studies, Periodontitis has been associated with COPD. This study aimed to assess the plaque intervention of tooth brushing and/ or mouth wash in chronic obstructive pulmonary disease (COPD) subjects on recovery & discharge of subjects.

Methods: In total, 150 COPD subjects with periodontitis were divided into 3 groups. Oral hygiene instructions (modified Bass technique using soft tooth brush and toothpaste containing 1000ppm NaF) on brushing were introduced along with Chlorhexidine (0.12 %) mouthwash of twice day in Group A, Group B with only mouthwash, & Group C as control with only toothbrushing. This was supervised through trained nurses. The span of hospital stay until recovery from exacerbation stage were assessed & followed-up based on those recovering within 5 days & between 5-10 days with this oral health intervention. Neither oral prophylaxis nor periodontal intervention were not possible because of their acute condition in all these subjects.

Results: A shorter hospital stay (< 5days) due to faster recovery were noticed in Group A & B of 76% & 72 % respectively as compared with Group C (12% only) which was of tooth brushing alone. This could be attributed due to the possible antiplaque effects from brushing and/ or mouth wash introduced in the Group A & B, which possibly acts in inaccessible interproximal areas in patients where there was a difficulty to practice self-care with regards to oral hygiene due to poor dexterity.

Conclusion: The present findings of the implementation of primary preventive care can be a feasible model. The oral hygiene practices & the use of Chlorhexidine mouthwash (0.12%) as a primary preventive program in COPD subjects & needs to be introduced in COPD patients on a routine basis.

Keywords: COPD, Tooth Brushing, Mouthwash, Chlorhexidine, community oral health program.
Restoration Of Gingival Esthetics - A Concern In Mixed Dentition Prosthesis.

Presenter- Dr. Anoop N K
Co-author- Dr. Nandial B

The incidence of traumatic dental injuries in children ranges from 1%– 3% in the population among which avulsion of the permanent teeth form 0.3% to 5% and the most commonly affected teeth are the maxillary central incisors. Premature teeth loss might cause difficulty in mastication, malposition of adjacent teeth, hinders pronunciation, narrowing of alveolar processes and vertical alveolar defects at sites of missing teeth. Also esthetical issues can lead to psychological problems as child may be mocked or bullied, leading to insecurity, development of complexes and low self esteem. Removable partial dentures are indicated in children after tooth loss following extraction or traumatic injury. Such prosthesis must be planned considering the physical and mental growth and development of the child in mind. Personal appearance is very important to children, especially in adolescence. However, recent studies have shown that even children in preschool have a developed consciousness about their body image, and do care about how they are perceived by other children and adults alike. There is a need to address the esthetic part of a removable denture even in pediatric patient especially in anterior tooth replacement. Even though the shade matching of the teeth is followed routinely the shading or characterization of the buccal flange and the embrasure is neglected especially in children with melanin pigmented gingiva. Here we discuss cases of avulsed maxillary central incisors which were replaced with Removable partial dentures with characterization to improve the dental esthetics, compliance and self-esteem of the patient.

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Oral Piercing

Presenter- T K Anuharshitha

Co-Author- Dr.Navya D, Dr. Priyanka Nitin, Dr. Sreeshyla HS

Body piercing indicates penetration of jewellery by puncturing a part of the body. In recent years piercing of intraoral and perioral regions have become trend among the young generation. Oral piercings have several complications and risks for oral, dental and general health. So Dental care professionals should educate patients about the complications and advice patients prior to undergoing oral piercing.

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| 13-12-2019 | **DENTAL SLEEP MEDICINE UPPER AIRWAY SLEEP DISORDER -DENTISTRY'S ROLE**<br>**AIR CMDE DR. BALAKRISHNAN JAYAN**<br>**INTERNATIONAL SPEAKER**<br>**DR. DATTA MALAYAVANTHAM - DREAM PRACTICE - VISION TO REALITY**<br>**INAUGURAL CEREMONY**<br>**DR. RAMACHANDRA ORATION LECTURE**<br>**DR. C JAGADEESH - SMART DENTISTRY**<br>**TEDx SPEAKER**<br>**DR. PRAKASH - FUTURE OF DENTISTRY**<br>**LUNCH 01:30 PM TO 02:00 PM**<br>**DIGITAL SMILE DESIGNING - ACHIEVING BEAUTY**<br>**DR. SAGAR ABHICHANDINI**<br>**BPS DENTURES**<br>**DR. LINGESH** | **NEVER CHANGING CONCEPTS IN CLINICAL DENTISTRY**<br>**DR. RAVINDRA SAVDI**<br>**A BLENDERS PRIDE**<br>**DR. VINITA MANJUNATH**<br>**FINANCIAL ASPECTS IN DENTISTRY & PRACTICE MANAGEMENT**<br>**DR. SANDESH MAYEKAR**<br>**SIMPLIFY IMMEDIATE IMPLANTOLOGY**<br>**DR. SANJAY ASNANI**<br>**LUNCH 01:00 PM TO 02:00 PM**<br>**BREAKING THE BARRIERS - A PARADIGM SHIFT IN ORTHODONTICS**<br>**DR. NEELAN SHETTY**<br>**ORAL POTENTIALLY MALIGNANT LESION WHAT IS YOUR ROLE?**<br>**DR. ASHOK L** | **CORTICAL & BASAL IMPLANTS**<br>**DR. VEERENDRA KUMAR S C**<br>**INTRA ORAL SCANNING & OCCLUSION IN DENTISTRY**<br>**DR. PRAFULLA THUMATHI**<br>**METAMORPHOSIS TRANSFORMING YOURSELF**<br>**DR. UTKARSHA**<br>**NEGLIGENCE IN DENTAL PRACTICE**<br>**DR. GIRISH KUMAR R**<br>**LUNCH 01:00 PM TO 02:00 PM**<br>**FROM 2PM ONWARDS AGM**

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**TITLE:** GREEN DENTISTRY- A METAMORPHOSIS TOWARDS AN ECO-FRIENDLY DENTISTRY

**PRESENTER:** AYESHA MISBAH, I BDS, JSSDC&H, MYSORE.

**MAIN AUTHOR:** DR. BHAGYALAKSHMI AVINASH

**CO-AUTHOR:** DR. MUZAMMIL NAWAZ

Eco-friendly dentistry is currently transforming the medical and dental field to decrease its affect on our natural environment and reduce the amount of waste being produced. Eco-friendly dentistry uses sustainable approach to encourage dentists to implement new strategies to try and reduce the energy being consumed and the large amount of waste being produced by the industry. Many reasonable, practical and easy alternatives do exist which would reduce the environmental footprint of a dental office were it to follow the 'green' recommendations. Dentist should take a leading role in their impact on the environment.

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TITLE: Advancing education about PNAM.

Presenter: Birti Singh

INTRODUCTION:

Cleft lip and palate is the most common congenital craniofacial anomaly. Its incidence in India is 1 in 781 live births. In these patients, alveolar and nasal reconstruction for an optimal functional and cosmetic outcome is a challenge. A technique for the primary correction of the nose, lip, and alveolus called presurgical naso-alveolar moulding (PNAM) has been developed by Grayson for infants born with unilateral and bilateral clefts. Focusing on soft tissue and cartilaginous repair, PNAM reduces the need for secondary surgical intervention and results in an improved outcome. The awareness among parents regarding cleft and its various treatment modalities including PNAM is low as it is difficult to visualise the same merely through oral communication.

PROBLEM STATEMENT:

Is there a need for an advance technology to educate the parents of infants born with cleft lip and palate about PNAM?

CONCLUSION:

Virtual reality (VR), a 3-dimensional computer generated experience achieved with the aid of a specialised device, a virtual reality headset can be used as an educational tool in dentistry for PNAM in improving not only the function and aesthetics but also help build self-esteem and confidence in a child. Such advanced educational tools will help the parents visualise what a cleft and PNAM technique looks like and motivate them to make an educated smart decision for their child.

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Title-Lingual orthodontics is a great transition from the conventional labial

Presenter-Sunil Kumar M

Lingual orthodontics is a great transition from the conventional labial orthodontics that eliminates the visibility of the fixed appliance by avoiding the orthodontic attachments on the labial surface of the teeth, to meet the esthetic demands of the patients. This lingual technique is quite challenging in terms of treatment approach as compared to labial orthodontics due to working in areas with poor accessibility, variable morphology of lingual surfaces posing difficulty in bracket positioning, different mechanical considerations with respect to the position of orthodontic attachments having different relationship with the centre of resistance, patient irritability due to tongue irritation. It necessitates a lot of patience, efforts, expertise and time from the orthodontist and good cooperation from the patients in understanding the need of extended chairside time, increased expense, prolonged treatment duration as well as the distress associated, the speech and tongue soreness mainly. This article is an attempt to present overview of lingual orthodontics as compared to labial orthodontics.

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Title-Chasing perfection – Body Dysmorphic Disorder and its Significance in Dentistry

Presenter- Dr. Shruti
Co-author- Dr. Vishal S Kudagi,

Abstract:

Body Dysmorphic Disorder (BDD) a type of mental illness, a somatoform disorder, wherein the affected person is concerned with body image, manifested as excessive concern about and preoccupation with a perceived defect of their physical features. The individual may perceive a defect in either one feature or several features of their body, which causes psychological distress that impairs occupational or social functioning. Considerable numbers of these patients are obsessed with the appearance of their dentition and the shape of their jaws. Usually the dentist can be the first to diagnose this condition which may otherwise pass unnoticed. This problem can sometimes interfere to a large extent in rendering appropriate dental treatment. Body Dysmorphic Disorder (BDD) has remained an elusive topic for both researchers and clinicians likewise. This condition needs further research which can greatly help in intercepting and preventing its myriad lethal manifestations.

Key words: Body Dysmorphic Disorder, Eating disorders, Serotonin Reuptake Inhibitors, physical appearance.
Title: BARRIERS FOR SEEKING ORTHODONTIC TREATMENT IN PATIENTS WITH MALOCCLUSION

Presenter - Dr. Vishal

Overview: Malocclusion is prevalent in considerable part of our population. However, not all of these individuals with malocclusion will present themselves for orthodontic treatment either as children or adults. There are various reasons for abstaining oneself from seeking orthodontic treatment. This study investigates those reasons in detail.

Aims and Objectives: The aim of this study was to understand the lack of demand for orthodontic care among patients who are aware of their existing malocclusion, perceive the severity and realize their problem requires orthodontic attention.

Material and Methods- A descriptive cross-sectional study was conducted in which 200 patients reporting to the Department of Orthodontics and Pedodontics, JSS Dental College and Hospital, Mysore were selected as sample group after their malocclusions being quantified by Dental Aesthetic index (DAI). Subjects were made to fill in an orthodontic Need versus demand questionnaire.

Statistical analysis: For calculation of responses obtained from the questionnaire, frequencies and percentages were used for descriptive statistical analysis. SPSS Version 23 was used for the statistical analysis.

Result: The most common barrier in our study was affordability which constituted 69.5% of the respondents. This was closely followed by the fear of extractions involved during the treatment which stood at 69%.

Conclusion: The study indicates that despite the efforts of the orthodontist in educating the population about the need for the treatment, many individuals still deny oneself the benefits of the service due to reasons like cost, fear and social reasons.

Key words: Malocclusion, Orthodontics, perception, Pedodontics, Interceptive Orthodontics.

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Title: PHYSICS FORCEPS

Presenter: Joon Sunil

The physics forceps was developed by Golden and misch in 2004. It is an innovate design that provides a simple mechanical advantage by employing first-class lever mechanisms. Utilizing the patented beak and bumper technique we can simply and predictably extract virtually any tooth in any condition while preserving the buccal bone and socket. The beak is positioned on the lingual or palatal root of the tooth and in to gingival sulcus. The bumper is placed on the facial aspect of the dental alveolus at the mucogingival junction.

The advantage of the physics forceps are, it preserves the tissue and bone around the teeth, improves the potential of the body to regenerate bone and fill the socket, reduces or eliminates the risk of infection and discomfort after the extraction. Preserve the natural contour of the gums. In conventional forceps we need to raise the mucoperiosteal flap or use of an elevator before attempting extraction but according to Dym and Weiss, physics forceps does not require flap raise or elevators.

In conventional forceps root fracture is common but in physics forceps the chances of root fracture is less. Conventional forceps implements second class levers but physics forceps is first class lever, creep, and type of force that provide a mechanical advantage that makes it more efficient. Trauma to structures will be less compared to conventional forceps.

Disadvantage of physics forceps compared with conventional forceps is cost of forceps is higher.

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Title: "Dental Tourism in India"

Presenter- Milind Rajan

India has been remarkable for its popular tourist destinations for its diversities in its picturesque nature, culture and practices including food. It is currently considered as the hot spot for tourists around the world for the top-rated and cost-effective dental and medical facilities.

India is equipped with the best hospitals and treatment centers providing the excellent facilities in the world. More than ever it has been recognized as the popular and highly preferred dental tourism destination for its exclusive qualities like specialized services, technologically advanced infrastructure, expert and internationally trained dental surgeons; English speaking-kindhearted staff and most importantly affordable price, in all over the world.

Further, the dental healthcare system in the country has gained tremendous government support and approval. So it is important to train the dental students in understanding the significance of dental tourism on Indian economy and expectation of tourists and professional challenges in maintaining international standards. Hence presenting the dental tourism industry in the country growing by leaps and bounds.

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Title- V3  A Bilingual-bicultural principle based oral health education model for hearing-impaired children

Presenter- Samhita Bijlani

Co-authors- Dr. Nandlal B, Dr.Raghavendra Shanbhog

Oral health education plays a major role in prevention of oral diseases in children. Educating the hearing-impaired children is a complex problem that manifests itself at different levels. There is a need to develop oral health education in sign language. “Bilingual-bicultural education” is an education method in which hearing-impaired children use sign language as the first language and written or spoken language as a second language. This approach believes that classes should be conducted in a visual language since they learn visually. Based on this principle a teaching model called V3 was developed which includes different visual modes of teaching a sequential tooth brushing technique to hearing-impaired children aged six years and above. V3 can be used as a tool to promote active learning with reinforcement. V3 includes three visual modes: an automatic speech to sign language translation software (American and local), written educational material and a tooth-brushing demonstration video.
Title: Effect of microabrasion-resin infiltration and microabrasion-remineralization on dental fluorosis: An in vivo study.

Presenter - Dr. Shreepriya Singhania,

Co-author - Dr. B. Nandlal, Dr. Raghavendra Shanbhog

Introduction: Dental fluorosis is a condition that comprises hypomineralized areas resulting in lower fluorescence. Quantitative light-induced fluorescence is an objective method for fluorescence loss quantification.

Previous literature shows microabrasion, resin infiltration, composite restoration or porcelain veneers as treatment options for fluorosis. Microabrasion-remineralization and resin infiltration are minimally invasive techniques and have not been researched extensively.

Aims:

To evaluate effectiveness of microabrasion-resin infiltration and microabrasion-remineralization on fluorosed teeth using QLF and Image J software.

Method:

Sixty fluorosed incisors (Grade 3 per Dean’s Fluorosis Index) of patients aged 9-12 years were divided into: Group A: microabrasion-remineralization and Group B: microabrasion-resin infiltration. The absolute decrease in fluorescence (ΔF) was recorded pre-treatment, mid-treatment and post-treatment using QLF. L*, a*, and b* values were recorded for each tooth based on the CIE L*a*b* color space using image J software. The L value (lightness or darkness) and the size of color differences (ΔE) was clinically evaluated by the formula ΔE=([ΔL*]2+[Δa*]2+[Δb*]2)^1/2.

Results:

After microabrasion, ΔF values in both groups showed reduction however, the reduction observed was almost similar. Post-treatment fluorescence loss was reduced in both groups. Group B showed better colour masking than Group A.

Conclusion:

Microabrasion-resin infiltration was as effective as microabrasion-remineralization in management of dental fluorosis. However within the group the ΔF values before and after treatment was highly statistically significant. Resin Infiltration has a better color masking ability than remineralization.

*****
Brighter smiles and better lives is what Pediatric dentistry is all about. The welfare of a child is always a priority. Having said all this, besides dental treatment, a Pediatric dentist should focus on improving the overall well-being of a child. This is where the concept of Holistic dentistry also known as Alternative, Complementary or Biologic Dentistry can be explored and implemented. Conventional dental practise mostly involves only diagnosis, management, prevention and treatment of the oral cavity; however, the overall health of the patient goes unnoticed. The proponents of holistic dentistry believe in treating the root cause of the problem rather than just treating the symptoms. It is a natural and open-minded approach that brings together modern as well as traditional day alternatives to benefit dental care and make it more effective. It adopts the modality of understanding the body as a whole instead of just teeth and jaws and emphasizes on recognizing the fact that the mouth impacts the overall health of a person. Holistic dentistry is a natural, safer and biological approach along with modern practises towards patient well-being. Some of the concepts include use of natural products, avoidance of harmful substances, betterment of nutritional health etc. all towards improving the healthcare system. It is an innovative approach that has been in practise over a decade. However, its introduction into Dentistry is a rather new concept but a promising one that could pave pathways to a new era of dentistry.

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Title: COMPOSITES—“A Blenders Pride”

Presenter: Vinutha Manjunath

An apt quote from Albert Einstein says ‘Look deep into nature, and then you will understand everything better’. A successful composite restoration depends on biomimetic emulation of the natural tooth structure. The flawless blending of the restorative material to create an invisible margin is the ultimate goal a practitioner focuses on. This is achieved by following protocols at various stages that go into completing a restorative workup.

This lecture briefly throw light on a few of these protocols, which would probably result in a near perfect restoration.

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**Topic:** Nevoid Basal Cell Carcinoma Syndrome: A Case Report  
**Presenter:** Akash Ajit Kumar

**Introduction**

Nevoid basal Cell Carcinoma syndrome also known as Gorlin-Goltz syndrome is an infrequent multisystemic, autosomal dominant disorder of mesoectodermal development, with primary manifestation in skin, hair, bones and teeth. Mutation in the PTCH1 gene causes the spectrum of developmental abnormalities. This syndrome may be diagnosed early by a dentist by routine radiographic examination in the first decade of life, since the odontogenic keratocysts are usually one of the first manifestations of the syndrome in 78% of the cases and they could be detected in patients younger than 10 years of age. Here we present a case of Gorlin-Goltz syndrome in a 13 year old boy who was successfully treated and is under follow up.
The orthodontic profession has always been in pursuit of ideal dentition. The former emphasis on dental and skeletal components is still valid, but greater attention to the soft tissue aspects of orthodontics is now required. Even though patients come to us mainly to improve their smiles, the orthodontic literature contains more studies on skeletal structure than on soft-tissue structure, and the smile still receives relatively little attention. The smile is an important feature in daily life, and should be of interest to an orthodontist. It is an essential asset for psychosocial adaptation. The smile arc is the relationship of the curvature of the incisal edges of the maxillary incisors and canines to the curvature of the lower lip in the posed smile. The ideal smile arc has the maxillary incisal edge curvature parallel to the curvature of the lower lip. Evaluation of anterior smile aesthetics must include both static and dynamic evaluations of profile, frontal, and 45° views to optimize both dental and facial appearance in orthodontic planning and treatment. Maxillary incisor labiolingual inclination and anteroposterior (AP) position have a key effect on the appearance of the smiling profile. This poster presents the concept of the smile arc and how it relates to orthodontics—from the recognition of its importance, to its impact on orthodontic treatment planning, to how procedures and mechanics are adapted to optimize the appearance of the smile.

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Title: DNA for OSA: An innovation

Presenter: Miliya Parveen

Obstructive sleep apnoea is a disease of increasing importance because of its neurocognitive and cardiovascular sequelae. Abnormalities in the anatomy of the pharynx, the physiology of the upper airway muscle dilator, and the stability of ventilatory control are important causes of repetitive pharyngeal collapse during sleep. In short, obstructive sleep apnoea occurs when the airway becomes constricted. This is partly because of the position of the jaw during sleep. Since the jaw supports the airway, repositioning the jaw helps the jaw stay open. That’s the focus of most sleep apnoea appliances.

Positive airway pressure (PAP) is the treatment of first choice for obstructive sleep apnea (OSA) of moderate or greater severity in adults. Applied through a facial interface it is a very effective and safe method of preventing the upper-airway obstructions characteristic of OSA. There remain issues of imperfect patient acceptance and compliance with continuous PAP, uncertainties regarding the role of CPAP in mild OSA, and the desired cardiovascular benefits of CPAP. Therein comes the DNA appliance (Daytime Nighttime Appliance) which asks why the airway is even susceptible to collapse in the first place. For many people, the answer is that the upper and lower jaws developed in such a way that the airway was constricted. With the DNA Appliance system, it is possible to treat the teeth, jaws, temporomandibular joints (TMJ), face and airway for optimal growth and development by engaging the patient’s underlying genetics without the use of surgery. Using the principles of Epigenetic Orthodontics, this technique activates one’s naturally occurring genes to correct underdevelopment in the craniofacial region with removable appliances worn during the evening and at night- during the body’s natural circadian rhythm. Reshaping the jaw allows more room for your teeth, which can be straightened by the DNA appliance just as they can be straightened with regular orthodontic treatment. This poster in an overview of this progressive appliance that is changing the face of OSA treatment and removable appliance therapy.

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Title: GOLDEN PROPORTION

Presenter: Navya D
Co Author: T K Anuharshitha, Dr. PRIYANKA Nitin, Dr.Sreeshyla HS

ABSTRACT

“Golden proportion also known as Divine proportion ”is not only seen in dentistry but also in many things around us as in sunflower, our face, automobiles, paintings, monuments, birds, animals and some plants too. Golden proportion actually means the specific ratio for development of specific relation, as in dentistry. The geometric and mathematical proportion is much influential in bringing out inner beauty of a particular thing. Objects designed according to golden proportion is said to be aesthetically pleasing.

*****
The word photography comes from Greek word meaning “to write or draw with light.”

Photography has played a significant role in medicine from the very beginning. One of the first photographs taken over 150 years ago was a microscopic picture of human bone. Digital photographic technique has been available since 1981. Photography also plays a major role in orthodontics. The aims of dental photographs are documentation and evaluation of craniofacial and dental relationship, Assessment of soft tissue profile, Monitoring of treatment progress etc.

Times have certainly changed. Now, with more and more emphasis from the orthodontic community on the achievement of balanced facial harmony and smile esthetics for our patients, in addition to the traditional orthodontic goals of a well aligned and functional dentition, the need for proper clinical photographic records of the orthodontic patient has become more obvious and essential for proper treatment planning and follow up.

Clinical photographs allow the orthodontist to carefully study the existing patient’s soft-tissue patterns during the treatment planning stage. We can assess lip morphology and tonicity, the smile arc and smile esthetics from various angles. We can also assess the degree of incisal show upon smiling. Thus, they allow us to study the patient in a so called “social” setting, and all that without the patient ever being present. Such information greatly aids the orthodontist in formulating the best possible treatment plan for each patient, and for monitoring in subsequent follow-ups.

Intra-Oral Photographs: The major purpose of intraoral photograph is to enable the orthodontists to review the hard and soft tissue at clinical examinations. To record hard and soft tissue condition as they exist before treatment

*****
Title: Health and environment: Points to Ponder

Presenter: Poornima SP

Climate change is one of the greatest challenges of our time. Climate changes will affect in profoundly adverse ways to some of the most fundamental determinants of health – food, air, water. Climate change alone accounts for more than 60,000 deaths from climate related natural disasters every year.

All populations are likely to experience some impacts but the most vulnerable populations are those who live in poor countries where the health systems already struggles to detect, control and treat infectious diseases and health conditions including malaria, dengue hemorrhagic fever, protein energy malnutrition.

We need to make clear that in rapidly changing environment it is not only the animals and plants but humans that need protection. We need governments to put human health and well being at the heart of climate change policy and renew efforts to protect health through achieving the millennium developmental goals. We need ministries of health to strengthen public health policy and practice to meet the challenges of climate change and protect their population and most importantly we need individuals to make personal choices that will both enhance the health and reduce climate change. Climate change will exacerbate these weaknesses by bringing new pressures on health services with greater frequency.

*****
Orthodontic implants have become a reliable method in orthodontic practice for providing temporary additional anchorage. These devices are useful to control skeletal anchorage in less compliant patients or in cases where absolute anchorage is necessary. There are a great number of advantages in this new approach which include easy insertion, decreased patient discomfort, low price, immediate loading, reduced diameter, versatility in the forces to be used, ease of cleaning, and ease of removal. However, a proper management of the screws by the practitioner is necessary in order to increase the success rate of the technique. The purpose of this poster is to explain the types of mini implants, uses and indication and contraindication of mini-implants.

*****
**Title:** Implications of tissue adhesives in oral and maxilla-facial surgery

**Presenter:** Swathi Priya

Suitable closure and optimal maintenance of the surgical area are the important factors that affect proper wound healing and surgical success. The conventional method of wound closure causes trauma during the needle penetration while passing through the tissues and provides a “wick-down” through which bacteria can gain access to underlying tissues and it has been proved that the presence of suture material itself increases the susceptibility to infection and scar formation.

The use of tissue adhesives as an alternative or as a replacement for sutures in wound closure has long been an area of interest. A group of these tissue adhesives are Cyanoacrylates.

Cyanoacrylates were first synthesized in 1949, its properties and possibilities as tissue adhesive was described in 1959. It undergoes exothermic polymerization catalyzed by the presence of small quantities of weak base like water. The material spreads easily and readily wets the surface to which it is applied, produces very little heat. It has more tensile strength compared to sutures. Tissue adhesives are an important addition to our armamentarium of wound closure devices. Cyanoacrylate is a better alternative for intraoral and extra oral minor surgical procedures as tissue adhesive as it was found to be haemostatic in nature and helpful in reduction of pain and patient’s next visit for the suture removal was not required. The use of tissue adhesives has long appealed to surgeons and they have been extensively studied for diverse applications in oral and maxillofacial surgical field.

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Title: SUBMENTAL INTUBATION IN ORTHOGNATHIC SURGERY

Presenter: Thajunnisa

ABSTRACT:
Submental intubation is a technique for use in maxillofacial surgery, which allows precise assessment of changes to the nasolabial complex, midlines, cants and incisal display in patients having maxillary orthognathic surgery. Achieving the necessary occlusion for orthognathic surgery is not possible with conventional oral intubation since the tube interferes with the occluding teeth. Sometimes nasotracheal intubation is impossible due to developmental malformation requiring repair. In 1986, HERNANDEZ ALTEMIR described a method of submental endotracheal intubation.

The advantage of this technique include simplicity, promptness and low morbidity. It is a safe technique for managing the airway and does not interfere with any intraoral work during surgery or the intra-operative intermaxillary fixation. It avoids necessity for elective Tracheostomy which has its own inherent complications. The submental scar is cosmetic and practically invisible as compared with a tracheostomy scar.

The goal of this presentation is to describe about the indications, contraindications, advantages and disadvantages of SUBMENTAL INTUBATION IN ORTHOGNATHIC SURGERY.
Title: VASCULAR ENDOTHELIAL GROWTH FACTOR (VEGF)

Presenter: SANJANA AGARWAL,

Vascular Endothelial Growth Factor (VEGF) or also known as Vascular Permeability Factor (VPF) is a multifunctional cytokine. The discovery of VEGF has revolutionized our understanding of vasculogenesis and angiogenesis as it is the main driver of angiogenic process in both physiologic and pathologic conditions. The role of VEGF until recent years was limited to growth of endothelium.

Recently, the application of VEGF in the treatment of oral cancer, wound healing, fractures of the jaw, orthodontic tooth movement, in implants, revascularization of severed human dental pulp are some of the arenas in dentistry where it’s role can be found.

Elucidation of the molecular regulation of VGEF and its transformative development of multiple therapeutic pathways which target VGEF directly or indirectly or along with a combination therapy is one of the recent interests among researchers.

This paper highlights the importance of understanding VGEF in further treatment modalities and research.

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Title: PIEZOSURGERY: A BOON IN MODERN DENTISTRY

Presenter: YASHASWINI G

INTRODUCTION: Over the last few decades, there has been rapid development in various dental surgical techniques, evolving a world of painless dentistry. One such novel surgical method for bone related surgeries is Piezoelectric bone surgery/Piezosurgery invented by Professor Vercellotti in 1988 by modifying and improving conventional ultrasound technology.

MECHANISM OF ACTION: Piezoelectric ultrasonic frequency (24–36 kHz) is created by compelling an electric current from a generator over piezo-ceramic rings, which leads to their deformation sets up a vibration in the transducer, which converts electric signals into mechanical vibrations and finally mechanical vibrations into electric signals. These waves are transmitted to the hand piece tip-Insert, where longitudinal movement occurs resulting in the cutting of osseous tissue.

INDICATIONS: Soft tissue debridement, smoothening of root surfaces, bone grafting, implant site preparation, removing an implant, sinus lifting procedure, apicectomy, cystectomy, extraction of ankylozed teeth, and orthodontic surgeries etc. CONTRAINDICATIONS: In patients with cardiopathy, uncontrolled diabetes mellitus, radiotherapy, pacemakers and dental prosthesis.

ADVANTAGES: Highly precise and safe cutting of hard tissue with rapid postoperative wound healing.

DISADVANTAGES: Technique sensitive and expensive with increased operative time and inaccessibility in deeper osteotomy sites.

CONCLUSION: Piezosurgery has a wide range of applications in periodontology, implantology, and various other surgical procedures, making it a highly effective tool in clinical practice. Furthermore, it improves the quality of patient’s experience and enhances their confidence leading to a painless procedure.
Title: **Quantitative Light Induced Fluorescence (QLF) in Endodontics**

**Presenter:** Aishwarya B

The goal of root canal therapy is to eliminate the pathogenicity of bacteria in the root canal system of teeth. Treatment approaches include chemico-mechanical cleaning to prevent the microorganism from infecting or reinfecting root canals and periradicular tissue after treatment. Therefore, complete eradication of microorganisms is essential for successful RCT. The current methods to evaluate persistent presence of bacteria after therapy is not widely practiced which leads to the failure of root canal treatment. In the past, presence of infection was assessed on the basis of clinical evaluation. Presently, ATP assay and fluorescence staining are used which are expensive and technique sensitive.

Our study introduces QLF in the field of endodontics. The use of QLF has already been established in the detection of incipient caries and presence of plaque. Our concept of QLF in endodontics instantly helps us to visualize the bacterial load before and after treatment.
**TITLE:** HERBAL BONDING-GOING NATURAL

*Presenter:* DR. SANSHAVI PONNAMMA A R  
*Co-author:* DR. SHOAIB ULLA KHAN A, DR. BELWIN BABY

**INTRODUCTION:**
With the advent of direct bonding agents a new era has dawned thereby opening new horizons in the specialty of orthodontics both in clinical and research field. The future of bonding is promising as new avenues are opening up but there is still remarkable lack of consensus regarding shear bond strength. Through this scientific paper we would like to highlight the effects of natural herbal products on the shear bond strength and their effect on enamel surface.

**OBJECTIVES:**
- To determine the effect of natural herbal products on enamel surface after etching, debonding and clean up through scanning electron microscope
- To compare the efficacy of a naturally occurring antioxidant Amla (Indian Gooseberry), Lemon And Aloe Vera in adjunct with carboxymethylcellulose (CMC) in normalizing the shear bond strength of enamel.

**BACKGROUND:**
In this in-vitro study we will evaluate the effect of Amla (Phyllantus Embilica, Indian Gooseberry), Lemon And Aloe Vera extract in adjunct with carboxymethylcellulose (CMC) on the shear bond strength of composite resin to etched enamel.

**METHOD:** Four extracted premolars from the same patient were divided into 4 equal groups; 1st group-control group, bonded directly; 2nd group-etched followed by using amla extract adjunct as bonding agent, then bonded; 3rd group-etched followed by using aloe vera extract adjunct as bonding agent, then bonded and 4th group- etched followed by using lemon extract adjunct as bonding agent, then bonded. Shear Bond strength was checked using Universal Testing Machine and bonded layer evaluation using Scanning Electron Microscope

**Results:** Test Results are to be obtained

**Keywords:** Antioxidants, shear bond strength, carboxymethylcellulose
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