ABSTRACT

It is generally understandable that a major cause of the failure of root canal therapy is an inability to localize and treat all of the canals of the root canal system. The risk of missing anatomy during root canal treatment is high because of the complexity of the root canal system.

One must understand that all teeth may have extra roots and/or canals, but the incidence is higher in premolars and molars. In addition, lateral ramifications of the root canal system may be present in all teeth with a significant frequency, increasing the probability of leaving untreated spaces after root canal therapy.

Prevention of missed anatomy starts with good pre-operative radiographs, even though radiographs have limitations in assessing the number of canals and the presence of accessory canals and anastomoses. A correct access cavity preparation is of central importance in localizing the orifices of the root canals.

The impact of missed anatomy on the outcome of endodontic treatment is difficult to predict although theoretically it will be a failure. The clinical impact of missed anatomy can be clearly demonstrated with a large number of re-treatment case reports available in the literature; in the majority of these cases, failure of endodontic therapy is associated with untreated canal space. Localization and treatment of this missed anatomy typically leads to complete clinical and radiographic healing.
Oroantral Fistula: How To Prevent And Manage Properly

David B. Kamadjaja
Oral & Maxillofacial Surgery Department, Faculty of Dentistry, Airlangga University, Indonesia

ABSTRACT

Oroantral communication (OAC) is unexpected communication between maxillary sinus and oral cavity which may occur after extraction of posterior maxillary teeth. Undetected post extraction OAC may eventually become oroantral fistula (OAF) which is a permanent communication between maxillary sinus and oral cavity. OAF usually result in chronic infection of the affected antrum (sinusitis) which further complicate the condition. It is therefore important that OACs be identified and managed accordingly in order to prevent the occurence of OAFs because they, if do occur, would usually require longer and more complicated treatment. This paper outlines various aspects of maxillary antrum related to dental extractions and discusses the step-by-step procedures in the management of oroantral communication as well as oroantral fistula.

Correspondence: David Buntoro Kamadjaja, Oral & Maxillofacial Surgery Department, Faculty of Dentistry, Airlangga University, Indonesia, email: davidbk65@gmail.com
Orthodontic Complications Considerations to Remember to Prevent Running into Problems

Chng Chai Kiat
Dental Service KK Women’s and Children’s Hospital, Singapore

ABSTRACT

The risks associated with orthodontic treatment are a reality, complications being a result of a multifactorial process, including aspects related to patient, orthodontist and the technical features of orthodontic appliances and procedures. These can be prevented by knowing the possible complications that may arise from orthodontic treatment and can be limited through identification and implementation of best treatment alternative for each individual case. Patient’s compliance is an important factor that can contribute to a high standard outcome, with minimum side effects. In this lecture, we will be covering complications in relation to TMJ, periodontal, allergies and to the dental structures in general. Treatment planning will also be covered to show how best to plan an orthodontic treatment to minimise complications from arising.

Correspondence: Chng Chai Kiat, Dental Service KK Women’s and Children’s Hospital, Singapore, email: chng.chai.kiat@kkh.com.sg
The Flow, When, and Where
Rudi Wigianto
General Practitioner, Rudi Dental Clinic, Denpasar, Bali

ABSTRACT

Modifications of composite resin, as one of tooth restoration materials, are not only on the use of bonding, phisical and aesthetic properties, but also on how to use, which is getting easier on its application. Flowable composite resin is known to have many advantages, that it can prevents marginal leakage, high shrinkage on pulpal wall, with minimally invasive occlusal class I. This flowable composite can also be used to repair: porcelain fractures in non-stress-bearing area, leakage in amalgam fillings, any defect on enamel, and also for cementation or luting in porcelain and composite resin veneers. Flowable composite can also be used for surface texturing using brush. Latest generation of this flowable composite is bulky type that can be used in large cavities. This will easier our restoration work while also prevents porosity and high shrinkage.

Keywords: flowable composite resin, bulky flowable, texturing, porosity, composite filling

Correspondence: Rudi Wigianto, Rudi Dental Clinic, Denpasar, Bali;
Email: rudiw@dps.centrin.net.id
Sleep Apnea: The Case for Oral Appliances

Himawan Halim
Department of Orthodontics, Faculty of Dentistry
Trisakti University, Indonesia

ABSTRACT

There are different therapeutic options for treating obstructive sleep-disordered breathing, non and surgical. Non-surgical therapeutic options include the use of oral appliances. An oral appliance such as an oral myofunctional appliance is commonly regarded as a simple, silent, bed-partner friendly, less invasive, reversible, tolerable, and efficacious choice. Orthodontists, based on their knowledge and training with functional appliances and their skills to evaluate jaw position and tooth movement, are ideally suited to provide oral appliances as an effective form of therapy.

Correspondence: Himawan Halim, Department of Orthodontics, Faculty of Dentistry, Trisakti University, Indonesia, email: himdmd@yahoo.com
Dental Implant Failure; Related Factors and Clinical Cases

Watanabe Megumi
Oral and Maxillofacial Prosthodontics and Oral Implantology Department,
The University of Tokushima, Institute of Health Biosciences, JAPAN

ABSTRACT

Oral implant therapy has been accepted as a predictable dental treatment and is recognized as effective treatment option for edentulous during patients.

As is widely known, the success rate of dental implant is more than 95%, but there are still some cases of failure. In this presentation, I will show clinical cases of ‘dental implant failure’ and how we tried to recover them in the University of Tokushima Japan.

Correspondence: Watanabe Megumi, Oral and Maxillofacial Prosthodontics and Oral Implantology Department, The University of Tokushima, Institute of Health Biosciences, JAPAN, email: megwat@tokushima-u.ac.jp
The dental abscess is a difficulty of decay of the tooth. It can also be caused by tooth trauma when a tooth is chipped or broken. Any opening in the enamel of the tooth lets bacteria in to cause an infection of the tooth center known as the pulp. The infection can spread from the tooth root and into the bones which support the tooth. Bacteria from dental caries (a tooth cavity) can extend into the gums, the cheek, the throat, beneath the tongue, or even into the jaw or facial bones. A dental abscess can become very painful when tissues become inflamed or due to the pressure within the abscess. A gum or gingival abscess is the result of infection or trauma to the surface of the gum tissue. Periodontal abscesses are the result of an infection that has moved deeper into gum areas, and a periapical abscess refers to a tooth with an infection of the pulp. The success of both periodontal and periapical abscesses therapy depends on the elimination of both disease processes, whether they exist separately or as a combined lesion. Diagnosis is paramount to determining the course of treatment and overall prognosis. This paper aims at presenting a comprehensive review of several aspects of periodontal and periapical lesions.

Key words: Periodontal lesion, periapical lesion, dentoalveolar infection

Correspondence: Widowati, Kulliyyah of Dentistry, International Islamic University Malaysia, Bandar Indera Mahkota 25200, Kuantan, Pahang Darul Makmur, Malaysia, email: drwidowati@iium.edu.my
Management of Complete Denture in Flat Edentulous Ridge

Mee-Kyoung Son
Department of Prosthodontics, Chosun University, KOREA

ABSTRACT

Loss of teeth induces the patient’s psychological, aesthetic and functional problems. If the edentulous condition persists for a long time, problems such as severe alveolar bone resorption, degenerative changes of TMJ, muscle atrophy can be caused and the treatment would be very difficult and complicated. Therefore, before the problems occur, the aesthetic and functional recovery through the complete denture fabrication is needed. Some edentulous patients who visit dental clinic for the complete denture have severely resorbed ridges caused by anatomic, metabolic, and mechanical factors. The treatment for atrophied ridges is a clinical challenge faced by dentists because prosthodontic rehabilitation of a patient with compromised edentulous ridges in a conventional manner is a difficult task. Severe ridge resorption results in increased inter-arch space, sunken appearance of cheeks, non retentive dentures without ability to withstand the masticatory forces, unstable dentures with associated pain and discomfort. The negative effects of ridge atrophy should be managed by modifying the conventional procedures of fabricating a complete denture. In this presentation, modifications in occlusal, impression and polished surfaces of denture will be described to manage the patient who has flat edentulous ridge.

Correspondence: Mee-Kyoung Son; Department of Prosthodontic, Chosun University Dental School, Gwangju, KOREA; email: son0513@chosun.ac.kr
Direct Aesthetic Restorations For One And All

Jennifer Neo
Endodontics, Operative Dentistry and Prosthodontics, Faculty of Dentistry, National University of Singapore

ABSTRACT

Composite resins have become the standard of care in many situations. Yet, this seemingly simple technique is fraught with problems if we as dentists do not pay attention to the number of issues arising from the use of material. Armed with this knowledge, we will be able to maximize the use of composites in numerous situations providing a quality of care that is not only aesthetic but certainly minimally invasive and of satisfactory longevity for our patients.

Correspondence: Jennifer Neo; Endodontics, Operative Dentistry and Prosthodontics Department, Faculty of Dentistry, National University of Singapore; email: dennnj@nus.edu.sg
The Current Concept of Anchorage System in Orthodontic Treatment

Narmada Ida Bagus
Department of Orthodontic, Faculty of Dentistry
Airlangga University Surabaya-Indonesia.

ABSTRACT

The anchorage system is part of orthodontic therapy and the resistance to unwanted tooth movement due to reaction of buccal segment for space closure. Orthodontic treatment of malocclusion with the problems severe crowding, excessive overjet, bimaxillary protrusion and many posterior teeth mutilated, the operator should be able to determine minimum, medium, maximum and maximum plus of anchorage to achieve treatment goal. Extraoral anchorage, such as head gear, is traditionally used to reinforce anchorage and the current concept of anchorage system is TADs (Temporary Anchorage Devices) are many terms used in orthodontic skeletal anchorage such as, skeletal anchorage system, mini-screw, micro-screw, mini-implant, micro-implant and mini-screw implant. Placement of TAD is minimally invasive and often completed using only local anesthesia. Its can be usually inserted through the gingival tissue into bone with a screwdriver. The location chosen should be the optimal one in terms of anatomic limitations and biomechanical considerations.

Key words: anchorage, orthodontic treatment

Correspondence: Ida Bagus Narmada, Department of Orthodontic, Faculty of Dentistry Airlangga University Surabaya-Indonesia. Jln. Mayjend Prof Dr Moestopo No 47 Surabaya 60132. E-mail: dr_narmada@yahoo.com. Mobile phone: + 62 81 131 6694, Fax: + 62 31 5020
**ABSTRACT**

**Introduction**: In modern dentistry, patients are demanding not only enhancement to their dental esthetics, but also their overall facial esthetics. To achieve the demanded results can be challenging especially in dental practice. No single modality can accomplish all the complex aesthetic impacts needed for satisfactory improvements. Neuromodulation using Botulinum toxin and soft tissue augmentation via hyaluronic acid fillers may be used to correct aesthetic defects such as wrinkles, thin lips, asymmetrical facial appearances, peribuccal volume loss, and others.

**Objective**: To review botulinum toxin and filler augmentation as minimal invasive aesthetic procedures in dentistry.

**Materials and Methods**: Technical details, aesthetic benefits and risks regarding botulinum toxin and filler augmentation with hyaluronic acid to refine dental and overall facial esthetics are described. Typical instructional cases of patients were detailed.

**Results**: Dental and overall facial esthetics are effectively achieved using botulinum toxin and filler augmentation. Using correct methods based on anatomical approach and clinical knowledge, these minimal invasive aesthetic procedures are performed safely with minimal risk of complication.

**Analysis and Conclusion**: Anatomical analysis and patient selection are essential to achieve effective results. It is also important that patients receiving these procedures understand the realistic expectations, advantages and limitations. Botulinum toxin and filler augmentation indicated for dental and overall facial aesthetics may be considered as minimal invasive aesthetic procedures in dentistry.

Correspondence: Adri D. Prasetyo, REJUVA Skin & Beauty, Surabaya, Indonesia; email: adri_dermatology@yahoo.com
Bitter Taste as Dipsruptive Sign in Homeostasis

Jenny Sunariani
Oral Biology Department, Faculty of Dentistry, Airlangga University, Surabaya-Indonesia

ABSTRACT

Background. Taste is very important in human life, without taste the world seems so nothing. Taste is divided into five basic tastes. The five basic tastes are commonly recognized by a receptor. Humans can perceive these tastes through sensory organs called taste buds, concentrated on the upper surface of the tongue. Scientists have described five basic tastes as bitter, salty, sour, sweet, and umami. Inspite of the five basic tastes, human can also recognize two additional tastes, such as: water taste and metallic taste. Each of taste has a different function, but it totally depends on each other to work well. One of the most important tastes is bitter taste. Bitter is usually known as an unpleasant taste, but inspite of this condition, bitter taste indicates so many effects in human’s body. If someone feels the bitter taste of excessive, it shows there are some disturbances in his body. Bitter taste is perceived when there is a bitter substance entering in the mouth. Bitter taste is perceived by α1-G Protein, is usually called gustducin. This protein will activate phospholipase C (PLC). PLC in human is divided into two components, such as: Dialglycerol (DAG) and Inositol Tri-phosphat (IP3). IP3 will release Ca²⁺ from Endoplasmic Reticulum to cytosol. This increasement of Ca²⁺ will be perceived as a bitter taste. Bitter taste is commonly known when there are so many Ca²⁺ in cell, not only by IP3 but also by through pass on the membrane calcium. Bitter taste is commonly perceived in some conditions, such as: someone doing too many exercises, fasting, someone suffering fever and cancer. Purpose: The main purpose of publishing this journal is to let someone know about the realtionship between bitter taste and homeostasis. Conclusion: The mechanism of bitter taste is to increasement intracellular Ca²⁺ that can caused depolarization, potential action will be occurred and there arose a bitter taste improvement in the oral cavity.

Key words: Taste, bitter taste, IP3, DAG.
Correspondence: Jenny Sunariani; Oral Biology Department, Faculty of Dentistry, Airlangga University, Surabaya-Indonesia; email: jennyagoes@gmail.com
ABSTRACT

Day in and day out there is a battle going on in your mouth. Bad bacteria attack your teeth and gums causing gum disease, bleeding and potentially the loss of teeth. The body’s own good bacteria fight the bad ones, but our modern lifestyle makes their job difficult. They need reinforcements.

Three out of four adults will experience gum disease in their lifetime. The incidence of gum disease is high, underlining the importance of recognizing the signs of early gum disease (gingivitis) before it may progress to periodontitis and eventually lead to the destruction of bone and tooth loss. Almost all gum disease is caused by bacterial plaque. Some bacteria in plaque release substances which may be irritating and toxic to the gum tissue resulting in a local inflammation in the gum tissue. The disease is progressive and often the patient does not experience until the teeth are loose and ready to be lost. Frequently the signs of the gum disease cannot be seen just by looking in the mouth.

The most common cause of gingivitis is inadequate oral hygiene. The first measure in gingivitis treatment is to instruct the patient on good oral hygiene practices and to regularly visit dental professionals for tooth cleaning in order to remove plaque. However, both gingivitis and plaque may develop again even with thorough brushing and flossing. The effect of professional cleaning lasts one to three weeks before plaque and gingivitis start to develop again.

Bacteria constitute a major component of the oral environment where more than 800 different microbial species co-exist, making the oral cavity the most diverse microbial population of the body. The biofilm is the preeminent form by which colonies of microbes grow, proliferate and mature. A balanced oral microbial environment is essential for the promotion of health and prevention of gum disease.

The ecological plaque hypothesis states that caries and periodontitis, the most common biofilm-associated diseases in the world, originate from a disturbance in the balance and diversity in the biofilm.
Contributing causes maybe inadequate oral hygiene, incorrect diet, stress and/or other factors which determine the micro-ecology.

The oral micro flora is at least as complex as the gastro-intestinal and vaginal micro flora and consists of hundreds of different kinds of bacteria away. Some beneficial bacteria are referred to as probiotics. The term probiotics comes from the Greek pro bios (for life) and is defined by WHO as “live microorganisms which when administered in adequate amounts confer a health benefit on the host”. Most friendly bacteria belong to a group known as lactic acid bacteria (Lactobacillus), which are naturally found in the mouth, stomach and intestines from the first days after birth and throughout life. However, modern hygiene standards and changes in eating habits have resulted in a reduction of these bacteria compared with just a few decades ago. By taking probiotics daily it is possible to restore the good and natural balance in the mouth and recreate the healthy ecology.

Lactobacillus reuteri (L. reuteri) is recognised as a true probiotic thanks to its documented positive effects on human health and that it meets all the requirements of a modern probiotic. L. reuteri is a natural colonizer in humans from time we are born and is even found in the milk of breastfeeding mothers. It is one of very few species of Lactobacillus that uniquely adapted to reside in the digestive and oral tract of man and to interact with us in symbiosis.

L. reuteri Prodentis is the patented combination of two complementary strains of Lactobacillus reuteri that were originally isolated from human breast milk and saliva. Lactobacillus reuteri DSM 17938 and ATCC PTA 5289 are specifically selected for their exclusive properties of colonozation in the oral cavity, fixation to mucins and biofilms effects.

Supplementation of Lactobacillus reuteri Prodentis affects the oral micro flora locally by competing for binding sites and nutrients with pathogenic bacteria. In addition, Lactobacillus reuteri Prodentis produces reuterin that directly inhibits growth of pathogenic bacteria. Lactobacillus reuteri Prodentis does not only suppress the emergence of endogenous pathogens and prevent superinfection with exogenous pathogens, but might also protect the host by stimulating the immune system.

Lactobacillus reuteri Prodentis is the first and only probiotic specifically formulated to restore the oral micro flora in a natural, fast and simple way. It is the most studied probiotic in oral health. To date more than ten studies have been published proving its safety and health promoting affects. Clinical studies have shown the synergistic properties of Lactobacillus reuteri Prodentis in reducing plaque, halitosis, gingivitis and periodontitis.
Orthognatic Surgery on Post Labio and Palatoplasty Patient

Setyo Harnowo

ABSTRACT

Case on 31 years old woman with a diagnosis of Class III Malocclusion Angle with 12 mm overjet post labio and palatoplasty. Etiology from family there is no one who suffer labio and palatochisis (including the 60% of the causes are unknown / congenital). Possibly related to his father’s job in nuclear reactor, there are cases from the children of his father colleague in nuclear reactor who suffer cleft lip and palate, eye abnormalities, mental retardation and deaf mute.


Sefalometri analysis result: skeletal analysis SNFH 9°, SNA 79° (Normal 80°-82°). Soft tissue analysis result of pre operation Köle, SNA perpendicular with upper lip (Normal). Based on the analysis of soft tissue post operation Gonzales Ulloa, FHP line perpendicular with NA exactly intersection with chin soft tissue (Normal).

Discussion of Oral Surgery and Orthognatics agreed that the patients underwent surgery to reserve only the lower jaw, the operation is performed with Sagital Split Osteotomy Method, followed by fixation intermaxilla upper and lower jaw during one month. After fixation intermaxilla to improving continue with orthodontic treatment again. After orthodontic treatment complete can be continued with prostodontic treatment to replace the missing tooth.

Correspondence: Setyo Harnowo, Universitas Pertahanan, Jl. Salemba Raya No.14, Jakarta Pusat, Tel. (021) 3924177, Fax. (021) 3924235
How to Use of Autonomic Drugs in Dentistry Hypertensive Patient

Rukma Juslim
Cardiology Department, Medical Faculty Hang Tuah University, Ramelan Hospital

ABSTRACT

Autonomic drug is one of a large group of drugs that mimic or modify the function of the autonomic nervous system. It is a drug with similar effects to those of the effector agents in the two systems which are called Sympathomimetic or Parasympathomimetic drugs.

The use of Autonomic drugs in dentistry hypertensive patient can be a problem, especially for Sympathomimetic effect. The small amounts of epinephrine (combined with local anesthetics) that may be used in routine dental procedures are unlikely to be a problem. Hypertensive or High Blood Pressures, sometimes called Arterial hypertension, is a chronic medical condition in which the blood pressures in the artery is elevated.

The JNC VII reports said that any blood pressure above than 130/80 mmHg is called Hypertension. In order to detect hypertension accurately, good measurement of blood pressure is necessary. Dental treatment is contraindicated in patients with severe hypertension.

Betablocers are no longer recommended as first-line treatment by the US JNC, but remains as the second choice among others.

Betabloker is an important protective effect in some certain cases. Perioperative death from cardiac causes and myocardial infarction were reduced by bisoprolol in high risk patients undergoing vascular surgery. Poldermans D et al. Betablocers are effective, acting not centrally but through a reduction of peripheral manifestations of anxiety such as tremor and tachycardia. If a patient on a nonselective beta-blocker receives a systemic dose of epinephrine, however, the beta-blocker prevents the vasodilation.
THE EFFECTS OF HYPERBARIC OXYGEN THERAPY TO REGULATE NITRICOXIDE PRODUCTION ON WOUND HEALING

Dian Mulawarmanti
Laboratorium Biochemistry, Oral Biology Faculty of Dentistry
University of Hang Tuah

ABSTRACT

Hyperbaric oxygen therapy (HBOT) is a therapy in which patients breathe 100 % pure oxygen at a pressure of more than one atmosphere absolute (ATA) in a pressurized chamber. HBOT increases the amount of oxygen that is carried in the plasma. As adjunctive therapy in the healing process of wounds, HBOT has been shown to enhance wound angiogenesis and granulation tissue formation and accelerates wound closure. One of the properties of HBOT is an anti-inflammatory effect and is correlated with the healing process by increasing the production of Nitric Oxide which may play a role in wound healing. The purpose of this paper is to describe the effects of HBOT in increasing the production of nitric oxide in wound healing.

Keywords: hyperbaric oxygen, nitric oxide, anti-inflammatory, wound repair

Correspondence: Dian Mulawarmanti, Oral Biology Departement faculty of Dentistry HangTuah University, Jl. Arif Rahman Hakim 150 Surabaya 60111 Indonesia, Telp 031-5912191. Email: dianmulawarmanti@yahoo.com
Cardio-Pulmonary Resuscitation: Is it a must for Dentist?

Philia Setiawan
Cardiac Anesthesiologist Consultant, Intensive Care Consultant
Dr. Soetomo Hospital Surabaya – Faculty of Medicine, Airlangga University

ABSTRACT

Basic Cardio-Pulmonary Resuscitation (CPR) is a basic level competence which is a must for many who involved in mass activities, since sudden cardiac arrest event can be anywhere and at anytime. It is more important for health care providers as we introduce many substances to human body that may react differently. Accidental intravenous of local anesthetic agent that injected by a dentist may cause a severe bradycardia leading to cardiac arrest. Further concern for high risk patients, any stress during dental procedures may trigger cardiac events. Cardio-pulmonary resuscitation for the first seconds may change the survival rate, while waiting for the expert team for further cardiac arrest management.

Basic CPR consists of Airway Management, Breathing assistance and External Cardiac Compression. CPR 2010 is the latest version for cardiac arrest resuscitation. Since the cause of cardiac arrest mostly is ventricular fibrillation, cardiac compression is the most important procedure allowing the oxygen flows to important organs. In 2010 CPR guidelines, the sequence of resuscitation become C – A – B (Cardiac compression, Airway and Breathing Management.) and more frequent uninterrupted cardiac compression, 30 : 2 (breathing assistance) to buy time of defibrillation.

A chain of resuscitation, Call for help, immediate proper CPR, timely shock and good post cardiac arrest care, is needed to provide a high survival rate of cardiac event.

Correspondence: Philia Setiawan, Cardiac Anesthesiologist Consultant, Intensive Care Consultant, Dr. Soetomo Hospital Surabaya – Faculty of Medicine, Airlangga University, email: philstawn@yahoo.com
The Role of NSAIDs for Acute Dental Pain

Maftuchah Rochmanti
Pharmacology Department, Faculty of Medicine, Airlangga University

ABSTRACT

Everyone had experienced dental pain regardless of the cause and all dentists treat ever. But whether drugs or combinations of drugs are appropriate for dental pain? And whether the drugs are given also in accordance with the patient's condition is so diverse? Dental pain may be nociceptive pain (inflammatory pain), vascular pain, neuropathic pain or psychological pain. Acute inflammatory pain and are generally derived from the tooth, the pulp and periodontal tissues, often encountered in daily practice. Vascular pain characterized by severe pain, unilateral, intraoral, short and episodic migraine may manifest. Neuropathic pain such as trigeminal neuralgia that occurs in general due to dysfunction or damage to both somatic and autonomic innervation.

Various management approaches have often raised include pharmacotherapy, clinical psychology, acupuncture, etc., but whether it is satisfying for clinicians in pain management in daily practice? In this paper, discussion is limited to pharmacologic approach. Various medications are used to overcome pain medications can be classified as non-steroidal anti-inflammatory (NSAIDs), opioids, drugs that act on the central nervous system such as tramadol, morphine sulphate tablets (MST), tricyclic tranquilizers such as amitriptyline, an inhibitor of N-methyl-D-aspartate (NMDA) such as ketamine, amantadine, an anti-epileptic drugs such as gabapentin, pregabalin, and membrane-stabilizing drugs such as mexilitene, tocainamide and so on. These medications should certainly be used in accordance with the severity, type and location of pain where the pain comes from pain receptors in peripheral sensory nerve fibers, spinal cord and central nervous system.

NSAIDs can be used at different levels of severity of pain. Divided according to the nature and type of pain, NSAIDs can be combined either with opioid drugs, anti-epileptic drugs, tranquilizers or inhibiting NMDA. NSAID drug selection should consider the potential, safety, mechanism of action, pharmacokinetic profile and of course affordability and availability in the community. Things that should be avoided is the shared use of two or more drugs that work on the same pain receptors, such as the use of two types of NSAIDs at the same time, this action will only increase the side effects of the drug rather than increasing the potential for anti-pain.

Correspondence: Maftuchah Rochmanti, Pharmacology Department, Faculty of Medicine, Airlangga University
Description of Mandible Cortical Bone Height in Patients with Type-2 Diabetes Mellitus and Suspect Osteoporosis

Lusi Epsilawati¹, Azhari¹
Department of Dentomaxillofacial Radiology, Faculty of Dentistry, Padjadjaran University, Bandung, West Java, Indonesian

ABSTRACT
Background: Osteoporosis and diabetes mellitus is a systemic disease in which both lead to decreased bone quality. Decrease in bone quality can be analyzed by measuring the mandible cortical bone height. Mentale index is an index that can be used for assessment the height cortical bone in the mandible. This Assessment use the panoramic radiograph.

Purpose: The purpose of this study was to analyze the ratio of mandibular cortical bone height in patients with type 2 diabetes mellitus and osteoporosis with panoramic radiography.

Methods and Materials: The study is descriptive study. Samples were secondary data were 14 panoramic radiographs of patients suspected osteoporosis, 13 pieces of patients with type 2 diabetes mellitus and 5 normal patients as a control. All data is the data of patients who come to the clinic RSGM Dentistry Padjadjaran.

Results: The results showed that mandible cortical bone height in patients with diabetes mellitus-value of 2.37 mm by 2.31 mm, whereas in patients with osteoporosis showed a lower value which is 1.7mm in the right and left 1.8 mm.

Conclusion: The conclusion that can be drawn from this study is the decline in the quality of bone in patients with osteoporosis is more common when compared with patients with type 2 diabetes mellitus

Key Word: Osteoporosis, Diabetes mellitus type 2, Cortical Bone height, Panoramic Radiograph

Correspondence: Lusi Epsilawati, drg., M.Kes Dentomaxilla Facial Radiology Faculty Of Dentistry University Padjadjaran Telp. 081802092026 Email: lusiepsilawati@yahoo.com
FIBER COMPOSITION ANALYZED FOR ALGINATE IMPRESSION MATERIAL WITH CASSAVA STARCH (Manihot Utilisima)

Mirna Febriani
Departement of Material and Technology, Faculty of Dentistry
Prof Dr Moestopo (B) University

ABSTRACT

Background: Alginate impression material is a common dental impression material used in producing a removable partial denture. A research done by Febriani (2009) was found that alginate impression material with cassava starch has physical properties still in ANSI/ADA no 18/1992.

Objective: To analyze fiber composition alginate impression material with cassava starch.

Material and methods: All material in this research including Tulip alginate impression material of normal set type, cassava starch of Pak Tani brand, Aquadest and proximat test for composition analysing test.

Result: Alginate impression material with cassava starch has fiber 2.98, protein 0.84, water 6.03, ash 44.17, fat 0.24, and carbohydrate 45.74.

Conclusion: Alginate impression material with cassava starch contains water, fat, protein, ash and carbohydrate higher than alginate impression material standard.

Key words: alginate impression material, composition test.

Correspondence: Mirna Febriani, Office: Departemen of Material and Technology, Faculty of Dentistry Prof Dr Moetopo (B) University, Address: Bintaro Permai Raya No. 3, Jakarta Selatan, Post code: 12330, Phone/Fax : 73885254/73885253 , E-mail: mirnarifky@yahoo.com
ASSESSMENT OF DENTAL IMPLANT IN CBCT

Emy Khoironi, Nurianingsih R
Departement of Dentomaxillofacial Radiology, Faculty of Dentistry, Hang Tuah University. Departement of Dentomaxillofacial Radiology, Faculty of Dentistry, Padjadjaran University

ABSTRACT

Background: Placement technique of dental implant needs accuracy and exactness that important to be examined and analyzed before so a satisfactory result can be obtained. Radiograph examination considered would be very useful to well-analyze in two-dimensional or three-dimensional. Three-dimensional radiograph or CBCT-3D able to give complete and accurate informations.

Objective: The objective of this study was to find standard criteria of dental placement by using CBCT-3D of alveolar bone before implant placement was done.

Discussion: CBCT-3D able to interpret various things needed to determine the treatment plan and evaluation after dental implant placement compared with two dimensional radiograph.

Conclusion: CBCT-3D has advantage to analyze compared to other radiographs and very useful in terms of dental implant placement.

Keywords: Dental implant, CBCT-3D

Correspondence: Emy Khoironi, Office: Departemen of Radiology, Faculty of Dentistry Hangtuah University, Address: Arif Rahman Hakim 150 Surabaya, Indonesia. Post Code (60111), Telepon/ Fax: 031 591 2191, HP: 081 330 349 837, E-mail: emykaha@gmail.com.
ANTI BACTERIAL EFFECT OF THE MOUTHWASHES CONTAINING CHLORHEXIDINE, POVIDONE IODINE, FLUORIDE WITH ZINC SUPPLEMENTATION AGAINST PLAQUE MIX BACTERIA, S.MUTANS AND P.GINGIVALIS

Betadion Rizki Sinaredi, Seno Pradopo, Teguh Budi Wibowo
Departement Pediatric Dentistry, Airlangga University, Surabaya, Indonesia

ABSTRACT

Background: Caries and periodontal disease prevalence in Indonesian children are still high. Approximately 90% of Indonesian children have been infected with caries disease. Effort to decrease the prevalence of caries and periodontal disease are using mechanical methods and chemical methods, mouthwashes. Mouthwashes in the market contain Chlorhexidine, Povidone Iodine and Fluoride with Zinc supplementation.

Purpose: The purpose of this study was to evaluate the efficacy of the Chlorhexidine, Povidone Iodine and Fluoride with Zinc supplementation against mix bacteria that found in the plaque, S.mutans and P.gingivalis.

Method: The disk diffusion test was selected to measure the efficacy each of the mouthwashes. Each of the bacteria, mix bacteria from plaque (obtained from 6 subject), S.mutans (obtained from clinical isolation) and P.gingivalis (ATCC No.33277) were being inoculated and spread in the petridish containing MHA. Paper disk containing the mouthwashes were placed in the middle of the petri dish and incubated for 24 hours in the 37\degree C temperature (anaerob for P.gingivalis, aerob for S.mutans and mix bacteria). Diameter of inhibition that surrounds the paper disc is measured and compared between each of the active ingredients used.

Result: There was significant difference in diameter measurement between each group with the mean diameter of Chlorhexidine was highest of all experimental groups.

Conclusion: Chlorhexidine was found to be more effective in all experimental group compared with Povidone Iodine and Fluoride with Zinc supplementation.

Keywords: Mouthwash, Chlorhexidine, Fluoride, Povidone Iodine, S.mutans, P.gingivalis

Correspondence: Betadion Rizki Sinaredi, Departemen Ilmu Kedokteran Gigi Anak, Fakultas Kedokteran Gigi Universitas Airlangga, Jalan Prof.Dr.Moestopo 47 Surabaya 60132. Email: betadion@yahoo.com
FABRICATION OF NANOFIBERS WITH SOL-GEL METHOD FOLLOWED BY ELECTROSPINNING.

Gantini Subrata
(Bagian Prostodonsia, Fakultas Kedokteran Gigi, Universitas Padjadjaran)

ABSTRACT

**Background**: In this new era, nano fibers with large surface area are really needed for various applications. In regeneratif medicine (biomedical applications), nano fibers is used as tissue engineering (scaffold), drug release, wound dressing etc. In dentistry is used as a filler in restoration such as in composite filling materials which is known as nanocomposite, to strengthen dental posts, as a filler for denture base, porcelain veneer etc. But yet not every dentist and researcher fully understand this big chances.

**Purpose**: The purpose of this paper is to give dentists, researchers and all who are interested in, an understanding about nanofibers, sol-gel method, electrospinning and its procedures. In this paper is discussed the importance of nano, nanofibers, sol-gel and electrospinning method and its manufacturing. Here is described how to produced nanofiber by combination method; sol-gel and electrospinning. In conclusion nano fibers can be made simply by using the sol-gel method and electrospinning..

**Keywords**: nanofibers, sol-gel method, electrospinning, zilica-zirconia

**Correspondence**: Gantini Subrata, Prosthodontia Department Faculty of Dentistry Padjajaran University, Jl. Raya Bandung Sumedang KM 21, Jatinangor 45363, Telepon: (022) 7794120 Faksimile: (022) 7794121 Email: gantinisubrata@yahoo.com
NICOTINE EFFECTS ON THE NUMBER OF OSTEOCLAST AND OSTEOBLAST AFTER DENTAL IMPLANT PLACEMENT
(Animal laboratory experimental study in New Zealand rabbits)

Nina Nilawati
Departement of Periodontia, Faculty of Dentistry HangTuah University

ABSTRACT
Introduction: Smoking is a factor that can interfere the success rate of dental implants. In most smokers, dental implant failures before getting a load are higher than non smokers. Nicotine is the main ingredient in tobacco cigarettes and the purpose this study aimed to explore the nicotine effect on osteoclast and osteoblast cell to osseointegration in dental implant.

Methods: This study was performed on New Zealand rabbits through measurement the value of osseointegration by Implant Stability Quotient (Osstell), the number of osteoclast and osteoblast by histology test. This study is an animal experimental laboratory research with post test control group design. The number of rabbits in this study was 16, divided into 2 groups. Group 1 was a control group at week 1 and week 8, Group 2 was a treatment group at week 1 and week 8. The treatment group given nicotine injection, 1 week before implant placement until the end of the research. The dose of nicotine was 2.5 mg/kg BW/day.

Result: Statistical analysis found significant differences the controls and treatment group (p<0.05). At the first week and eighth week on the treatment group, it showed that nicotine increase the number of osteoclast and decrease osteoblast.

Conclusion: Nicotine can increase the number of osteoclasts and decrease osteoblasts that causing the inibition of osseointegration of dental implant.

Key words: Dental implant, nicotine, osteoclast, osteoblast, osseointegration
Correspondence: Nina Nilawati, Office: Departemen of Periodontia, Faculty of Dentistry Hangtuah University, Address: Arif Rahman Hakim 150 Surabaya, Indonesia. Post Code (60111), Phone/ Fax: 031 591 2191, E-mail: nina.nilawati@yahoo.co.id.
VIABILITY OF FIBROBLAST CELLS ON SEVERAL COMMERCIAL BEVERAGES AS AN ALTERNATIVE MEDIA STORAGE FOR AVULSED TEETH

Bingah Fitri Melati, Herawati, FX. Suhariadji
Post graduated student, Departement of Pediatric Dentistry, Airlangga University
Department of Pediatric Dentistry, Airlangga University
Department of Pediatric Dentistry, Airlangga University

ABSTRACT

Background: The main treatment for the avulsed tooth is replantation. The cells in periodontal ligament of the avulsed tooth must be protected from damage and loss of normal cell metabolism so that required storage media which have optimal osmolarity, nutritional adequacy, proper pH and easy to obtained. Recommended storage media for avulsed teeth is Hank’s Balanced Salt Solution (HBSS) because it has electrolytes and glucose. However HBSS is not always available when the trauma occurs.

Purpose: To determine the viability of fibroblasts in three commercially beverages which were coconut water, isotonic drinks and milk.

Method: BHK-21 cells that had been grown and placed in micro plate induced with coconut water, isotonic drinks and milk. The cells were measured with colometric assay and ELISA reader.

Result: All of the commercial beverages in this study showed a percentage above 50%; it appeared that all sample solution had no toxic effect on fibroblasts. The highest viability of fibroblast was found in coconut water 97% followed by isotonic drinks 87% and the lowest in milk 79%.

Conclusion: The study suggested that high viability of fibroblast found in coconut water, isotonic drinks and milk.

Keyword: Avulsed teeth, Storage media, coconut water, viability of fibroblast.

Correspondence: Bingah Fitri Melati, Departemen Ilmu Kedokteran Gigi Anak, Fakultas Kedokteran Gigi Universitas Airlangga, Jalan Prof. Dr. Moestopo No 47 Surabaya 60132. E-mail: bingahfitrimelati@gmail.com
MINERAL CONTENT DIFFERENCES BETWEEN LOW AND HIGH CARIES INDEX OF PRIMARY TEETH

Edina Hartami, Irmawati, Herawati
Post graduated student, Departemen of Pediatric Dentistry, Airlangga University
Department of Pediatric Dentistry, Airlangga University

ABSTRACT

Background: Dental caries prevalence in children increased because of the habit of bottle feeding, however with the same amount of milk consumption, there are children suffer with caries and free caries. One of the etiologies of dental caries is tooth quality (host). The tooth quality was influenced by levels of minerals that have resistance to dental caries. Mineral composition of the enamel primary teeth consist of Ca, P, Mg, Zn, Al, Sr, Mn, Fe, Na, K, and F.

Purpose: The purpose of this study was to compare the mineral content of primary teeth in low and high caries index children.

Methods: This study was using exfoliated deciduous anterior teeth from fourteen children aged 5-7 years, divided into 2 groups, low and high caries index children. Tooth mineral content was measured by X-ray fluorescence.

Result: by using parametric Independent t-test, there were significant differences in level of mineral Ca and P between low and high caries index children (p < 0,05).

Conclusion: The conclusion of this study was mineral content of Ca and P in low caries index children was higher than high caries index children.

Key words: mineral content, primary tooth caries index

Correspondence: Edina Hartami, Departemen Ilmu Kedokteran Gigi Anak, Fakultas Kedokteran Gigi Universitas Airlangga, Jalan Prof. Dr. Moestopo 47 Surabaya 60132. Email: edina_redaholic@yahoo.com
CORRELATION BETWEEN INTECANthal DISTANCE AND THE MESIODISTAL WIDTH OF THE MAXILLARY ANTERIOR TEETH IN JAVANESE BOYS

Grace Prawira¹, Teguh Budi Wibowo², Seno Pradopo²

¹Post graduated student; ²Staff of Departement Pediatric Dentistry, Airlangga University, Surabaya, Indonesia

ABSTRACT

Background: Risk of trauma occurs in several boys by losing their anterior teeth that caused by extracting them. They could be restored by denture application, which the esthetic side is mainly concerned.

Purpose: the purpose of this study was to determine the proportional relationship between facial dimension and anatomic landmark with the width of the maxillary anterior teeth that potentially provide a guide for teeth selection.

Method: A hundred adults (12-14 years old) with well aligned maxillary anterior teeth and minimal attrition were selected for this study. Using direct measurement with caliper we determined the intercanthal distance and intercanine width. For all the subjects in the study, mean, standard deviation, maximum and minimum values (range) were calculated. Pearson correlation test was done to estimate the correlation between the variables. Ratio ('r' factor) between the mean of all the variables were calculated.

Result: the means (standard deviation) of ICD were 30,72 mm (2,62), respectively, the intercanine width were 30,09 mm (1,89). There was positive correlation between intercanthal distance with intercanine width. Conclusion: there are various methods of selection of teeth but their applicability varies due to the ethnic differences between populations. The results can help to use the correlation of these measurements for rehabilitating local edentulous adult patients as their pre-losing records were not available

Keywords: intercanthal distance, intercaninus width, ratio

Correspondence : Grace Prawira Putri, Departemen Ilmu Kedokteran Gigi Anak, Fakultas Kedokteran Gigi Universitas Airlangga, Jalan Prof. Dr. Moestopo 47 Surabaya 60132. Email: grace.sunito@gmail.com
ANTIMICROBIAL ACTIVITY OF ZINC OXIDE EUGENOL PASTE, CALCIUM HIDROXIDE+ IODOFORM, AND MINERAL TRIOXIDE AGGREGATE AS PULP TREATMENT OF PRIMARY TEETH

Hesti Muharini, Seno Pradopo, Prawati Nuraini
Post graduated student, Departement of Pediatric Dentistry, Airlangga University

ABSTRACT
Background: Endodontic therapy is a commonly treatment in pediatric dentistry in order to prevent premature exfoliation in primary tooth. The successful of this therapy is directly affected by the success of eliminating pathogen microorganism that infects root canal, which can be accomplished by conducting disinfection, preparation root canal and filling the root canal.

Purpose: The purpose of this study was to examine in vitro the antimicrobial effects of three experimental pastes containing zinc oxide eugenol paste, calcium hydroxide associated iodoform paste and Mineral Trioxide Aggregate (MTA) paste.

Methods: Three microbial strains (Porphyromonas ginggivalis, Enterococcus faecalis and Fusobacterium  nucleatum) obtained from the American Type Culture Collection (ATCC) were inoculated in Brain Heart Infusion (BHI) and incubated at 37°C for 24 hour. For the agar diffusion test (ADT) 7 petri plates with 20 mL of BHI agar were inoculated with 0,1 mL of the microbial suspension, using sterile swab that were spread on the medium. Three cavities were made in each agar plate (total=21) and completely filled with one of the root canal paste. The plates were pre-incubated for 1 h at room temperature and then incubated at 37°C for 24 h. The inhibition zone around each well was recorded in mm.

Result: There is significant difference between the inhibition level of ZnOE, calcium hydroxide and iodoform and MTA on three bacteria groups of Porphyromonas ginggivalis, Enterococcus faecalis, and Fusobacterium nucleatum (p=0,000 (p<0,05). Porphyromonas ginggivalis was inhibited by MTA more effectively (p<0,05), while Enterococcus faecalis, and Fusobacterium nucleatum were more effective to be inhibited by ZnOE (p<0,05).

Conclusion: The in-vitro test on microbial activity from three pastes of pulp treatment showed that MTA had the highest inhibition level on the Porphyromonas ginggivalis, while ZnOE had the highest inhibition level on Enterococcus faecalis, and Fusobacterium nucleatum

Keywords: antimicrobial activity, zinc oxide eugenol, calcium hydroxide, mineral trioxide aggregate

Correspondence: Hesti Muharini, Departemen Ilmu Kedokteran Gigi Anak, Fakultas Kedokteran Gigi Universitas Airlangga, Jalan Prof. Dr. Moestopo 47 Surabaya 60132. Email: hmuharini@yahoo.com
THE USE OF MINI DENTAL IMPLANT IN THE POSTERIOR REGION
(Case Report)

Hans Goenawan
Lakdogi TNI AL-Jakarta

ABSTRACT

The use of dental implants for single and/or multiple edentulous cases has increased significantly in recent years. They are used not only in normal cases, but also in special cases when the alveolar bone resorption occurred vertically and/or horizontally.

Mini dental implant is an implant with less than 3.1 mm diameter and the length more than 10 mm. There are many brands and companies produce mini dental implants. Mini dental implant generally indicated in cases when the alveolar bone width are very limited because of bone resorption process or in cases when the mesio-distal edentulous width is too narrow.

In this case report will be discussed the use of mini dental implant in the posterior region, the indications, treatment planning and techniques to achieve the optimal success and how to choose the mini dental implant for the cases and how to use the mini dental implant for posterior cases with a proper treatment planning.

Correspondence: Hans Goenawan, The Green, Manhattan Forum, B1 no 11, BSD City, Tangerang Selatan, Banten, Indonesia 15322. Email: hans_goenawan@yahoo.com
ACCURACY OF DEMIRJIAN’S AGE ESTIMATION IN DEUTERO MALAY CHILDREN

Retno Dewati, Els S. Budipramana, Sindy Cornelia
Post graduated student, Departemen of Pediatric Dentistry, Airlangga University
Department of Pediatric Dentistry, Airlangga University

ABSTRACT

Background: Tooth formation is widely used to assess dental maturity and predict age of growing children. Demirjian et al in 1973, formulated the method of dental age estimation in French - Canadian population with reference to the panoramic radiographs. It is based on eight calcification stages which span from the first sign of tooth calcification to apex closure for the seven left permanent mandibular teeth.

Purpose: The purpose of this study was to evaluate the accuracy of Demirjian’s age estimation in 8 – 13 years Deutero Malay children.

Method: We selected 62 dental panoramic radiographs of 30 boys and 32 girls for estimating the age with Demirjian’s technique. A paired samples t-test was performed to search for significant age differences between the obtained age estimation with Demirjian’s method (dental age) and the chronological age based on medical record.

Result: The overestimation of the age was confirmed. Then, the index was calculated as an instrument for adapting Demirjian’s method in Deutero Malay population. The index resulted in percent of the mean of chronological age divided by dental age of each samples group: boy is 92,7%, girl is 96,1%, boy and girl is 94,5%. The new data (after being multiplied by index) was analyzed for statistical differences with the chronological age using paired samples t-test. The result was no significant difference between the new data and the chronological age.

Conclusion: The conclusion was Demirjian’s method could be applied in 8-13 years children of Deutero Malay with modification, so that helpful in dental forensic for estimating chronoloical age of cadaver.

Keywords: dental forensic, chronological age estimation, Demirjian

Correspondence: Retno Dewati, Departemen Ilmu Kedokteran Gigi Anak, Fakultas Kedokteran Gigi Universitas Airlangga, Jalan Prof. Dr. Moestopo 47 Surabaya 60132. Email: dhew_bale@yahoo.com
THE DIFFERENCE OF S. MUTANS COLONY BETWEEN MICROHYBRID AND NANOHYBRID FLOWABLE COMPOSITE RESINS SURFACE

Setyaningrum Kusuma Wardani, Prawati Nuraini, Sindy Cornelia
Postgraduate Student, Department Pediatric Dentistry, Airlangga University
Department of Pediatric Dentistry, Airlangga University

ABSTRACT

Background: Surface attributes of a restoration play an important role in adherence of plaque bacteria. The formation of biofilm and bacterial accumulation on dental materials may lead to the development of secondary caries. S. mutans can adhere to the entire surface of oral cavity and visible light composite resins.

Purpose: The aim of the present study is to examine the effect of different surface polishing methods on the amount of S. mutans colony adherence to the surface of two restorative materials.

Method: A total 20 specimens were prepared from each material; micro hybrid and nano hybrid flowable composite resin. For each material, the specimens were randomly divided into two groups (n=10). Group 1: polished with aluminium oxide disc (enhance); Group 2: polished with diamond finishing bur (fine finishing). The specimens of 5 mm diameter and 3 mm in thickness were immersed in saliva for one hour, than the samples were put into bacteria suspension, incubated for 24 hours at 37°C. Final solution was dropped into TYC plate. The amount of S. mutans was determined by the plate counting method. The data were statistically analyzed by using independent t-test.

Result: a significant different of S. mutans colony on the surface between microhybrid and nanohybrid flowable composite resins finished with enhance and with fine finishing bur.

Conclusions: The amount of S. mutans adherence on the surface of microhybrid was higher than the nano hybrid flowable composite resin. Enhance polishing method possesses significantly lower adherence compared with fine finishing method in both composite material.

Keywords: S. mutans, bacterial adherence, flowable composite resin, polishing method

Correspondence: Setyaningrum Kusuma Wardani, Departemen Ilmu Kedokteran Gigi Anak, Fakultas Kedokteran Gigi Universitas Airlangga, Jalan Prof. Dr. Moestopo 47 Surabaya 60132, Indonesia. Email: setyaningrum.kusuma@yahoo.com
THE SUCCESFULL OF PERIODONTAL TREATMENT WITH
SCALING ROOT PLANNING COMBINED WITH HOST
MODULATION ON PERIODONTITIS PATIENTS WITH
DIABETES

Novita Pratiwi
PPDGS Periodontia Student Dentistry Faculty Airlangga University

ABSTRACT

Background: Periodontitis is a common problem in patients with diabetes, as much as 75% of diabetic patient had periodontitis. Diabetes can stimulate the chronic release of proinflammatory cytokines that have a deleterious effect on periodontal tissues. Conventional periodontal treatment in patient periodontitis with diabetes is ineffective.

Objective: For the patient periodontitis with diabetes type 2 we give unusual treatment. Scaling root planning and oral antibiotics to eliminate the pathogenic bacteria combined with host modulation therapy which is enable to support regeneration of periodontal tissue.

Case: An 62 years old male with Diabetes history fell unpleasant because of mobility tooth in maxillary anterior region. There’s no allergic history. On clinical examination we found 4 mm pocket depth, gingival indeks score 2, periodontal indeks score 6.

Case Management: For the treatment we have done Scaling root planing, followed by consumption Amoxillin and Metronidazole, and also NSAID per-oral as Host Modulation Terapy.

Conclusion. therapeutic mechanical scaling and root planning combined with host modulation therapy proves successful repair of periodontal tissue destruction in periodontitis patients with diabetes.

Keywords: Diabetes, Host Modulation, Periodontitis

Correspondence: Drg. Novita Pratiwi. Departemen Periodonsia, Fakultas Kedokteran Gigi Universitas Airlangga Jl. Mayjen. Prof. Dr. Moestopo No. 47 Surabaya 60132, Indonesia. E-mail: novitadentist@gmail.com atau novita_dentist03@yahoo.com
THE USE OF LOW DOSE DOXYCYCLINE FOR AGRESISIVE PERIODONTITIS THERAPY (CASE REPORT)

Dwi Wahyu Indrawati, Ernie Madratna Setiawati
Resident of Periodontia FKG Unair
Departemen Periodonsia, FKG Unair

ABSTRAK
Agresif periodontitis caused by lokal infection factors.others factor can be effecs the disease among other duo the stress factor,systemic disease,and idiopathic factors,the disease is usually accompanied by periodontal demage is quite extensive and accompanied by periodontal damage is quite extensive and accompanied by bone resobsi alveoli.periodontitis disease surference an object is therefore a factor stress.patient woment 30 year old,unmarried with agreat demage on the upper and lower jaw tooth,there is a loosening of three derajat ,the resobsi and alveoli bone care periodonsia for six months.

Key word: periodontitis agresif, emotional stress, low doxycyclin.

Corespondence: Dwi Wahyu Indrawati, Resident at Periodontia Department, Faculty of Dentistry, Airlangga University, Jalan Prof. Dr. Moestopo 47 Surabaya 60132. Email: indrawatidwi55@yahoo.com
CROSSBITE ANTERIOR TREATMENT WITH INCLINE BITE PLANE (CATLANS APPLIANCES) IN MIXED DENTITION
(Perawatan gigitan silang anterior dengan menggunakan incline bite plane (catlans appliances) pada fase geligi pergantian)

Ike Ratna Dewi
RSUD Banjarbaru Kalimantan Selatan

ABSTRACT

Background: Anterior crossbite is the term used to describe an abnormal labiolingual relationship between one or more maxillary and mandibular incisor teeth. Different techniques have been used to correct anterior crossbite. Single tooth anterior dental crossbite is the commonly encountered malocclusion during the development of occlusion in children. The presence of anterior crossbites may cause mandibular displacement, if left untreated may lead to restriction of maxillary growth, traumatic occlusion, and may lengthen the treatment time. The anterior crossbite should be treated immediately to prevent further damage to the periodontium and attrition. Various treatment options such as removable and fixed appliances have been suggested by different authors in the past literature.

Purpose: This paper cases of anterior crossbite corrected using Incline Bite Plane in a short period of a weeks without any damage to the tooth or the periodontium.

Case: In this case report children aged eight years old with anterior crossbite was corrected with incline bite plane method.

Case Management: An acrylic incline bite plane cemented to the lower anterior teeth to correct in locked anterior teeth. An incline bite plane approximately ¼ inch in length is then added, extending at a 45 degree angle to the long axis of the lower incisors.

Conclusion: This would suggest that the prognosis of the tooth is good. This fixed appliance is a simple and traditional method which does not depend on patient cooperation to reverse the bite.

Keyword: Anterior crossbite, Incline bite plane, mixed dentition

Correspondence: Ike Ratna Dewi, RSUD Banjarbaru Kalimantan Selatan, Palang Merah Street No.02 Banjarbaru 70714, Indonesia, hp 081251203558, email. ratnadewiike@gmail.com

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THE EFFECT OF STICHOPUS HERMANII TO PREVENT THE ORTHODONTIC RELAPS MOVEMENT

Noengki Prameswari, Syamsulina Revianti, Arya Brahmanta
Orthodontic Laboratory*, Biology Oral Laboratory Dentistry Faculty Hang Tuah University

ABSTRACT

Background: Relapse Orthodontic is the return, following correction, any change from the final tooth position at the end of treatment relapse, could be a return to the original teeth position, caused by factors unrelated to the orthodontic treatment. Stichopus hermanii is one of the best fishery commodities in Indonesia. It is natural and contain various active ingredient such as hyaluronic acid, chondroitin sulphate, cell growth factor, EPA DHA, flavonoid that might reduce relaps orthodontic.

Objectives: The aim of this study is to investigate the effect of Stichopus hermanii to prevent the orthodontic relaps movement.

Material and Method: The experiment was held by Post Test Only Group design. Thirty twomale Cavia Cobaya were divided into four groups. K(-) group as negative control group (without treatment), K(+) group as positive control group which is give with orthodontic mechanical forces, and the other groups P1, P2, were give with orthodontic mechanical forces and stichopus hermanii 2,5 % and 3 %. After treatment the rats were sacrificed. The orthodontic relaps movement of each group was measured by caliper in mm length.

Results: This study showed that orthodontic relaps movement was significantly differences in group P1 compare to K(-) and K(+), group P2. K(+) and P2, whereas the other data showed no significantly differences.

Conclusion: Stichopus hermanii 2,5 % could prevent orthodontic relaps movement in Cavia cobaya after releasing following orthodontic mechanical forces.

Keywords: Stichopus hermanii, orthodontic mechanical forces, orthodontic relaps movement.

Correspondence: Noengki Prameswari. Orthodontic Laboratory. Faculty of Dentistry Hang Tuah University, Surabaya – Indonesia, Jl. Arif Rahman Hakim 150, Surabaya 60111 Indonesia, Telp 031-5912191. Email: noengki.prameswari@gmail.com
TEST OF BACTERICIDAL EFFECT BETWEEN METHANOL EXTRACT OF 80 % MAULI BANANA STEMS AND POVIDONE IODINE 1 % AGAINST STREPTOCOCCUS MUTANS

Maharani Laillyza Apriasari *, Amy Nindia Carabelly**
*Oral Medicine Departement Study Program of Dentistry, ** Oral Biology Department Study Program of Dentistry, Lambung Mangkurat University

ABSTRACT
Background: There are a lot of traditional medicine that can be used as the alternative medicine. One of them is 80% methanol extract of mauli banana stems which is proven as a potential antibacterial agent if applied in the wound. Some people in North of Hulu Sungai Banjarmasin are using it as the agent for healing the wound. The gold standar for healing the wound is Povidone iodine that has an antibacteriocid effect. The therapies that have been given to reduce the colonies of Streptococcus mutans in oral cavity is modern medicine, such as povidone iodine 1% which had side effects such as toxicity, systemic absorption, and delayed healing.

Purpose: The aim of this research was to compare bactericidal effect between 80% methanol Extract of mauli banana stems and 1% povidone iodine against Streptococcus mutans. Methods: The method uses pure laboratory experimental with post test only design and complete randomized design. The given treatments were 80% methanol Extract of mauli banana stems and 1% povidone iodine which also used as the positive control. The treatment replication was done 16 times. 80% methanol Extract of mauli banana stems were tested and compared with 1% povidone iodine using paper disk diffusion method to measure the diameter of inhibition zone to Streptococcus mutans colonies.

Result: 80% methanol Extract of mauli banana stems has antibacterial effect against Streptococcus mutans with average radical zone 15 mm and less effective than Povidone iodine 1% which showed average radical zone 17 mm.

Conclusion: 80% methanol Extract of mauli banana stems has antibacterial effect against Streptococcus mutans but less effective than Povidone iodine 1%.

Keywords: antibactericidal effect, 80% methanol Extract of mauli banana stems, 1% povidone iodine, Streptococcus mutans.

Correspondence: Maharani Laillyza Apriasari, Program Studi Kedokteran Gigi Fakultas Kedokteran Universitas Lambung Mangkurat, Jl Veteran 128 B, Banjarmasin, Kalsel, email: rany.rakey@gmail.com
Knowledge Level of Productive-Age-Patient in Dental Hospital University of Hang Tuah Surabaya About HIV/AIDS Disease.

Steven Pangestu*, Dwi Hariyanto**, Isidora Karsini S***.
* Student, Dentistry Hang Tuah University
** Lecturer at Departement of Dental Public Health Faculty of Dentistry University Of Hang Tuah Surabaya
*** Lecturer at Department of Oral Medicine Faculty of Dentistry Hang Tuah University

ABSTRACT
Background: This world has encounter a vicious virus called HIV/AIDS. This virus slowly but sure killed every people they infected and there’s still no cure for this virus. In Indonesia this virus has infected 33.2 millions people and killed 2.1 millions people and most of it's victims are people at the age of 20-29. This virus are not well known, so the number of victims each year became increase.
Purpose: This research is want to know about how many people understand about HIV/AIDS virus.
Methods: We have devided a test in which the people have to answer the questionnaire. We used this questionnaire to study 49 peoples, aged between 15-64 years, who visited Hang Tuah’s dental hospital. By spread questionnaires to 49 peoples, without distinguish between men or women, and ask them to fill it. The results of the answer we calculated and classified it by the criterion. There are four criterions: very aware (9-12), aware (6-8), not aware (3-5), really do not aware (0-2). From the answer of the people, those will help us to gauge the knowledge.
Result: Most of the people we tested were very aware of this virus, and mostly of the people who known are the people with higher level education.
Conclusion: Our HIV/AIDS knowledge is a valuable standard of the knowledge of people who aware or not aware about HIV/AIDS virus. From this test we can gain valueable information about HIV/AIDS virus.

Key Words: HIV/AIDS, People, Knowledge, Hang Tuah

Correspondence: Dwi Hariyanto. Dental Public Health Dentistry Faculty Hang Tuah University. Jl. Arif Rahman Hakim 150 Surabaya. Telp 031-5912191. Email dwi_surabaya@yahoo.com
INCIDENCE RATE OF TEMPORO MANDIBULAR DISORDERS (TMD) DUE THE MISSING OF THE FIRST PERMANENT MOLARS MANDIBULAR

Deby Kania Tri Putri *, Bayu Indra Sukmana**
*Conservative Departement Study Program of Dentistry,
** Oral Surgery Department Study Program of Dentistry,
Lambung Mangkurat University

ABSTRACT

**Background:** Losing teeth of mandibular first permanent molars in Banjarmasin have high prevalence while installing removable and fixed denture by only (3.0%). This suggests that many cases of tooth loss is not offset by rehabilitation treatment. This will lead to arch function decreased by 30%.

**Objective:** To determine the incidence rate for temporo mandibular disorder (TMD) due the loss of teeth mandibular first permanent molars.

**Methods:** Conduct anamnesic and dysfunction index to subjects that fit the inclusion criteria. Overall the data collected and grouped according to data obtained by descriptive methods.

**Results:** Calculated percentage of TMD due loss of the mandibular first molar by classification and gender.

**Conclusion:** TMJ dysfunction in women have most high frequency than men. Classification of severe TMJ dysfunction are shown in subjects with missing teeth 46 and who lost both its molar 36 and 46

**Keywords:** Incidence Rate, Temporo Mandibular Disorders (TMD), missing of the first permanent molars mandibular

**Correspondence:** Bayu Indra Sukmana. Program Studi Kedokteran Gigi Fakultas Kedokteran Universitas Lambung Mangkurat, Jl Veteran 128 B, Banjarmasin, Kalsel, email : drg_bayuindra@yahoo.co.id
ABSTRACT

Background: Drug induced gingival enlargement is frequently observed in patients taking three main group of drugs like calcium channel blockers (CCBs), immunosupressants and anticonvulsants. Amlodipine belongs to the dihydropyridine—a third generation calcium channel blockers agents that may cause the side effect of drug-induced gingival enlargement and oral bacteria intervention due to calculus retention. This case report describes the management of gingival enlargement in a hypertensive patient taking amlodipine.

Objective: This case report was aimed to discuss the treatment and maintenance of systemic observation-surgical periodontic approach to restore gingival enlargement.

Case report: A 47-years old man was referred to the Department of Periodontology, Faculty of Dentistry, Airlangga University complaining of swellings and bleeding on his gingiva in all region. He felt very uncomfortable as the swelling interfered while chewing and sometimes there was bleeding spontaneously and halitosis. He had hypertension since 5 years and was on medications Captopril 12,5 mg daily during 4 years and Amlodipine 5mg daily during last 1 year. A provisional diagnosis and systemic observation-periodontal phases treatment were taken to restore gingival enlargement condition.

Case Management: Systemic observation of medication use, periodontal phases treatment such as scaling root planning, periodontal surgery as flap and gingivectomy, home oral hygiene maintenance, control recall every month during first 3 months were taken.

Conclusion: The successful of combination carefully systemic observation-surgery periodontal approach are promising to maintain Amlodipine induced gingival enlargement.

Keywords: Amlodipine, Gingival enlargement, Systemic observation, Surgical periodontic

Correspondence: Rahmidian Safitri .Department of Periodontology, Faculty of Dentistry Airlangga University, Prof Dr Moestopo 47, Surabaya
ABSTRACT

Background: Sweet taste stimulation may possibly be applicable in the field of dentistry, and to relieve pain during injection of local anesthetic. In the present study, oral administration of sucrose and xylitol have been reported to increase the pain threshold.

Objective: The aim of this study was to determine the mechanism of sweet taste stimulation on pain tolerance threshold.

Review: A-delta fibers contribute to the sensation of pain, and C fibers contribute to pain pressure in the submucosa during injection of local anesthetic. The increase in pain threshold from sucrose and xylitol is caused by enhanced secretion of endogenous opioids and activation of the descending pain inhibitory system. The distribution in dorsal horn of spinal cord of A-delta and C fibers react to noxious stimulation. Serotonergic and noradrenergic neurons in descending pain modulatory system and endogenous opioids in the superficial layer of the trigeminal subnucleus caudalis both contribute to the pain-inhibiting effects of sweet taste stimulation. This may result an increasing of pain tolerance threshold.

Conclusion: Sweet taste stimulation may potentially inhibit pain and increase the pain tolerance threshold.

Keywords: mechanism, sweet taste, stimulation, pain threshold

Correspondence: Yani Corvianindya Rahayu. Oral Biology Department. University of Jember. Jalan Kalimantan No. 37 Kampus Tegalboto Jember Jawa Timur 68121 Indonesia, Email: ryanicorvianindya@yahoo.com
FACIAL TYPES DETERMINATION BASED ON FM ANGLE MEASUREMENT IN CEPHALOMETRIC ANALYSIS

Rudy Joelijanto
Departement of Orthodontics Faculty of Dentistry University of Jember

ABSTRACT

Background: Cephalometric analysis is used in dentistry especially in orthodontics which is to study the growth of craniofacial, enforce the diagnosis or analyze abnormality of craniofacial, to study facial types, determine the treatment plan of orthodontic, evaluate any case had been treated, to analyze functionally and to do research. FM angle measurement is useful to determine facial types. Facial types are correlated to the shape of jaw arch.

Objective: The purpose of this paper is to discuss about facial type determining, based on FM angle measurement on cephalometric analysis in order to determine treatment plan.

Methods: FM angle is an angle formed by FHP and mandible plan. FHP (Frankfort Horizontal Plane) is plane that through orbita and porion points.

Result: When the resultant of FM angle is 260 ± 3 it is included in mesofacial type. When FM angle is < 260 ± 3 so that it is included in brachyfacial type and if FM angle is > 260 ± 3 it is included in dolichofacial type.

Conclusion: Facial types will affect in determining treatment plan, there should be jaw expansion or tooth extraction.

Keywords: cephalometric analysis, face type, orthodontic treatment.

Correspondence: Rudy Joelijanto Departement of Orthodontics Faculty of Dentistry University of Jember. Jalan Kalimantan No. 37 Kampus Tegalboto Jember Jawa Timur 68121 Indonesia, Email: kaditya_rakan@yahoo.co.id
A SIMPLE TECHNIQUE FOR FIXING PREMAXILLA AFTER OSTEOTOMY IN PROTUDED PREMAXILLA PATIENT POST LABIOPLASTY AND PALATOPLASTY

Eddy Hermanto*, Sunardi Mangundjaja**

*Department of Oral and Maxillofacial Surgery, Faculty of Dentistry Hang Tuah
**Department of Oral and Maxillofacial Surgery, Faculty of Dentistry Padjajaran University

ABSTRACT

Background: Patients post labioplasty and palatoplasty with protuded premaxilla require surgical setback of the premaxilla with osteotomy. There was no consensus for the setback osteotomy because it is usually difficult to fix the premaxilla after osteotomy. Due to financial constrains and the distances traveled, the patient prefer to come for fewer procedure.

Objective: The aim of this paper to report repositioning of the protuded premaxilla as functional and aesthetic treatment

Case: An 8 years old girl with protuded premaxilla have been performed labioplasty and palatoplasty. The procedures of these case were setback osteotomy and immobilization with intraosseous wire.

Case management: The premaxilla was immobilized using simple technique of Dentaurum wire fixation, after osteotomy and bone graft was placed in the alveolar cleft. Palatal closure was achieved with two flap technique.

Conclusion: Setback osteotomy of protuded premaxilla with intraosseous wire is simple procedure but the result was satisfactory.

Key Words: Set back osteotomy, labioplasty and palatoplasty, protuded premaxilla, intraosseous wire

Correspondence: drg Eddy Hermanto, Sp BM. Dentistry Faculty Hang Tuah University. Arif Rahman Hakim 150 Surabaya. Email: eddyhermanto_tarka@yahoo.com
SUCCESSFUL MANAGEMENT OF “BLACK TRIANGLE” USING SUBEPITHELIAL CONNECTIVE TISSUE GRAFT

Winarto Chandra*, Poernomo Agoes W.2
‘Resident of Post Graduate Program of Periodontics, Faculty of Dentistry, Airlangga University “Department of Periodontics, Faculty of Dentistry, Airlangga University

ABSTRACT
Introduction: Open gingival embrasures are a common occurrence in adult population with a history of periodontal disease. Open gingival embrasure show a loss of interdental papilla which usually refer as the “black triangles” occur in more than one-third of adults. Most of the treatment for black triangle usually treated with orthodontic treatment and restorative treatment. However this treatment is unsatisfied, as we want to regenerate the interdental papilla. One of the most difficult goals of periodontics in the field of reconstruction, regeneration and esthetic aspect of periodontal therapy is the surgical reconstruction of the lost interdental papilla. Loss of interdental papilla could result in patient complaints such as phonetic problems, food impaction, functional problems and esthetic concern. Subepithelial connective tissue graft was used to treat open gingival embrasure, better aesthetics can be achieved because of a better color match of the grafted tissue to adjacent area.

Objective: To provide information about a successful surgical reconstructive of interdental papilla using a subepithelial connective tissue graft and evaluated clinically for 3 months.

Case: Female, 25 years-old visit “Rumah Sakit Gigi dan Mulut” public service hospital Airlangga University, Surabaya in May 2012, she complained about her black spot at anterior lower region after scaling and root planning (SRP) treatment by dentist and she came to Rumah Sakit Gigi dan Mulut Airlangga University.

Case management: full thickness flap is dissected on the lingual aspect of the interental area. The flap is elevated labially, folded and sutured to create the new papilla at the facial part of the interdental area. The lingual which is open then covered by a subepithelial gingival graft then sutured to the facial part of interdental papilla, then coronally reposition flap was done for the
lingual side. Then evaluated pre- and post treatment. After 3 month post flap surgery the interdental papilla has increased

**Conclusion:** Subepithelial connective tissue graft was able to increase the papilla height with interdental papilla lost <6 mm.

**Key words :** Loss of interdental papilla, black triangle, subepithelial connective tissue graft

**Correspondence :** Winarto Chandra. Departemen Periodonsia, Fakultas Kedokteran Gigi Universitas Airlangga Jl. Mayjen. Prof. Dr. Moestopo No. 47 Surabaya 60132, Indonesia.

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**RESTORING FACIAL BALANCE AND FUNCTION WITH ANTERIOR TEETH PROSTHESES**

**Widaningsih, Meinar Nur Ashrin**

Departement of Prosthodontics, Faculty of Dentistry, Hang Tuah University

**ABSTRACT**

**Background:** Contradiction in functional problems often occurs during the making of full dentures. Patients expect near-real prostheses in aesthetically and functionally, particularly in chewing and speech function.

**Review:** In these following cases, the problems are facial anatomical landmarks, mouth cavity and jaw shape of the patients that has changed due to resorbing of the alveolar ridge of upper jaw upwards to the palate, and resorbing of the alveolar ridge of lower jaw forward to the anterior.

**Conclusion:** Some efforts are done to overcome these problems: reduction to the vertical dimension during measurement of biting height, precise centric occlusion, and arrangement of anterior teeth not directly on the ridge for the upper jaw, as for the lower jaw, the anterior dentures are placed towards lingual direction.

**Keywords:** Full dentures, esthetic and function, vertical dimension, dentures arrangement

**Correspondence :** Meinar Nur Ashrin, drg., PhD, Faculty of Dentistry, Hang Tuah University, Jl. Arif Rahman Hakim No. 150 Surabaya, Telp. (031) 5945864, 5912191, email: meinar.ashrin@gmail.com
MAKING FULL DENTURE WITH A FLAT RIDGE OF THE MAXILLA AND MANDIBLE IN PATIENT WITH POST STROKE (CASE REPORT)

Debby Saputera*, Sukaedi**, Mefina S Kuntjoro**
*Resident of Prosthodontics Faculty Of Dentistry Airlangga University
**Department of Prosthodontics Faculty Of Dentistry Airlangga University

ABSTRACT

Background: In the case of post stroke patients who have lost teeth longer and do not use full denture may occur that flat ridge conditions. The condition of the flat ridge, have any impact on the stability and retention of dentures is difficult to achieve. Medical rehabilitation in this condition required special measures is using the shortest treatment time. Making full denture can be optimized with the use of fully adjustable articulator that can be adjusted condyle angle and bennet angle patients.

Purpose: To get the denture retention and stability on flat ridge can be use of fully adjustable articulator.

Case: Men age 80 years, come to the clinic specialist prosthodontics faculty of dentistry airlangga university to making full denture in the maxilla and mandible. Patients had a stroke during this, already wearing dentures, but often problematic bacause denture often loose when used for mastication.

Case management: high initial bite determination using centric tray which is then connected to facebow transfer for move the position of the maxilla and mandible patient into the articulator. Functional printing is closed mouth method with the appliance gnathometer and use accessories articulator in making teeth.

Conclusion: High determination bite, accurate and precise printing, the principles of making teeth is fulfilled with the help of fully adjustable articulator will result in intimate contact between the denture and mucosal tissue underneath so in get the denture retentive and stable.

Key Words: full denture, flat ridge, fully adjustable articulator

Correspondence: Debby Saputera. Department of Prosthodontics, Faculty Of Dentistry Airlangga University. Jl. Mayjen. Prof. Dr. Moestopo No. 47 Surabaya 60132, Indonesia. Email: debbysaputera@gmail.com
DISTRIBUTION OF VISITS THE PATIENT PARTICIPANTS ASKES TO POLY DENTAL PUBLIC HEALTH CENTER IN JEMBER BASED ON GOOGLE EARTH

Hestieyonini Hadnyanawati
Dental Public Health Department Faculty of Dentistry Jember University

ABSTRACT
Background: Askes or health insurance is one of the health care insurance is managed by the Government. One of the utilization service of askses by society is service for outpatient poly dental public health center. The utilization of cards askses by the public can be seen through the distribution of visits to his patient askses to poly dental public health center. There are 49 public health centers in Jember. The varying geographical conditions public health center in Jember can use geographic information system based Google Earth. Description of the distribution of visits the patient participants Askes to poly dental public health center Jember is presented in the form of geographic information systems based on Google Earth.

Purpose: The purpose of this research is to know the description of the distribution visits the patient participants Askes to poly dental public health center in Jember based on Google Earth. Method: This type of research is observational descriptive. Data sources secondary derived from the District Health Office of Jember. Data obtained in 2010, 2011 and 2012 years. Data is processed and presented in the form of partial and non-partial.

Results: The result of this study visit participants patients Askes to poly dental public health center in Jember showed average of + 5.59% (2010), 6.57% (2011) and 6.19% (2012).

Conclusion: the distribution of visits the patient participants Askes to poly dental public health center in Jember based google earth uneven.

Key words: distribution of visits the patient, askses, Google earth

Correspondence : Hestieyonini Hadnyanawati Dental Public Health Department Faculty of Dentistry Jember University. Jalan Kalimantan No. 37 Kampus Tegalboto Jember Jawa Timur 68121 Indonesia, Email : h3sti3@gmail.com
RELATIONSHIP BETWEEN THE ACTIVATION OF NFκB PRODUCING CELLS AND ALVEOLAR BONE DESTRUCTION IN LPS-INDUCED PERiapICAL INFLAMMATION

Dian Agustin Wahjuningrum
Department of Conservative Dentistry Faculty of Dentistry Airlangga University

ABSTRACT

Backgrounds. Infiltration of inflammatory cells is induced by penetration of bacteria and bacterial by products, including lipopolysaccharide (LPS), from infected root canals into the periapical tissues. These cells produce various chemical mediators, which characterize the periapical inflammation by activation NFκB. NFκB will producing cytokines. Especially, interleukin-1 synthesized by macrophages is a typical mediator in the periapical lesions, and it is involved in the bone resorption

Purpose: The aim of this study is to evaluate the expression of NFκB and IL-1 producing cells into the periapical lesions induced by application of LPS to the pulp chamber in experimental animals.

Method. Non-treatment animals were served as a control (Group A, n=7). LPS was applied into the exposed pulp chamber of molars (Group B, n=7). Phosphate buffered saline (PBS) was used instead of LPS (Group C, n=7). LPS was applied into gingival sulcus (Group D, n=7). Three weeks later, animals were sacrificed, and extracted samples were prepared for immunohistochemical study.

Results. The data was analysis by Anova (SPSS 13). The results by statistic analysis were showed expressions NFκB and IL-1 in group B were significantly different between group A and B p = 0,001*(p<0,05).

Conclusion. These results suggest that macrophages are involved in both progression and resolution of periapical inflammation induced by LPS. Macrophage expressing NFκB will release cytokines like IL-1, may play an important role in increasing the destructive mediators in periapical lesions.

Keywords :NFκB, Lipopolysaccharide, periapical inflammation, bone resorption

Correspondence: Dian Agustin W, c/o: Departemen Konservasi Gigi, Fakultas Kedokteran Gigi Universitas Airlangga. Jl. Mayjen. Prof. Dr. Moestopo no 47 Surabaya 60132, Indonesia. E-mail: dianagustin_fkg@yahoo.co.id
LEVEL OF CREACTIVE PROTEIN (CRP) AMONG CARDIOVASCULAR DISEASE PATIENTS WITH CHRONIC PERIODONTITIS IN CARDIOVASCULAR DEPARTEMENET OF DR. SOETOMO NATIONAL HOSPITAL SURABAYA

Yoifah Rizka, Joeristanti Soelistyaningroem, Muhammad Aminuddin
Periodontics Departement, Dentistry Faculty Hang Tuah University, Surabaya
Cardiovascular Departement, Mitra Keluarga Cibubur Hospital, Jakarta
Cardiovascular Departement, Medical Faculty Airlangga University, Surabaya

ABSTRACT
Background: Periodontitis is a local inflammatory process mediating destruction of periodontal tissues triggered by bacterial insult. However, this disease is also characterized by systemic inflammatory host responses that may contribute, in part, to the recently reported higher risk for cardiovascular disease (CVD) among patients with periodontitis. Moderate elevation of C-reactive protein (CRP) has been found to be a predictor of increased risk for CVD. Elevated CRP levels in periodontal patients have been reported by several groups. In this study, we examined whether CRP plasma levels are increased in periodontitis and if there is a relation to severity of periodontal disease.

Methods: CRP serum levels were assessed using reagenlmmulite C-Reactive Protein ® / Immulite ® 1000 high-sensitivity CRP as solid-phase, chemiluminescent immunometric assay in 100 subjects which diagnosed cardiovascular disease with chronic periodontitis.Periodontal Disease Index (PDI) were measured by clinical attachment loss, probing depths, and gingivarecessionat six selection teeth : 16, 21, 24, 36, 41,44 known as Ramfjord teeth.

Results: The measurement of Periodontal Disease Index (PDI) in 100 subjects with Cardiovascular Disease are Mild periodontitis (6,1%), Moderate periodontitis (70,4%), Severe periodontitis (23,5%) and only 2% with normal periodontal tissue. Increases in CRP levels were observed in these subjects. Subjects with high levels of clinical attachment loss (Severe periodontitis) had significantly higher mean of CRP levels (7,522 ± 0,3580 mg/L), moderate periodontitisare(5,284 ± 0,3138 mg/L) CRP levels and (2,017 ± 0,3656 mg/L) CRP levels for mild periodontitis

Conclusions: The positive correlation between CRP and periodontal disease might be a possible underlying pathway in the association between periodontal disease which a chronic inflammation as one of risk factor for Cardiovascular Disease in these patients.

Keywords : C- Reactive Protein, Periodontal diseases/ periodontitis , cardivaskular disease, pathogenesis, , risk factors

Correspondence : Yoifah Rizka, Periodontics Departement, Dentistry Faculty, Hang Tuah University. Jl. Arif Rahman Hakim 150, Surabaya 60111 Indonesia, Telp 031-5912191. Email : yoi.riez@yahoo.co.id
ABSTRACT

Background: Stichopus hermanii contain rich glycosaminoglycans and triterpene glycoside which is much less, so it can be used for the treatment of wound healing. Gingival fibroblasts was the most substantial in the gingival connective tissue plays an important role in wound healing and has a unique tolerance in the oral mucosa. For used in oral mucosa extract whole Stichopus hermanii, it is necessary to test compatibility, one of them with acytotoxicity assay. Stem cells are widely studied today in the medical field due to a very larger olein the treatment, especially to replace damaged cells.

Purpose: The aim of this study was to determine the extract whole Stichopus hermanii cytotoxicity against stem cell gingival fibroblasts.

Methods: The sample of this research is that stem cells taken from human gingival fibroblasts were awakened and grown until confluent and the amount and distributed in 96-well plate. Further into the wells included 100mL test solution at various concentrations ranging series of concentrations of 1% -0.00390625%. Once through customs procedures MTT assay, the test results read by ELISA reader at a wave length of 595nm. ELISA reader results were analyzed through ANOVA and Tukey HSD test.

Results: The results of ANOVA and Tukey HSD test showed that there was no significant difference between each group.

Conclusion: Whole extract of Stichopus hermanii not toxic to stem cells gingival fibroblasts

Keyword: cytotoxicity, Stichopus hermanii, stem cell gingiva fibroblas

Correspondence: Rima Parwati Sari, c/o: Bagian Biologi Oral, FakultasKedokteran Gigi Universitas Hang Tuah. Jl. ArifRahman Hakim No. 150 Surabaya 60111, Indonesia. E-mail: rima.sari @ yahoo.com
ABSTRACT

Background: Periodontitis that can lead to tooth loss needs a regenerative therapy and one of the materials is bone graft. Various kind of graft materials have been used to regenerate bone defects due to periodontal disease. In the past 30 years a variety of synthetic bone graft have been developed with the aim to minimize disease transmission. In this study we used Anadaragranosa clam shells because they are a new source and haven’t been used before as a graft material.

Purpose: The aim of this study was to examine the toxicity of Anadaragranosa clam shell hydroxyapatite graft by counting the amount of fibroblast living cells after being treated. Material and Method: This experiment used 44 wells of BHK-21 fibroblast culture cell which divided into 11 groups: cell control, media control group without cell and treatment groups were treated with 54mg/ml, 27mg/ml, 13,5 mg/ml, 6,75 mg/ml, 3,375 mg/ml, 1,6875 mg/ml, 0,8437 mg/ml, 0,4218 mg/ml, 0,2109 mg/ml blood cockle shell graft. These cells were read by ELISA reader and the cell viability were measured based on the optical density result.

Result: There was significant difference (p=0,000) and there were more than 77,63 percents of living fibroblast cells on all treatment groups.

Conclusion: Anadaragranosa clam shell hydroxyapatite graft was biocompatible with BHK-21 fibroblast cell culture.

Keywords: Anadaragranosa, graft, biocompatibility, hydroxyapatite

Correspondence: Widyastuti, Periodontia Departement faculty of Dentistry HangTuah University, Jl. Arif Rahman Hakim 150 Surabaya 60111 Indonesia, Telp 031-5912191. Email: widyastutihew@yahoo.com
ABSTRACT

Background: Periodontitis is a periodontal disease caused by mixed periodontopathogen bacteria. The bacteria were dominated by gram-negative bacteria. Soursop fruit (Annona muricata) leaves have been known having antibacterial effect against gram-positive and gram-negative bacteria, thus assumed to have antibacterial effect on bacteria caused periodontal disease.

Purpose: To examine the inhibition effect of Annona muricata leaf extract to the growth of mixed periodontopathogen bacteria.

Methods: Subjects were mixed periodontopathogen bacteria with total of 30 samples, divided into 6 groups (n = 5). Four groups were given the extract with different concentrations of 15 mg/ml, 30 mg/ml, 45 mg/ml and 60 mg/ml, while two other groups served as positive and negative controls. Extracts were prepared by maseration method. Sample of bacteria were inoculated in Mueller Hinton agar, tested by disk diffusion method. The inhibitory effect was observed by measuring the diameter of inhibition zones on agar media. Data were analyzed by ANOVA and LSD test.

Results: The result of LSD test showed significant difference (p<0.05) between all concentrations and control except on the group concentration of 45 mg/ml and 60 mg/ml.

Conclusion: Annona muricata leaves extract could inhibit the growth of mixed periodontopathogen bacteria.

Keywords: periodontitis, mixed periodontopathogen bacteria, soursop leaves, extract, Annona muricata linn.

Correspondence: Yoifah Rizka, Periodontics Department, Faculty of Dentistry Hang Tuah University, Arif Rahman Hakim 150 Surabaya 60111 Indonesia, Phone 031-5912191, e-mail: yoi.riez@yahoo.co.id
ABSTRACT

**Background**: Nannochloropsis occulata has many biological activities such as analgesic, anti-inflammatory, antioxidant and antibacterial properties thus potentially explored as therapeutic agent in oral disease.

**Objective**: This study aims to evaluate cytotoxic effect of Nannochloropsis occulata extracts in human gingival fibroblast stem cells.

**Method**: The study is an experimental laboratories research with post test only control group design. Nannochloropsis occulata extracts in concentration of 0.3125%; 0.625%; 1.25%; 2.5%; 5%; 10%; 20%, 40%; and 80% were tested its cytotoxicity on human gingival fibroblast stem cell. For the in vitro toxicity assay, serial concentration of Nannochloropsis occulata extracts was applied to human gingival fibroblast stem cell cultures in conditioned media. The cells (1x105) were cultured in 96 well plates and allowed to attach for 5 days before treatment with serial concentration of Nannochloropsis occulata extracts for 24 h period. Cell viability was assessed by the mitochondrial dependent reduction of yellow MTT (3-(4, 5-dimethylthiazol-2-yl)-2, 5-diphenyl tetrazolium bromide) to purple formazan. The data concerning cell viability were statistically analyzed using two-way ANOVA test and LSD multiple comparison test at 5% significance level.

**Result**: Nannochloropsis occulata extracts showed toxicity in the concentration of 2.5% above and not cytotoxic in the concentrations below (p<0.05).

**Conclusion**: Nannochloropsis occulata extracts was not cytotoxic effect on human gingival fibroblast stem cell in the concentration below 2.5%.

**Keyword**: Nannochloropsis occulata extracts, cytotoxicity, fibroblast gingiva stem cell

**Correspondence**: Syamsulina Revianti, Department of Oral Biology, Faculty of Dentistry Hang Tuah University, Surabaya – Indonesia, Jl. Arif Rahman Hakim 150, Surabaya 60111 Indonesia, Telp 031-5912191, e-mail: syamsulinaravi16@gmail.com
CLINICAL DIAGNOSIS OF VARICELLA ZOSTER
(CHICKEN POX) (CASE REPORT)

Astrid Palmasari, Isidora KS, Dwi Setyaningtyas, Nafiah, Stefani Lengkong

Lecturer at Department of Oral Medicine Faculty of Dentistry Hang Tuah University
Undergraduate Student at Faculty of Dentistry Hang Tuah University

ABSTRACT

Background: Varicella zoster virus (VZV) is a DNA virus morphologically similar to the HSV and apparently responsible for two completely dissimilar disease in humans, namely, chickenpox (varicella) and herpes zoster (Shingles). It is usually, but not invariably, a mild, self-limited disease in otherwise healthy children, but the severity of disease and risk of complications are usually greater in adolescents and adults. Transmission occurs via airborne droplets, or contact with infected respiratory tract secretions or vesicular lesions. Oral lesion may appear on the hard palate, pillar of fauces, uvula and appear like small ulcers, with a red halo. The rash initially manifest as pink maculopapular lesions that develop into itchy vesicles on the back, chest, face and scalp. Other clinical manifestations include malaise, fever, and lymphadenopathy.

Purpose: This case report is aimed to discuss diagnosis and management of varicella with malaise, fever.

Case: Patient, female 14 years old came with chief complaint of malaise, fever, headache and multiple vesicle, ulcer and crustae on the facial and single ulcer on the oral cavity. The diagnosis was Varicella (Chicken pox).

Case Management: Patient was prescribed with acyclovir 200 mg 5 times per day, analgesic, antibiotic, antiseptic mouthwash, multivitamin and high calory high protein dietary. Oral pain disappeared in 3 days, and after 10 days ulcer in facial and mouth healed.

Conclusion: Diagnosis of Varicella zoster could be get from detail anamnesis and examination.

Key Words: Varicella, acyclovir, benzydamine HCl

Correspondence: Astrid Palmasari, Bagian Ilmu Penyakit Mulut Fakultas Kedokteran Gigi Universitas Hang Tuah Surabaya, Jl.Arief Rahman Hakim 150, Surabaya. E-mail: pastrid81@yahoo.com.
THE HEAD CONDYLE RESORPTION CONNECTED BY FHS LEVEL IN PATIENT OSTEOPOROSIS WITH PANORAMIC RADIOGRAPHY

Azhari, Lusi Epsilawati, Pramanik F
Department of Dentomaxillofacial Radiology, Faculty of Dentistry, Padjadjaran University

ABSTRACT

Backgrounds: Osteoporosis is a systemic disease in which a decline in bone quality and increased levels osteocalcin as a detector of osteoporosis. Examination for these abnormalities does with BMD examination. Panoramic radiography is one tool to detect this disease. Head of condyle is a sign that examined the panoramic radiography.

Objective: The aim of this study was to assess the resorption of the head condyle associated with FHS with suspected osteoporosis.

Methods: This study uses the analytic description. Samples derived from 10 panoramic radiographs. Analysis uses multiple regressions analysis, calculated by ANOVA test.

Result: The results of this study found a positive correlation between the resorption of the head with the condyle with FHS levels. Beside that there is a correlation between BMD and resorption examination condyle head.

Conclusion: In Patients suspected of osteoporosis than proved by BMD and levels osteocalcin, panoramic radiographs especially when viewed from the head of the condyle resorption can be quite helpful.

Keywords: Head of the condyle, Osteoporosis, Osteocalcin

Correspondence: Azhari ,drg., M.S., Sp.RKG (K) Lusi Epsilawati, drg., M.Kes Dentomaxilla Facial Radiology Faculty of Dentistry Padjadjaran University Telp. 081802092026 Email: lusiepsilawati@yahoo.com
COLLAGEN TYPE I ON THE WOUND HEALING PROCESS OF DENTAL EXTRACTION WITH DIFFERENT MOLECULAR WEIGH OF CHITOSAN
(RESEARCH ARTICLE)

Sularsih
Departement of Dental Material and Technology, Dentistry Faculty of Hang Tuah University

ABSTRACT

Objectives: The applications of chitosan in the medical field are determined by the specification of the deacetylation degree and molecular weight.

Purpose: The aim of this study was to account the rate of collagen type 1 on wound healing process of dental extraction in Rattus norvegicus for 7 and 14 days using chitosan gel with high molecular weight and low molecular weight.

Methods: Rattus norvegicus strain wistar male, aged 8-16 weeks, divided into 3 groups, namely group 1 which given chitosan gel with high deacetylation degree and high molecular weight, group II which given chitosan gel with high deacetylation degree and low molecular weight and group III as control which were not given chitosan gel. Chitosan gel were applied into the socket of dental extraction. Rat was decaputated 7 and 14 days after chitosan gel application and the jaw in the treated regions and control group were cut for immunohistochemical examination using type 1 collagen monoclonal antibody to observe collagen type I. Data were analyzed using t test.

Results: The result showed significant differences in collagen type 1 for 7 and 14 days observation (p<0.05). The number of collagen type 1 were found higher in the group which given chitosan gel with high deacetylation degree and high molecular weight.

Conclusion: Chitosan gel with high deacetylation degree and high molecular weight become more active and have high chemical reactivity. It can increase the number of collagen type 1 on wound healing process of dental extraction.

Keys words: Chitosan,molecular weight,collagen type 1

Correspondence: Sularsih, c/o: Departemen of dental material, Dentistry faculty of Hang Tuah University, Arif Rachman Hakim 150 Surabaya. E-mail: l4rs_dentist@yahoo.co.id
ABSTRACT

Recurrent Aphthous Stomatitis (RAS) was an open wound in the oral cavity which is recurrent. Until now, the etiology was idiopathic, so the therapy has not specifically fixed. Considering the chief complaint of RAS was painful, which cause disturbed food intake. Many factors which are known to have influence in the wound healing, among others in oxygenation hyperbaric oxygen therapy was a therapy with continuous pure oxygen to the body with air pressure greater than normal atmospheric pressure. The reason is to increase the concentration of oxygen at all body tissues. So basically, in literature study theory, there is relationship between wound healing using hyperbaric oxygen therapy.

Key words: Recurrent Aphthous Stomatitis, Hyperbaric Oxygen therapy, Atmosphere

Correspondence: Dwi Setianingtyas, Departement of Oral Medicine, Faculty of Dentistry Hang Tuah University, Arief Rahman Hakim street 150 Surabaya 60111. Indonesia. Phone : (031) 5945864, Ext 204. Fax : 031 – 84743. E-mail : andan_rhp@yahoo.com
CORRELATION OF THE MANDIBULAR CORTICAL BONE HEIGHT WITH ALKALINE PHOSPHATASE VALUE IN PATIENT SUSPECT OSTEOPOROSIS WITH PANORAMIC RADIOGRAPHY

Farina Pramanik, Azhari, Lusi Epsilawati
Dentomaxillofacial Radiograph, Faculty of Denstisry,University of Padjadjaran

ABSTRACT
Backgrounds: Osteoporosis is a metabolic bone disease characterized by a reduction in mass and deterioration of bone microarchitecture. One of the symptoms the mandibular cortical bone height reduction by panoramic radiographs. Another way that can help detect osteoporosis is to look for levels of alkaline phosphatase in the blood.

Objective: The purpose of this article is to look at the correlation between the height of the mandibular cortical bone with alkaline phosphatase levels in patients with osteoporosis. The aim of this study was to assess cortical bone height correlated with the alkaline phosphatase levels in patients with suspected osteoporosis.

Materials and methods: This study used a descriptive analytic method. Population of 18 pieces complete with panoramic radiography blood test that consisted of 14 patients with osteoporosis and 4 pieces normal conditions. The collected data was then analyzed with regression and correlation analysis.

Result: The results obtained by the correlation between the height of the mandibular cortical bone alkaline phosphatase value.

Conclusion: Panoramic radiography can be used as a medium for detecting osteoporosis and alkaline phosphatase levels is one good marker in detecting osteoporosis

Keywords: Mandibular cortical bone height, alkaline phosphatase, osteoporosis, and panoramic radiography.

Correspondence: Farina Pramanik.,drg., MM. Department of Radiology, Faculty of Dentistry, Padjadjaran University. Sekeloa Selatan I Bandung, 40132. Hp: 081 221 72 983. E-mail: iyank_drg@yahoo.com
THE RITE OF DEATH THE STUDIES ON END OF LIFE CARE AS A BEREAVEMENT MANIFESTATION FOR TERMINAL ILLNESS PATIENTS AND HIS FAMILY IN THE SEVERAL CITY OF EAST JAVA

Sudibyo
Head of Dental Public Health Sciences, Faculty of Dentistry, University of Hang Tuah Surabaya.

ABSTRACT

Background: Associated with chronic end-stage patients (terminal illness), due to illness or physical abilities elderly patient of illness. The objective conditions would impact on rationality and construction in the maintenance, construction also about end of life, and the good end of life after death, so with his family following a good treatment as a manifestation of a sense of bereavement, not regardless of culture, ethnicity, religion and socio-economic status.

Methods: This study uses Husserl's phenomenological approach in which an individual has a reflective consciousness and act to do on that awareness. In this case, the experience of illness resulting end of life (terminal illness) to be part of "ever," he was experiencing, and "near of the object that is being experienced." Surabaya chosen because there are ethnic and religious diversity. Meanwhile, the unit of analysis is the patient who is or ever experienced a fatal illness (terminal illness), including elderly parents and family members. The patient who is the subject divided into 2 (two), namely: hospitalized and at home. Data collection techniques used, observation and in-depth interviews.

Results: result of research carried out at several informants with different backgrounds chronic diseases suffered by various socio-economic backgrounds. Analysis of the results showed that the phenomenon of pain as fate and misfortune, as negotiations inpatient physician and patient, waiting for patients, and substitute of nurse "role".

Conclusion: that the patient's treatment decision doesn't just based on the severity of the disease, but also social and economic factors. There is a difference of understanding the construction of the hospital and family activities while waiting for patients in the hospital.

Keywords: terminal illness, elderly patient, end of life, a bereavement

Correspondence: Sudibyo, Faculty of Dentistry, University of Hang Tuah Surabaya, Jl. Arif Rahman Hakim No.150. Tilp. 0315912191, 0816515100, e-mail: sudibyo_2008@yahoo.com
ORTHODONTIC TREATMENT IN UPPER ARCH DDM WITH MANDIBULAR CROWDING CAUSED BY UNFINISHED REMOVABLE ORTHODONTIC TREATMENT (Case Report)

Oktrivina Prihantini *, Ari Triwardhani**
* Orthodontic Private Practice
** Lecturer, Department of Orthodontic, Airlangga University

ABSTRACT
Introduction : Disharmony dento maxillar a disproportion between teeth size and the arch. One of clinical appearance that can be seen is crowding with several signs. Which can be seen in this patient upper arch, with mutilation in mandibular first premolar causing increasing in overbite, overjet and moderate crowding in mandibular.
Objectives : The purpose of this treatment is to eliminate crowding, reduce overjet, overbite and establish good relationship between maxilla and mandibula.
Case : An Indonesia-Javanese female 25 years old. Patient presented dento-skeletal class I maloclussion with severe crowding at maxilla and moderate crowding in mandibula. Permanent first premolar mutilation at mandibula in both sides. With increasing overjet and overbite.
Case Management : Edgewise appliances was bonded, extraction maxillary first premolar, odontectomy mandibular third molar , canine retraction, maxillary anterior retraction. Overbite and overjet correction and mandibular leveling unraveling.
Result : In the end of treatment crowding was eliminate, good esthetic and function was established.

Key words : Orthodontic treatment, DDM, mandibular first premolar mutilation.

Correspondence : Oktrivina Prihantini. Email: vina_orfo@yahoo.com
THE INHIBITION EFFECT OF AVICENNIA MARINA MANGROVE LEAVES EXTRACT TO THE GROWTH OF MIXED PERIODONTOPATHOGEN BACTERIA

Adrianus Bagus Krisnata, Yoifah Rizka, Dian Mulawarmanti
Undergraduate Student Program Faculty of Dentistry Hang Tuah University
PeriodonticDepartment of Hang Tuah University
Oral Biology Department of Hang Tuah University

ABSTRACT
Background: Periodontitis is a periodontal tissue disease in which one of main factors is caused by bacteria periodontopathogen. Some antibacterial drugs had been used to eliminate the mixed periodontopathogen on periodontitis. A natural antibacterial compounds could have benefit as alternative drug on that matter. Avicennia marina is one of mangrove species which has potent as a source of antibacterial compound, such as flavonoid, alkaloid, terpenoid, tannin, and saponin.

Purpose: The aim of this research was to study the inhibitory effect of mangrove leaves (Avicennia marina) on the growth of mixed periodontopathogen bacteria with various concentrations.

Methods: Mangrove leaves was extracts with ethanol 96%. Mixed periodontopathogen bacterial was inoculated on Brain Heart Infusion (BHI) medium. The antibacterial effect of Avicennia marina extract to the growth of mixed periodontopathogen were tested by diffusion methods with 3 concentration 750 µg/ml, 1500 µg/ml and 3000 µg/ml, each consisted of 6 samples. The Inhibition effect were examined by measuring the clear zone surrounding diffusion disc with a digital calipers, stated in millimeters.

Result: Data were analyzed with ANOVA (one way) test and result showed the significant different (p < 0,05) between all groups and it was found that there is inhibition growth power of mixed periodontopathogen bacterial by leaf extract of Avicennia marina with concentration 750 µg/ml (0,8067 mm), 1500 µg/ml (0,9067 mm), 3000 µg/ml (1,2167 mm), DMSO 1% (0 mm) and minosiklin 0,1% (42,835 mm)

Conclusion: Leaf extract of Avicennia marina could inhibit the growth of mixed periodontopathogen bacteria.

Keywords: Avicennia marina, antibacterial, periodontal disease, mixed periodontopathogen bacterial.

Correspondence: Yoifah Rizka. Periodontic Laboratory. Dentistry Faculty Hang Tuah University. Jl. Arif Rahman Hakim 150 Surabaya. Telp 031-5912191. Email yoi.riez@yahoo.co.id
ANTERIOR CROSSBITE CORRECTION WITH INCLINE BITE PLANE
(CASE REPORT)

Fahmi Fuadi*, Arya Brahmanta**
*Clinical Student Faculty of Dentistry Hang Tuah University Surabaya
** Department of Orthodontics Faculty of Dentistry Hang Tuah University
Surabaya

ABSTRACT
Anterior crossbite as a dental malocclusion resulting from the abnormal axial
inclination of one or more anterior maxillary teeth. There are several method
for solving this problem, one of them is inclined bite plane. Incline bite plane
is a simple functional appliance used in the lower arch jaw which work as bite
jumper. In this case report we would like to describe removable incline bite
plane in a 10 years girl with class III malocclusion, SNA 86, SNB 87, ANB -1,
overjet -2mm, overbite 1.5 and concave facial profile. This appliance was
applied for only 1 month for anterior crossbite correction. The result showed
that the anterior crossbite can be corrected by incline bite plane.

Key word: anterior crossbite, axial inclination, inclined bite plane

Correspondence: Arya Brahmanta, Bagian Ortodonti Fakultas Kedokteran
Gigi Universitas Hang Tuah, Jl. Arif Rahman Hakim 150 Surabaya 60111
Indonesia, Telp 031-5912191, e-mail: aryabrahmanta@gmail.com.
LASER THERAPY: NEW INSIGHT IN ANUG MANAGEMENT
Wenni Kannis Qorinna*, Rikko Hudyono**
* Klinik Utama Prima Medistra, kudus
** RSGMP Fakultas Kedokteran Gigi Universitas Jenderal Soedirman Purwokerto

ABSTRACT:

Background: Necrotizing ulcerative gingivitis (NUG) is a microbial disease of the gingiva, characterized by the death and sloughing of gingival tissue. Until today the treatment of NUG consists of alleviation of the acute inflammation and antibiotics. Very little literature, if any, had described the use of laser in NUG management.

Purpose: The purpose of this report is to give a new insight in treatment alternative for NUG.

Case Report: A woman 36-year-old came to our clinic with chief complain of severe pain on her gingiva. She has got the pain for 10 days, and had got ciprofloxacin twice a day from her previous doctor, but showed ineffective. Intraoral examination showed a pseudomembrane on her gingiva in some areas.

Case management: Laser had been introduced to treat the ulcer. No antibiotics had been administered in this therapeutic session. The effect of laser may be seen directly after the laser had initiated. In 3 days the pain had been diminished and the patient had a full mouth scaling. After 7 days, the gingiva had completely recovered.

Discussion: Laser has an ability to kill all bacterial contamination on the gingival surface without causing mucosal damage. This ability may decrease the bacterial load and at the same time causing protein denaturation and hemostatic effect beneath the pseudomembrane. The effect of biostimulation had been seen in this case. However it is usually take more than one week to fully recover, in this case 3 days after laser therapy, the gingiva showed recovery.

Conclusion: Laser is a new treatment choice for NUG. It may offer faster healing, less tendency for antibiotics prescription, more comfortable for the patient.

Keywords: NUG, laser, biostimulation, protein denaturation, hemostatic

Correspondence: Rikko Hudyono. RSGMP Fakultas Kedokteran Gigi Universitas Jenderal Soedirman Purwokerto. Email: rharmani@yahoo.com
DIRECT IMPLANT PLACEMENT AND LOADING: CHALLENGING THE BRANEMARK CONCEPT

AP. Hudyono*, Rikko Hudyono**
* Klinik Utama Prima Medistra,
** RSGMP Fakultas Kedokteran Gigi Universitas Jenderal Soedirman
Purwokerto

ABSTRACT

Background: Since Branemark’s first implant invention, implant had been rapidly evolved. Branemark believed that implant shall be placed after the bone is healed completely and the prosthetic is placed after osseointegration occurs. However, this approach cause a long treatment time.

Purpose: The aims of this paper is to give a new paradigm of direct implant placement.

Case Report: A woman 43-year-old came to our clinic with a chief complaint of tooth no #15 fractured while eating. This tooth was previously endodontically treated and a composite onlay was placed over it.

Case management: Tooth no #15 was fractured. We decided to place an implant directly after the extraction. The tooth was extracted using a periotome, an implant 5.3x12 mm was inserted. Allograft was used to fill the bone defect and a healing abutment was placed to facilitate abutment and crown placement in the next day.

Discussion: New paradigm of implant placement and loading had been shifted dramatically. Based on theory of bone biology, a stress less than 150 micro Newton is needed to prevent bone resorption. Placing an implant directly and load it at few days can be successful as we can have the initial fit at the placement. The prosthetic had to be free of occlusal traumatism especially from the lateral forces.

Conclusion: Direct implant placement and loading are biologically-based protocol. The success and failure are the same as the usual implant protocol.

Keywords: Direct placement, direct loading, osseointegration, micromovement, atraumatic extraction

Correspondence: Rikko Hudyono. RSGMP Fakultas Kedokteran Gigi Universitas Jenderal Soedirman Purwokerto. Email: rhamani@yahoo.com
APICAL GRANULOMA TREATMENT IN OPEN APEX BY USING CALCIUM HYDROXIDE (CAOH)

Jessica Novia W, Aprilia
Undergraduate Student Program Faculty of Dentistry HangTuah University
Conservation Department Faculty Of Dentistry Hangtuah University

ABSTRACT

Background: The success of root canal treatment is based on total elimination of root canal content, thorough cleaning, shaping and obturation of root canal system. Calcium hydroxide is recommended as intra-canal medicament because of its antibacterial properties, tissue dissolving ability, inhibition of tooth resorption and indication of tissue repair by hard tissue formation. Apexification is a process/procedure well recognized and accepted by clinicians and researchers. Calcium hydroxide is most commonly used to induce an apical hard tissue barrier. An immature tooth that develops pulpal or periapical disease presents special problems. Because the apex has not yet completely formed, conventional root canal treatment procedures would be unpredictable. The walls of the root canals are frequently divergent and open apexes make debridement and obturation difficult. Thus closure of root apex is very essential for success of the endodontic treatment. Although different materials are used for the apexification procedure, calcium hydroxide is the material of choice for apical barrier formation and healing. There are different opinions regarding frequency of CaOH dressing change to induce complete closure of the apex. Granuloma periapical is a growing mass of granulation tissue surrounding the apex of a nonvital tooth and rising in response to necrosis of the tooth pulp.

Case: A student, 19th, came and wanted to fix her left upper front teeth were fracture ± 7th ago because of accident.

Case management: The management for this case is Endodontic intracanal with apexification and Crown (for post endodontic).

Conclusion: Calcium hydroxide can reduce or eliminate periapikal lesion.

Keywords: Apeksifikasi, Calsium hidrokside, granuloma

Correspondence: Aprilia, Conservation Departement Faculty of Dentistry HangTuah University. Address: Arif Rahman Hakim 150 Surabaya, Indonesia. Post Code (60111), Telepon/ Fax: 031 591 2191. Email: drg.aprilia.spkg@gmail.com
THE EFFECT OF TIME INTERVAL OF 1, 2, 3 MONTHS POST-TOOTH EXTRACTION TO RETENTION AND STABILITY OF FULL DENTURE IN RSGM FKG UHT SURABAYA

Rahmawaty Andriany*, Paulus B. Teguh*, Henry Wahyu ***
*Mahasiswa Fakultas Kedokteran Gigi Universitas Hang Tuah
**Laboratorium Prostodonsia Fakultas Kedokteran Gigi Universitas Hang Tuah
*** Laboratorium Bedah Mulut Fakultas Kedokteran Gigi Universitas Hang Tuah

ABSTRACT

Background: The fabrication of full denture was often found that many patient have to extract their teeth due to full denture’s treatment purposes. The time interval of post-tooth extraction and the commencement of the full denture fabrication will affect the outcome of the full denture treatment.

Objective: The aim of this study was to determine effect of the time interval post-tooth extraction in the fabrication of upper full denture retention and stability in RSGM FKG UHT.

Methods: This study was an observational analytic with cross sectional study design. analysis of the data using non-parametric Kruskal-Wallis test. Upper full denture which fit the criteria were divided into the interval of 1, 2 and 3 months post-tooth extraction and were checked for the retention and stability during insertion and given scores ranging from 0-3 for its retention and 0-2 for its stability.

Results: Results showed that the average score for retention and stability at each time interval. At intervals of 1, 2, and 3 months post-tooth extraction, the mean retention score are 1.5, 1.75, 2.25 respectively while stability are 1.5, 1.5, 2 respectively. The average score based on the stability and retention intervals tested by Kruskal Wallis test and get a value for the variable respectively which are time interval, retention and stability scores p = 0.71, p = 0.93, p = 0.26 where all p> 0.05.

Conclusion: The time interval of 1, 2, 3 months post-tooth extraction did not have effect on the retention and stability of full denture in RSGM FKG UHT.

Keywords: full denture, retention, stability, time interval

Correspondence : Paulus B. Teguh, Laboratorium Prostodonsia, Fakultas Kedokteran Gigi Universitas Hang Tuah, Jl. Arif Rahman Hakim 150 Surabaya 60111 Indonesia, Telp 031-5945894, 031-5945894, e-mail : paulusteguh@yahoo.co.id
CORRECTION OF UNILATERAL POSTERIOR CROSSBITE AND ANTERIOR OPENBITE IN PERMANENT DENTITION WITH ORTHODONTICS REMOVABLE APPLIANCES

Eka Pramudita D* Arya Brahmanta**
*Undergraduate Programs at Department of Orthodontics Faculty of Dentistry Hang Tuah University
**Lecturer at Department of Orthodontics Faculty of Dentistry Hang Tuah University

ABSTRACT
Background: The correction of class I malocclusion with unilateral posterior crossbite and anterior openbite in permanent dentition is very important, because this condition has a bad effect in many aspect, such as: aesthetic, mastication and fonetic for the patient.

Objective: The aim of this case report is to know the mechanism of orthodontics removable appliances for managing class I malocclusion together with unilateral posterior crossbite and anterior openbite in permanent dentition.

Case: In this case report we would like to present a 11-years-old girl with class I malocclusion together with unilateral posterior crossbite and anterior openbite, SNA 79°; SNB 74°; ANB 5°; Overjet 4 mm; Overbite -5 mm and Convex facial profile.

Case Management: Orthodontics removable appliances such as: expansion screw is used to correct unilateral posterior crossbite; palatal spring, button and labial bow is used to correct anterior openbite.

Conclusion: The result of this treatment indicated that orthodontics removable appliances technique can be considered an effective therapy for correction class I malocclusion with unilateral posterior crossbite and anterior openbite in permanent dentition.

Keywords: Anterior Openbite, Permanent Dentition, Posterior Crossbite, Orthodontics Removable Appliances.

Correspondence: Arya Brahmanta. Laboratorium Ortodonsia, Fakultas Kedokteran Gigi Universitas Hang Tuah, Jl. Arif Rahman Hakim 150 Surabaya 60111 Indonesia, Telp 031-5945894, 031-5945894, e-mail: aryabrahmanta@gmail.com
ORTHODONTICS REMOVABLE FIXED APPLIANCES IN MANAGING TREATMENT OF DENTAL CLASS I MALOCCLUSION WITH MAXILLARY MIDLINE DIASTEMA RELATED TO MESIODENS AND BIMAXILLARY DENTAL PROTRUSION

Stevanus Chandra Sugiarto Budijono*, Arya Brahmanta**

* Student, Departement of Orthodontics Faculty of Dentistry Hang Tuah University
** Lecturer, Departement of Orthodontics Faculty of Dentistry Hang Tuah University

Abstract

Background: The correction of class I malocclusion with maxillary midline diastema related to mesiodens in child patient is one of moderate biomechanical in orthodontics. Maxillary midline diastema is resulting from mesiodens caused poor facial aesthetic.

Objective: The aim of this case report is to know the mechanism of Watkin appliance in managing early treatment of dental class I malocclusion with maxillary midline diastema related to mesiodens.

Case: This case report presents an 11-year-old boy with dental class I malocclusion with maxillary midline diastema related to mesiodens and bimaxillary dental protrusion, SNA 83°, SNB 76°, ANB 7°, overjet 4 mm, overbite 6 mm, the diastema was 5 mm and convex facial profile.

Case Management: Firstly, we extract the mesiodens to correct the diastema. Watkin appliance consists of incisor bands with tubes and the watkin free sliding arch. This Appliance was ideal for retracting and rotating incisor teeth as desired. Any incisor rotation that was required could be done simultaneously by bending the arch wire laterally by the amount and in the direction that would cause precise correcting forces.

Conclusion: The result of this case showed that Watkin appliance is can be considered to be therapy choice for maxillary midline diastema.

Key words: Maxillary midline diastema, Mesiodens, Watkin appliance

Correspondence: Arya Brahmanta, Bagian Ortodonti Fakultas Kedokteran Gigi Universitas Hang Tuah, Jl. Arif Rahman Hakim 150 Surabaya 60111 Indonesia, Telp 031-5912191, e-mail: arya.brahmanta@gmail.com
THE EFFECTS OF CHITOSAN BIOMATERIAL ON THE INHIBITION OF MATRIX METALLOPROTEINASE 8 (MMP-8) IN WOUND HEALING PROCESS

Sularsih*, Endah wahjuningsih**
*Departement of Dental Material and Technology, Dentistry faculty, Hang Tuah University
**Departement of Oral Biology, Dentistry faculty, Hang Tuah University

ABSTRACT

Background: Chitosan is a linear polysaccharide that consists of β-(1-4)-(2-acetamido-d-glucose and β-(1-4)-(2-amino-d-glucose units derived from partial deacetylation of chitin.

Objective: This study is to know about chitosan effect on the inhibition of matrix metalloproteinase 8 (MMP-8) in wound healing process.

Review: Chitosan in one of abundant, renewable, non toxic, biodegradable carbohydrate polymer and available largely in the exoskeleton of shellfish and insects. It has similar characteristics with glycosaminoglycans (GAGs), an extracellular macromolecule that is important in wound repair. The extracellular degradation of collagen and other matrix components is regulated by a complex system of enzyme is called matrix metalloproteinase (MMPs). Chitosan has inhibition MMP-8 effect in wound healing process. It has activity to release transforming growth factor β1 (TGF β1) that plays the role of increasing new collagen transcription and production of collagen. The expression of MMP-8 in human PDL fibroblast and macrofag is decreased by TGF β1. The balance between deposition and degradation of collagen would determine integrity and the strength of tissue.

Conclusion: Chitosan inhibits the expression of MMP-8 by releasing TGF β1, which will result in accelerated wound healing process.

Keywords: chitosan, MMP-8, wound healing process

Correspondence: Sularsih, c/o: Departemen of dental material, Dentistry faculty of Hang tuah University Gigi, Arif Rachman Hakim 150 Surabaya 60111. E-mail: l4rs_dentist@yahoo.co.id
ABSTRACT

Objective: The aim of this study was to describe and to discuss how accurate conversion from CT number into HU. A review of the current literature is presented and the study methods are discussed.

Review: Density of available bone influence the clinical success of dental implants. Computed Tomography (CT) is an established method for acquiring bone images before performing dental implant surgery. It allows precise three-dimensional evaluation of anatomic structures and direct measurement of bone density, expressed in Hounsfield units (HU), characteristics that provide important information about the bone. Conversion of CT numbers into HU becomes a problem.

Conclusion: Various authors have calculated machine-specific conversion factors from CT numbers to HU. However their results are impaired by the underlying (unexpressed) assumption that the CT numbers are consistent throughout the volume of interest.

Keywords: hounsfield unit, CT numbers, bone density

Correspondence: Sarianoferni,drg.,M.Kes. Radiology Department Faculty of Dentistry Hang Tuah University.Jl. Arif Rahman Hakim No. 150 Surabaya, Telp. (031) 5945864, 5912191
PERIPHERAL GIANT CELL EPULIS IN A 5 YEARS OLD BOY

Isidora K S*, Palmasari A**, RizkaY***, Sarianoferni***, Abuzar***
Student of Dentistry Faculty Hang Tuah University
and lecturers at Dentistry Faculty Hang Tuah University

ABSTRACT

Background: Giant cell granuloma occurs either as a peripheral exophytic lesions on the gingival (giant cell epulis, peripheral giant cell reparative granuloma). Peripheral giant cell lesions are considered to be examples of benign inflammatory hyperplasia in which cells with fibroblastic, osteoblastic and osteoclastic potentials predominate. The lesions are highly vascular; hemorrhage is a prominent clinical and histologic feature.

Objective: of this paper is want to report about a large nodule between 84 and 85 in 5 years old boy. The nodule grew until about 3 cm in size in the last 3 months. It bleeds easily by a light trauma.

Case: The is a nodule between 84 and 85 in 5 years old boy that wanted to be treated pedodontically. By panoramic foto the sources of the epulis clearly detected.

Case Management: The management of the case was, examined the nodule intensly and refer to Dr.Soetomo Hospital, because he had to have his JAMKESKIN card. Meanwhile he was given Vitamins, herba mouth gargle and some liquid- high- nutrition- foods. of this case was, by the easily bleeding condition, we had to be very caution for a more serious illness. The examinations in the Dr.Soetomo Hospital were complete. The results were normal in the general conditions, except for the PLT concentration. According to the fund that was minimal, his parents postponed the continueity of the schedule. Meanwhile the herba’s gargle (the most medicament that easily make by themselves ) was dayly used. The lesion reduced and not bleed anymore.

Conclusion: The epulis that easily bleeds, for the patient from lower level, had to be treated with a natural herba medicament that was able for them..

Keywords: Epulis easily bleeding, general check up, herbal medicine.

Correspondence: Astrid Palmasari. Dentistry Faculty Hang Tuah University, Jl. Arif Rahman Hakim 150 Surabaya 60111. HP.: 0813 3055 7474,
IMPROVING DENTAL PRACTICE WITH HOLISTIC THEME

Dwi Hariyanto*, Arya Brahmanta**

*Departement of Dental Public Health Faculty of Dentistry University Of Hang Tuah Surabaya
** Department of Orthodontics Faculty of Dentistry University of Hang Tuah Surabaya

Abstract

Improving dental practice were not difference from effort of service. As a effort of service has two major should achieved : benefit and satisfaction of service. Improving dental practice with holistic care, whereas not only for dental and oral health but also involved generalized for overall health care, will giving satisfaction according to profesional procedure for operator and patient

Key word : improving practice, dentist, holistic care

Correspondence : Dwi Hariyanto. Dental Public Health Dentistry Faculty Hang Tuah University. Jl. Arif Rahman Hakim 150 Surabaya. Telp 031-5912191. Email dwi_surabaya@yahoo.com
ROOT CANAL TREATMENT AT TEETH WITH FIXED
ORTHODONTIC TREATMENT

Moh. Basroni Rizal*; Linda Rochyani**
*Undergraduate student Program Faculty of Dentistry Hang Tuah University
**Department of Conservative Dentistry Faculty of Dentistry Hang Tuah University

ABSTRACT

Background: The periapical abscess results from an infection of the pulpal tissue causing the pulp to become necrotic. It is formed when pus escapes from walls of the pulp chamber and the root canal(s) through the apical foramen. An area of pus and fluid accumulation forms in the bone surrounding the apex of the tooth and is accompanied by continuous pain and increases when there is pressure. Root canal treatment is the removal of the pulp tissue necrosis, after all necrotic pulp tissue is removed, the root canal sterilized, then root canal obturation well.

Case: The author reports the case of root canal treatment with acute periapical abscess in the teeth 21 which are class 4 composite restoration and is undergoing fixed orthodontic treatment in female patients 20 years old.

Case Management: Metapex root canal treatment is used as a dressing material, then performed the root canal obturation, with subsequent cavity in composite restorations because patients undergoing fixed orthodontic treatment so that restoration can not be made. Prognosis is good in this case.

Conclusion: Root canal treatment can be performed on teeth that are in fixed orthodontic treatment.

Keyword: Root canal treatment, periapical abcess

Correspondence: Linda Rochyani, Laboratorium Konservasi Gigi Fakultas Kedokteran Gigi Universitas Hang Tuah Surabaya, Jl. Arif Rahman Hakim 150 Surabaya. No Telp. 08563142257. email: lindarochyani@yahoo.co.id
THE MANAGEMENT OF CHRONIC ULCERS ON BOTH OF THE LATERAL BORDERS OF THE TONGUE

Nafi’ah., Palmasari A., Isidora KS., Lukisari C., Nirmala D.
Lecturers and student in Dentistry Faculty Hang Tuah University

ABSTRACT

Background: Ulcer is the most common lesion that occur in the mouth. Stomatitis Aphthousa Recurrent is one of the lesion and usually healed within maximal 14 days. Another ulcer that caused by trauma, will healed when yhe irritant was eliminated. Lateral posterior of the tongue is the place that mostly a persistent ulcer will become malignant.

Objective: The purpose of this paper was wanted to show the management of the chronic ulcer on both of the lateral posterior border of the tongue.

Case: The case was a 54 years old female, complain of a pain in all of her oral mucosa. The pain was recurrent ever since her husband passed away, about 5 years ago. She had already visited some doctors, taken many medicines, whether modern or traditional. The ulcers still persist ever since.

Case Management: The management of the case was, recorded all of the histories and sending the person to be examined by FNAB from the Dr.Ramelan's Hospital. The result was a chronic supurative inflammatory infection. She received vitamin, mouth gargle, antacid and corticosteroid orally. From the histories of the illness, she had to be given some medicaments that hopefully regain her conditions

Conclusion. The therapy of some chronic ulcerations in the posterior lateral border of the tongue had to be supported by an HPA’s examination. As a General Practitioner, had to be very familiar with the changes in the oral mucosa, to avoid a severe and dangerous progress of the lesions.

Keywords: Ulcers, chronic, lateral border of the tongue.

Correspondence: Isidora Karsini Dentistry Faculty Hang Tuah University
Jl.Arif Rahman Hakim 150, Surabaya 60111. HP.: 0818 319 612., e-mail: isidora_karsini_drg@yahoo.com
PERIODONTIC- ENDODONTIC TREATMENT AT PERiapical lesion (suspect cyst)

Hansen Kurniawan
Resident of Graduate Program of Periodontics, Faculty of Dentistry, Airlangga University

ABSTRACT

Background In this case report, we present a periapical lesion case (suspect cyst) and was treated with Periodontic-Endodontic Treatment. Periapical lesions develop as sequelae to pulp disease. They often occur without any episode of acute pain and (are) discovered on routine radiographic examination. The incidence of cysts within periapical lesions varies between 6 and 55%

Case: a 40-years old man had been pain and swelling in right upper lateral incicivus, with radiographic picture oval radiluscent at apical right upper lateral incicivus with radiopaque margin. The patient had heavy staining and calculus. The patient also has habit of smoking, drinking and bruxism.

Case management, endodontic treatment have been done on right upper lateral incicivus and scaling root planning on maxilla and mandibula. Post scaling and endodontic treatment, control patient recall after 3 month treatment to radiographic photo for evaluation of periodontic – endodontic treatment.

Conclusion, Periodontic – endodontic treatment able to treat periapical lesions (suspect cyst) with proper, routine treatment and regulary control.

Keywords: Periapical lesion, periodontic-endodontic treatment

Correspondence: Hansen. Dentistry Faculty Airlangga University. Jl Prof Dr Moestopo 47 Surabaya.
THE INHIBITION EXTRACT FRUIT OF THE SOURSOP (ANNONAMURICATA LINN) TO BACTERIAL GROWTH OF MIXED PERIODONTOPATHOGEN

Vita Narastri Mayangsari, Yoifah Rizka, Kristanti Parishini
Undergraduate student Program Faculty of Dentistry Hang Tuah University
Periodontic Departement of Hang Tuah University
Oral Surgery Departement of Hang Tuah University

ABSTRACT
Background: Periodontitis is a periodontal disease caused by mixed periodontopathogen bacteria. The bacteria were dominated by gram-negative bacteria. Soursop fruit (Annona muricata linn) have been known having antibacterial effect against gram-positive and gram-negative bacteria, thus assumed to have antibacterial effect on bacteria caused periodontal disease. The effect of the soursop fruit extract to inhibit the growth of mixed periodontopathogen bacteria has never been researched before.

Purpose: To examine the inhibition effect of Annona muricata fruit extract to the growth of mixed periodontopathogen bacteria.

Methods: Subjects were mixed periodontopathogen bacteria with total of 30 samples, divided into 6 groups (n = 5). Four groups were given the extract with different concentrations of 5%, 10%, 20% and 40%, while two other groups served as positive and negative controls. Extracts were prepared by maseration method. Sample of bacteria were inoculated in Mueller Hinton agar, tested by disk diffusion method. The inhibitory effect was observed by measuring the diameter of inhibition zones on agar media. Data were analyzed by ANOVA and LSD test.

Results: The mean of the inhibition effect for each concentration group were 5% = 6,38 mm; 10% = 7,02 mm; 20% = 7,96 mm; 40% = 8,55 mm; positive control = 17,35 and negative control = 6 mm, result showed the significant difference on ANOVA test (p<0.05). The result of LSD test showed significant difference between all concentrations and control.

Conclusion: Annona muricata fruit extract could inhibit the growth of mixed periodontopathogen bacteria.

Keywords: periodontitis, mixed periodontopathogen bacteria, soursop fruit extract, Annona muricata linn.

Correspondence: Yoifah Rizka. Periodontic Laboratory. Dentistry Faculty Hang Tuah University. Jl. Arif Rahman Hakim 150 Surabaya. Telp 031-5912191. Email yoif.riez@yahoo.co.id
THE INHIBITION EFFECTS OF NANNOCHLOROPSIS OCULATA EXTRACT TOWARDS THE MIXED PERIODONTOPATHOGEN BACTERIA

Insana Arina P, Kristanti Parishini, Yoifah Rizka
Undergraduate student Program Faculty of Dentistry Hang Tuah University
Oral Surgery Departement of Hang Tuah University
PeriodonticDepartement of Hang Tuah University

ABSTRACT

Background: Periodontal disease is multifactorial disease where the bacteria caused is mixed periodontopathogen. Antibiotics often used to support the treatment of periodontal disease but it has some disadvantages such as gastrointestinal disorder and teeth discolourization. Extracts of Nannochloropsis oculata has been known having antibacterial effect against negative gram microorganism, potential to be explored as the therapy to periodontal disease.

Purpose: The aim of this study was to determine the inhibitory effects of N. oculata extract to the growth of mixed periodontopathogen bacteria at concentration of 10%, 20%, 40% and 80%.

Methods: The antibacterial effects of N. oculata extract to the growth of mixed periodontopathogen were tested by diffusion methods with 4 concentration 10%, 20%, 40% and 80%, each consisted of 6 samples. The inhibition effects were examined by measure the diameter of the clear zone around the disc. Data were analyzed by Anova followed by LSD test.

Result: The result showed the clear zone around the disc of N. oculata extract in all concentration, the greater concentration of the extract the greater diameter of the clear zone. Mean of inhibition zone at concentrations of 10% (6.12 mm), 20% (6.34 mm), 40% (6.66 mm), 80% (7.24 mm), DMSO 1% (6.00 mm) and tetracycline (10.59 mm). Showed meaningful distinction between the group experiment with negative control. N. oculata extract could inhibit the growth of mixed periodontopathogen (p<0.05). The largest diameter of the clear zone was in the concentration of 80%.

Conclusion: N. oculata extract could inhibit the growth of mixed periodontopathogen.

Key words: Periodontal disease, antibacterial, mixed periodontopathogen bacteria, Nannochloropsis oculata.

Correspondence: Insana, Undergraduate Student Program, Faculty of Dentistry Hangtuah University, Address: Arif Rahman Hakim 150 Surabaya, Indonesia. Post Code (60111), Telepon/ Fax: 031 591 2191, Email: nyitnyitnyot@gmail.com
ABSTRACT

Background: Protrusion is a condition where the maxillary anterior teeth protrude beyond normal overjet. The protrusion itself affects the appearance and aesthetic grade.

Purpose: The aim of this case report is to know the management of protrusion using the removable orthodontic appliance and elastic.

Case: This case report presents a 9 years old boy with protrusion class I malocclusion. SNA 80°, SNB 75°, ANB 5°, overjet 5 mm, overbite 3 mm and convex profile.

Case management: Removable orthodontic appliance and elastic was applied to this patient. Elastic was used to substitute the labial bow, the advantage of elastic is it could push the teeth constantly without any activation.

Conclusion: Therefore the using of elastic could decrease the overjet quicker than labial bow.

Keywords: protrusion, removable appliance, elastic

Correspondence: Arya Brahmanta, Department of Orthodontic Faculty of Dentistry, Hang Tuah University, Address: Arif Rahman Hakim 150 Surabaya, Indonesia. Post Code (60111), Telepon/ Fax: 031 591 2191, Email: aryabrahmanta@gmail.com
RELATIONSHIP BETWEEN SELF SATISFACTION ABOUT
FACIAL APPEARANCE AND
ORTHODONTIC TREATMENT NEED

Ariel Vincent Widjaja, Ratna Hartati, Dwi Hariyanto
Undergraduate, Faculty of Dentistry, Hang Tuah University
Department of Orthodontic Faculty of Dentistry, Hang Tuah University
Dental Public Health Department Faculty of Dentistry, Hang Tuah University

ABSTRACT

Background: Orthodontic patients at RSGM UHT treated by clinical students, have average age of 6-14 years old as a young adolescence. Failure in treatment often happened because lack of motivation from the patients. Patients motivation to seek orthodontic treatment depends on their self satisfaction on facial appearance. Study about correlation between self satisfaction about facial appearance with orthodontic treatment at 6 grade SD Sekolah Alam Insan Mulia Surabaya has not been studied yet.

Objectives: To determine relationship between self satisfaction about facial appearance and orthodontic treatment need at 6 grade SD Sekolah Alam Insan Mulia Surabaya.

Material and Methods: A survey of 41 children, was carried out at SD Sekolah Alam Insan Mulia Surabaya. The subjects were interviewed using a questionnaire consisting of questions concerning smile, dental appearance and desire for orthodontic treatment. Interocclusal records was made and assessed using the ICON. Analysis with Spearman test.

Results: There is no significant correlation between self satisfaction about facial appearance with orthodontic treatment need (R = -0.211 and P = 0.186). 53.7% respondent feel satisfied with facial appearance and 80.5% need orthodontic treatment.

Conclusion: There is no correlations between self satisfaction about facial appearance with orthodontic treatment need.

Keywords: Young adolescence, treatment need, self satisfaction, facial appearance.

Correspondence: Ratna Hartati, Bagian Ortodontik Kedokteran Gigi, Fakultas Kedokteran Gigi Universitas Hang Tuah, Jl. Arif Rahman Hakim 150, Surabaya 60111 Indonesia, Telp 031-5912191
CITOTOXICITY OF DEMINERALIZED FREEZE DRIED APICAL TOOTH ALLOGRAFT ON FIBROBLAST CELLS VIABILITY FROM BHK-21

Stephanie Salim, Widyastuti, Soemartono
Student Faculty of Dentistry Hang Tuah University
Periodontic Departement of Hang Tuah University,
Oral Surgery Departement of Hang Tuah University

ABSTRACT

Background: Bone graft is one of the regenerative therapy which is needed to treat periodontal diseases. There are four kinds of bone grafts based on its donor, allograft, xenograft, alloplast and autograft. Demineralized Freeze-Dried Bone Allograft (DFDBA) is one of the most commonly used allograft material in dentistry to form new bones because the effect of bone induction protein which is BMP. BMP is produced by demineralisation. This experiment used post-extraction teeth material which is considered having similar composition with bone on dentin and cementum area, where collagen type 1 is found.

Purpose: The aim of this research is to examine the cytotoxicity of DFDATA on the viability fibroblast cell from BHK-21.

Material and Methods: This experiment used microplate with 44 wells of BHK-21 fibroblast culture which divided into 11 groups, cell control group without any treatment, media control group without cell and 9 treatment groups were treated with DFDATA: 54mg/ml, 27mg/ml, 13,5 mg/ml, 6,75 mg/ml, 3,375 mg/ml, 1,6875 mg/ml, 0,8437 mg/ml, 0,4218 mg/ml dan 0,2109 mg/ml. These cells were incubated for 24 hours before and after treatment. Then, these cells were read using Elisa reader and the cell viability percentage were measured based on the OD (optical dencity) result and viable cell count.

Result: There is significant difference (p=0,000) on all treatment group. All treatment group had more than 50% of cell viability.

Conclusion: Demineralized Freeze Dried Apical Tooth Allograft is not toxic to fibroblast cell viability from BHK-21.

Keywords: Demineralized, Tooth, Allograft, Graft, Cytotoxicity

Correspondence: Sthepanie Salim, Faculty of Dentistry Hang Tuah University, Arif Rahman Hakim 150 Surabaya 60111 Indonesia, Telp +6231 5912191, e-mail: little2_fani@hotmail.com
ABSTRACT

Background: Class II skeletal malocclusion division I is one of the most commonly encountered scenarios in clinical orthodontics. This is often caused by an underlying discrepancy in the growth of the jaws, ranging from mandible deficiency, maxilla prognatism, or both.

Purpose: The purpose of this case report is to describe the efficacy of twin block intervention as functional appliance for correction of class II skeletal malocclusion division I.

Case management: This case report demonstrate the use of twin block appliance in a 10 years old girl with skeletal and dental class 2 malocclusion, convex facial profile, overjet 10mm, overbite 6mm SNA 84°, SNB 76°, and ANB 8°. Twin block is a removable functional appliance that consist of two bite lock, upper and lower witch interlock at 70 degree, which work together to posture the lower jaw forward. This frees up the “locked-in” lower jaw and encourages it to grow to its fullest potential to correct underdeveloped lower jaw.

Conclusion: The twin block could be an effective intervention to correct skeletal class II malocclusion division I in mixed dentition case.

Keyword : class II skeletal malocclusion, twin block.

Correspondence: Arya Brahmanta, Bagian Ortodonti Fakultas Kedokteran Gigi Universitas Hang Tuah, Jl. Arif Rahman Hakim 150 Surabaya 60111 Indonesia, Telp 031-5912191, e-mail: arya.brahmanta@gmail.com
INHIBITION OF RHIZOPHORA MUCRONATA BARK EXTRACT AGAINST GROWTH OF MIXED PERIODONTOPATHOGEN BACTERIA

Gaharu Firdianto, Yoifah Rizka, Kristanti Prisihni
Mahasiswa Fakultas Kedokteran Gigi Universitas Hang Tuah
Periodonsia Fakultas Kedokteran Gigi Universitas Hang Tuah
Mikrobiologi Fakultas Kedokteran Gigi Universitas Hang Tuah

ABSTRACT

Background: Periodontitis is a disease of the periodontal tissues which one of the primary etiology is mixed periodontopathogen, dominated by gram-negative bacteria. Rhizophora mucronata bark as one of the mangrove plant species have the antibacterial effect against gram positive and gram negative bacteria, thus potentially developed as antibacterial agent in periodontal disease.

Purpose: Examine the inhibition effect of Rhizophora mucronata bark extract to bacterial periodontopathogen pathogen.

Methods: Subjects were mixed bacterial periodontopathogen total of 42 samples were divided into 7 groups (n = 6). Five groups were given the extract with different concentrations of 5mg/ml, 10 mg/ml, 20 mg/ml, 40 mg/ml, and 80 mg/ml, control positive group was given minocycline 0,1 % and control negative was given aquadest steril. Extracts was prepared by percolation method, sample of bacteria were inoculated in Muler Hinton agar. The inhibitory effect was observed by measuring the diameter of inhibition zones on agar media.

Results: Data was analyzed by ANOVA and LSD test (P = 0.05). The results show each extract and control groups had significant differences. With an average diameter of each disc is obtained as follows: 5 mg/ml = 6.23mm, 10 mg/ml = 6.51mm; 20 mg/ml = 6.91mm, 40 mg/ml = 7.70mm, 80 mg/ml = 13.55mm; positive control = 45.24, and negative control = 6 mm.

Conclusion: Rhizophora mucronata bark extract could inhibit the growth of bacteria mixed periodontopathogen and the effective inhibitory concentration is 80 mg/ml but it smaller than positive control (minosiklin 0,1%)

Keywords: periodontitis, mixed periodontopathogen bacteria, Rhizophora mucronata barks

Correspondence: Yoifah Rizka. Periodontic Laboratory. Dentistry Faculty Hang Tuah University. Jl. Arif Rahman Hakim 150 Surabaya. Telp 031-5912191. Email yol.riez@yahoo.co.id
CHARACTERIZATION OF WATER EXTRACT GOLD SEA CUCUMBER (STICHOPUS HERMANII)

Damaiyanti D. W. Saptaswari D
Post Graduated Program Magister Science of Dentistry Airlangga University
Surabaya

ABSTRACT

Background. Indonesia is the country with the biggest sea cucumbers world’s producer. So far, sea cucumbers are only used as a side dish alone. Indonesia can provided added value and high economic value of gold sea cucumber through right procedure. A lot of gold sea cucumbers active substance that are suspected to have an influence on wound healing. For the best result, extract gold sea cucumber must be prepare with correct procedure. Extraction choosen depends on miltifactorial. Water extract is one of a safe procedure with a small risk that may damage parts of the active substance

Objectives. The aim of this study is to know the characterization of water extract gold sea cucumber (Stichopus hermanii).

Methods. Gold sea cucumbers were collected, homogenized with distillated water and shaken with water-bath shaker. Then extract was freeze dried, the result then characterized using spectrophotometer.

Results. The largest component to fewest component of water extract gold sea cucumber is total protein 76,82%, essential amino acid 48,11%, non essential amino acid 28,70%, glycoprotein 4,62%, collagen 4,05%, GAG’s 1,62%, proteoglycan 1,13%, heparin sulfate 1,02%, calcium 59%, saponin 56%, heparin 38%, hyaluronat acid 29%

Conclusion: There is many active substance of water extract gold sea cucumber that involed in wound healing process.

Keywords: gold sea cucumber, active substance, water extract, wound healing

Correspondence: Dian W Damaiyanti, Post Graduated Magister Science of Dentistry Airlangga University Surabaya. Address: Rungkut Tengah 6 B no 20 D Surabaya. Office: Praktik sosial Nurul Hayat, Pulowonokromo no.140. Phone: 08563385805. Email: diandamaiyanti@yahoo.com
MANAGEMENT CLEFT LIP/PALATE OF A 10 DAYS OLD NEONATUS

Dyah Ayu R, Ayulistya P, Istien Wardani
Lecturer at Department of Pedodontic Faculty of Dentistry Hang Tuah University

ABSTRACT
Background: Cleft lip/palate are a congenital anomaly. Incidence cleft lip/palate are one in 800 live births worldwide with wide cultural variation, male>female. Cleft lip/palate makes some problem, like swallowing, speaking, and esthetic.
Purpose: The purpose of this case report is to describe the efficiency of feeding plate for patient with palatoschizis.
Case management: This case report a male 10 days old neonates, has class III unilateral of Veanus’s Classification. He can not nursing well and using nasogastric tube. We apply a feeding plate so he can nursing well and the growth increase.
Conclusion: Feeding palate on cleft lip/palate can help patient to nursing well. The patient can reach the rule of ten to prepare the surgery to correct the cleft lip/palate.
Keyword: cleft palate, maxilla, feeding plate, nursing

Correspondence: Dyah Ayu Retnowulan, Bagian IKGA Fakultas Kedokteran Gigi Universitas Hang Tuah, Jl. Arif Rahman Hakim 150 Surabaya 60111 Indonesia, Telp 031-5912191.
ANTIBACTERIAL ACTIVITY OF SEA CUCUMBER EXTRACT TO Porphyromonas Gingivalis IN VITRO

*Dian Mulawarmanti,*KristantiParisihni,**YoifahRizkaWedarti

*Oral Biology Departement of Hang Tuah University
**PeriodonticDepartement of Hang Tuah University

ABSTRACT

**Background**: Periodontitis is the disease of periodontal tissue which is the second common oral disease worldwide and affected the systemic health in general. Porphyromonas gingivalis is one of main periodontopathogenic bacteria related to periodontitis. The recent local adjunctive therapy in periodontitis is antibiotic treatment. Sea cucumber is a marine vertebratae used as traditional medicine and has been known to have antibacterial properties so it’s potentially be explored as antibacterial agent in dentistry.

**Aim**: to examine the antibacterial activity of sea cucumber extract Sticopushermanii and Holothuriaatra Porphyromonasgingivalis.

**Methods**: The study is an experimental laboratory research with post test only control group design. The samples were divided into 5 groups each consisted of 6 samples i.e: positive control was given tetracycline, negative control was given DMSO 1%, treatment group were given each of Sticopushermaniiaand Holothuriaatraextract with concentration of 20%, 40% and 80%. Antibacterial activity test was performed by disk diffusion method on Mueller Hinton agar. Diameter of inhibition zone was measured with digital caliper.

**Result**: All treatment groups in all concentration showed inhibition zones but less than tetracycline as positive control. Non parametric statistical analysis Kruskall Wallis showed the significant difference on Sticopushermaniiaextract 40% and 80% and Holothuriaatraextract 80% compared to negative and positive control group (p<0,05).

**Conclusion**: Sticopushermaniiaextract on the concentration of 40%, 80% and Holothuriaatraextract on the concentration of 80% have antibacterial activity against Porphyromonasgingivalis.

**Key words**: Sticopushermanii, Holothuriaatra, Porphyromonasgingivalis

Corespondence: Dian Mulawarmanti, Oral Biology Departement faculty of Dentistry HangTuah University, Jl. Arif Rahman Hakim 150 Surabaya 60111 Indonesia, Telp 031-5912191. Email: dianmulawarmanti@yahoo.com
MINIMUM BACTERICIDAL CONCENTRATION (MBC) OF ARECHA CATECHU FOR MIXED PERIODONTOPATHOGEN BACTERIA

Widyastuti*, RadikaFahmi Siddiq**
*Periodontic Department, Faculty of Dentistry, Hang Tuah University.
**Student, Faculty of Dentistry, Hang Tuah University

ABSTRACT

Background: Periodontitis is a periodontal tissue disease that one of the main etiologic is periodontopathogen bacteria that effects the supporting tissues of the teeth. Most of the bacteria associated with periodontitis are Gram negative. Antimicrobial was used to inhibit the growth of bacteria in dental plaque which caused periodontitis. This experiment was using extract of Arecha catechu as an antimicrobial.

Objective: This experiment was done to examine minimum bactericidal concentration (MBC) of betel nut (Arecha catechu) to the growth of mixed periodontopathogen bacteria.

Material and Methode: Periodontopathogen bacteria sample were taken from cultured mix periodontopatogen bacteria. Sample were divided into 5 groups which were K1 and K2 (control), where a sterile aquadest was given and P1, P2 and P3 groups (treated with infusum of Arecha catechu with the concentration of 80%, 90% and 100%). The sample were inoculated in BHI agar media. The inhibition effect was observed by counting the diameter of inhibition zone on the agar media.

Result: Data were analyzed with ANOVA, the result showed extract of Arecha catechu can inhibit the growth of periodontopathogen bacteria between P1, P2 and P3 groups

Conclusion: Extract of Arecha catechu inhibited 80% was a minimum bactericidal concentration (MBC) for mixed periodontopathogen bacteria.

Keywords: Periodontitis, mixed periodontopathogen bacteria, extract of Arecha catechu.

Correspondence: Widyastuti, Periodontia Departement faculty of Dentistry HangTuah University, Jl. Arif Rahman Hakim 150 Surabaya 60111 Indonesia, Telp 031-5912191. Email: widyastutihew@yahoo.com
ABSTRACT

Background: Periodontal disease is the second largest oral disease in Indonesia population caused by infection of periodontopathogen bacteria. Most of the bacteria of periodontitis are Gram negative anaerobic bacteria. Avicennia marina sp is a natural product that has some medical potential regarding to its nutritional contents including antioxidant activity.

Objectives: The aim of this study is to investigate the effect of Avicennia marina sp extract on catalase activities in gingival Wistar rats induced mix periodontopathogen bacteria.

Material and Methods: The study is an experimental laboratories research with post test only control group design. Fifty male Wistar rats divided into five group. Group-1 group was negative control group, group-2 group was a positive control group, and the other groups were induced by mixed periodontopathogen bacteria and treated with Avicennia marina sp leaf extract on various concentration. After treatment, the rats were sacrificed. Gingival catalase level (mg/ml) of each group was measured. All of datas were analyzed by one way ANOVA and LSD multiple comparison test at 5% significance level.

Result: This study showed that gingival catalase level was significantly lower in group-2 than group-1. Gingival catalase level in treatment group was significantly higher than control positive group.

Conclusion: Avicennia marina sp leaf extract can increase rat gingival catalase level.

Key words: Avicennia marina sp leaf extract, periodontitis, catalase
ABSTRACT

Background This paper is a case report of porcelain onlay restoration which was made on the first lower molar after root canal treatment. Onlay is an alternative for endodontically treated teeth it provides cuspal protection, this type of restorations sometimes called a partial crown. The case is a female patient, age 19 years old, with pulp necrosis in the maxillary lower teeth. This case report describes a minimally invasive, aesthetic solution to provide cuspal coverage after root canal treatment. The restoration were examined for marginal integrity, anatomis form, surface and color for a period of 12 months. This restoration was in function at the end of evaluation period. There was adverse event the all ceramic restoration exhibited the least plaque growth, have excellent biocompatibility, inertness, improved physical bonding and natural appearance.

Key words: dental porcelain, endodontics

Contact person: Twi Agnita C: 08123083029; e-mail: twicevanti2873@gmail.com, Jl. Arif Rahman Hakin 150, Surabaya 60111. Telp. 031 – 5912191.
ABSTRACT

Background. Streptococcus mutans cariogenicity is based on the ability to produce and tolerate large amounts of acid. Rhizophora mucronata have broad spectrum antibacterial properties that can inhibit the growth of gram-positive or gram negative bacteria.

Purpose. The objective of this study was to examine minimum inhibition concentration (MIC) against streptococcus mutans.

Methods. Subjects were 32 samples of s.mutans, divided into 8 groups (n = 4). Six groups were given the extract with different concentrations of 50%, 25%, 12.5%, 6.25%, 3.125%, 1.56%, control positive group was given eugenol 0.025mg/ml and control negative was given 1% dmso. Extracts was prepared by percolation method, sample of bacteria were inoculated from patients’s saliva. The inhibitory effect was observed by measuring the diameter of inhibition zones (clear zone) on agar media with digital calipers. Data were analyzed with kolmogorov smirnov and one-way anova

Result. There were significant difference between each concentration (50%-p=0.015; 25%-1.56%-p=0.000) and control positive. There were significant difference between concentration (50%-p=0.000; 25%-p=0.001; 1.56%-p=0.001) and no significant difference between concentration (12.5%-p=0.083; 6.25%-p=0.091; 3.125%-p=0.054) and control negative.

Conclusion rhizophora mucronata’s extract has inhibition potency against streptococcus mutans. The minimum inhibitory concentration (mic) is 50% in bark’s stem extract.

Keywords rhizophora mucronata, streptococcus mutans, minimum inhibitory concentration

Correspondence: Dwi Andriani|Hang Tuah University|Jln.Arif Rahman Hakim 150 Surabaya|Telp.+62315912191|e-mail: riadwiandriani@yahoo.com
PHOSPHATE LEVELS TOOTH AFTER SMEARED WITH SHELL ANADARA GRANOSA’S GEL

Puguh Bayu Prabowo, Widyasri Prananingrum, Maria Setiabudi
Department of Dental Material Faculty of Dentistry, Hang Tuah University

ABSTRACT

Background: Demineralization is the early process of dental caries as a result of bacterial fermentation of carbohydrate substrates. If there is calcium and phosphate in sufficient quantities, the remineralization will occur as a natural repair process for non-cavitated lesions. Anadara granosa shell is among the source of calcium and phosphate.

Purpose: The aim of this study was to describe the phosphate levels of enamel after smear it with Anadara granosa shell.

Methods: In this study, Anadara granosa shell manufactured in gel. Then smear one drop of it on enamel surface 2 times a day and immersed the samples in artificial saliva. The samples (n=24) were labial of bovine incisive, 3 years old that it were divided into 4 groups. Group I was a control group and group II, III, IV were treated group for 3, 14 and 28 days. Measurement of calcium levels was conducted by titration analysis. All data were analyzed by One - Way ANOVA test with a significance level of 5%.

Results: It showed significant differences in the phosphate levels of enamel between groups (p=0.000).

Conclusion: Smearing with Anadara granosa shell in gel 2 times a day for 3, 14 and 28 days can increase the phosphate levels of enamel.

Key words: Phosphate, enamel, Anadara granosa shell

Correspondence: Puguh Bayu Prabowo, c/o: Departemen Ilmu Material dan Kedokteran Gigi, Fakultas Kedokteran Gigi Universitas Hang Tuah. Jl. Arif Rahman Hakim No. 150 Surabaya. E-mail: pbprabowo@gmail.com
# DENTAL EXPO

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