ISSN No. 0972-396X

KDJ

Kerala Dental Journal

Vol 33 | No. 1
January 2010

Quarterly Publication of Indian Dental Association, Kerala State Branch

Nonsurgical Periodontal Therapy

Email: editorkdj@gmail.com
Web: www.idakerala.com

Kerala Dental Journal

Vol. 33 | No. 1 | January 2010

Contents

President's Message

Dr. Samuel K. Ninan

Caring For You Sincerely

I am glad to greet you through the first issue of KDJ for the year 2010. Thank you all for your confidence and enormous support which enabled me to rise to the post of the President of this prestigious organization. I am happy that all the new office bearers of my team are putting extra efforts to make this year unique. Congratulations to Dr. K. Nandakumar and his team for making a world class journal that is rich in content and good in production. This year we are sending them directly to our members to assure timely delivery. The journal is also available at our newly inaugurated website www.idakerala.com and I am proud to inform you that this site, with a lot of innovative features, has become the largest dental portal in Kerala in such a short span of time with 50-100 hits per day.

This year we are committed to take you all a step forward to the new decade. We have already started working aiming the four target groups ie 1. Our members and Family. 2. Our Patients and Society 3. Our Institutions and Staff 4. The Profession & our Association

Our new system of "E reporting and Communications" has helped all our local branch officials and members to use the latest trends at ease while saving time, money and nature. My first attention was on membership growth and that has shown good response with two branches having 100% membership growth and many others with a lot of new members. Our world has become closer to all our members who have updated their data's through data updating forms and we are keeping them updated instantly via Emails and SMS.

Our projects for the year – Pain & Palliative care and Road safety & Trauma care are meant to take our members deep in to the society breaking our traditional four walls of dentistry. I want all of us to be a caring and compassionate human being rather than a mere Dental Surgeon. The two days foundation course on Pain and Palliative care for our members is scheduled on March 20th and 21st at YMCA Alwaye.

The life expectancy of our population has increased in the last few decades and the need for lasting dentition has become a need of the society. In 1961 the average population of the people above the age of 60 yrs in Kerala was 5.9 % when compared to 10.6 % in the year 2001. Eventually the need for quality in life was a demand of the society and the need for Quality dental health has become a necessity. So, we have witnessed the introduction of a lot of new materials which enhances the quality of Dental Health. Now it is the responsibility of the doctor to educate our patients and inform them the best available options. So, we dental Surgeon should utilize all the available opportunities to keep ourselves updated and one should not hesitate to refer the cases for a better care if we are not equipped to perform the best.

This year IDA Kerala State is taking all possible steps to update our members via a series of CDEs with diverse topics and faculties, Journals, Websites, Conferences etc with minimum possible registration charges. We expect all our members to utilize those opportunities. A CDE programme that is totally free of cost for the members of IDA Kerala State is planned in Pathanamthitta District at Thiruvalla on 14th March to enlighten us with the new trends in full mouth rehabilitation. Details are regularly updated at the events calendar in the website.

I expecting all your support and cooperation to move ahead with confidence and I will be always with each and every ordinary member of the state. I love to be cared by you and I love to care for you sincerely.

Thanking You,

Jai IDA

Pathanamthitta,
15-01-2010.

Dr. Samuel K. Ninan

Vision for 2010 – set a goal for improvement

Dr. K. Nandakumar

2010 has arrived. This marks the end of the first decade of 21st century. There was a quantum leap in the field of Dentistry. Dental Implants have become a common word in the dental practice of Kerala. CAD/CAM has made a fashionable entry and research has caught up with the needs of the society. Dental education had an explosive growth with a number of colleges opening up and the Health University is starting within a short while. More than four national conferences in different specialities were held in our state within one year proving the fact that Kerala has become the most delightful destination for scientific activities. 2008 was a lull period for dental education but in 2009 dentistry has refurbished its potential in attracting many youngsters. 2010 is going to be an year of great potential and I would like to highlight a few points to the young practitioners.

Many dentists start their practice without a vision, costing them lots of time and money in the long run. Decide on the vision of what makes up your ideal dental practice. Observing and discussing with successful dentists, will help you in deciding and formulating the kind of practice you would like to do. Only word of caution is that you should define the meaning of success in your dictionary. The profession way of practicing right dentistry should supersede the desire to amass wealth.

Young dentists must educate themselves on the business side of the practice. Gain an understanding of things like cash flow, overhead control, scheduling and financing, personnel management, communication skills, marketing and customer service. Dedicate considerable time for working on the practice, while working in the practice. Reading genuinely on practice management will help you a lot in establishing a successful practice.

Young dentists build a very fast life and fail to build a lasting relationship with the patients. Patients are human beings and their health needs must be your first priority. Do not simply force them to accept the treatment of your choice under the pretext of motivation. Build a trustworthy human relation with the patient, express your interest in them, the rewards will come to you only; even if it is not in the near future.

Set goals for your practice and your life. If you are not specifying a destination, how will you know that you have reached there? You can have financial goals and other goals like upgradation of infrastructure, updation of knowledge, improving facilities in the clinic and buying a new car but specify when and how.

We are all human beings and there is every possibility that we may fail. Do not consider failure as a disaster from which you can never come out. In fact failure gives you an opportunity to introspect and correct yourself. To be in the process, what you have to do is to accept the fact of failure. Never hesitate to repeat a treatment. Giving excuses will never solve the problems.

Wishing you all the very best in 2010. Plan for 2010 because you are going to live there for the next one year.

EDITORIAL OFFICE
Neelambikam, Attukal, Manacaud
Trivandrum, Kerala - 695 009
Phone: 0471-2459235
Mobile: 09447066100
e-mail: editorkdj@gmail.com
web: www.idakerala.com

Nonsurgical Periodontal therapy

Chronic periodontitis formerly known as “adult periodontitis” or chronic adult periodontitis is the most prevalent form of chronic infection in the oral cavity.

Periodontal infection may contribute to the development of heart disease, premature, underweight babies, poorly controlled diabetes, and respiratory diseases.

Research has provided information to permit better understanding of mechanisms of disease progression and pathogenesis in order to make treatment of periodontal diseases more effective and predictable. Management of periodontal disease is now mainly focused on nonsurgical therapy. Nonsurgical periodontal therapy has the broad overall objective of eliminating disease and returning the periodontium to a healthy state that can be maintained by a combination of professional and patient care.

Due to controversy over the efficacy and unwanted effects of systemic antibiotics, methods of direct delivery into the pocket have been explored. They have included using injected pastes or gels or by impregnated fibre. This medicaments can be extremely effective if high concentrations are permitted to work at the affected site for a sufficient length of time. The medicaments such as Elyzol (Metronidazole 25%), Atridox (8.5% Doxycline), Arestin (1 mg Minocycline-HCl) Periochip (2.5 mg chlorhexidine) are used with mixed results. A number of host modulatory agents have been investigated in clinical trials for their potential use as adjuncts to mechanical nonsurgical therapy. These agents have included the systemic (flurbiprofen) and topical (ketoprofen), sub antimicrobial-dose doxycycline (SDD; Periostat) and bisphosphonates. Clinical trials have shown that combination therapy (antibacterial therapy – SRP plus locally applied antibiotics) with host modulatory therapy (SDD) results in successful management in treating periodontal diseases.

Principles of periodontal treatment

Initial visit includes a medical and dental history, a risk assessment profile, periodontal charting and radiographic analysis. After establishing a diagnosis and risk factor assessment, initial therapy consists of risk reduction strategies, oral hygiene instructions to maintain a good oral hygiene, oral rinses and irrigation (supra and sub gingival) with antiseptics and periodontal debridement (scaling and root planing) procedures. In addition, an initial course of host modulatory therapy can be given to reduce the excessive levels of host inflammatory mediators (enzymes, cytokines and prostanoids). After completion of initial therapy, re-evaluation of periodontal status (stable or unstable) to be done to determine whether to continue with maintence therapy or active (non surgical or surgical) therapy. Typically for isolated sites with probing depths >5mm at reevaluation, a nonsurgical approach include periodontal debridement and placement of a locally antimicrobial agent (Atridox, Arestin, Periochip), along with host modulatory therapy. If results are not favorable, surgical approach is indicated.

Edited by: **Dr. K. Nandakumar,** Hon. Editor ● Published By: **Dr. Shibu Rajagopal,** Hon Secretary ● **For IDA, Kerala State Branch** ● Production : **Suman Graphics,** sumangfx@gmail.com

Molecular markers in the identification of potentially malignant lesions and minimal residual disease in oral cavity

* Santhi W.S., ** M. Radhakrishna Pillai

Introduction

The incidence of oral cancer shows extensive variation in various parts of the word. Incidence and mortality rates are higher in men than woman. There is significant local variation in the incidence of oral cancer. Oral cancer is increasing in some parts of the world. A high incidence of oral cancer is observed in the Indian subcontinent, which accounts for a third of the world burden (Sankaranarayanan et al, 2006). Oral cancer is commonest cancer in India accounting for 50-70% of total cancer mortality (Park, 1997) and it also accounts for the most cancer-related deaths among men in India. A high prevalence of betel quid (with or without tobacco) chewing, smoking and alcohol drinking is responsible for the high risk of oral cancer in India (Sankaranarayanan et al, 2006).

The oral cancer incidence in Kerala is one among the highest in India. According to the population-based cancer registry from Regional Cancer Centre, Thiruvananthapuram, Kerala the age adjusted incidence rate of cancers of oral cavity increased from 11.8 per 100,000 males in the year 2000 to 14.1 in 2002 in urban areas (Regional Cancer Centre, 2005). A study in three areas of south India including Kerala, reported that chewing and poor oral hygiene explained 95% of oral cancer among women. Among men, 35% of oral cancer was attributed to a combination of smoking and alcohol and 49% to tobacco chewing (Balaram et al, 2002).

Premalignant lesions and cancers of the oral cavity

Malignancy of the oral cavity is often preceded by premalignant lesions. The concept of leukoplakia representing a pre-cancerous state was strengthened by the identification of dysplastic change, if not early invasive cancer, when large numbers of leukoplakia specimens were studied. In those studies (Bouquot and Gorlin, 1986; Waldron and Shafer, 1975; Pindborg et al, 1963), the presence of dysplasia, carcinoma *in situ*, and carcinoma in leukoplakias ranged from 17% to 25% for all oral sites. There is a wide range difference in the prevalence of leukoplakia in various populations globally. In India, between 0.2% and 4.9% of the population over 15 years of age was reported to have leukoplakia (Mehta et al, 1972a; Mehta et al, 1972b; Mehta et al, 1969).

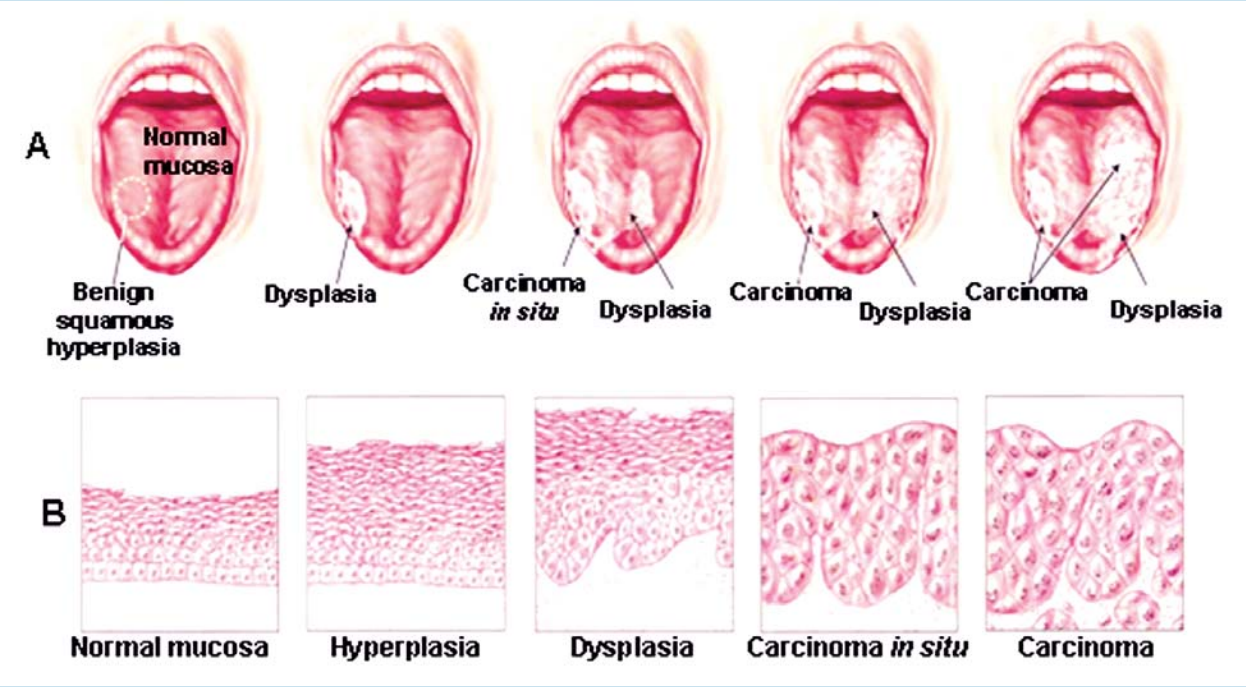
The long term risk of progression of premalignant lesions to invasive cancer varies between studies from 4% to 18% (Silverman et al, 1984; Ba´no´czy, 1977) and warrants careful clinical management. Oral erythroplakia has a very high risk of progression (14% to 50%) and is frequently diagnosed histologically as carcinoma *in situ* or severe epithelial dysplasia. A subset of these lesions will progress to oral cancer and warrant early and aggressive treatment while others may progress slowly, if at all.

Limitations of current methods of predicting oral tumorigenesis and minimal residual disease

Oral squamous cell carcinoma is an aggressive malignancy with a varying degree of malignant behavior. The biological characteristics of these cancers are not yet well understood. However, prognoses that are based on pathological criteria for both precancerous lesions and more advanced tumors are often difficult. Oral tumor progress through a series of histopathological stages from hyperplasia, to dysplasia of varying degrees, to carcinoma *in situ* (Fig. 1), prior to the development of invasive squamous cell carcinoma (Hunter et al, 2005).

A significant proportion of oral squamous cell carcinomas develop from premalignant lesions. The cytological diagnosis is not always very sensitive in identifying prospective cancer lesions. Histological examination of tissue remains the gold standard for diagnosis and identification of malignant oral lesions. Biopsy is an invasive technique with surgical implications and technique limitations for professionals. It also presents limitations when the lesions are large and in these cases it is important to select the most appropriate site of biopsy. Furthermore, even though the biopsy study is fundamental, it is a diagnostic method with limited sensitivity where one of the most important features is the subjective interpretation of the examining pathologist (Epstein et al, 2002; El-Naggar et al, 2001; Ogden et al, 1991).

Despite significant advances in oral cancer treatment over the last few decades, the 5-year survival rates of oral cancer patients have not improved much and partly this is due to the relatively high rate of locally recurrent cancer. The resection margins, obtained after surgery as the primary mode of oral cancer treatment, are examined by a pathologist to identify any residual cancer. If residual cancer is found, there is a relatively high risk for the development of recurring cancer, and therefore, additional therapy, re-excision, or postoperative radiotherapy is given (Looser et al, 1978). Even when



Source: Head and neck cancer. N Engl J Med. 2001; 345 :1890-900

Fig. 1. Clinical and Pathological progression of oral cancer. **Panel A** shows a typical clinical presentation of oral cancer. (Benign squamous hyperplasia can often appear similar to normal mucosa.) **Panel B** depicts the pathological progression from normal-appearing mucosa to invasive cancer.

the surgical margins are diagnosed as tumor free by histopathology, the local recurrence rate is still 10% to 30% (Sutton et al, 2003; Leemans et al, 1994; Vikram, 1984), which is very high. The relatively small number of cancer cells that remains in the patient at the margin is the main source of local recurrence. This limited number of cells has been designated as minimal residual cancer or minimal residual disease (MRD).

Importance of molecular markers in oral tumors

Although epithelial dysplasia is an important predictive factor of malignant transformation, not all dysplastic lesions will become malignant. On the other hand, non-dysplastic lesions are known to progress to malignancy (van der Waal et al, 1997). Certain groups of population are known to be at high risk for oral cancer, specifically those who use tobacco and/or alcohol and those over 45 years of age. As per existing methods such persons can be screened by physical examination, and early-stage disease, if detected, can be treated. But just as visual inspection of the uterine cervix has been shown to be an unreliable means of identifying precancer and cancer, clinical inspection of the oral cavity has been shown to be equally unreliable in identifying precursor lesions and early cancers (Mehrotra et al, 2004; Wesley et al, 1997). These issues underline the importance of discovering and developing new diagnostic methods for oral tumor progression. In recent decades, we have seen a dramatic switch from histopathological to molecular methods of disease diagnosis. Tumor-derived markers are genes or proteins that play a direct role in carcinogenesis and may also be used as biomarkers to improve cancer detection, predict disease outcome or response to therapy.

Markers of oral cavity

Today malignancy is considered as a process caused by the accumulation of multiple genetic alterations. These genetic alterations, which occur during carcinogenesis, can be used as targets for detecting tumor cells in clinical samples. Molecular analysis can be used to identify a clonal population of cancerous cells. For the last few decades there have been many important discoveries in cancers of oral cavity. Some of these findings suggest certain molecules as markers for the identification of tumor progression and to assess completion in treatment.

Genomic instability reflects the propensity and susceptibility of the genome to acquire multiple alterations (Brinkman and Wong, 2006). Numerical aberrations in chromosomes, referred to as aneuploidy, are commonly observed in oral pre-cancer or cancer. The measurement of nuclear DNA content (DNA ploidy) has reported to be a good candidate, as a reliable predictor of clinical outcome (Sudbo, 2004). Some researchers have focused on microscopic, cytogenetic and somatic mutation changes as early biologic markers.

One of the markers used to define chromosomal aberrations is the staining for micronuclei in exfoliated buccal mucosal cells (Stich et al, 1985).

The applicability of molecular markers such as epigenetic alterations (hypermethylation of promoter regions) and genomic instability such as loss of hetrozygosity (LOH) and microsatellite instability (MSI) has also been studied in great detail (López et al, 2003; Rosas et al, 2001). Several studies on oral dysplasias have shown that dual LOH at 3p and 9p can reliably distinguish those lesions that are likely to progress to invasive carcinoma from those that will not (Lee et al, 2000; Rosin et al, 2000; Mao et al, 1996). Other sites of chromosomal aberrations are found in sister chromatid exchanges and allelotypic variations designated by losses on chromosomes 4, 5, 6, 8, 11, 13, 17, and 19 (Field et al, 1995; Jin et al, 1995; Andrew et al, 1994). LOH and other molecular changes, like presence of microsatellites, are indicative of oral carcinogenesis can also be readily identified in exfoliated cells (Partridge et al, 2000; Rosin et al, 2000).

Tumor Protein 53 (TP53) is mutated in 40% to 60% of patients with head and neck cancer, and this mutation is associated with the progression from premalignancy to invasive disease (Forastiere et al, 2001). Tumors with TP53 mutations are likely to recur early; Brennan et al, (Brennan and Sidransky, 1996; Brennan et al, 1995) showed that patients with TP53 mutations in their primary tumor that were subsequently detected in surgical margins had early recurrences compared with patients with all tumor margins free of this mutation. The TP53 mutations were significantly greater in patients who used tobacco and ethanol than in patients who abstained from these substances.

Data from several studies by Nathan et al (Nathan et al 2002, Nathan et al, 2000 Nathan et al, 1999) have suggested some prognostic value for over-expression of the proto-oncogene eIF4E in histologically negative margins of HNSCC. eIF4E is a eukaryotic protein synthesis initiation factor increased in almost all HNSCC cases (Nathan et al, 1999). Nathan and colleagues (Nathan et al 2002, Nathan et al, 2000) showed statistically significant differences in local recurrence rates and disease-free intervals between eIF4E positive and eIF4E negative margins.

Cyclin D1 (CCND1) is an oncogene that activates cell cycle progression and is amplified in 30% to 50% of patients with head and neck cancer (Sidransky, 1995). Over expression and amplification of CCND1 have been associated with more advanced disease, early recurrence, and shortened survival (Sidransky, 1995). The CDKN2A (formerly P16) gene, an inhibitor of cyclin-dependent kinase, is important in regulating the cell cycle. Loss of chromosomal region 9p21 causes inactivation of the CDKN2A gene; this inactivation is the most common genetic change that occurs early in the progression of head and neck tumors (Reed et al, 1996). Epidermal growth factor receptor (EGFR) is another molecule that is highly expressed in more than 95% of HNSCCs. Increased protein expression of EGFR and its ligand, transforming growth factor α (TNF-α), is associated with poor prognosis (Kalyankrishna and Grandis, 2006). The identification of tumoral markers, notably cytokeratins in smears from the oral cavity has attracted considerable interest. Cytokeratin expression profile provides useful information on cell differentiation status (Remmerbach et al, 2003) but its potential for early diagnosis of oral cancer is limited (Ogden et al, 1993).

Reports form our laboratory have shown that Nuclear Factor Kappa B (NF-κB), an inducible transcription factor and one among its down stream targets Cyclooxygenase-2 (COX-2) is over expressed in oral tumors and down regulated in oral surgical margins (Santhi et al, 2006; Bindu et al, 2006). Our results suggest the validation of NF-κB and COX-2 as participants of oral carcinogenesis and these molecules could also be used for the validation of MRD in oral surgical margins.

Chin et al (Chin et al, 2005) have reported for the first time that SPARC can be used as an independent prognostic marker in HNSCC. Secreted protein and rich in cysteine, SPARC (also known as osteonectin; or basement-membrane-40, BM-40), is a member of a family of matricellular proteins, whose function is to modulate cell–matrix interactions and cell function without participating in the structural scaffold of the extracellular matrix (Bradshaw and Sage, 2001).

MicroRNAs (miRNAs) comprise a novel class of endogenous, small, non-coding RNAs that control gene expression by directing their target mRNAs for degradation and/or translational repression (Farh et al, 2005). Dysregulation of miRNA function can lead to human diseases, including cancer (Blenkiron and Miska, 2007). miRNAs are differentially expressed in various cancer cells compared with normal cells and this can be exploited to use microRNA as potential diagnostic markers. Upregulation of miR-21, miR-31, miR-155, and downregulation of miR-26b, miR-107, miR-133b, miR-138, and miR-139 were observed in head and neck/oral cancer (Liu et al, 2009). Further, Wong et al. (Wong et al, 2008) have identified site-specific microRNA, mature miR-184 as potential oncogenic microRNA of squamous cell carcinoma of tongue.

Saliva as a substrate for biomarker assessment

Till recently the substrate for oral biomarker assessment was either tissues or cell scrapings. But now one of the more promising breakthroughs regarding early cancer diagnosis has been the ability to use saliva as a substrate for biomarker assessment. Saliva has been used as a noninvasive, inexpensive, and readily accessible diagnostic substrate to assess diverse biomarkers including HPV status (Smith et al, 2004), promoter hypermethylation profiles (Carvalho et al, 2008; Rosas et al, 2001), TP53 gene mutations (Boyle et al, 1994),

telomerase activity (Califano et al, 1996), and differential gene expression profiles (Li et al, 2004). Noninvasive test for specific DNA-sequence variants, saliva may someday be useful in identifying either early lesions or patients with cancer.

Molecular marker and their current position

According to the US Food and Drug Administration, an ideal biomarker should be specific, sensitive, predictive, robust, and able to bridge preclinical and clinical trials. Even though several genes listed above have been associated with histopathological staging of oral cancer, many markers appear to provide little or no definitive prognostic or predictive information that can be used in a clinical setting (Ben-Izhak et al, 2005; Kwong et al, 2005).

There has been much progress in our understanding of the molecular progression of many primary human cancers; but the process and the molecular mechanisms behind oral tumorigenesis are not still completely understood; even though oral cancer is one among the most common cancers, especially in developing countries, and with a high degree of recurrence after treatment. Characterizing the molecular progression of a particular tumor type is critical in providing markers for diagnostic molecular assays. Use of the appropriate markers or panel of markers would then provide information about the presence or absence of MRD, theoretically the best prognosticator of relapse (van Houten et al, 2000). There are many encouraging results concerning identification of a suitable molecular marker for oral cavity cancers, from numerous groups, some of which mentioned above. Even than, studies involving large and diverse populations and with accurate follow up are necessary to develop the most appropriate molecular marker for the detection of prospective oral cancer lesions and for assessing the completion of oral cancer treatment.

References

Andrew KW, Cooke TG, Pickford IR, Soutar D, Calmain A. An alleotype of squamous carcinoma of the head and neck using microsatellite markers. Cancer Res 1994;54:1617-1621.

Ba´no´czy J. Follow-up studies in oral leukoplakia. J Maxillofac Surg 1977;5:69–75.

Balaram P, Sridhar H, Rajkumar T, Vaccarella S, Herrero R. Oral cancer in southern India: the influence of smoking, drinking, pan-chewing and oral hygiene. Int J Cancer 2002; 98 : 440-445.

Ben-Izhak O, Kablan F, Laster Z, Nagler RM. Oropharyngeal cancer pathogenesis: ubiquitin proteolytic, apoptotic and epidermal growth factor related pathways act in concert–first report. Oral Oncol 2005; 41:851–860.

Bindhu OS, Ramadas K, Sebastian P, Pillai MR. High expression levels of nuclear factor kappa B and gelatinases in the tumorigenesis of oral squamous cell carcinoma. Head Neck. 2006;28:916-925.

Blenkiron C, Miska EA. miRNAs in cancer: approaches, aetiology, diagnostics and therapy. Hum Mol Genet 2007;16: R106–R113.

Bouquot IE, Gorlin RJ. Leukoplakia, lichen planus and other oral keratoses in 23,616 white Americans over the age of 35 years. Oral Surg Oral Med Oral Pathol. 1986; 61:373-381.

Boyle JO, Mao L, Brennan JA, Koch WM, Eisele DW, Saunders JR, Sidransky D. Gene mutations in saliva as molecular markers for head and neck squamous cell carcinomas. Am. J. Surg. 1994;168:429–432.

Bradshaw AD, Sage EH. SPARC, a matricellular protein that functions in cellular differentiation and tissue response to injury. J. Clin. Invest. 2001;107: 1049–1054.

Brennan JA, Boyle JO, Koch WM, Goodman SN, Hruban RH, Eby YJ, Couch MJ, Forastiere AA, Sidransky D. Association between cigarette smoking and mutation of the p53 gene in squamous-cell carcinoma of the head and neck. N Engl J Med. 1995;332:712-717.

Brennan JA, Sidransky D. Molecular staging of head and neck squamous carcinoma. Cancer Metastasis Rev. 1996;15:3-10.

Brinkman BM, Wong DT. Disease mechanism and biomarkers of oral squamous cell carcinoma. Curr Opin Oncol. 2006 ;18:228-233.

Califano J, Ahrendt SA, Meininger G,Westra WH, Koch WM, Sidransky D. Detection of telomerase activity in oral rinses from head and neck squamous cell carcinoma patients. Cancer Res. 1996;56:5720–5722.

Carvalho AL, Jeronimo C, Kim MM, Henrique R, Zhang Z, Hoque MO, Chang S, Brait M, Nayak CS, Jiang W-W, Claybourne Q, Tokumaru Y, Lee J, Goldenberg D, Garrett-Mayer E, Goodman S, Moon C, Koch W, Westra WH, Sidransky D, Califano JA. Evaluation of promoter hypermethylation detection in body fluids as a screening/diagnosis tool for head and neck squamous cell carcinoma. Clin. Cancer Res. 2008;14:97–107.

Chin D, Boyle GM, Williams RM, Ferguson K, Pandeya N, Pedley J, Campbell CM, Theile DR, Parsons PG, Coman WB. Novel markers for poor prognosis in head and neck cancer. Int J Cancer. 2005;113:789-797.

El-Naggar AK, Mao L, Staerkel G, Coombes MM, Tucker SL, Luna MA, Clayman GL, Lippman S, Goepfert H. Genetic heterogeneity in saliva from patients with oral squamous carcinomas: implications in molecular diagnosis and screening. J Mol Diagn 2001;3:164-70.

Epstein JB, Zhang L, Rosin M: Advances in the diagnosis of oral premalignant and malignant lesions. J Can Dent 2002;68:617-21.

Farh KK, Grimson A, Jan C, Lewis BP, Johnston WK, Lim LP, Burge CB, Bartel DP. The widespread impact of mammalian microRNAs on mRNA repression and evolution. Science. 2005;310: 1817–1821.

Field JK, Kiaris H, Risk JM, Tsiriyotis C, Adamson R, Zoumpourlis V, Rowley H, Taylor K, Whittaker J, Howard P, et al. Allelotype of squamous cell carcinoma of the head and neck: fractional allele loss correlates with survival. Br J Cancer 1995;72:1180-1188.

Forastiere A, Koch W, Trotti A, Sidransky D. Head and neck cancer. N Engl J Med. 2001;345:1890-1900.

Hunter KD, Parkinson EK, Harrison PR. Profiling early head and neck cancer. Nat Rev Cancer 2005; 5:127–135.

Jin Y, Mertens F, Jin C, Akervall J, Wennerberg J, Gorunova L, Mandahl N, Heim S, Mitelman F. Nonrandom chromosome abnormalities in short-term cultured primary squamous cell carcinoma of the head and neck. Cancer Res. 1995;55:3204-3210.

Kalyankrishna S, Grandis JR. Epidermal growth factor receptor biology in head and neck cancer. J Clin Oncol. 2006;24:2666-2672.

Kwong RA, Kalish LH, Nguyen TV, Kench JG, Bova RJ, Cole IE, Musgrove EA, Sutherland RL. p14ARF protein expression is a predictor of both relapse and survival in squamous cell carcinoma of the anterior tongue. Clin Cancer Res 2005; 11:4107–4116.

Lee JJ, Hong WK, Hittelman WN, Mao L, Lotan R, Shin DM, Benner SE, Xu XC, Lee JS, Papadimitrakopoulou VM, Geyer C, Perez C, Martin JW, El-Naggar AK, Lippman SM. Predicting cancer development in oral leukoplakia: ten years of translational research.

Clin. Cancer Res. 2000;6:1702–1710

Leemans CR, Tiwari R, Nauta JJ, Van der Waal I, Snow GB. Recurrence at the primary site in head and neck cancer and the significance of neck lymph node metastases as a prognostic factor. Cancer (Phila) 1994;73:187–190.

Li Y, St.John MAR, Zhou X, Kim Y, Sinha U, Jordan RCK, Eisele D, Abemayor E, Elashoff D, Park N-H. Salivary transcriptome diagnostics for oral cancer detection. Clin. Cancer Res. 2004;10:8442–8450.

Liu X, Chen Z, Yu J, Xia J, Zhou X. MicroRNA Profiling and Head and Neck Cancer. Comp Funct Genomics. 2009:837514.

Looser KG, Shah JP, Strong EW. The significance of "positive" margins in surgically resected epidermoid carcinomas. Head Neck Surg 1978;1:107– 111.

López M, Aguirre JM, Cuevas N, Anzola M, Videgain J, Aguirregaviria J, Martínez de Pancorbo M. Gene promoter hypermethylation in oral rinses of leukoplakia patients – a diagnostic and/or prognostic tool? Eur J Cancer 2003;39:2306-2309.

Mao L, Lee JS, Fan YH, Ro JY, Batsakis JG, Lippman S, Hittelman W, Hong WK. Frequent microsatellite alterations at chromosomes 9p21 and 3p14 in oral premalignant lesions and their value in cancer risk assessment. Nat. Med. 1996;2:682–685

Mehrotra R, Gupta A, Singh M. Brush biopsy in the early diagnosis of oral soft tissue lesions. In Tobacco Counters Health Volume III. Edited by: Verma AK. New Delhi: Macmillan; 2004:216-19.

Mehta FS, Gupta PC, Daftary DK, Pindborg JJ, Choksi SK. An epidemiologic study of oral cancer and precancerous conditions among 101,761 villagers in Maharashtra, India. \nt J Cancer 1972a; 10:134-141.

Mehta FS, Pindborg JJ, Gupta PC, Daftary DK. Epidemiologic and histologic study of oral cancer and leukoplakia among 50,915 villagers in India. Cancer 1969; 24:832-849.

Mehta FS, Shroff BC, Gupta PC, Daftary DK. Oral leukoplakia in relation to tobacco habits. Oral Surg Oral Med Oral Pathol 1972b; 34:426-433.

Nathan CO, Amirghahri N, Rice C, Abreo FW, Shi R, Stucker FJ. Molecular analysis of surgical margins in head and neck squamous cell carcinoma patients. Laryngoscope 2002;112:2129–40.

Nathan CO, Franklin S, Abreo FW, Nassar R, De Benedetti A, Glass J. Analysis of surgical margins with the molecular marker eIF4E: a prognostic factor in patients with head and neck cancer. J Clin Oncol 1999;17:2909–14.

Nathan CO, Sanders K, Abreo FW, Nassar R, Glass J. Correlation of p53 and the protooncogene eIF4E in larynx cancers: prognostic implications. Cancer Res. 2000;60:3599–604.

Ogden GR, Chisholm DM, Adi M, Lane EB. Cytokeratin expression in oral cancer and its relationship to tumour differentiation. J Oral Pathol Me 1993; 22:82-6.

Ogden GR, Cowpe JG, Green MW. Detection of field change in oral cancer using oral exfoliative cytologic study. Cancer 1991; 68:1611-1615.

Parkin DM, Whelan SL, Ferlay J, Raymond L, Young J. (eds), Cancer Incidence in Five Continents, vol. VII, International Agency for Research on Cancer (IARC), Scientific Publication 143, IARC, Lyon, France, 1997.

Partridge M, Pateromchelakis S, Phillips E, Emilion GG, A'Hern RP, Langdon JD. A case control-study confirms that microsatellite assay can identify patients at risk of developing squamous cell carcinoma within field cancerization. Cancer Res 2000;60:3893-8.

Pindborg JJ, Renstrup G, Poulsen HE, Silverman S Jr. Studies on oral leukoplakias. V. Clinical and histological signs of malignancy. Acta Odontol Scand. 1963;21:407-414.

Reed AL, Califano J, Cairns P, Westra WH, Jones RM, Koch W, Ahrendt S, Eby Y, Sewell D, Nawroz H, Bartek J, Sidransky D.High frequency of p16 (CDKN2/MTS-1/INK4A) inactivation in head and neck squamous cell carcinoma. Cancer Res. 1996;56:3630-3633.

Regional Cancer Centre Trivandrum. Population based cancer registry, Trivandrum (Urban and Rural), Kerala, India: annual report for the year 2001-2002. Trivandrum: Regional Cancer Centre; 2005.

Remmerbach TW, Weidenbach H, Müller C, Hemprich A, Pomjanski N, Buckstegge B, Böcking A. Diagnostic value of nucleolar organizer regions (AgNORs)in brush biopsies of suspicious lesions of the oral cavity. Anal Cell Pathol 2003;25:139-146.

Rosas SL, Koch W, da Costa Carvalho MG, Wu L, Califano J, Westra W, Jen J, Sidransky D. Promoter hypermethylation patterns of p16, O6- methylguanine-DNA methyltransferase, and death-associated protein kinase in tumors and saliva of head and neck cancer patients. Cancer Res 2001;61:939-942.

Rosin MP, Cheng X, Poh C, Lam WL, Huang Y, Lovas J, Berean K, Epstein JB, Priddy R, Le ND, Zhang L. Use of allelic loss to predict malignant risk for low-grade oral epithelial dysplasia. Clin Cancer Res 2000; 6:357-362.

Sankaranarayanan R, Dinshaw K, Nene B N, Ramadas K, Esmy P O, Jayant K, Somanathan T, Shastri S. Cervical and oral cancer screening in India. J Med Screen 2006;13:S35–S38.

Santhi WS, Sebastian P, Varghese BT, Prakash O, Pillai MR. NF-kappaB and COX-2 during oral tumorigenesis and in assessment of minimal residual disease in surgical margins. Exp Mol Pathol. 2006;81:123-130.

Sidransky D. Molecular genetics of head and neck cancer. Curr Opin Oncol. 1995;7:229-233.

Silverman S, Gorsky M, Lozada F. Oral leukoplakia and malignant transformation. A follow-up study of 257 patients. Cancer 1984;53:563–8.

Smith EM, Ritchie JM, Summersgill KF, Hoffman HT, Wang DH, Haugen TH, Turek LP. Human papillomavirus in oral exfoliated cells and risk of head and neck cancer. J. Natl. Cancer Inst. 2004;96:449–55.

Stich HF, Hornby AP, Dunn BP. A pilot betacarotene intervention trial with Inuits using smokeless tobacco. Int J Cancer 1985;36:321-327.

Sudbo J. Novel management of oral cancer: a paradigm of predictive oncology. Clin Med Res 2004; 2:233–242.

Sutton DN, Brown JS, Rogers SN, Vaughan ED, Woolgar JA. The prognostic implications of the surgical margin in oral squamous cell carcinoma. Int J Oral Maxillofac Surg 2003;32:30–34.

van der Waal I, Schepman KP, van der Meij EH, Smeele LE. Oral leukoplakia: a clinicopathological review. Oral Oncol. 1997;33, 291–301.

van Houten VM, Tabor MP, van den Brekel MW, Denkers F, Wishaupt RG, Kummer JA, Snow GB, Brakenhoff RH. Molecular assays for the diagnosis of minimal residual head-and-neck cancer: methods, reliability, pitfalls, and solutions. Clin. Cancer Res. 2000;6: 3803–3816.

Vikram B. Changing patterns of failure in advanced head and neck cancer. Arch Otolaryngol 1984;110:564–565.

Waldron CA, Shafer WG. Leukoplakia revisited. A clinicopathologic study 3256 oral leukoplakias. Cancer 1975;36:1386–1392.

Wesley R, Sankaranarayanan R, Mathew B, Chandralekha B, Aysha Beegum A, Amma NS, Nair MK. Evaluation of visual inspection as a screening test for cervical cancer. Br J Cancer 1997; 75:436-440.

Wong TS, Liu XB, Wong BY, Ng RW, Yuen AP, Wei WI. Mature miR-184 as Potential Oncogenic microRNA of Squamous Cell Carcinoma of Tongue. Clin Cancer Res. 2008;14:2588-2592.

*** Senior Research fellow ** Director , Rajiv Gandhi Centre for Biotechnology, Thycaud PO, Poojappura, Thiruvananthapuram - 14**

Guest article

The political economy of dental care*

[Speech delivered at the 42nd Kerala State Dental Conference which was inaugurated by the Hon. Minister for Health, Smt. P.K. Sreemathi Teacher]

* Krishna K Ladha

I am honored to be invited to the 42nd Kerala State Dental Conference to give this lecture. Let me begin with my first experience of preventive dental care. It was in Pittsburgh, Pennsylvania after I joined Carnegie-Mellon University as a doctoral student more than two decades ago. After meeting the dentist, I discovered to my dismay that I did not know how to brush my teeth and that there was something called dental floss. The dentist asked me to visit, like his other patients, every six months for preventive care. I am happy that I acted as per his advice.

While growing up in India, I did not visit a dentist just the way I do not visit an orthopedist every six months. But I should have, considering that an auto rickshaw to Kozhikode railway station from the Indian Institute of Management Kozhikode (IIMK), a distance of about 10 Kms., costs more than a routine dental visit, and a porter at the railway station costs nearly as much. Indeed, I have learned to bargain by asking the porter "and do you know how much I pay my dentist for half an hour of work?" The porter seldom yields!

I do not think things have changed that much in the last two decades in India even as the size of the middle class has swelled. Wherever I look, people's dental health does not seem to keep up with their incomes and education. Even the relatively rich, who can easily afford to visit a dentist periodically, are often ignorant about preventive dental care. As a result, the demand for dental services has remained dismal. Question arises, "how do we overcome the obstacles so that dental care improves? This turns out to be the question of political economy to which I will devote the rest of my talk.

I will focus on mass education in dental care. We know that at the present level of India's dental health and awareness, improved education is most desirable. But who would pay for it? Surely one doctor cannot educate a population. The task of educating a population to change dental habits is too costly. Yet we know if the demand for dental care improves, all doctors would profit even as the patients do. Even the suppliers to dentists would profit. So would the drug companies. The question arises, if all doctors profit and all the suppliers profit and the all the patients profit, why don't they jointly push for actions that increase demand for dental care? Why are we stuck in a situation that is less profitable for all? In the field of political economy, we call this a *collective action problem*. It is a situation in which all benefit from an action, but no one has the incentive to undertake the action.

The collective action problem is an ancient problem that has drawn the attention of many philosophers and economists; among them by Aristotle and by the winner of the 2009 Nobel Prize in Economics, Elinor Ostrom. Aristotle in his Politics states: "For that which is common to the greatest number has the least care bestowed upon it. … everybody is more inclined to neglect the duty which he expects another to fulfill." In other words, while all stand to benefit from dental education, no one finds it profitable to contribute to it. The Kerala State Dental Association (KSDA), in collaboration with other professional associations at the state and national levels, can potentially rise to the occasion to address the collective action problem I outlined above. Considering the magnitude of the task ahead, it seems to me that KSDA needs to raise enough resources from its members so that it can lobby the governments to undertake the task of educating the public, *especially the young*, in dental health. This is the opportunity, the opportunity to lobby the government for the common cause, that is afforded to us by the democratic structure of our government. Your Association, in collaboration with similar other associations, must make the best use of this opportunity. They do it all the time in the USA!

Let us compare the US and India with respect to healthcare. For the US, 19.1% of the total government expenditure in 2006 was on health; the corresponding number for India is 3.4%. Moreover, the US government paid 45.8% of the total (private and public) expenditure on health in 2006; the corresponding number for India is 19.6%. See WHO detailed database at http://apps.who.int/whosis/data/Search.jsp.

How is it that the US expenditure on health is so much greater than that in India? Why are the Democrats pushing so hard for healthcare reforms in the USA whereas our actions at the national level are muted? For a clue, let us consider Robert Steinbrook's (New England Journal of Medicine, 2008) statement (*italics added*):

The Center for Responsive Politics analyzes campaign finance data reported to the Federal Election Commission and classifies contributions of $200 or more from individual donors and their immediate families, as well as from PACs, into 13 sectors. As of the end of July, the health sector ranked sixth among the 13 sectors in *contributions to federal elections since January 2007*. Health professionals, a grouping that includes doctors, dentists, and nurses, ranked fifth among more than 80 industries. Within the health sector, the largest contributors (individuals and PACs) were associated with *the American Dental Association ($1.7 million, 52% to Democrats)*, the American Hospital Association ($1.5 million, 61% to Democrats), Pfizer ($1.1 million, 50% to Democrats), the American Society of Anesthesiologists ($1.0 million, 47% to Democrats), and Amgen ($1.0 million, 50% to Democrats).

The health care industry spends substantially more money for purposes for which federal law does not restrict its spending, such as to finance the host committees at the Democratic and Republican national conventions and *to lobby Congress and federal agencies*.

Since 2006, the health sector has spent more money on lobbying than any other sector of the economy ... Updated statistics for 2006 show that the health sector spent $379.8 million to lobby the federal government, about $5 million more than the finance, insurance, and real estate sector and about $28 million more than was previously reported. In 2007, the health sector spent $450.7 million, nearly a 20% increase from the amount in 2006 and about $35 million more than was spent by the financial sector. Within the health sector, manufacturers of drugs, medical devices, and other health care products spend the most and have increased their spending more rapidly than other health care industries. In 2007, PhRMA [the Pharmaceutical Research and Manufacturers of America] spent $22.7 million, the American Medical Association $22.1 million, the American Hospital Association $19.7 million, Amgen $16.3 million, and Pfizer $13.8 million, ranking 3rd, 4th, 5th, 9th, and 15th, respectively, among the top spenders on lobbying.

Clearly, the US healthcare associations seek to influence both the electoral outcomes and the public policy. They proactively pursue their cause and have developed considerable expertise in how to go about it. Your Association only needs to visit their websites to gain from their accumulated wisdom.

To summarize, let me recall the question. How do we overcome the obstacles so that dental care improves? As *an* answer, I offered the following:

1. People act in self-interest. Self-interest means that no doctor would individually spend resources to enhance the demand for medical services. Doctors might jointly contribute to an association if the association can prove itself in realizing programmes that would increase their incomes more than what they contribute to the association.

2. The association of medical professionals can engage in education campaigns provided it can raise resources from the members and the manufacturers who profit from the increased demand.

3. The association of medical professionals can lobby the government to increase healthcare expenditure, to improve people's sense of hygiene, to spend more on preventive care, and can even lobby corporations to offer insurance coverage to their employees for health care and dental care. In other words, your association becomes an educational institution, a training institution, a lobbying institution and the political wing of your profession.

4. Your association could form coalitions with similar interests and lobby with the bureaucrats and politicians to bring about policies in pursuit of the common good.

Once your Association has done all of the above, a meeting with the health minister might run something like this:

Madame Health Minister,

Kerala has 56 lakh school students and 2 lakh school teachers. Counting school staff, that is more than 6 million out of the state population of 33 million in 2005. In other words, a little less than 20% of our people are in schools. They are the future. We are banking on them. They are our demographic dividend. They are our passport to beat up everyone in the world.

Madame Health Minister, human beings consist of two parts: as biological beings and as social beings. We are kind of machines who reproduce themselves. We reproduce biologically and we reproduce socially. A defective machine will give rise to yet another defective machine. If the parents do not pay any attention to dental care, the child is less likely to do so. We cannot allow that to happen. We cannot let 56 lakh students graduate from high school with bad dental habits. Because tomorrow there would be 112 lakh children, with bad dental habits.

Madame, we the Association of Dental Care Professionals are here to help you with information and with expertise regarding dental care legislation. We will help you in the implementation of the legislation by taking the lead in the education of our children in dental hygiene. We have the support of Medical professions as well as academic scholars. Even the business firms support our programmes.

Madame, it might please you to know that we have compiled the list of your voters who would benefit from the programmes. There are roughly 40% of your voters who are affected by the programmes of concern to the Kerala State Dental Association. They are either the parents or aunts and uncles of the children in the various schools in your electoral district. Think of that!

It is fortunate that the members of our association contribute to us in pursuit of the common cause of our nation. We have a good amount of cash and we would like to give some of it to those parties who support our programmes. Please know that while our incomes will go up, the benefit to the society will be much larger. We have come to you to help. But as you can understand that our association, as a part of its service to our members, will have to remain open to all policymakers who support our programmes of national importance. Thus, we are constrained to spend our campaign resources on a case by case basis.

Lobbying means giving to the listener what she needs: information, votes, office. That is democracy for you, a democracy with teeth!

References

Aristotle. The Politics, Book II, Chapter III, 1261b. Translated by Benjamin Jowett. Oxford: Clarendon Press. Available at http://oll.libertyfund.org/?option=com_staticxt&staticfile=show.php%3Ftitle=579&chapter=75396&layout=html&Itemid=27

Robert Steinbrook. 2008. Campaign Contributions, Lobbying, and the U.S. Health Sector — An Update, New England Journal of Medicine, 25 Sep 2008. Available at http://content.nejm.org/cgi/content/full/359/13/1313

* **Professor of Economics, Indian Institute of Management, Kozhikode - 673 570**

Lateral throat form- design of a measuring instrument

* Sadhvi K.V., ** Chandrasekharan Nair K., ***Jayakar Shetty

Abstract

Objectives: Designing an instrument to measure lateral throat form and compare its efficacy with conventional method. Methodology: Stainless steel instrument with measuring scale and a stop was designed. Three patients were subjected for evaluation of the depth of the lateral throat by eight evaluators. Assessment was done by the conventional method and by using the instrument. Results: An instrument to measure lateral throat form was designed which showed consistent results when compared to conventional method.

The distal portion of the alveololingual sulcus is designated as lateral throat. Denture extended to this area can resist horizontal forces, increase border sealing and contribute to neuromuscular control. The length as well as the thickness of the denture flange occupying this space is dictated by the tonicity, activity and anatomy of the adjacent structures. It has been established that the length of lateral throat form was significantly more than that in the dentures[1]. This is mainly caused due to the inadequate extension of the impression tray. Only if the lateral throat form is measured accurately in the pre impression stage, the lingual extension of the impression can be assessed accurately.

Neil has classified lateral throat form based on the distance between the floor of the mouth and the middle of the retromolar pad when the patient protrudes the tongue one fourth of an inch beyond the edge of the lower lip[2]. Measurement of the depth is generally done using arbitrary assessment. In order to bring in accuracy, a device to measure the lateral throat form was made and the design details are presented in this paper.

Materials and methods

The instrument was designed in stainless steel. It consisted of two arms united by a spring and the distance between the arms could be controlled by a threaded screw and nut. At the tip of one arm a wire frame measuring 17 x 12 mm was attached. A measuring scale was attached to the tip of the other arm. The wire frame was horizontal in direction and the scale passed through the frame in a vertical direction. (Fig. 1,2,3 and 4)

In order to measure the depth of the lateral throat, the wire frame was positioned at the level of the middle third of the retromolar pad. The scale was then pressed to the floor of the mouth and the readings could be obtained directly. (Fig 5 and 6)

To evaluate the effectiveness of the instrument against conventional method, a clinical trial was done on three patients by six evaluators. Lateral throat form was assessed both by conventional method and by using the instrument. Evaluation sequence was changed in both the methods to avoid bias, because throat form was assessed in all the individuals using both the methods.

Conventional method was by adapting the finger lightly to the patient's lingual vestibule towards the lateral throat form and the patient was asked to protrude the tongue one fourth of an inch beyond the edge of the lower lip. If the finger felt no appreciable movement, the throat form was class I. If the finger was entirely displaced, it was class III. But if the finger felt intermediate functional movement of the tissue, then it was classified as class II.

Testing with the instrument was done by first loosening the screw and placing the horizontal stop at the middle third of the retromolar pad. The upper arm of the instrument was compressed such that the bottom of the scale engaged the lingual sulcus. While the patient protruded the tongue by one fourth of an inch beyond the lower lip, care was taken to keep the scale in a position to make passive contact with the floor of the mouth. At this point, the locking screw was tightened. This measurement indicated the lateral throat form. (Table I)

Results

Table I shows inconsistent classification of lateral throat form recorded by the conventional method. Use of the MCS Gauge showed consistent results with actual measurement of the lateral throat.

Discussion

Most of the dentures fabricated are inadequately extended because the lateral throat form is not assessed, measurement was only empirical because no tool was used. May be an experienced dentist can find out, but a novice who is new to this field will find it difficult to assess without a tool. The determined height of the

Fig.1 Maaruti Chandra Sadhvi gauge (MCS Gauge)

Fig. 2 Measuring tip consisting of scale and the stop

Fig. 3 and 4 Measuring tip with stop positioned for left and right side

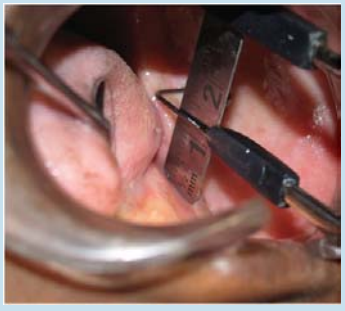


Fig. 5 and 6 Measuring throat form in the patient (left and right side)

Fig. 7 Selection of stock tray according to the throat form

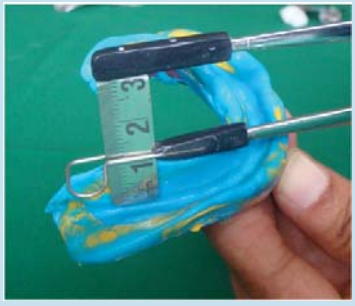


Fig. 8 Verifying the throat form in impression using the gauge

Fig. 9 Verifying the throat form in impression using the gauge

Table I. ***Assessment of lateral throat by conventional method*** **and using the MCS Gauge (mm)**

Evaluator	Patient 1		Patient 2		Patient 3	
	Arbitrary	Instrument	Arbitrary	Instrument	Arbitrary	Instrument
1	Class II	16	Class III	10	Class I	19
2	Class I	17	Class III	9	Class II	19
3	Class II	17	Class II	10	Class II	19
4	Class II	17	Class II	10	Class I	17
5	Class I	17	Class III	10	Class I	19
6	Class I	16	Class II	10	Class I	19
7	Class I	17	Class III	10	Class II	19
8	Class II	17	Class II	10	Class I	19

lateral throat form can be used to select the stock tray, verification of the impression, the master cast and the finished dentures. (Figs. 7, 8 and 9)

Conclusions

- An instrument to measure lateral throat form was designed
- Its effectiveness was compared against conventional method
- Consistent results were obtained with the instrument

References

1. Huang PS, et al. The proportion of 3 classes of lateral throat form. Int J Prosthodont 2007;20:640-42.
2. Engelmeier RL and Phoenix RD. Patient Evaluation and Treatment Planning for Complete Denture Therapy. Dental Clinics of North America1996;40:1-17.

*** PG student; ** Professor & Head of the Department; *** Professor; Department of Prosthodontics, AECS Maaruti Dental College and Research Centre, Bangalore**

Case report

Management of a case of decreased vertical dimension and occlusal plane derangement

* Shyam Mohan A., ** U-Nu S, *** K. Chandrasekharan Nair

Abstract

Decrease in vertical dimension at occlusion is a common sequel to early loss of posterior teeth. The usual line of treatment involves the use of full veneer crowns in restoring the VD and esthesis. An alternative technique is discussed in this article in which the rehabilitation is achieved using posterior composite resin restorative material.

Introduction

Early loss of posterior teeth can cause a decrease in the vertical dimension at occlusion (VDO). Enhancement of this occlusal height is generally achieved by full crowns. The non-resilient nature of rigid crowns makes the transition to a new occlusal position difficult, manifested by an expressed discomfort by the patient. Hemming[1] had described a technique of increasing the VDO using direct composite restorations in worn anterior teeth. The resilient nature of composite resin helps the patient in attaining a stable position over a period of time. The newer composite materials exhibit improved abrasion resistance, which make them an ideal material to be used in similar cases for increasing the VDO.

This article explains a technique of rehabilitating a case of decreased VDO by using posterior composite resin restorative material.

Clinical report

A 20 year old female reported to the clinic with a complaint of missing left maxillary first molar and both the mandibular first molars. Intra oral examination revealed a marked aberration of her upper occlusal plane with occlusal attrition of the right central incisor and lateral incisor, an apically positioned right canine and palatoversion of right first and second premolars. The left first and second premolars were also in palatoversion. This altogether gave the upper smile line an unnatural 'wavy look'. The incisal attrition of lower anteriors had violated the lower anterior occlusal plane (fig 1).

The patient presented with a decrease in VDO, which was confirmed by a comparison of the lower one third of the face with the upper and middle thirds[2]. This was attributed to the loss of posterior teeth at an early age. Since the mandibular occlusal plane was more acceptable it was taken as the guide to rehabilitate the maxillary arch. The patient was made aware of these problems using front and profile photographs taken by a Polaroid camera.

Procedure

1. The rehabilitation of lower arch was carried out first by replacing the first molars using provisional FPDs

2. Casts of the upper and lower arches were made. Casts were mounted on a semi adjustable articulator (Dentatus ARH-type) after face-bow transfer and using centric relation record. An interocclusal opening of 4mm was given and a maxillary splint was constructed using self- cure acrylic(DPI-RR cold cure, Dental Products of India, Mumbai)

3. Patient was asked to wear the splint for 6 weeks to assess whether the new VDO will be tolerated or not

4. Six weeks later she reported back without any symptoms of clicking , pain, and tenderness of the TMJ or fatigue of the masticatory muscles[3,4]

5. The right side of the splint was removed and posterior composite resin restorative material (Filtek P60, 3M, USA) was used to modify the maxillary right premolars and first molar to contact the lower teeth with light occlusal contacts

6. After wards the left side splint was removed and the left premolars and first molar were modified in a similar manner. A group function occlusion was established without any balancing side contacts. The restorations were finished and polished (Enhance, Dentsply, Caulk Milford DE and So-flex disc®, 3M, USA). The patient was allowed to be in this corrected

occlusal position for a period of 6 weeks before the anterior smile line correction was undertaken (fig 2)

7. When it was confirmed that the patient had attained a stable occlusal position after 6 weeks, the upper anteriors were corrected to an esthetic smile line by using the curve of the upper border of the lower lip as the guide (fig 3). The patient was asked to report every three months for the first year and half yearly for the next two years. The periodic check – ups showed a perfectly equilibrated occlusion maintaining the established VDO. The patient was followed up for a period of three years.

Discussion

Tooth wear associated with decreased VDO affects both esthesis and function of the mouth. The conventional line of treatment is to raise the VDO to an acceptable height using full veneer crowns. The full crowns do not give an opportunity for smooth transition to the newly established position due to its non-resilient nature. As a result of which the patient can have some amount of discomfort in adapting to the same.

The use of direct composite restorations in worn anterior teeth is documented[1]. The resiliency and abrasion resistance of newer posterior composite materials make it more suitable choice to be used in VDO alterations. This treatment allows a smooth transition to the newly established occlusal condition with superior patient compliance.

Treatment with crowns is more radical and irreversible. A more conservative treatment plan can always be considered in such situations. The article discussed a similar line of treatment. The outcome was superior and the patient acceptance was better. The three- year follow – up also showed an acceptable wear rate of the composite restorations without any change in the established VDO. This shows that the newer composite materials can be used in the place of conventional crowns for full mouth rehabilitation with better patient compliance. However the treatment plan does not deny the scope of fabrication of crowns at a later stage.

Conclusion

The management of a case of decreased VDO with marked esthetic defects is discussed. Here the lost VDO is re established using composite restorations instead of a conventional approach using crowns. The outcome is promising and the esthesis superior.

Fig. 1 Extra oral view on reporting

Fig. 2 Occlusal view before treatment

Fig. 3 Occlusal view after treatment

References

1. Hemming KW, Durbar UR, Vaughan S. Tooth wear treated with direct composite restorations at an increased vertical dimension: Results at 30 months. J Prosthet Dent 2000; 83:287-293
2. Goldstein RE. Change your smile. 3rd edition. Chicago Quintessence co. 1997; 4-5
3. Carlsson GE, Ingervall B, Kocak G. Effects of increasing vertical dimension on the masticatory system in subjects with natural teeth. J Prosthet Dent 1979; 41:284-289
4. Christensen J. Effect of occlusion-raising procedures on the chewing system. Dent Prac Res 1970; 20(7):233-238

*** Professor, CIDS, KK Campus, Virajpet, Coorg, Karnataka - 571218.**
**** Reader, PSM College of Dental Sciences and Research, Trichur, Kerala.**
***** Professor, AECS Maruthi Dental College, Bangalore**

Dental caries status of 15 year old school children in Thiruvananthapuram District, Kerala.

* Jacob Kuruvilla, **Biju Soman, ***Nanda Kumar K.

Abstract

Objectives: To study the prevalence and correlates of dental caries among 15 year old school children in Thiruvananthapuram district.

Methodology: It is a descriptive study. A representative sample of 1060 children of 15 years of age drawn from 97 schools in Trivandrum district were examined by a dentist. Students were asked to fill up a structured questionnaire prior to the examination.

Results: A total number of 1000 subjects (551 boys, 449 girls) were examined. The prevalence of dental caries in the study population was 59.4 percent. The mean DMFT score was 1.3. Molars were the most frequently affected teeth. Sex, type of school, socioeconomic status, frequency and method of tooth brushing, oral hygiene, passive smoking and smokeless tobacco usage had a significant correlation with dental caries.

As per the multivariate analysis, the main predictors for dental caries were female sex (OR 2.11; 95%CI 1.55, 2.86), low socioeconomic status (OR 2.36; 95% CI 1.58, 3.62), and poor oral hygiene status (OR 2.36; 95% CI 1.04, 5.48).

Conclusion: More than half of the children examined were having caries. However, oral hygiene status was good among the majority of children. Molars were the most frequently affected teeth.

Introduction

Dental caries and periodontal diseases have been historically considered as the most important global oral health burdens. Understanding the determinants and modifying interventions of oral conditions will help us to prevent these chronic diseases. This study attempts to identify the determinants of dental caries among school children.

Dental caries in India

Dental caries is a public health problem in India with a prevalence as high as 60-80 percent in Indian children[1]. According to the first National Oral Health Survey, dental caries is prevalent among 63.1percent and the mean DMFT (decayed, missing, filled teeth) score is 2.4 in 15 year olds[2]. A study conducted among primary school children in the municipality of Varkala, Kerala, estimated the prevalence of dental caries as 68.5percentage[3]. Study among children in the age group11-13 year old, with representative samples from urban, rural, and slum areas, reported a prevalence of 57 percent with a mean DMFT + dft of 1.6. The caries experience was 2.5 times higher among children in slum areas compared to children living in rural areas[4].

Objectives: To study the prevalence and correlates of dental caries among 15 year old school children in Thiruvananthapuram district.

Materials & methods

Variables Socioeconomic status. Assessing the socioeconomic status in a school-based survey was a major problem. In order to obtain validity of the socioeconomic assessment, three surrogate variables were included i.e., medium of instruction, parents' educational status and father's occupation. Medium of instruction was chosen as it was shown in a state level survey that choice of medium of instruction has got a relation with the socioeconomic status..

Apart from the socioeconomic factors other information collected were,

a. Demographic characteristics
b. Diet pattern
c. Oral hygiene practices
d. Personal and family tobacco smoking history
e. Chewing tobacco habits
f. Knowledge and awareness regarding oral health
g. Oral health treatment practices

Research Methodology

Study Setting: the study was conducted among students attending the tenth standard in selected schools from Trivandrum district.

Sample Size: According to the National Oral Health Survey, the prevalence of dental caries in 15-year old children in India was found to be 63.1% Taking this as a guideline, the prevalence to calculate the sample size for this study was taken as 63 percent.[5]

As the study was trying to estimate the influence of tobacco chewing habits in dental caries prevalence, the sample size was doubled to 483. Since clusters i.e. class/ divisions only were taken randomly and not individual students, a design effect of 2 was applied. Hence the required sample size was taken as 486. *2=972. Therefore the final sample size for conducting this study was calculated as 1000 students.

Study Unit: Each class division was the study unit

Sample Selection; Stratified Sample selection was done. Prior to the study, list of all the schools with number of students in the tenth class in each of these schools were collected. Final sample frame consist of 350 divisions from all the schools.In order to achieve 1000 subjects, 30 divisions from the total 350 divisions were randomly selected and study was completed with 28 divisions after getting enough sample size of which 14 Divisions were from Government Schools, 7 from government aided schools and 7 from unaided schools.

Ethical considerations

Approval from the institutional ethics committee was obtained before the start of the study. Permission from the district education officer and the head of institutions were also obtained before the study. As study subjects were school children, consent from parents/guardian were also obtained. Data were collected after obtaining informed consent and assurance of confidentiality to the individual participants in the study.

Results

1. Demographic Characteristics (N 1000) (Table1)

Place of Residence	Rural Urban	530 (53%) 470 (47%)
Religion of the subject	Hindu Christian Muslim	722(72.2%) 145 (14.5%) 133 (13.3%)
Type of School	Government Aided Unaided	503 (50.3%) 259(25.9%) 238(23.8%)
Medium of Instruction	English Malayalam	550(55%) 450 (45%)

Table 1: *Demographic Characteristics*

2) Diet characteristics

About 92.3percent of the subjects were reported to have non-vegetarian diet and out of the total 1000 subjects, 34.5percent of the subjects were reported of having daily intake of milk. Excluding 11percent of the subjects, everyone in the group has consumed sweets in the last 24 hours at different frequencies.

(3) Oral Hygiene practices

Around 92.1percent of the subjects reported using toothpaste and toothbrush for their oral hygiene care. When 44.5 percent of the subjects reported brushing twice daily, 55.5percent of the subjects reported as regular one time brushing.

4) **Tobacco Usage**: 25 (2.5%) had the habit of smoking.

Among the subjects, 42.2 percent reported history of tobacco smoking in the family. Regarding the usage of chewing tobacco, 6% of the subjects were current users (used within last 30 days) and 7.4% had used it at least once. The major reason reported for the use of chewing tobacco products was for fun.

5) Dental treatment seeking practices.

According to 94.7 percent of the subjects, dentist was the ideal person for consultation of dental problems. However, 46.10percent of the subjects had never visited a dentist.

Magnitude of the Problem.

1) Prevalence of Dental caries (DMFT Score>=1)

Among the total subjects, 54.6percent of boys and 65.5percent of girls were affected by dental caries.(Table 2).The prevalence of dental caries for the total population was found to be 59.4percent (95% CI 56.3% -62.5%)

	Male	Female	Total
Caries>=1	51.2%	62.8%	**56.3%**
Missing teeth>=1	5.7%	4.5%	**5.2%**
Filled teeth>=1	3.8%	6.3%	**4.9%**
DMFT>=1	54.6%	65.5%	**59.4%**

Table 2: *Prevalence of dental caries, missing teeth, filled teeth and DMFT>=1 in the subjects*

As the percentage or the prevalence of Decayed missing and filled teeth (DMFT) includes all the teeth that have been affected by caries, prevalence of DMFT>=1 was taken as the base for further analysis.

When 563(56.3percent) of the subjects were affected by one or more dental caries which needed dental restorative treatments, only 23 (4.1percent) had got fillings done. Out of the total 1000 subjects, 52 (5.2 percent) had missing teeth ≥1. The mean number of missing teeth was 0.06± 0.283 (95percent Confidence Interval). The maximum number of teeth that have been missing per individual was three. In contrast to the increased caries prevalence found in girls, more boys were found in the group with missing teeth>=1. 5.7percent of the boys had one or more missing teeth compared to 4.5 percent of girls.

Oral hygiene Status of the study population

The oral hygiene status of the subjects were assessed using the Simplified Oral hygiene Index (Greene and Vermilion 1964) 95.7% of the total subjects had good oral hygiene.

4.14 Correlates of Dental Caries.

To find out the correlates for dental caries, bivariate analyses were carried out. The variables that had a significant association are stated below. (Table3)

Table 3: *Correlates of Dental Caries*

Variables		DMFT=0	DMFT>=1	Total	$\div^2$ test
Sex	Male (559) Females (441)	254 (62.6%) 152 (37.4%)	305 (51.3%) 289 (48.7%)	559 (55. 9%) 441 (44. 1%)	P Value .000,
Type of School	Government Aided Unaided	171(42.1%) 110 (27.1%) 125 (30.8%)	332 (55.9%) 149 (25.1%) 113 (19.0%)	503 (50.3%) 259 (25.9%) 238 (23.8%)	P value= .000
Medium	English Malayalam	274 (67.5%) 132 (32.5%)	276 (46.5%) 318 (53.5%)	550 (55.0%) 450 (45.0%)	P value= .000
Religion	Hindu Muslim Christian	292 (71.9%) 41 (10.1%) 73 (18.0%)	430 (72.4%) 92 (15.5%) 72 (12.1%)	722 (72.2%) 133 (13.3%) 145 (14.5%)	P Value= .004
Place of Residence	Rural Urban	236 (58.1%) 170 (41.9 %)	294 (49.5%) 300 (50.5%)	530 (53.0%) 470 (47.0%)	P Value= .004
Oral hygiene status	Good Fair	398 (98.0%) 8 (2.0 %)	559 (94.1%) 35 (5.9%)	957 (95.7%) 43 (4.3%)	P value= 0.002
Frequency of tooth brushing	Brushing 2 times Daily Not brushing 2 times	196 (48.3%) 210 (51.7 %)	249 (41.9%) 345 (58.1%)	445 (44.5%) 555 (55.5%)	P value =0.027
Mouth rinsing practice	Always washing the mouth after every food Sometimes washing the mouth	326 (80.3%) 80 (19.7 %)	428 (72.1%) 166 (27.9%)	754 (75.4%) 246 (24.6%)	P value =0.002
Bleeding during tooth brushing	Always bleeding Sometimes bleeding Don't Know No bleeding	4 (1.0%) 175 (43.1 %) 71 (17.5%) 156 (38.4%)	16 (2.7%) 311 (52.4%) 105 (17.7%) 162 (27.3%)	20 (2.0%) 486 (48.6%) 176 (17.6%) 318 (31.8%)	P value =0.001
Tobacco Usage	No Yes	392 (96.6%) 14 (3.4 %)	534 (89.9%) 60 (10.1%)	926 (92.6%) 74 (7.4%)	P value =0.000
Current use of chewable tobacco products	No Yes	393 (96.8%) 13(3.2%)	547 (92.1%) 47 (7.9%)	940 (94.0%) 60 (6.0%)	P value =0.001
Passive smoking	No Yes	266 (65.5%) 140 (34.5 %)	312 (52.5%) 282 (47.5%)	578 (57.8%) 422 (42.2%)	P value =0.000

Table 4: *Results of Multivariate Analysis*

Independent Variable		*Odds Ratio*	95% confidence interval		P value
			Upper	Lower	
Sex	*Male* *Female*	*1* *2.113*	*1.558*	*2.866*	*0.000*
Socioeconomic status (Medium of instruction)	English Malayalam	1 2.369	1.587	3.621	0.000
Place of residence	Rural Urban	1 1.399	1.047	1.869	0.023
Frequency of brushing	Twice Daily Once daily	1 1.173	0.884	1.557	0.269
Mouth rinsing	Always Sometimes	1 1.364	0.979	1.900	0.019
Oral Hygiene Status	Good Bad	1 2.390	1.042	5.481	0.067
Passive smoking	No yes	1 1.201	0.887	1.625	0.236

Results of Multivariate Analysis (Table 4)

In the multivariate analysis, it was observed that the variables like sex, medium of instruction, and place of residence, oral hygiene status were giving significant odds for dental caries (table 4). Among these, oral hygiene status was the most important predictor for dental caries with an odds ratio of 2.390. As mentioned earlier, the medium of instruction, Malayalam which was taken as a proxy variable to asses the economic status of the subjects, was observed as the second major predictor for dental caries within the subjects. Subjects residing in urban area were found to have 1.39 times more risk for caries when compared to those in rural area.

Discussion and conclusions

5.1 Discussion.

The present study examined the clinical, social, and

behavioral determinants of dental caries. All the established determinants of dental caries such as diet, oral hygiene practices, method and frequency of tooth brushing, gingival status etc were studied in detail and other probable factors like socioeconomic conditions, consumption of carbonated drinks, passive smoking and usage of chewable tobacco products were also added to analyze its relationship with dental caries. The prevalence of dental caries in the 15-year age group was taken as an indicator of the oral health in the community.

The prevalence of dental caries among the students of Thiruvananthapuram education district was found to be 59.4 percent. According to the National Oral Health Survey (2002) conducted by the Dental Council of India, prevalence of dental caries among 15 year olds in Kerala was 68% and mean number of teeth affected with caries was 1.8[6]. The most commonly affected tooth was the first molars. An oral screening conducted among 4458 children in Belgium to analyze the reasons for high caries prevalence in permanent molars, came out with the finding that if both the deciduous molars adjacent to the permanent molars are affected by caries and if the child's oral hygiene status is poor, it will result in a peak in cavity formation of the permanent first molar 1-2 years after emergence[7].

In the present study, greater proportions of dental caries were found in subjects in urban areas. A study carried out in Calcutta among 9600 children in the age group 6 to 14 years, reported a higher prevalence of dental caries among children in urban areas[8].

A study conducted in Kerala to estimate the prevalence of dental caries among primary school children 6-12 years, found a statistically significant association between low socioeconomic status and prevalence of caries (O.R. 1.89, 95% CI--1.28, 2.8)[9]. A study from Jordan carried out in preschool children to asses relationship of dental caries to socio-demographic factors found a lower caries prevalence among the children of fathers engaged in non-manual occupation. The caries prevalence was also influenced by educational status of mothers[10].

Present study found a significant difference in the prevalence of dental caries among the subjects who reported exposure to family smoking. The reason for this difference has to be further probed into. One reason can be the overall negligence of oral hygiene maintenance by elders in the family who smokes, which can in turn influence the child's attitude. No reported studies have proved a potential relationship between tobacco in other forms, e.g., smoked tobacco, whether active or passive, and growth of cariogenic oral flora in the permanent dentition. If proven, the association between smoking (including passive smoking) and dental caries can be used for anti-tobacco advocacy initiatives.

Influence of chewing tobacco related products on dental caries was another major finding of the study. Based on the findings from the present study, smokeless tobacco products may be considered as a risk factor for dental caries. The sweetening agents added by the manufacturers in chewing tobacco products may favor the growth of cariogenic microorganisms which can increase the caries incidence.

Present study also shows a higher prevalence of dental caries among the vegetarians compared to non-vegetarians. India is one among the few countries where vegetarianism exists. A pilot survey conducted in India among the vegetarian people found that, vegetarians have higher degree of tooth wear than the non-vegetarians and also a higher tendency towards crowding in the maxillary arch, which may translate into higher DMFT, and greater number of cervical buccal defects than the non vegetarians[11].

5.2 Conclusion

Molars being the major teeth used for chewing are the ones that are most commonly affected. Loss of molars at early ages can affect the general health. Considering the anatomical reasons which renders the molar teeth increased caries susceptibility, preventive interventions should be started at an early age. This can be yet another reason for the observed higher prevalence of dental caries among girls as the molars erupts at an early age in girls. The correlation between chewing of smokeless tobacco products and dental caries should be studied further.

References

1 Damle SG. Epidemiology of Dental Caries in India. In: Pediatric Dentistry. Arya Publishing House, New Delhi, 2002; pp 75-96. Chapter in a book.

2 R K Bali , V.B Mathur, PP Talwar, H B Chanana Oral health status,National oral health survey and fluoride mapping. Page 111 Chapter 6.

3 Retnakumari N, Prevalence of dental caries and risk assessment among primary school children of 6-12 years in the Varkala municipal area of Kerala J Indian Soc Pedod Prev Dent. 1999 Dec; 17(4):135-42

4 Lisa Bøge Christensen, Poul Erik Petersen and Ajay Bhambal , Oral health and oral health behaviour among 11-13-year-olds in Bhopal, India , Community Dent Health (2003) 20,153-158.

5 R K Bali ,V.B Mathur, PP Talwar, H B Chanana Oral health status,National oral health survey and fluoride mapping. Page 111 Chapter 6.

6 R K Bali ,V.B Mathur, PP Talwar, H B Chanana Oral health status,National oral health survey and fluoride mapping. Page 111 Chapter 6.

7 Leroy R, Bogaerts K, Lesaffre E, Declerck D. Effect of caries experience in primary molars on cavity formation in the adjacent permanent first molar. Caries Res. 2005 Sep-Oct;39(5):342-9.

8 Subrata S, Subrata Prevalence and severity of dental caries and oral hygiene status in rural and urban areas of Calcutta. S.J Indian Soc Pedod Prev Dent. 1996 Mar; 14(1): 17-20.

9 Retnakumari N Prevalence of dental caries and risk assessment among primary school children of 6-12 years in the Varkala municipal area of Kerala. *Indian Soc Pedod Prev Dent*. 1999; 17(4):135-42.

10 Sayegh A, Dini EL, Holt RD, Bedi R. Caries in preschool children in Amman, Jordan and the relationship to socio-demographic factors. Int Dent J. 2002 Apr;52(2):87-93.

11 Sherfudhin H, Abdullah A, Shaik H, Johansson A Some aspects of dental health in young adult Indian vegetarians. A pilot study *Acta Odontol Scan*d. 1996 Feb;54(1):44-8

***Senior Lecturer, Department of Community Dentistry, Mar Baselios Dental College, Kothamangalam, Ernakulam, Kerala.**

**** Associate Professor, Achutha Menon Centre for Health Science Studies, Sree Chitra Tirunal Institute for Medical Sciences & Technology, Trivandrum**

***** Principal & HOD, Department of Periodontics, Azeezia College of Dental Sciences and Research, Kollam, Kerala**

Observation

Oral squamous cell carcinoma in young generation - a growing concern

* Rani Mol P., **Girija K.L., ***Rema J., ****Anita Balan

Abstract

Oral cancer was considered as a disease of older people. Recent trend of increasing incidence of oral squamous cell carcinoma in young population has been noted -an alarming situation! In view of this issue a few cases of oral squamous cell carcinoma in young people who reported to are discussed here. We need to be more vigilant for early diagnosis of such cases.

Introduction

Oral squamous cell carcinoma is predominantly seen in the middle and old age and is rare in persons below the age of 45[1,2,3]. Cancer of the oropharyngeal region is most common in the sixth or seventh decade of life[2]. Of recent there are reports of increasing incidence of oral squamous cell carcinoma in young people.[1,2,4,5,6]

The practices like tobacco smoking, betel quid chewing and alcohol drinking are well established etiological factors in the development of oral squamous cell carcinoma.[3,7,8] Certain other factors like viral infection (EBV, HPV)[8], genetic[6,9]or familial factors and chronic irritation[4,5] are also implicated in oral carcinogenesis. Most knowledge on oral cancer risk factors relate to the middle and elderly population.[3]

According to recent studies, 6% of oral cancer occurs in the younger age group that is in persons less than 45 years of age[1] .There is also lack of the usual etiological factors in these young patients[1,5,6].Interestingly an unexpected increase in number of involved young females has been noted[5,6,8] that too without any specific etiologic factors. The etiology and disease progression are different in young patients when compared with the older group. Oral squamous cell carcinoma in younger persons is also associated with poor patient prognosis with studies showing 2 year survival rate of only 57%.[5]

In the light of this recent trend, we would like to present a few cases of young patients, diagnosed to have squamous cell carcinoma, who reported to The Department of Oral Medicine and Radiology, Government Dental College, Thiruvananthapuram, during the period of 2005-2008.No specific etiology could be found in these patients other than trauma.

Case series report

During the 3 year period, 1, 40,180 patients who reported to the OPD were screened for oral cancer. Suspicious lesions in 654 patients were biopsied after obtaining informed consent. Out of these 592 patients were histologically reported to have squamous cell carcinoma of oral cavity. 13 patients were under the age of 45 and had no deleterious oral habits. Most of the patients were in the 30-34 age group (46%). 62% of the patients were females. Male: Female ratio being 5:8. Most common site of occurrence of oral squamous cell carcinoma was the lateral margin of tongue (69%). Seven cases had no contributing factors. (Table 1)

Discussion

During the 3 year period, 1, 40,180 patients reported to the OPD of Govt Dental College, Trivandrum. Of these 592 patients were diagnosed to have squamous cell carcinoma. Out of the confirmed cases 13 patients were below 45 years in whom no specific etiology could be elicited (2.1% of the total OSCC diagnosed cases). In a two year survey done in the same institution in 2000-02 by Thomas S *et al*, 23 patients were reported to have no deleterious oral habits.[4]

Oral squamous cell carcinoma in the elderly population had a male predominance [1-11] . This may be attributed to the usual habits in the male group. In our case 62% were females. A female predominance was noted in the younger age group similar to those reported by others.[2, 4, 5, 6]

It was noted that the common site of occurrence of squamous cell carcinoma of oral cavity in this group was tongue. Sankaranarayan R *et al* has reported that young patients had a higher proportion of tongue cancers[7]. This is consistent with the reports of Davis *et al* [12], Kuriakose *et al*[5] and Mc Gregor *et al* [1, 13]. Tongue cancer in any age group seems to be associated with less traditional risk factors than in other regions of the oral cavity[8]. The clinical behavior of tongue cancer is variable and has a more aggressive nature[8,14]. The prognosis of tongue cancer in young is also poor.[5,8]

A complete lack of the conventional risk factors was noted in all the 13 patients. The lesions on the lateral aspect of tongue could be attributed to chronic trauma

Fig. 1 Intraoral photograph of 34year old female patient with MDSCC of lower alveolus who reported with nonhealing extraction site 46 region.

Fig. 2 Intraoral photograph of 28year old male patient with WDSCC of right lateral border of tongue

Fig 3.1 Intra oral photograph of 13year old patient with a diffuse lesion involving the left side of the posterior palate and alveolus who presented with a swelling of the left side of the face with associated epiphora.

Fig 3.2 3D CT showing the above involvement.

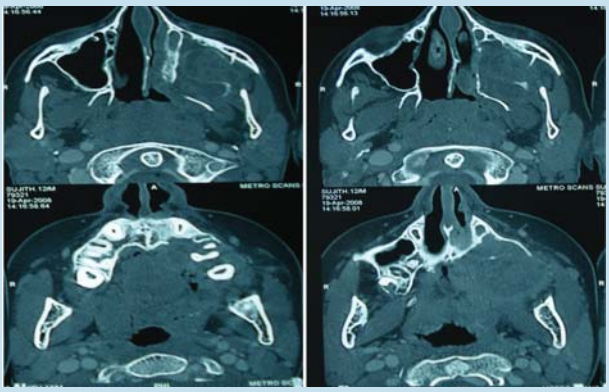
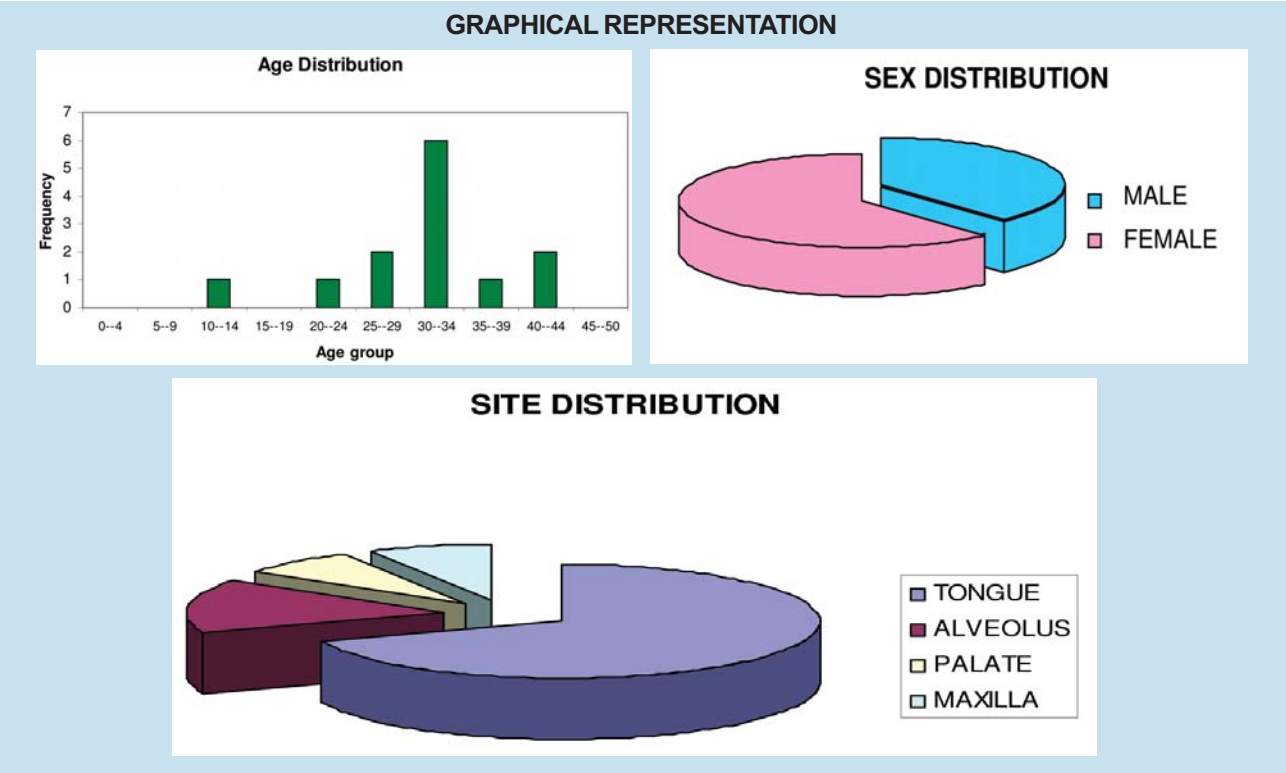


Fig 3.3,3.4 CT scan picture showing a diffuse involvement of the left maxillary antrum invading all the antral walls, encroaching the nasal fossa up till the nasal septum medially, posteriorly extending beyond the pterygoid fossa destroying pterygoid plates and muscles, superiorly extent and invade the left orbit.

Table 1 : *Details of Cancer Patients Less Than 45 Years*

	YEAR	AGE GROUP (yrs)	SEX	SITE	RISK FACTORS	HISTOLOGY
1	2005	30-35	F	Tongue (right)	Tooth trauma	MDSCC
2	2005	30-35	F	Tongue (left)	Tooth trauma	MDSCC
3	2005	40-45	F	Palate	Nil	WDSCC
4	2005	25-30	M	Tongue (right)	Erosive LP	WDSCC
5	2005	35-40	M	Tongue (right)	Erosive LP	WDSCC
6	2006	30-35	F	Tongue (left)	Tooth trauma	MDSCC
7	2006	30-35	F	Tongue (left)	Tooth trauma	MDSCC
8	2007	30-35	F	Lower Alveolus (right)	Nil	MDSCC
9	2008	25-30	M	Tongue (right)	Nil	WDSCC
10	2008	10-15	M	Lt Maxillae	Nil	WDSCC
11	2008	30-35	M	Tongue (right)	Nil	MDSCC
12	2008	40-45	F	Lower Alveolus (right)	Nil	WDSCC
13	**2008**	**20-24**	**F**	**Tongue (right)**	**Nil**	**PDSCC**

MDSCC - moderately differentiated squamous cell carcinoma
SCC - squamous cell carcinoma;
WDSCC - well differentiated squamous cell carcinoma
PDSCC - poorly differentiated squamous cell carcinoma



from teeth; but the etiology of lesions on palate and alveolus remained unexplained. As a detailed history has been recorded for all the patients, the possibility of any deleterious habits has been ruled out. Many studies reported oral squamous cell carcinoma in young patients with no obvious etiologic factor.[1, 4,5,6,15,16]

Conclusion

The reported cases pertaining to the oral cancer in young patients are increasing especially in a developing country like India and also world wide. This has to be taken as an emergency situation and quick action is needed for early diagnosis and treatment.

References

1. Llewellyn CD, Johnson NW, Warnakulasuriya KAAS. Risk factors for squamous cell carcinoma of oral cavity in young people – a comprehensive literature review. Oral Oncology 2001; 37: 401-418.
2. Llewellyn CD, Johnson NW, Warnakulasuriya KAAS, Linklater Karen, Bell Janine. An analysis of risk factors for oral cancer in young people: a case-control study. . Oral Oncology 2004; 40: 304-313.
3. Rodriguez Teresa, Altieri Andrea, Chatenoud Liliane, Gallus Silvano, Bosetti Cristina Carlo La Vecchia *et al.* Risk factors for oral and pharyngeal cancer in young adults . Oral Oncology 2004; 40: 207-213.
4. Thomas S, Balan A. Oral Cancers- A two year survey. JIAOMR 2003; 15: 3-6.
5. Kuriakose M, Sankaranarayanan M, Nair MK, Cherian T, Sugar AW, Scully C ,Prime SS. Comparison of Oral Squamous Cell Carcinoma in younger and older patients in India. Oral Oncol, Eur J Cancer 1992; 28B:113-120.
6. Son YH, Kapp DS. Oral Cavity and oropharyngeal cancer in a younger population. Cancer 1985; 55:441-444.
7. Sankaranarayanan R, Najeeb Mohideen M, Krishnan Nair M, Padmanabhan TK. Aetiology of oral cancer in patients <30 years of age. Int J Cancer 1989; 59,439-440.
8. Papageorge B Maria. Etiology of oral cancer in the young patient: Is tongue cancer becoming the other cancer in women? Oral Maxillofacial Surg Clin N Am 2007; 19: 163-171.
9. Mackenzie J, Ah-See K, Thakker N, Sloan P, Maran AG, Birch J *et al.* Increasing incidence of oral cancer amongst young persons. . Oral Oncology 2000; 36: 387-389.
10. Schantz SP, Byers RM, Goepfert H, Shallenberger RC, Beddingfield N. The implication of tobacco use in the young adult with head and neck cancer. Cancer 1988; 62: 1374-1380.
11. Chitapanarux, Lorvidhaya V, Sittirai P, Pattarasakulchai , Tharavichitkul E, Sriuthaisiriwong P, *et al.* Oral cavity cancers at a young age : analysis of patient, tumor and treatment characteristics in Chiang Mai University Hospital. . Oral Oncology 2006; 42:83-88.
12. Davis S, Severson RK. Increasing incidence of cancer of tongue in the United States among young adults. The Lancet 1987; 2:910-1.
13. McGregor GI, Davis N, Robins RE. Squamous Cell Carcinoma of the tongue and lower oral cavity in patients under 40 years of age. The American Journal of Surgery 1983; 146:88-92.
14. Liao CT, Wang HM, Hsieh LL, Chang JTC, Ng SH, Hsueh C, *et al.* Higher distant failure in young age tongue cancer patients. Oral Oncology 2006; 42: 718-725.
15. Cusumano RJ, Persky MS. Squamous Cell Carcinoma of the oral cavity and oropharynx in young adults. Head and Neck Surgery 1988;10:229-34.
16. Carniol PJ, Fried MP. Head and neck carcinoma in patients under 40 years of age. Annals of Otolaryngology 1982; 91: 152-5.

*** PG student; ** Lecturer Trainee; ***Post Graduate; **** Professor and Head, Department of Oral Medicine and Radiology, Govt. Dental College, Thiruvananthapuram - 695 011, Kerala**

Enhanced periodontal regeneration through Gem 21S

***Rajeev Chitguppi**

Advances in tissue engineering, understanding of the molecular basis of wound healing and application of recombinant DNA technology have given us a few products that have become available in the market to enhance periodontal regeneration. Recent products - Platelet derived growth factor (Gem 21S), Enamel Matrix Derivative (Emdogain) and Bone Morphogenic Proteins (Infuse) can make Periodontal regeneration more promising and more predictable now.

Growth factors have been undergoing lot of trials since long and out of several growth factors available, the researchers have zeroed in on Platelet Derived Growth Factor (PGDF). It has five forms – AA, AB, BB, CC and DD out of which BB has shown greater potential to induce periodontal regeneration. Recently, a large multi-center human clinical trial demonstrated administration of PDGF to be safe and effective in the treatment of intra-oral periodontal defects as demonstrated by significant gain in clinical attachment level [1].

GEM 21S® Growth-factor Enhanced Matrix (Fig 1)was developed utilizing innovative tissue engineering principles which combine a bioactive protein (highly purified recombinant human platelet-derived growth factor, rhPDGF-BB) with an osteoconductive matrix (beta tricalcium phosphate, β-TCP).[2]

Fig. 1 Gem 21S

This completely synthetic grafting system is engineered to stimulate wound healing and bone regeneration by triggering a cascade of molecular events when implanted into the body that continues on even after the implanted PDGF is gone.

Mechanism of Action

Extensive in-vitro and animal studies have demonstrated that PDGF is a broad acting growth factor with mitogenic (cell proliferation) and chemotactic (cell recruitment) effects on osteoblasts, cementoblasts and periodontal ligament cells. In fact, the PDGF contained in *GEM 21S*® significantly increases the proliferation and migration of osteoblasts and other cells of the periodontium.

Steps:

1. After implantation, PDGF is released from the â-TCP matrix into the surrounding environment (Fig2).

PDGF then binds to specific cell surface receptors on the target cells initiating a cascade of intracellular signaling pathways.

Fig. 2 PGDF in β-TCP matrix

2. PDGF-induced intracellular events lead to directed cell migration or chemotaxis and cell proliferation or mitogenesis (Fig 3) of osteoblasts, periodontal ligament fibroblasts and cementoblasts.

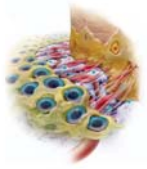


Fig. 3 Periodontal cells-migration and proliferation.

3. Proliferation of osteoblasts, periodontal ligament fibroblasts and cementoblasts lead to increased matrix synthesis (Fig. 4), resulting in formation of new alveolar bone, periodontal ligament and cementum. Angiogenesis (blood vessel formation) continues.

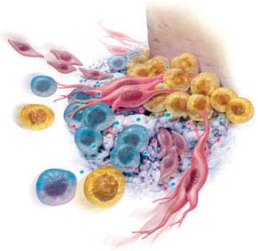


Fig. 4 Matrix synthesis

4. Clinical data suggests that over time (approximately 6 months), maturation of supporting alveolar bone, cementum and periodontal ligament occurs (Fig 5). The end result is enhanced bone and periodontal regeneration and retention of the natural tooth.

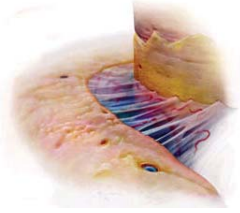


Fig. 5 Periodontal regeneration.

5. The goal of using *GEM 21S*® Growth-factor Enhanced Matrix is to restore normal esthetics, anatomic form (Fig 6) and function.

Fig. 6 Optimum clinical outcome.

1. Nevins M, Giannobile WV, McGuire MK, et al. Platelet-derived growth factor stimulates bone fill and rate of attachment level gain: results of a large multicenter randomized controlled trial. J Periodontol 2005 ; 76 : 2205 -15.

2. http://www.osteohealth.com/GEM21S.aspx (Accessed on 24th Jan 2010)

*** Consulting Periodontist & Implantologist**
www.perioindia.com

Case report

Pendulum appliance in class II treatment

* Sanu Tom Abraham

Abstract

Class II division I malocclusions constitute the bulk of cases requiring extractions to facilitate space gain to correct it. The pendulum appliance is an effective and reliable method for distalizing maxillary molars. Its major advantages are minimal dependence on patient compliance relatively low cost, ease of fabrication, one time activation, adjustment of the springs if necessary to correct minor transverse and vertical molar positions and patient acceptance. All these advantages make it an excellent appliance to be incorporated in regular practice

Introduction

The Pendulum Appliance was introduced by James J Hilgers of California as a mechanism for distalization of molars for class II non-compliance treatment.[1] The pendulum Appliance is a hybrid that uses a large Nance acrylic button for palatal anchorage and 0.032" TMA spring to deliver a light , continuous force to the upper first molar without affecting the palatal button . The appliance produces a broad pendulum of force from the mid palate to the upper molar. Its efficiency has been proved in many clinical studies.[2]

Fabrication

The right and left Pendulum spring , formed from 0.032" TMA wire, consist of a molar insertion wire , a small horizontal adjustment loop, a closed helix and a loop for retention in acrylic button. (Fig 1) The springs are extended close to the centre of the palatal button to maximize their range of motion, to allow for easier insertion into the lingual sheaths and desired amount of forces to an acceptable range. Tongue irritation during swallowing is minimized by extending the springs distal to the button.[3]

The anterior portion of the appliance is welded to the bands on first bicuspids. Anteriorly, the appliance can also be retained by bonding occlusally on first and second bicuspids. The Nance button should be made as large as possible to prevent any tissue impingement. It should be extended to about 5mm from the teeth, to avoid highly vascular cuff of tissue near the teeth.

Pre activation and placement

The molar bands are cemented without the springs engaged. Once the appliance is in place, Pendulum springs are seated in the lingual sheath with the help of Weingart pliers. Distal pressure holds the spring quite effectively in the sheath.

Reactivation and stabilization

The patient should be seen once in every three weeks to monitor the spring. The spring may be reactivated to the desired extent if needed. Once the molars have moved distally they are stabilized in their new position or they will rapidly drift immediately after the removal of pendulum appliance.

The molars can be stabilized by:

1. An upper utility arch hold the molars back with Incisor as an anchorage. The cuspids and bicuspids are then retracted, usually with elastomeric chain. A Nance button is used to augment anchorage

2. The second bicuspid, first bicuspid, and cuspid are serially bonded and a 0.016" stainless steel arch wire passed buccally with an open coil spring to apply a reciprocal force to push the bicuspid (second then first) and the cuspids. Finally the anterior segments is bonded and the incisors are retracted with loop mechanics and the arch is consolidated

Diagnostic criteria

Since the Pendulum Appliance drives the upper molar distally (with slight lingual tipping) quite rapidly , there is a tendency for the anterior bite to open. This open bite generally corrects by itself in brachycephalic patients, but it can be a problem for dolicocephalic types, especially those with tongue thrust habit. Distal movement of the molars appear to be most efficient before the upper second and third molars have erupted. Unilateral class II patient also benefit greatly from Pendulum therapy. There are some cases where forward positioning of one molar due to early loss of deciduous teeth and mesial drifting of the molar is the root cause of the malocclusion. A pendulum spring on one side can regain space without putting undue strain on other parts of the arch.

A fixed rapid palatal expander with incorporated Pendulum Appliance can accomplish dual purpose of rapid maxillary expansion and molar distalization.[4]

Case

16 year old female patient reported to the department of Orthodontics with complaint of upper anterior crowding and proclination (Fig. 2 a,b,c)

Fig 1

Fig 2 Pre-Treatment a

b

c

Fig 3 Initial placement of pendulum After distalization

Fig 4 Post-Treatment a

b

c

d

e

On examination

Extraorally - she was brachycephalic type, with an acceptable facial profile .

Intraoral - examination her molars were in Class II and with all other features of class II Division 2 pattern. For investigation, OPG and lateral cephalograms and study models were made. OPG revealed that her third molars are absent in the upper arch, lower third molars were in the erupting stage.

Treatment Plan

The patients profile was taken into account when the treatment plan was decided,

- To distalize the upper molar using pendulum appliance to gain space
- Correcting the alignment of anterior teeth by fixed appliance therapy
- Correction of molar relation (fig. 3)

Treatment done

A standard pendulum appliance was delivered , anterior portion of the appliance was welded to the banded attachment on first bicuspid, preactivated pendulum springs inserted into molar sheath by Weingart plier. Distal movement of molars were noticed. After 6-7 mm of distalization on both sides molars were stabilized by using a Nance palatal button. Fixed appliance treatment carried out in upper and lower arch by 022 slot Roth appliance. After stabilizing the molars second bicuspid then the first bicuspid were retracted by elastomeric chain. Finally the anterior segment was retracted by T loop. The total treatment time taken for pendulum appliance and fixed appliance was 20 months. (Fig 4 a, b, c, d, e)

Limitations of Pendulum Appliance

1) Torquing or rotation of molars: If the helix loop is not adjusted correctly, the pendulum spring can be distorted and can result in undesirable rotation or torquing of molars

2) Tissue irritation by food and plaque accumulation under palatal acrylic plate.

Conclusion

Patient tolerance of the pendulum appliance is excellent, and is very efficient technique to correct Class II malocclusion without resorting to extractions and with minimal patient compliance. This is simple and easy to fabricate, with minimal laboratory procedure. For better result the appliance should be given very cautiously and before the eruption of third molars.

Reference

1. Hilgers JJ : The Pendulum Appliance for Class II non – compliance therapy : J Clin Orthod 1992; 26: 706-14
2. Comparative distalization effect of Jones Jig and Pendulum Appliance : Am J Orthod Dentofacial Orthop 2009 Mar; 135(3) 336-42
3. Rondeu Brock HM Pendulum Appliance : The functional Orthodontist 1994;14:4-10
4. Snodgrass David J : A fixed Appliance for maxillary Expansion, Molar rotation and Molar distalization : J Clin Orthod 1996; 30:156-9

*** Professor, Department of Orthodontics, Mar Baselios Dental College, Thankalam P.O., Kothamangalam**

Case report

Diagnostic pitfalls

*Rani Mol P., **Ajith Kumar K., ***Anita Balan

Abstract

Correct diagnosis is the firm base of our treatment plan. But in many a cases we are not able to reach the correct diagnosis. Oroantral communication is a situation which poses diagnostic dilemma to practicing dentists. It is a frequent complication after molar extraction. Here is a case report of a patient who had to sacrifice a good period of his life following misdiagnosis.

"Some doctors make the same mistake for twenty years and call it clinical experience"- Dr Noah Fabricant.

Introduction

In medical practice, diagnosis is the process of identifying a medical condition or disease by its signs, symptoms, and from the results of various diagnostic procedures. Failure to reach the correct diagnosis will result in improper treatment. Therapy without accurate diagnosis will be empirical. It is the first step to adequate treatment. Once diagnosis is established a comprehensive management plan can be formulated. However in clinical practice misdiagnosis is often encountered. Misdiagnosis may occur as part of inadequacy of history taking or clinical examination.

Oroantral communication is one such situation where mis diagnosis can occur presenting a diagnostic dilemma to dental practitioners. Commonly oro antral fistulas (OAF) develop after molar extraction. An oroantral fistula is an abnormal communication between the oral cavity and the maxillary sinus. A case misdiagnosed as OAF is discussed here.

Case report

A 46year old male reported to the Oral Medicine Department of Government Dental college, Trivandrum, with complaint of fluid discharge from upper left extraction site and nasal stuffiness (fig 1, 2) of a long standing duration. He had had a difficult extraction of upper left second molar teeth, 20 yrs back ending up in an OAF which was treated with a buccal displacement flap. During the following 20yrs he had repeated episodes of pain and fluid discharge from the site and had to undergo repeated treatment. He had very little symptom free period and had to undergo treatment from various hospitals and specialists. Eventually he was referred to Dental college .Radiographic investigations were done to find out the root cause. Panoramic, Water's and lateral skull views were taken. Radiographs showed cloudiness of the left maxillary antrum and a well defined radiolucent lesion extending into the left max sinus (fig 3, 4).

Biopsy was done and the final report came as **odontogenic keratocyst (OKC).**

Marsupialization was done and obturator was given. Regular check up is being done every month (fig 5, 6). Till date the patient is free of symptoms.

Discussion

Misdiagnosis can be very expensive both for the patient and the doctor. As in the reported case, the patient had to suffer for about 20 years of his life as the doctors could not arrive at a correct diagnosis. The patient has consulted many specialists (including the medical fraternity) for a relief of his symptoms. If someone had found out the exact cause for his misery, he could have efficiently made use the bright years of his life.

The oroantral fistula is common sequelae of difficult tooth extraction (.3%-.8% of extractions). [1,2] Patients may complain of foul taste or smell, passage of food or drink into the nose, symptoms of chronic sinusitis or inability to 'draw' on a cigarette or pipe. Clinical tests can be done like 1) the pt should be asked to attempt to blow air into the pinched nose with the mouth open, if an oroantral defect is present, bubbles appear in the extraction socket.2) Gentle probing with a blunt instrument will confirm the bone defect without perforating an intact lining or 3) the movement of a wisp of cotton wool held near the defect.

OKC is one of the most common jaw cyst which is subject to misdiagnosis. This occurs mostly when OKC occurs in the anterior region of maxillae (canine region) where it can be misdiagnosed as periapical cyst.[3] The histological features of OKC are very characteristic. So a histopathological examination of the suspected lesion is needed apart from clinical examination.

Another entity which can be misdiagnosed as OAF is the patent nasopalatine duct. The patient may be asymptomatic. The nose blowing test used in OAF is

Fig 1: Extra oral photograph of the patient

Fig. 2: Intra oral photograph showing an opening buccal sulcus in the 27 region

Figure 3 and 4: Radiograph showing cloudiness of left maxillary sinus and a radiolucency in the 27 region

Figure 5 and 6: post operative photograph showing the healing site and the obturator in place

found to be positive in cases of patent nasopalatine duct.[4] Other diagnostic tests should de carried out. In such cases also histopathological examination should follow clinical examination.

Diagnosis must be evidence based. Detailed investigation specific for each situation should be carried out. Many a times more information is acquired from general conversation with the patient which is a part of history taking. A doctor-patient bond is formed by such talks. This bond is very important in our clinical practice. Even if a mistake is committed by the doctor it has to be conveyed to the patient .This will help avoid the bitter consequences.

References

1. Punwutikorn J, Waikakul A, Pairuchvej V. Clinically significant oroantral communications—a study of incidence and site. *Int J Oral Maxillofac Surg* 1994; 23: 19–21.
2. Chiapasco M, De Cicco L, Marrone G. Side effects and complications associated with third molar surgery. *Oral Surg Oral Med Oral Pathol* 1993; 76: 412–420.
3. Ali, M., Baughman, R. A. Maxillary odontogenic keratocyst .A common and serious clinical misdiagnosis. J Am Dent Assoc 2003; 134(7): 877-883.
4. Valstar M.H, van den Akker H.P. Patent nasopalatine duct: A diagnostic pitfall. British Journal of Oral and Maxillofacial Surgery 2008; 46(4):304-305.

*** PG Student, **Associate Professor, Dept. of OMFS, Thrissur.**
*****Prof and HOD, Dept of OMR, Govt Dental College, Thiruvananthapuram.**

Case report

Management of mucocele

* M. M. Dayakar, ** Shivananda H, *** Anitha Dayakar

Abstract

Among the non tender, non indurated and fluctuant swellings occurring at lips and buccal mucosa; most common differential diagnosis is salivary extravasation phenomena or also called a Mucocele. This case report explains the simple surgical technique to excise mucocele. A 45 year old man presented to our speciality dental Department, complaining of a painless, non tender swelling just below the left corner of the mouth in relation to lower 1st molar. An elliptic split thickness incision was made to fully enucleate the lesion along with the overlying mucosa and the affected glands, and the lesion was completely excised; which gave excellent results.

Introduction

Small lesions which appear as well circumscribed swellings in oral mucosa, mainly along labial and buccal mucosa, are the common symptoms that bring the patient to the dental office. Swellings in the oral mucosa can occur as a consequence of infection, trauma, developmental lesion or it can be a benign or malignant a condition. Irrespective of severity in symptoms of the lesion, all kinds of swellings requires immediate attention of clinician to rule out possibility of malignancy. Detailed evaluation of the history related to its onset and progression always aid in its diagnosis.

Among the non tender, non indurated and fluctuant swellings occurring at lips and buccal mucosa; most common differential diagnosis is salivary extravasation phenomena or also called a Mucocele. Mucocele is a cyst like lesion occurring by laceration of the minor salivary gland duct. Numerous secreting minor salivary glands are scattered throughout the oral cavity each with its own duct system, having its orifice positioned in the immediate overlying mucosa. Because these ducts are subject to trauma and consequent laceration, leakage can occur, with the secretion escaping into the surrounding submucosal tissue. Pools of mucous collect as a result of this extravasation phenomenon and a visible surface swelling results, called the mucocele.[1] Even though Mucocele is usually not associated with pain, it may cause discomfort for the patient because of its size. The most satisfactory treatment is its excision. This case report deals the most successful management of Mucocele in dental OPD.

Case presentation

A 45 year old man presented to our specialty dental department, complaining of a painless, non tender swelling just below the left corner of the mouth in relation to lower 1st molar. It had been present for approximately 4months which initially began as a small swelling (Fig. 1). There was no relevant medical and family history. No submental or submandibular lymph nodes were palpable. On clinical examination, the lesion was found to be a soft, non-tender, fluctuant, round submucosal swelling, approximately 1 cm in diameter. Dental examination revealed grossly decayed left lower first molar (tooth no. 36) with a sharp cusp impinging the swelling. The clinical findings like its sudden appearance and the fluctuation in size were almost suggestive of an extravasation mucocele, caused by trauma to the mucosa and laceration of minor salivary gland duct by the sharp decayed tooth cusp. Since some salivary gland tumor, such as mucoepidermoid carcinoma, may appear identical; we decided histopathological examination.

The treatment plan included elimination of the etiology and excising the lesion. The decayed lower left first molar was endodontically involved but patient was not complying for pulp space therapy and thus the tooth was extracted.

The lesion was completely excised using scalpel, number 15 blade mounted in a number 3 handle. An elliptic split thickness incision was made to fully enucleate the lesion along with the overlying mucosa and the affected glands, while under local anesthesia. The incision started on the normal mucosa, passed delicately through the stretched epithelial covering of the mucocele and again on to normal mucosa. A plane of separation was gained and followed from the normal to the stretched mucosa by blunt dissection using curved forceps. Additional care was taken to prevent rupture of the 'mucous ball' to ensure complete elimination of the lesion. The entire lesion, together with the attached underlying mucous gland was pushed out through the incision line using slight finger pressure (fig. 2). Finally the wound was sutured (fig. 3). During the recall visit the patient was asymptomatic with uneventful healing (fig. 4). Histopathological study reported (fig. 5) a circumscribed cavity of connective tissue and the submucosa. Wall of the cavity was made of compressed fibrous connective tissue and fibroblasts with numerous leukocyte infiltrations. Lumen of the cyst like cavity was filled with mucoid material, confirming the diagnosis as mucocele.

Discussion

Mucocele can not be considered as a true cyst because its wall lacks an epithelial lining. They are characterized by the accumulation of liquid or mucoid material, giving

Fig. 1 Swelling in relation to the left commissures of lip, decayed 36 can be noticed.

Fig. 2 Following elliptical incision complete submucosal lesion excised in a mass. extraction of 36 can be noticed

Fig. 3 Suture placement for healing in primary intention

Fig. 4 One week post operative healing

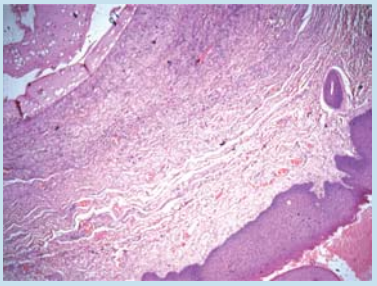


Fig. 5 Histopathology picture confirming mucocele.

rise to a rounded, well circumscribed transparent and bluish-colored lesion of variable size. The consistency is typically soft and fluctuant in response to palpation. Mucoceles are painless and tend to relapse[2].

Mucocele normally appear in the glands that secrete predominantly mucous saliva. It is therefore more frequent to find these lesions in the minor salivary glands, which are distributed throughout the oral sub mucosa, except in the attached gingival regions and in the anterior portion of the back of the tongue[3]. They are most commonly found on the lower lip, accounting for over 60% of all cases and are usually found lateral to midline, but are seldom found in the upper lip. Other less common sites include buccal mucosa, anterior ventral tongue and floor of the mouth.

Another type of minor salivary gland lesion, resembling mucocele, is retention cyst phenomenon, which occurs as a result of chronic low grade, constant surface irritation leading to narrowing of minor gland duct opening and thus decrease or even an absence of glandular secretion. Retention cysts are visible surface swellings but significantly smaller than extravasation mucoceles and these are common in palatal tissues.[4]

Mucoceles located in the floor of the mouth are referred to as "ranulas" (from the Latin terms rana, or frog, and ula, or small), due to the great similarity between these mucosal lesions and the swollen mouth of a frog[5]. In these cases the sublingual glands are affected, and the saliva is mainly composed of mucus. There also have been exceptional reports of mucoceles of the submaxillary glands.

Etiologically, most mucoceles are associated with minor trauma and laceration of the mucosa like biting the lips or cheek, pinching the lip by extraction forceps etc. Mucocele are commonly observed in all decades of life, with increased predilection in children and young adults.

Clinically Mucocele appear as raised, dome shaped vesicles of 1mm to several centimeters. When it is superficial it presents as a bluish, tense, circumscribed, fluid filled swelling, but if placed more deeply in the tissues it appears more pink in color. The reported duration of the lesion can vary from a few days to several years. There may be a history of recurrent swelling that periodically may rupture and release its fluid contents. It is usually asymptomatic, though in some patients they can cause discomfort by interfering with speech, chewing or swallowing[5]. On the other hand, in the case of repeated trauma, the lesion may become nodular and firmer in response to palpation rupture in this situation being more difficult. The most satisfactory treatment is dissection and removal. The earliest time to do this is just before it has reached the maximum tension. The worst time is immediately after it has discharged; the cyst wall then being very difficult to define[6]. Healing is usually asymptomatic and uneventful.

Conclusion

A salivary extravasation phenomenon is among the commonly encountered lesions in dental practice. The simple surgical technique described above can be followed by the general dental surgeons during routine dental practice where in satisfactory results can be achieved.

References

1 Loues Mendel, journal of oral maxfac surg 59;928,2001

2 Eveson JW. Superficial mucoceles: pitfall in clinical and microscopic diagnosis. Oral Surg Oral Med Oral Pathol. 1988;66:318-22.

3 Jinbu Y, Kusama M, Itoh H, Matsumoto K, Wang J, Noguchi T. Mucocele of the glands of Blandin-Nuhn: clinical and histopathologic analysis of 26 cases. Oral Surg Oral Med Oral Pathol Oral Radiol Endod. 2003;95:467-70.

4 Harold mavrmash journal of oral maxfac surg, 60,237-238,2002

5 Harrison JD. Salivary mucoceles. Oral Surg Oral Med Oral Pathol.1975;39:268-78.

6 J. R Moore,Surgeries of the mouth and jaws, Blackwell scientific publication 1985; 438-439.

*** Prof. & Head, ** Sr. Lecturer, Department of Periodontics, *** Sr. Lecturer, Department of Oral Pathology, K.V.G. Dental College and Hospital, Sullia, D.K., Karnataka**

Removal of post from root canal

* Aji Mathew Thomas; **Barry Musikant

Abstract

With all the new technology that has been introduced in endodontics there are now several ways for removal of the post from the root canal. Practitioners often develop their own hybrid technique after sharing ideas with several colleagues, the purpose of this article is to describe the various methods of removal of the post, hoping that others may incorporate some aspects into their own hybrid style.

Introduction

Technologic advancements in dentistry have vastly improved the quality of the care provided to general population, these advancements along with the increased patient education and awareness, have helped to promote the view that dentition should remain, throughout peoples life. As the life span of the population increases, the need to maintain patients dentition for a longer period of time has led to various advancement procedures that where nonexistent years ago, as a result the need for performing conventional root canal therapy also increased dramatically.

Ruddle described this vast increase in endodontics as good news-bad news.

The good news is that hundreds of millions of teeth are salvaged through the combination of endodontics, periodontics and restorative dentistry.

The bad news is that tens of millions of endodntically treated teeth are failing each year for variety of reasons, therefore the future of endodontics will include dealing with the retreatment of its failures.

Case Report

One of my client, who visited my clinic complaining of discoloured front tooth of the upper jaw, looking back into the history of the tooth, he had fall ten years back, and fractured the centrals, and a tooth coloured filling was done.

On clinical examination, it revealed that a composite filling which involves more than the incisal third was done on both centrals, provided there was slight gum inflammation along the gum margins. Vitality test was carried out on both the tooth, and they did not respond to heat.

A radiograph was taken and it showed a periapical radiolucency on maxillary left central incisor, provided an orthodontic wire was used as a post, bent like an umbrella handle. Even the root canal was not visible, a radiograph in a different angulation, revealed a narrow canal.

All treatment options like implant and bridge where discussed, if the orthodontic wire was not able to be removed. With the recent advances in endodontics like ultrasonics, it was easy to remove the post, but since I didn't have it, I had to inform the client about getting the tips, and he dint have the time to wait for me to get the ultrasonic tips for post removal.

Brushing aside through one of the earlier lectures I attended by Dr.Ahkil (prosthodontist), where he had mentioned of using a ultra sonic scalar tip to break loose the cement below the crown, so the crown removal becomes easier.

I informed my client of using the ultrasonic scalar tip and try removing the post, my client being a doctor himself was willing for it.

Composite around the bent part of the post was removed using round bur, so that part of the post was exposed, and the scalar tip was applied at the junction of coronal and middle third, resulting in the post removal. Even post by (dentsply) can be removed by ultrasonic vibrations, provided the vibrations should be applied along the junction of middle and coronal third, not on coronal end of the post, which can result in the post rotating inside the canal.

Further the canal was located and a root canal treatment and post was carried in the tooth, and a follow up periapical xray was advised to the individual, of three months and six months and one year, since he is in a different country, I will be able to se him after one year.

Discussion

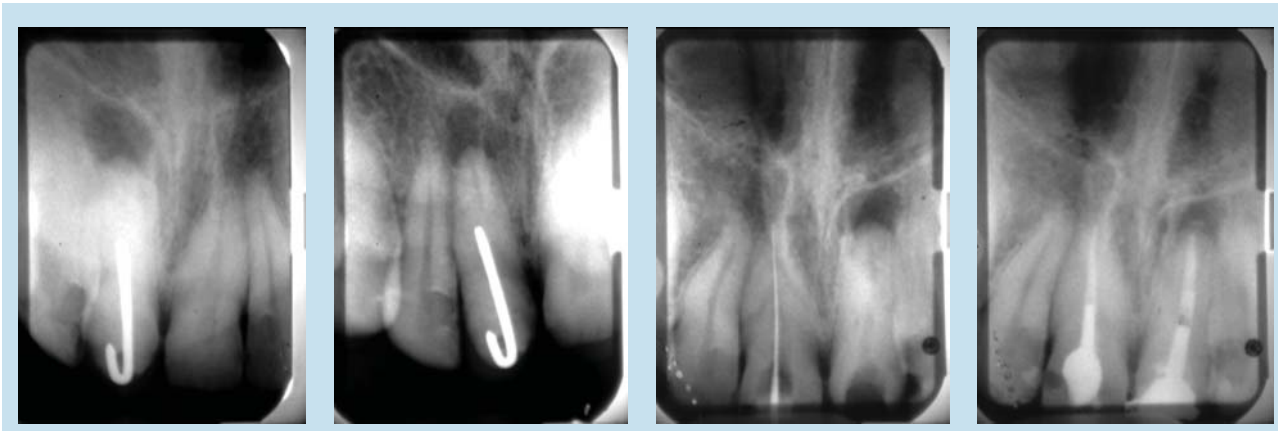
Access for endodontic retreatment cases includes removal of post and core, cast post and cores should be reduced to a single post preparation before removal.

The earlier post removal systems included the Rotosonic which works by vibrations (Roto- Pro-Bur), the Roto-Pro bur is a six sided, non cutting instrument that comes in two shapes, the regular straight tip bur and the football rounded bur.

The bur is placed in a high speed hand piece and rotates along the side of the post.

It is kept in intimate contact in a clock wise fashion to facilitate the loosening and removal of post.

The disadvantages of this system was a coolant was needed since it can cause bony dehiscence, and occasionally the post can break and cause obstructions



in the canal, which results in unforeseen complications, also sonic vibrations may not be enough to retrieve post from root canal system.

Therefore devices have been made to load forces along the long axis of the tooth, to enhance post removal, these devices are the Gonon post puller and Ruddle post removal system and the Masserann Kit. The Gonon post puller and Ruddle post removal system are equipped with trephine burs that allow for milling of the coronal 1 to 3mm of the post itself and have corresponding tubular taps, these taps are a screwed in a counter clock wise motion, onto the post until a snug fit is obtained

The Masserian kit also uses a trephine bur, however one size larger than the post should be selected, the bur should be placed around the post than on the post, this large trephine bur removes excess dentine supporting the post for approximately 3mm into the orifice of the canal wall, afterwards a trephine bur one size smaller than the post is selected, it is screwed into the post with a slow speed latch attachment, the post is removed with a counter clockwise motion. In addition the Masserian kit also has an extractor that makes use of a mechanical device to grasp the post. The disadvantage of masserian kit is the initial unwarranted removal of excess dentin from around the post.

One of the recent advances in endodontics is the use of the surgical operating microscope, which in turn necessitated the evolution of a number of micro-endodontic instruments., among these the ultrasonic instruments have improved the most.

The ultrasonic technique is essentially a nonrotary method of cutting dental hard tissues and restorative materials using piezoelectric oscillations.

Almost all the currently available systems provide the option for using ultrasonic instruments in a wet or dry field, the advantage of a wet field include easier washing of the field and the cooling effect, however the area must be dried to provide the clinician with a clear view of the operating field.

Today ultrasonic tips are being made and coated with different materials. The Enac ultrasonic endodontic system uses stainless steel tips that are effective and very economical. To improve efficiency ultrasonic instruments also have been manufactured with a coating of zirconium nitride(Pro Ultra ultrasonic instruments Dentsply), these tips are designed to function dry. CPR ultrasonic instruments are similar in design to Pro Ultra instruments, except that they are diamond coated and have built in water ports. Diamond coated tips last longer and are associated with greater efficiency when compared to uncoated or zirconium nitride coated tips. Both the CPR and Pro Ultra systems also are accompanied by a set of slender and long tips made from titanium alloys. Titanium alloys provides flexibility and greater vibratory motion to the tips. These tips are end cutting and are employed for cutting deep inside the root canals

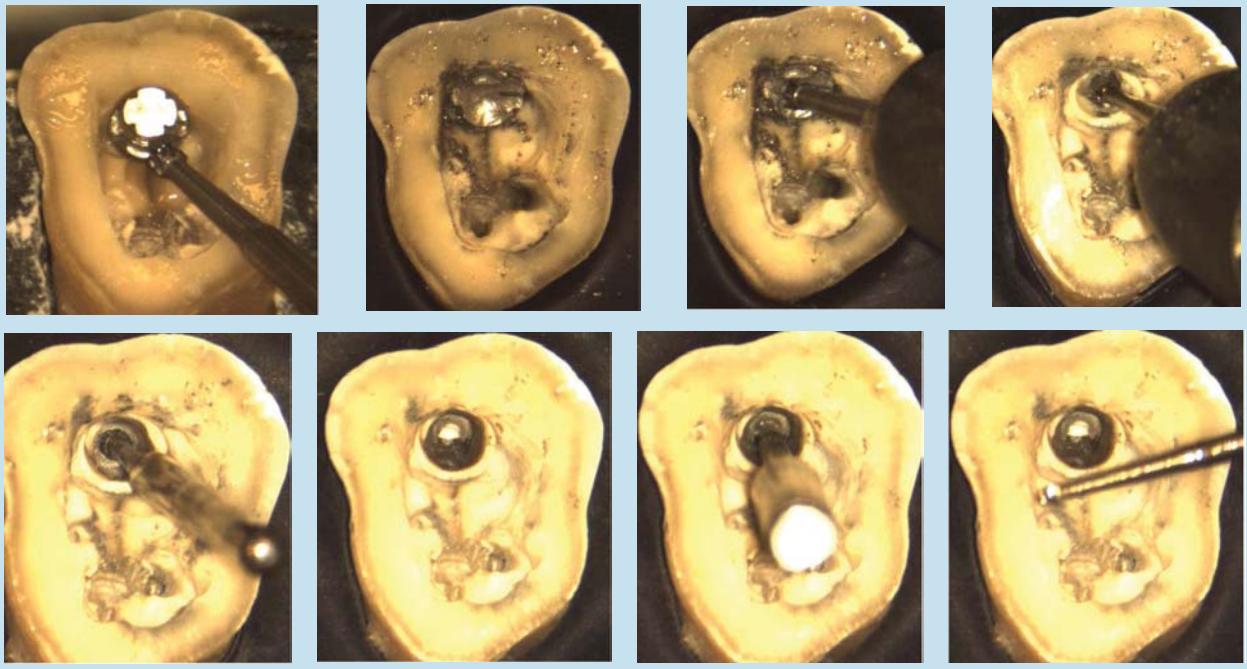
Each instrument system usually comes with its own ultrasonic engine, which is capable of generating ultrasonic frequencies in the range of 20kHz to 30kHz these frequencies generate comparable patterns of oscillations at the tip of the instruments.

The components of the ultrasonic systems can be broadly classified as

1. Access refinement tips
2. Bulk removal tips
3. Troughing tips
4. Vibratory tips

Access refinement tips

The advantages of using access refinement tips when compared to the burs is that there is no hand piece head to obscure vision and therefore the progressive cutting action can be observed directly and continuously under the microscope. The size of the ultrasonic tips is smaller than the smallest burs, therefore the dentine can be brushed off in smaller increments and with greater control, the process allows for exposure of any missed of hidden canals or recesses containing necrotic pulp tissue without gutting down the tooth's structure. Another advantage of ultrasonic instruments over burs is the production of cavitation within the cooling water that flows over the tip of the ultrasonic instruments, cavitation can be described as simply as bubble activity in a liquid, which is capable of generating enough shock



Different stages of post-removal

waves to cause disruption of remnants of necrotic pulp tissue and any calcific deposits, therefore the final result of an access cavities prepared with ultrasonic instruments have a thoroughly washed out and clean appearance

Bulk removal tips

They are extremely sharp and sturdy tips that are operated at moderate or maximum intensity of the ultrasonic unit (eg: BUC 1, CPR 2D). Both of these tips are diamond coated an have an added advantage of a water port placed near the cutting surface of the tip for increased washing and cooling of the operative sites. These tips designed primarily to remove dentine and core material quickly and expeditiously before subjecting the root canal obstruction to vibratory and troughing procedures.

Troughing tips

They are used to create a sufficiently deep trough around post to maximize the benefits of the subsequently applied vibratory or extraction forceps. In the past troughing around the root canal obstruction was performed with trephine drills, this process was extremely destructive and frequently led to the gutting down and perforation of root trunks

Vibratory tips

These instruments have spherical or flat tips, which are placed against the post to transmit vibration, they are activated at the maximum intensity and moved circum-ferentially until the post dislodges. If this method does not loosen and free the post, then alternate method must be used. The inability to remove post by vibration alone is dependent on many factors such as the type of looting agent, length and type of post and type of core build up, the core build up around the post should be removed before applying the vibratory tip. in some cases troughing tip should be used around the post and then vibratory tips should be reapplied to obtain maximum benefit. Post luted with zincphosphate cement can be dislodged readily by ultrasonics, because of microcrack formation in cement. However, post luted with resin cements fail to dislodge by ultrasonic vibrations, probably due to lack of microfracture propagation in this materials.

Conclusion

Technologic advancements in dentistry and specifically endodontics have vastly improved the quality of care rendered to patients. These advancements allow clinicians to gain insight into the retreatment of failing root canals and broken posts. Due to training, practice and patience clinicians can expand their capabilities alongside of these technologic advancements perform post removal and endodontic retreatments with increased success.

Reference

1 The Dental Clinics of North America (volume 48 number 1 January 2004)
2 Ruddle CJ Non surgical endodontics retreatment (pathways of pulp 8th edition 2002)
3 Ruddle CJ Micro endodontics Non surgical retreatment (the dental clinics of north America 1997; 41(3):429)
4 Ingle JI endodontics 3rd edition
5 Lin LM, Skribner JE Gaengler P. Factors associated with endodontics failures. J Endo 1992;18:625

*** General Practitioner ** Graduate of the Pennysylvania School of Dental Medicine, Member of American Academy of Endodontics**

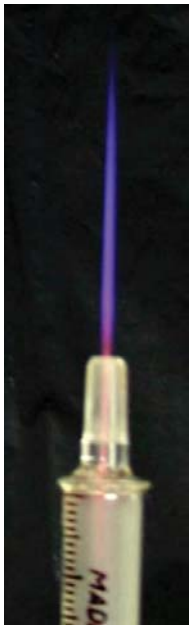
Research Findings

*Bindu R. Nayar

Dentist's Drills Could Be Replaced By Painless Plasma Jets

Plasma jets capable of obliterating tooth decay-causing bacteria could be an effective and less painful alternative to the dentist's drill, according to a new study published in the February issue of the Journal of Medical Microbiology.

Firing low temperature plasma beams at dentin - the fibrous tooth structure underneath the enamel coating - was found to reduce the amount of dental bacteria by up to 10,000-fold. The findings could mean plasma technology is used to remove infected tissue in tooth cavities - a practice that conventionally involves drilling into the tooth. Scientists at the Leibniz-Institute of Surface Modifications, Leipzig and dentists from the Saarland University, Homburg, Germany, tested the effectiveness of plasma against common oral pathogens including Streptococcus mutans and Lactobacillus casei. These bacteria form films on the surface of teeth and are capable of eroding tooth enamel and the dentin below it to cause cavities. If left untreated it can lead to pain, tooth loss and sometimes severe gum infections. In this study, the researchers infected dentin from extracted human molars with four strains of bacteria and then exposed it to plasma jets for 6, 12 or 18 seconds. The longer the dentin was exposed to the plasma the greater the amount of bacteria that were eliminated.



Plasmas are known as the fourth state of matter after solids, liquids and gases and have an increasing number of technical and medical applications. Plasmas are common everywhere in the cosmos, and are produced when high-energy processes strip atoms of one or more of their electrons. This forms high-temperature reactive oxygen species that are capable of destroying microbes. These hot plasmas are already used to disinfect surgical instruments.

Dr Stefan Rupf from Saarland University who led the research said that the recent development of cold plasmas that have temperatures of around 40 degrees Celsius showed great promise for use in dentistry. "The low temperature means they can kill the microbes while preserving the tooth. The dental pulp at the centre of the tooth, underneath the dentin, is linked to the blood supply and nerves and heat damage to it must be avoided at all costs."

Dr Rupf said using plasma technology to disinfect tooth cavities would be welcomed by patients as well as dentists. "Drilling is a very uncomfortable and sometimes painful experience. Cold plasma, in contrast, is a completely contact-free method that is highly effective. Presently, there is huge progress being made in the field of plasma medicine and a clinical treatment for dental cavities can be expected within 3 to 5 years."

Source: Laura Udakis; Society for General Microbiology

Low dietary vitamin C increases risk of periodontal disease.

Specific pathogenic bacteria that produce inflammation and bone loss in susceptible individuals cause periodontal disease. Although researchers have identified most of the periodontal pathogens, the reasons why some individuals are susceptible to periodontal disease are not well understood. One of the factors thought to affect susceptibility is vitamin C. However, is there a relationship between low intake of vitamin C and a greater incidence of periodontal disease? That question was addressed in a study that was published in the Journal of Periodontology (2000;71:1215–1223). The sample for this study consisted of 12,419 adults between the ages of 20 and 90 years that were a part of the Third National Health and Nutrition Examination Survey. This sample of individuals is representative of the US civilian, non institutionalized population. A 24-hour dietary record estimated the dietary intake of vitamin C of these individuals. In addition, a thorough periodontal screening was performed to identify individuals with periodontal disease. Then, the incidence of attachment loss was correlated with the dietary levels of vitamin C. The results of this study showed a statistically significant relationship between reduced dietary vitamin C and increased risk for periodontal disease for the overall population. Current and former tobacco users who also had lower levels of dietary vitamin C were at even greater risk. On the basis of this study, those individuals taking the lowest levels of vitamin C and who also smoke are likely to show the greatest clinical effect on the periodontal tissues.

Long-term low-dose use of antimicrobials for periodontal therapy does not produce drug resistance.

The guidelines for prescribing antibiotics in dentistry have changed significantly in recent years. Today, the American Dental Association has drastically reduced the number and types of patients who require prophylactic antibiotics before dental procedures to avoid producing oral bacteria with drug resistance. However, periodontists are currently prescribing long-term low doses of doxycycline for many of their recalcitrant periodontal patients. Does long-term doxycycline create resistant strains of bacteria? This issue was evaluated in the Journal of Periodontolgy (2000;71:1472–1483). This article compared 4 previous studies by the authors(Thomas J, Walker C, Bradshaw M.) in which subantimicrobial doses of doxycycline were given to adult periodontitis patients. In all studies, up to 20 mg of doxycycline were given 4 times a day to these patients. Then the resistance of oral microbes was evaluated with a variety of tests. The results of this study show that there were no statistically significant differences in the proportion of doxycycline-resistant bacteria among the treatment groups and no evidence of multiantibiotic resistance. In conclusion, long-term subantimicrobial doses of doxycycline do not alter or contribute to alterations in the antibiotic susceptibility of the subgingival microflora compared with a placebo.

***** Professor, Dept of Periodontics, Government Dental College, Thiruvananthapuram**

Diagnose

*** Babu Mathew**

Case 1

Male aged 24, complained off about a fast growing painless swelling of the left side of face. On examination he was found to have a diffuse soft tissue swelling involving the upper half of buccal mucosa, upper buccal vestibule, gingiva on both side of the premolars and molars and also involving the Palatal mucosa. The diffuse swelling was beefy red, firm, non tender vascular and painless histopathological examination (no regional or distal lymph nodes) confirmed the diagnosis.

1. Fibrosarcoma
2. Malignant lymphoma
3. Reticulum cell Sarcoma
4. Swings sarcoma

Ans. 1. Fibrosarcoma

Case 2

Male aged 28 years, sought treatment for generalized enlargement of the gums. He had gingival enlargement from young age and had undergone surgery of the gums about 4years back .O/E Generalized fibrous enlargement of gums. No history of taking any medicine for long periods. Patient's maternal uncle had similar disease.

1. Dilantin hyperplasia
2. Hereditary gingival Fibromatosis.
3. Leukemic infiltration
4. Amyloidosis.

Ans. 2. Hereditary gingival Fibromatosis.

Case 3

Boy aged 14 years complained of in ability to swish water in the mouth, show the teeth right side since last 2 days. He had high fever and headache since last 5 days and when he woke up, on the previous day, noticed the facial changes. Oral examination showed small vesicles and ulcers on the Uvula and soft palate of right side.

1. Bell's Palsy
2. Melkerson Rosenthal syndrome
3. Ramsy-Hunt syndrome
4. Bloom syndrome

Ans. 1. Bell's Palsy

*** Rtd. Prof. Community Oncology, RCC, Trivandrum**

Quiz

*** M.S. Deepa, ** Anita Balan**

1. The probable clinical diagnosis for this lesion is

(a) lymphangioma
(b) hemangioma
(c) mucocele
(d) giant cell granuloma.

2. Identify the lesion?
(a)oral melanotic macule
b)nevi
(c)ecchymosis
(d)amalgam tattoo

3. A 45-year-old patient presented with a painful slow growing mass on the palate. The swelling was smooth and non tender. Histopathathological revealed a mixture of myoepithelieal cells and ductal cels,islands of basaloid epithelieal cells that contain multiple cylindric cyst like spaces resembling swiss cheese pattern.The most probable diagnosis for this condition is

(a)mucoepidermoid carcinoma
(b)ductal pappiloma
(c) pleomorphic adenoma
(d)Adenoid cystic carcinoma

4. "Epidemic parotitis" is
(a) miculicz's disease
(b)uveoparotid fever
(c)mumps
(d) recurrent nonspecific parotitis

5. Which viral lesion presents as unilateral intraoral vesicles
(a)herpes simplex
(b) herpes zoster
(c)herpangina
(d)hand –foot- mouth disease

6. The syndrome of congenital lip pits and cleft palate is

(a)melkersson rosenthal syndrome
(b)van der Woude's syndrome
(c)miescher's syndrome
(d)parry romberg syndrome

7. This patient presented with mask like face,button hole mouth and radiographic finding of generalized widening of PDL space. The diagnosis in this case is

(a) myositis ossificans
(b)scleroderma
(c)SLE
(d)ehler's danlos syndrome

8. The panoramic radiograph of a 25 year old patient showed generalised discontinuity of lamina dura, generalised horizontal pattern of bone loss,wide pulp chambers, short roots and root resorption.

The radiographic diagnosis is
(a) paget's disease (b) hyperparathyroidism
(c)rickets (d)hypophosphatasia

9. A 21 year old female patient reported with pigmented lesionson the face and oral cavity. There was gross facial asymmetry with right side being larger. Upper lip, lower lip and gingivae were enlarged and vascular on the right side. The apt diagnosis in this patient with normal radiograph of the skull is
(a)HHT (b)vascular nevus
(c)sturge weber syndrome
(d)klippel trenaunay weber syndrome.

10. A 7 year old girl presented with obvious facial symmetry, isolated microtia,crumpled distorted pinna,accessory pre auricular tags and pits on the right side. Panoramic radiograph revealed hypoplasia of ramus and condyle on the right side with decreased horizontal dimension of the ramus.The presentation is characterstic of

(a)hemifacial microsomia (b)hemiacial hypertrophy
(c)Pierre robin syndrome (d)apert's syndrome

ANSWERS

1. a; 2. b; 3. d; 4. c; 5. c; 6. b; 7. b; 8. c; 9. d; 10. a

*** Reader, Dept.of Oral medicine and Radiology,Azeezia college of dental sciences and research, ** Professor, Dept.of Oral medicine and Radiology, GDC , Trivandrum**

Secretary's Report and Association News

Secretary's Message

My dear fellow Members,

I am glad to greet you through the first issue of Kerala Dental Journal for the year 2010. It is truly an honor to be the Honorary Secretary Of I.D.A Kerala State .My gratitude goes out to you for placing your confidence and support in me.

The overarching aim of the association is to provide the frame work for co-operation and the exchange of ideas among members. Central to the achievement of this goal is an effective communication infrastructure. In this regard, KDJ is playing an important role. I have no words to appreciate the tremendous effort and hard work put in by our editor Dr. K. Nandakumar.

As in THE GEETHA, Lord Krishna says: "I residing in the intellect of my devotees ,destroy the darkness of ignorance by the resplendent light of knowledge." Let this journal throws light of knowledge to all of you.

Thanking You,
Jai IDA

Kollam
27-1-2010

Dr. Shibu Rajagopal

REPORT OF ACTIVITIES

Report of 42nd Kerala State Dental Conference "IDA KCON – 09" held on Nov 20 - 22, 2009 at The Gateway Hotel, Beach Road, Calicut.

Pre conference CDE	:	Government Dental College, Calicut-20th
Conference Inauguration	:	The Gateway hotel by The Hon Minister for Health & Family Welfare. Mrs. Sreemathi Teacher, Govt. of Kerala.
21st Saturday		
Banquet and Family meet	:	The Beach Hotel, 21st Saturday evening.
AGM of IDA Kerala State	:	The Gateway Hotel, 22nd *Sunday.*
Poster Presentation	:	Fr. Edamaram Square 21-22nd
Trade Fair	:	Father Edamaram Square 21-22nd
Scientific Sessions/ Paper Presentation	:	The Gateway Hotel, Fr. Edamaram Square. 21-22 Nov
Themed Conference	:	'Teamwork & Treatment Possibilities'

Pre-Conference Course:-
FRIDAY

There were two packages on offer and the involvement was restricted to allow a hands-on workshop by participants following the lecture.

The pre-conference course was inaugurated in the Govt.Dental College by Dr.Kunjamma Thomas Principal, KMCT Dental College, Dr. Ipe Varghese-Principal Govt. Dental College, Dr. K. N. Pratap Kumar - President IDA Kerala State, Dr.Antony Thomas - Hon. Secretary IDA Kerala State, Dr. Oommen George - Conference Secretary, Dr. V. Viswanath - Organizing Chairman were also present and spoke on the occasion.

The first package had 3 modules:
1) Interpretation of Intra oral/Extra oral Radiographs.
2) Surgical removal of impacted III molars.
3) Impression techniques with irreversible Hydrocolloids.

The second package consisted of:
1) Full Denture Impressions
2) Alternative to Conventional crowns.
3) An overview of Implant Prosthesis.
4) Lasers:Soft and Hard tissue management.

The two continuing education courses were inter-disciplinary and true to the theme of Teamwork in evolving solutions for patients.

SATURDAY: Main Inaugural

On Saturday, the 21st, the Inauguration was held at 9:30 a.m. by the Hon. Minister for Health Ms. P. K Sreemathi Teacher. The other guests included the Mayor of Calicut City Sri. M. Bhaskaran, Prof. Krishna K Ladha from IIM Calicut and G.S. Pradeep TV Personality. The meeting was presided over by Dr K.N.Pratap Kumar. This lasted for a good 120 minutes.

Scientific abstract and Souvenir was released.

The Trade Fair comprising of 100 AC Stalls was inaugurated

at the Edamaram Ground, opposite 'The Gateway Hotel and the Dental Expo was well attended by exhibitors.

This was followed by lunch.

Post lunch, scientific sessions followed in the Vasco Hall.

A Cultural Meet by many of the 27 branches of Kerala IDA was also held.

The meeting ended by 6:00p.m. and the Family get together/ Banquet was held in 'The Beach Hotel' from 6:30p.m.Wholesome entertainment was organized by a leading Event Management team 'AD-Ventures inc.'.This was attended by about 1500 people and was jam-packed.

SUNDAY

On Sunday, the Trade Fair continued as well as AGM of IDA and elections to Office. Scientific lessons and Poster presentation continued into day two.

The Elections for new Office bearers was held and the AGM was on upto 6pm, with the new President Dr. Samuel K. Ninan assuming the Mantle of President.

The Trade Fair concluded by 6:30p.m. On Sunday.

To sum up, it was a:

- Themed Conclave.
- Fully attended pre-conference courses.
- Record attendance by dentists
- House full Trade Fair.
- Landmark in 42 years of the history of the Association.
- Student Participation in good numbers.

Dr. V. Viswanath
Org. Chairman 42nd KSDC

Dr. Antony Thomas
Org. Secretary 42nd KSDC

Winners of IDA Kerala State Awards

1.Best Local Branch	: IDACentral Kerala Kottayam &Kochi
2.First Runner up.Best Local Branch	: IDA Malappuram
3.Second Runner up.Best Local Branch	: IDANorthMalabar
4.Dr. Samuel K Ninan Award for Best Local Branch President	: Dr. Praveen J .Thayil
5.Runner up Best Local Branch President	: Dr. Afzal VA
6.Best Secretary-Local Branch	: Dr. Vinod Mathew
7.Runner up Best Local Branch Secretary:	Dr. Dr Aby Jose & Dr Anil Thunoli
8.Best CDH Activities	: IDA Central Kerala Ktym
9.Runner Up. Best CDH Activities	: IDAKochi
10.Best Scientific Activities	: IDACentralKerala
11.Runner Up. Best Scientific Activities	: IDANorthMalabar
12.Best Journal / Bulletin	: IDA Central Kerala Ktym& Kochi
13.Membership Growth % up to 31st oct	: IDA Kochi &Malabar
14.IDA HOPE Awards	: IDA Thiruvalla
15.Student Activity Award	: IDA Malappuram & Malabar
16.Best cultural Programme	:Kochi
17.Best cultural Programme Runner up	: Malanadu & Pathanamthitta
18.Dr. K.L. Baby Award for the Best Scientific article in KDJ	: Dr. Manikya Arabalu (P.G Student, Dept.of Prosthodontics, AECS Maaruthi College of Dental Sciences Research, Bangalore .)
19.For the BEST Scientific article in KDJ-Under Graduate Student Category	: Dr. Miss. Anjana Ravindran, (Azeezia College of Dental Science & Research, Kollam)
20. For the BEST Scientific Article in KDJ-Private Practitioner Category	: Dr. Eldo Koshy (Prof. Dept.of Prosthodontics, KMCT Dental College, Calicut.
22.For the BEST scientific article in KDJ-Post Graduate Student Category	Dr. Santha Devi Antharjanam R (Dept.of oral Medicine &Radiology,Govt Dental College Trivandrum)

IDA KERALA STATE OFFICE BEARERS 2009-10

President	: Dr.Samuel K.Ninan	**President Elect**	: Dr.Santhosh Sreedhar
Imm.Past Prresident	: Dr.KN.Pratap Kumar	**1st Vice President**	: Dr.Nizaro Siyo
2nd Vice-President	: Dr.Ranjith CK	**3rd Vice-President**	: Dr.Abhilash.G.S
Hon:Secretary	: Dr.Shibu Rajagopal	**Joint Secretary**	: Dr.Manoj Augustine.J
Asst.Secretary	: Dr.Joseph Edward	**Treasurer**	: Dr.Anilkumar.G
Editor KDJ	: Dr.K.Nanda kumar	**CDH Convener**	: Dr.Joseph CC
CDE Convener	: Dr.Jaibin George		

Executive Committee Members 2009-2010

Dr. Anil Thunoli
Dr. Anilkumar
Dr. Anto Joseph P
Dr. AV Sreekumar
Dr. Baby K Antony
Dr. Biju A Nair
Dr. Deebu Jacob Mathew
Dr. Dinesh Nambiar
Dr. Jayakrishnan PK
Dr. Joaquim Kunju
Dr. Johny Paul Mampilly
Dr. Johnykutty Jacob
Dr. Lalappan K Joseph
Dr. Manoj Joseph Michael
Dr. N Sajith
Dr. Narayanan S
Dr. Pradeep Kumar PJ
Dr. Prasad T
Dr. Premjith S
Dr. Ravindran Nair KS
Dr. Sanal OV
Dr. Sangeeth K Cherian
Dr. Sherry M Joseph
Dr. Sijo Manavalan
Dr. Sijo Varghese
Dr. Sreekumar P Nambiar
Dr. Venu Gopal G
Dr. Vinod Mathew

Central Council Members 2009-2010

Dr. Samuel K.Ninan
Dr. Shibu Rajagopal
Dr. Alias Thomas
Dr. Antony Thomas
Dr. Ashokan C K
Dr. Babu John
Dr. Benny Augustine
Dr. Eapen Thomas
Dr. Mathew Joseph
Dr. M C Mohan
Dr. Nandakumar K
Dr. Oommen Georae
Dr. Pratap Kumar K N
Dr. Raju Kurian Ninan
Dr. Raveendranath M
Dr. Santhosh Sreedhar
Dr. Thomas K C
Dr. Vijayasankaran CR
Dr. Viswanath V

Office Address:
Dr. SHIBU RAJAGOPAL
SR SUPER SPECIALITY DENTAL CLINIC &
IMPLANT CENTRE,
MRA 24/A, MUNDAKKAL WEST,
KOLLAM 691 001. MOB: 09895420059

ISP NATIONAL AWARD FOR IDA KERALA STATE

IDA Kerala State bagged National Trophy for the BEST ORAL HYGIENE DAY CELEBRATIONS instituted by Indian Society of Periodontology. Oral Hygiene day is observed on 1st August by Indian Society of Periodontology throughout the country and Awards for the Best Oral Hygiene Day celebrations are given under the folowing 3 Categories. (1) Dental College Cetegory. (2) Dental Association Category and (3) Scocial and Voluntary Organization Category.

As a part of Oral Hygeine day celebration, IDA Kerala State conducted the following programmes on 1st August 2009 at Payyanur and we bagged the National Award. The programmes conducted includes various Dental Health and Education Programmes, Dental Health Education Seminar for 160 Ankanwadi workers of Payyanur Municipality, Best smile and Health Teeth contest for the selected Ankanwadi children and Essay and Painting competition for the High School Students of Payyanur Municipality.

President Elect IDA Kerala State Dr. Santhosh Sreedhar received this National Award from the Chief guest Prof. Dr. Robert Genco, Professor of Oral Biology, University of Buffalo, New York during the 34th National Conference of Indian Society of Periodontology held at Dharwad, Karnataka on 4th December 2009

CDE REPORT

Dr. Jaibin George
CDE Convener

Dear Friends,

As you all know the face of dentistry is changing, the world over. New materials are entering the market. New techniques are being introduced. Treatment modalities are changing at a rapid pace. To keep in touch with all these we need an avenue. This is where the CDE comes in to play. CDE wing of IDA Kerala state has been monitoring the CDE programmes of the branch and state in an efficient manner during the last few years. CDE programs imparting newer techniques and concepts will attract more members and in turn strengthen our association

Attendance in the CDE programs has attained greater importance due to recent changes in the laws pertaining to dental council registration A minimum of 100 CDE credit hours in 5years is be made compulsory for renewal of dental council registration. All branches have been conducting excellent CDE programs over the past few years. The only problem is that occasionally there is a clash of dates of programs among different branches. This can be avoided, if the CDE wing of the state is informed in advance about the upcoming CDE programs. State CDE wing approval prompt reporting is mandatory to avail credit points and to bid for Awards. Concrete guidelines have been formulated for the benefit of the branches for smooth conduct of CDE programs. State CDE wing can play a great role in coordinating the conduction of branch and state CDE programme in a smooth manner

This year we are introducing a new concept. Combining Education with entertainment. The state office plan to conduct CDE programmes in places of tourist interest with an eye to the active involvement of the family members.

1st State Level CDE (2009-10) was on Sunday 29th Nov 2009.

The topic was Current Concepts & Advances in Dental Implantology with Live Video Surgery. Venue was Saraf Hospital, Ravipuram, Kochi. The Speakers were Dr Sigmar Kop, Dr Varghese mani, Dr Prem nanda, Dr Sreekanth Mallan and Dr Joseph Varghese

2nd State Level CDE Programme is planned at Munnar.

Supported by IDA Green Valley& Malanadu Branches

Its a 2 days programme on Fixed Orthodontics with Hands on

Dates: Feb 6th and 7th

3rd State Level CDE Programme is on march 14th

Will be a free CDE for IDA Members Hosted by IDA Thiruvalla and the venue is Pushpagiri Dental College

Sponsored by Kerala Dental Council and Co sponsored by Dent Care Dental lab Muvattupuzha.

CDH REPORT

Dr. Joseph C.C.
CDH Chairman

IDA Kerala state observed a Special progremme on Pain & Palliative day on January 15th Friday 2010 6.30 pm at LIVA Tower Kunnamkulam. Kunnamkulam br. President Dr.Abdul latheef welcomed the gathering. Dr. Joseph C.C. CDH Convener, IDA Kerala State inaugurated the session and Prof N.N.Gokuldas, Sreekrishna College, Guruvayoor took a session on Introduction to Palliative Care. Discussion with Indian Association of Pain and Palliative Care (IAPC) Kerala at Trichur on Sunday 6-12-09 along with President IDA Kerala State Dr. Samuel K Ninan, Hon. State Secretary Dr. Shibu Rajagopal, CDH Convener Dr. Joseph C C, President IDA Kunnamkulam Branch Dr. Abdul Latheef, Past Secretary IDA Trichur Branch Dr. Ajmal Habeeb, Dr. Deepu Mohandas, Dr Sushanth B, Dr. Nikesh T Gouthaman and other members. IAPC State Sec. Mr. Praveen welcomed the meeting. Dr.Mathews Nambeli and Mr. Latheef were also present.

CDH convener made a presentation about CDH activities in DOTS 2010 (President Secretary Sseminar) on 3rd January 2010 at Kottayam.

IDA Kerala state observed a Special programme on Palliative Day on January 15th Friday 6.30 at LIWA Tower, Kunnamkulam. Kunnamkulam Branch President Dr. Abdul Latheef welcomed the gathering. Dr. Joseph C C, CDH Convener IDA Kerala State inaugurated the session and Prof N N Gokuldas, Sreekrishna College, Guruvayoor took a session on Introduction to Palliative Care.

IDA Kerala State is planning to conduct a special training programme on Pain & palliative care on Sat, Sun 20, 21 March 2010 at YMCA, Alwaye. All the CDH and CDE representatives should attend this meeting. Those who are interested in palliative care are also welcome.

WORLD PALLIATIVE CARE DAY, conducted by IDA at LIWA TOWER Kunnamkulam. Dr JOSEPH C C inaugurated the function,scientific paper presentation & homecare detailles with case presentation was done by Prof: N N Gokul Das (Palliative Care Society, Trichur). Felicitations by BABU .M NAIR (Joint Secratary, Trichur Initiative in Palliative Care), & Dr Sharafudheen- President, IDA Malabar Branch. Dr Mercy Joji introduced the faculty. It was a wonderful experience for the participants. Every one was appreciating IDA KERALA leaders for taking this step.

IDA CENTRAL KERALA - KOTTAYAM BRANCH

REPORT OF ACTIVITY

CDH ACTIVITIES: 2 dental awareness classes and 2checkup camps were conducted in the month of December 2009.

Dental Checkup Camp & Awareness Class At Kidangoor

IDA Central Kerala Kottayam Branch in association with JCI Kidangoor conducted a dental awareness class and checkup camp at Jaycee Bhavan in Kidangoor on 6th December 2009. Dental awareness class was taken by Dr. Praveen J Thayil. 182 patients were checked in the camp. Dr. Bobby Joseph, Dr. Raju Sunny, Dr. Sanju Mathew and Dr. Robin Theruvil did the checkup at the camp.

Dental Checkup Camp & Awareness class at Erattupetta

IDA Central Kerala Kottayam Branch in association with Lions Club Erattupetta conducted a dental awareness class and checkup camp at Lions Hall in Erattupetta on 13th December 2009. Dental awareness class was taken by Dr. Bobby Emmanuel. Dental check up was done by Dr. Bobby Emmanuel, Dr. Savio Thelly, Dr. Sheena and Dr. Sonia Raju.116 patients were screened at the camp.

EXECUTIVE COMMITTEE MEETING

Executive committee meeting was held on 15th December 2009 at Kottayam Club. All the executive committee members participated in the meeting.

BRANCH AGM: Annual general body meeting of the branch was held on 20th December at Hotel Orchid Residency, Kottayam.

CDE PROGRAMME: CDE on Management of medically compromised patients in Dental practice was conducted on 20th December 2009 at Hotel Orchid Residency, Kottayam. The faculty for the day was Dr. George Philip MDS, FDSRCS, FFDRCS, Asst Prof, Dept of Oral and Maxillofacial Surgery, Govt Dental College, Kottayam. 56 members attended the CDE programme

LIVE TV TALK SHOW: Dr. Praveen J Thayil conducted a live TV talk show in Jaihind TV on 30th December 2009 from 1:30 to 2:30 pm. The topic for the interactive show was flourosis in dentistry. The role of Indian Dental Association in creating awareness and management of flourosis was highlighted by Dr. Praveen J Thayil.

IDA KOTTARAKKARA BRANCH

CDH Programmes

8th NOV 2009. IDA Kottarakara branch in association with Panchayath Libraray-Chariparambu conducted an Oral Check Up camp on 8th Nov.2009, 10am-2pm @Panchayath Library Hall,Chariparambu -Anchal. About 60 Patients benefitted the camp. 6 Members of IDA KTR Branch attended the camp'. Prof. Sivadasan Pillai, President, Ittiva Grama Panchayath, inaugurated the camp.

Exe.Committee & General Body Meetings

An Exe.Com. & General Body Meeting held @ Hotel Nadans, Kottarakara On 14th Nov 2009,Saturday 7.30pm,17 Members attended the meeting.

On 20/12/09-7 pm AGM & Installation ceremony were held @ Hotel Nila Palace-Ezhukone, IDA Kerala State President Dr.Samuel K.Ninan was the Chief Guest of the day, and Hon.Secretary, IDA Kerala State Dr.Shibu Rajagopal was the Guest of Honour. Dr.Samuel K.Ninan installed Dr. Baiju P.Sam as the President of IDA Kottarakara Branch 2009-10.

Office bearers of neighbouring branches & almost all members and family of IDA KTR were attended the programme. Variety entertainments were followed the meeting

An Emergency Exe.Com. Meeting held @ Hotel Zam Zam, Punalur on 26th Dec 2009, 7.30 pm. 15 Members attended the meeting.

Other Activities

15 Members from IDA-KTR attended the State Dental Conference held @ Calicut on 21st & 22nd Nov 2009.

IDA TRIVANDRUM BRANCH

The Installation Ceremony and family gettogether of the branch was held on 24th of January 2010 at IMA Hall, Trivandrum. The overwhelming participation was witness to a grand installation ceremony which had Veteran Journalist Mr K P Mohanan as the chief guest, Dr Shibhu Rajagopal, Hon.State secretary as the Guest of Honour and Mr Sanalkumar P C as a Guest.

The New team of Office bearers with Dr Sangeeth K Cherian as its President took over office from Dr Mukesh.The Students confrence 2010 Logo was unveiled by The Hon. State Secretary. More than 142 members participated many of them with their families made up for a total participation in excess of 265.

There were many cultural programs which were orchestrated by Dr Dileepkumar and Dr Arun R.The meeting concluded with a sumptuous dinner.

IDA KOCHI BRANCH

Year 2009 had been a special one for IDA Kochi. Activities at the branch level, state level and national level were present during the year. We had better participation and involvement of members, Greater Cochin Dental Society foundation stone laying etc during the year. And IDA Kochi is proud to have bagged numerous awards at State level in this year.

On the 28th of November 2009, Dr. P.C. Sunil and his team of office bearers took charge of IDA Kochi. The new team thanked the Immediate Past President Dr. Afzal for giving a great momentum for IDA activities.

IDA Kerala State Immediate Past President Dr. K.N. Pratap Kumar was the chief guest and he praised the branch for being rejuvenated and being actively involved in IDA branch and state activities. IDA Kochi was the host branch for the First State CDE program at Saraf Hospital which was organized by the State CDE wing and DISK.

IDA Kochi had its first inter branch CDE program on the 13th of December 2009 at Park Central Hotel, Kaloor. We had 106 participants for the program. The topic was All Ceramics and the Dr. Aqeel Sajjad Reshamvala was the speaker. IDA Kerala state President Dr. Samuel K Ninan was the chief guest for the program. Dentcare Dental Lab, Muvattupuzha supported IDA Kochi in this program and we are thankful to them.

The second inter branch CDE program was held on the 10th of January 2010 at IMA House, Kaloor. The topic was Cosmetic Dentistry- upgrade with composites and the faculty was Dr. T.V. Narayan. IDA Kerala State CDE Chairman Dr. Jaibin George was the Chief Guest and he briefed the members on the CDE program of the state and the CDE point system needed for the Dental Council Registration. The Branch CDE representative Dr. Vinod Kumar R B did a wonderful job by organizing two CDE programs in the early days of this IDA Calendar Year. IDA Kochi had its first Executive Committee Meeting and an emergency executive meeting during the month of January 2010 to decide on various activities of the branch. IDA Kochi held Hepatitis B Vaccination program on the 31st of January 2010 at IMA Hall, Ernakulam. The Immediate Past President Dr. V. A. Afzal along with the President Dr. P.C. Sunil and Secretary Dr. Vinod Mathew gave the vaccinations to 25 members of the branch.

The same day evening we had our Christmas New Year Celebrations at Lotus Club Ernakulam from 7:30pm to 10:30pm. Wonderful decorations, numerous programs by members and their children along with the presence of many new members added color to the function. Dances, songs, riddles, quiz and very many games were present. The Christmas papa showered the kids with chocolates and gifts. All the program participants were given gifts as a token of encouragement. The program came to an end with dinner and fellowship.

IDA NORTH MALABAR BRANCH

Installation Ceremony

29.11.2009 Dr T.V .Rameshan president,and his team of office bearers were sworn in. Variety entertainments and dinner followed.

8.12.2009, First executive meeting: First executive meeting was held at hotel Malabar residency.All the executive members attended the meeting. Plans for the year &various sub commities were formed

25.12.2009, Dental check up camp: Dr.Anil Kumar and Dr.Ranjith Krishnan conducted acheck up camp for students at Rajas high school. About 50 students were exmined during the camp.

25.12.2009, Dental awareness class: Dr Anil Kumar P.Kconducted a dental awareness class at chirakkal rajas high school.

1.01.10, CDH activity: Aashraya special school New year lunch for inmates of Aashraya special school,Thottada was provided by those members of north Malabar branch, who celebrated yheir birth day in december,

5.01.10, 2nd executive meeting Held at hotel Malabar residency

10.01.10, Dental awareness class President, koodali panchayath Kodalipram vaani vilaasam grandhaalayam, pattanur Dr subair conducted adental awareness class

10.01.10, Check up camp, Kodalipram vaani vilasam grandhalayam, Pattanur, About 100 people were examined in the camp. medicines were distributed.Dr Dinesh nambiar,Dr ramesan,Dr Roopesh, Dr Ajay nair,Dr Ranjith participated in the camp

10.01.10, New year celebrations MDS dental shoppe, SM dental lab Held at hotel Malabar residency .music, games for children,magic show followed by dinner.

15.1.10, Pain and palliative day: Malabar cancer society Food and medical expences for the day of pain and palliative wing of Malabar cancer society was taken up by ida north Malabar branch.

IDA ALAPPUZHA BRANCH

Installation Ceremony of the 10th President of IDA Alappuzha Dr. Arun Babu took place on 10th January 2010 at 5 p.m.at Hotel Royale Park, Alappuzha. Dr. Santhosh Sreedhar Pres. Elect IDA Kerala State was the Chief Guest on the occasion. Dr. K.S. Raveendran Nair, Charter Pres of IDA Alappuzha was the guest of honour. After the President called the meeting to order, Dr. Prashant Jacob welcomed the gathering. Then Secretary Dr. Rupesh summarized the various activities in the Secretary's report.

This was followed by the Presidential address of Dr. Tijo Alex. Chief Guest Dr. Santhosh Sreedhar then released the Installation special issue of the Branch Bulletin- *The Venice Voice*. The installation of the 10th President was preceded by the introduction of Dr. Arun Babu by Dr, Ajith Samson. Dr. Arun Babu assumed the office of President by being adorned by the President's collar. After his acceptance speech Dr. Arun Babu installed his team of office bearers-Imm. Past president- Dr. Tijo Alex, President Elect Dr S. Satheesh,Ist Vice President Dr.M. Mathew, 2nd Vice President Dr. Tomy Joseph, Secretary Dr. S. Rupesh, Jt. Secretary Dr. C. Antony, Treasurer Dr. M.G. Kannan, State executive member Dr. G. Venugopal, CDE Convener Dr. Tina Antony, CDH Convener Dr. U. Abhilash, Editor Dr. Vandana Salim, Rep to State Dr. Prashanth Jacob & Dr. Ajith Samson, Executive members Dr. Suresh Mathew,Dr. Rani Joseph, Dr. Capt. Siva Prasad, HOPE Rep. Dr. Jihannuddin, IMAGE Rep.Dr. Binu Mathew, DRS Rep. Dr. Aji Sarasan, Cultural Rep. Dr. Maya Later 4 new members were inducted to the fold of IDA Alappuzha- Dr. Sushant Krishnan, Dr.Vidhu S. Dr. Balagopal and Dr. Joe Bijoy.

Dr. Tina Antony was then installed as the 2nd President of the ladies wing and since President Dr. Siloo could not be present Mrs Yamuna Arun Vice President did the honours of installing Dr. Tina Antony as the President of the ladies wing. Past Secretary and President Elect of IDA Alappuzha Dr. Sathesh introduced the chief guest of the evening. Chief Guest of the evening President elect of IDA Kerala state Dr. Santhosh Sreedhar then delivered the keynote address of the evening.Two members of the branch who reached the milestone of 25 years of practicing their chosen vocation Dr. C. Antony and Dr.Tina Antony were honoured on the occasion. IDA Alappuzha also honoured Dr. G. Venugopal for being elected once again to the IDA state executive.

Felicitations were then offered by Guest of honour and Charter President of IDA Alappuzha Dr. S.Raveendran, Dr. E.K.Antony- President IMA, Alappuzha, Rtn. Vidhu Unnithan President, Rotary club of Alleppy Meeting then concluded with the vote of thanks by Dr.Mathew the 1st Vice president and National Anthem

CDH ACITIVITIES

HEALTH @ SCHOOL – A UNIQUE DENTAL HEALTH PLAN

9th and 11th December 2009 - Teachers' Training program

IDA Alappuzha joined hands with the Zilla Panchayath, and brought out a unique scheme known as Health @ School wherein all school children in Alappuzha district would be screened and all teachers in all schools of the district would be trained in oral health care. This program is one of its kind and has also involved the participation of Alappuzha T. D. Medical College Hospital doctors and other voluntary organizations. As part of this program, on 9th and 11th December 2009 a Teachers' Training program conducted in 2 Sessions and over 300 teachers attended. Hon. Secretary Dr. S. Rupesh imparted the importance of oral hygiene and dental care for School children.

31st December 2009- Health @ school program at Arthunkal Fisheries School, Cherthala. Attended by IDA Alappuzha CDH Convener Dr. U. Abhilash and CDE Convener Dr. Tina Antony. A talk on Dental care was given by Dr. Tina and 200 students of the school were screened by Dr. Abhilash and Dr. Tina Antony for dental problems.

IDA MAVELIKKARA BRANCH

AGM: The AGM was held on the 1st week of November. The AGM elected Dr.Gopakumar.G as the President and Dr.Sajeev.S as the Hon. Secretary for the year 2009-10. It was decided to conduct the installation in Jan 2010.

Installation 2010

Installation of the new office bearers of the branch for the year 2009-10 was held on 10th Jan 2010 at Hotel Bhagavath Gardens ,Chengannur. The chief guest of the day was Dr.Prathap Kumar.K.N. Imm. Past President,IDA Kerala. He installed the New President Dr.Gopakumar.G and the Hon. Secretary Dr.Sajeev.S and all the office bearers.

The meeting was followed by a MUSICAL EXTRAVAGANZA and BANQUET

IDA KASARAGOD BRANCH

Annual General body meeting and Installation ceremony

On 4th December 2009, Installation of new office bearers of IDA took place at IMA hall. Dr. Raghavendra Bhat was installed as the new President, Dr. Rekha Maiya as the Secretary and Dr. Harikrishnan Nambiar as the Treasurerof the branch.

Executive meeting: On 11nth December, 1st Executive meeting took place. Discussion about the programmes to be conducted and discussion of collection of membership fees was done.

CDE Programme: 1st CDE programme of IDA –Kasaragod branch was held on 22 Jan 2010. Our Guest speaker was Dr. Varuni, Psychiatrist . She gave a lecture on "Stress management "which was well appreciated.

Pic of Momento given to our Guest speaker Dr. Varuni by senior member Dr. Sharada Bhat.

IDA KODUNGALLUR BRANCH

The Ist executive meeting was held at IMA hall, Kodungallur on 3.12.2009. The programme for the coming year was the main agenda of the meeting. It was decided to conduct the Ist CDH camp in association with the Kerala Child Welfare Society on 13-12-2009 at Karuvannur.

CDH Programmes

- 1St DENTAL CHEAK-UP CAMP was conducted in association with Kerala Child Welfare Society at Karuvannur Branch of the Society on 13.12.2009. The function was officially inaugurated by the Panchayath President and 87 children benefited from the camp. 7 of our members rendered free dental check-up.
- A DENTAL HEALTH AWARENESS CLASS was conducted by our branch as part of our public health awareness programme. Dr. Tenison Chacko conducted the class for the students, parents , teachers and staff of the Darusalem Orphanage, Ettumuna on 14.12.2009.
- 2nd DENTAL HEALTH CHECK-UP CAMP was a two day programme and was conducted on 15.12.2009 and 16.12.2009 for the students of Govt. Girls High school, Kodungalloor. 200 students were examined by a team of 9 doctors and were given dental health cards.
- 3rd CDH ACTIVITY : A dental health education programme was conducted for the students and teachers of Asmabi College, Kodungallur on 22.12.2009. Dr. Mahesh Narayanan explained about "Today's Trendsetters & Necessity for Early detection and Treatment of Dental Diseases."
- "TOBACCO-A MAJOR HEALTH HAZARD" - A thought provoking class was conducted by our president Dr. Shaji.P.H. for the students of Asmabi College, Kodungallur on 23.12.2009. There was an active interaction with the students about the dangers associated with the usage of tobacco.

1st General Body Meeting was conducted on 17.12.2009 at IMA Hall, Kodungallur. It was attended by 40 of our Members.

There was a detailed discussion on the conference bidding at Malappuram and a conference bidding team was elected and the hosting of the second last state executive meeting in 2010. Our branch has decided to conduct 12 CDE programmes including 8 interbranch CDE programme. The last year's accounts was presented by the Treasurer.

2nd Executive was conducted on 02.01.2010 at IMA Hall, Kodungallur. It was decided to conduct the 1st inter branch CDE programme on 17.01.2010 at Hotel Kallada Regency, Irinjalakuda.

IDA ATTINGAL BRANCH

REPORT FOR THE MONTH OF JANUARY 2010

Annual General Body meeting of IDA Attingal Branch was held at Hotel Ganga, The new office bearers were elected under the leadership of Dr. Premjith as President and Hon. Secretary Dr.Sudeep.S.

Installation Ceremony and Family meet held at Hotel Taj Gateway, Varkala on 10th January 2010 at 5pm

The meeting was called to order by the President Dr. Ashok Gopan. After the Presidential address and Secretary's report, the Chief Guest of the day Dr. Samuel. K.Ninan (IDA State President) installed Dr. Premjith as the President for the year 2010. Our first News letter "IOPA" was released by the Guest of Honour Dr. Shibu Rajagopal (Hon. State Secretary). This was followed by installation of all the office bearers for the year 2010, nearly 150 members participated in the programme.

Various entertainments like Magic show, Caricature drawing and Classical dance were arranged. Family members enjoyed the show. Dinner and Banquet followed.

New office-bearers for the year 2010 with state President and Hon. Secretary

CDH ACTIVITIES OF THE BRANCH

NATIONAL ORAL HEALTH PROGRAMME: National oral health programme was inaugurated by Attingal AEO at Govt: LPS Allamcode. Dr Premjith president IDA attingal branch presided the function. Head mistress and PTA president were also present.

TEACHERS TRAINING PROGRAMME: Teacher's training programme was inaugurated on the same day at BRC training centre, Alamcode, Attingal. BRC resource personnel were also present during this programme. Training certificates were given to teachers at this function.

Attingal AEO inaugurating the National Oral Health Programme

Inaugration by Attingal BPO (BRC Resource Personnel)

IDA MALAPPURAM BRANCH

Ist CDE Programme was conducted on 6th of December, 2009 at Ernad Inn, Malappuram by Dr. Pankaj Maheswari at 10 am. The subject was "Composite Restorations". The President Dr. Deebu Mathew, inaugurated the programme. Dr. Sameer T.A., CDE convenor introduced the speaker. Dr. Rajesh Raveendranathan, Hon. Secretary, delivered the vote of thanks. It was a 7 hour programme which included a demonstration and was attended by 34 members. The programme was sponsored by 3M. Lunch was served as well as tea and biscuits. Certificates of attendance were distributed among the participants.

Ist CDH Programme was held as a screening camp for the free Denture Programme in association with the Nilambur Grama Panchayat on the 20th of December, 2009 at Nilambur Guest House. The camp was inaugurated by Sri. Aryadan Shaukath (President Nilambur Grama panhayath). 120 patients were checked. Drs. P.C. Vijayan, Muhsin, Sujith, Jamsheer & Aneesh participated in the camp.

Ist Executive Committee Meeting was held on the 4th of December, 2009 at Sowparnika Inn, Puthanathani at 8 p.m. The president, Dr. Deebu Mathew presided over the meeting. 18 executive committee members and 3 observers were present. The future programmes of the year were discussed. The meeting was adjourned for fellowship and dinner.

2nd Executive committee Meeting as held on the 7th of January, 2010 at 8 p.m. the president Dr. Deebu Mathew presided over the meeting. 18 executive committee members and 3 observers were present. Pain and Palliative day, upcoming CDEs and CDH programmes were discussed. The meeting was adjourned for fellowship and dinner.

Installation Day was held as the first family programme with colour programmes on the 27th of December 2009 at Sowparnika Inn, Puthananthani. The official function was presided by the installing officer, Dr. Samuel Ninan, President, IDA Kerala State. The guest of honour was Advocate Saidalikutty. This was follows by song and dance prgrammes by our own members. There was also an interative motivational session by renowned speaker Mr. Bharatdas. 43 members and their families were present. Dinner was serviced with songs by Cochin Harisree in the background.

IDA KODUNGALLOOR BRANCH

The Installation ceremony of the office bearers of IDA Kodungallur Branch 2009-10 was held at IMA Hall, Kodungallur on the 15th of November 2009. IDA Kerala state President Dr. Samuel K. Ninan was the Chief Guest of the evening and State CDE Convenor Dr. Jaibin George was the Guest of Honour. State President installed Dr. Shaji.P.H. as our President and this was followed by the swearing-in of the team for 2009-10. The editor Dr. Sunitha Pradeeksh presented the first copy of our official publication Imprints to the Guest of honour, Dr. Jaibin George who officially released the journal. The official function was followed by variety entertainment including magic show for kids and familes and gala banquet.

The Ist executive meeting was held at IMA hall, Kodungallur on 3.12.2009. The programme for the coming year was the main agenda of the meeting. It was decided to conduct the Ist CDH camp in association with the Kerala Students' Welfare Association on 13-12-2009 at Karuvannur.

IDA CHALAKUDY BRANCH

Installation ceremony.

Installation meeting of the office-2010 of our branch was conducted on 19th December 2009. Dr. Jolly Ambooken was installed as new President. 2nd volume of our magazine Ozone was released on this occasion by Dr. Ommen George, our past state president. Former state secretary Dr. Antony Thomas was the keynote speaker. Report of 2009 activity was presented by Dr. Sabu. S. Thazhath.

Dental Camp at Outreach Clinic2.: Out-reach clinic-2 functioned at Madonna (an institution for the mentally disabled) on 3rd January Sunday. Dr. Aby Hormis, Dr. Laiju Seby and Dr. Beryl Paul rendered dental treatments : Extractions, scaling, Fillings etc. to 16 patients.

First general body meeting was conducted on 18th January at Vyapara Bhavan A/C hall with a strength of 22 members. Decision was taken to express willingness to conduct the national sports day at Chalakudy. A committee was formed for the conference bidding of the 43rd K.S.D.C. Dr. Mathew Mathew delivered a lecture on cosmetic dental surgery – a dental surgeon's view

IDA MALABAR BRANCH

Installation Ceremony: The new set of office bearers took oath in the glittering installation ceremony on 27th of December 2009. Renowned Novelist Mr. K.P. Ramanunni was the Chief Guest of the function. The installation ceremony was called to order sharp at 11.30 am. The meeting started with a prayer. After the presidential address and presentation of the presidential awards by the outgoing President Dr. Girish Kumar. P.K, Chief Guest Mr. K.P. Ramanunni gave a thought provoking speech. After that, the IDA State President Dr. Samuel K. Ninan installed the new president. Dr. Samuel K. Ninan gave a wonderful speech, touching all aspects of IDA.

New Year Celebration & Family Get Together: The New Year celebration and a family get together was conducted on the afternoon of 27th December 2009. The New Year cake was cut by our State President Dr. Samuel. K. Ninan. 51 members along with their family attended the function.

President's & Secretary's Seminar: President's & Secretary's Seminar of IDA Kerala State (DOTS 2010) was held on 3rd of January 2010 at Hotel Orchid Residency, Kottayam. The seminar was attended by our President Dr. Sharafuddeen. K. P, Past State Secretary Dr. Antony Thomas, State First Vice President Dr. R. K. Nizarosiyo, State CDH Convener Dr. Joseph. C. C and Secretary Dr. Manoj Joseph from our branch.

Ist Executive Meeting: The first executive meeting of the IDA Malabar branch was held on 14-01-2010 at IDA Hall, Ashokapuarm at 7.30 pm. 23 executive members were attended the meeting. Various subcommittees were formed and important decisions were taken. President Dr. Sharafuddeen. K. P released the detailed programme chart for the year 2010. The meeting was sponsored by President Dr. Sharafuddeen. K. P.

Pain and Palliative Care Day: Our President Dr. Sharafuddeen. K. P and Secretary Dr. Manoj Joseph along with our State CDH Convener Dr. Joseph. C. C attended the State level Inauguration of the Pain & Palliative Care Day celebrations at Liwa Tower, Kunnamkulam on 15th January 2010.

1st CDE Programme: Our 1st CDE programme was held on 24th of January 2010 at 10.30 am at IDA Hall. The topic was "Radiographic Interpretation Logic – Crack the Code" by Dr. Valsa Thomas, Professor & HOD, Dept. of Oral Medicine & Radiology, Govt. Dental College, Calicut. 47 members attended the CDE programme. Dr. Moideen Shah Chamba Memorial Award for the Oral Medicine topper from Govt. Dental College, Calicut was given away by Past State Secretary Dr. Antony Thomas to Miss. Sabna. K. P during this function.

Dental Camp at Kottooli GLP School

On 24-01-2010, in association with the Kottooli Central Powra Samithi, a dental camp was organized at Kottooli. Our member Dr. Arun. J. O along with some student members from Govt. Dental College, Calicut examined the patients. 154 patients were benefited by the camp.