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TO ASSESS THE MICROBIAL CONTAMINATION OF ORTHODONTIC BUCCAL TUBES, ARCH WIRES AND BRACKETS FROM VARIOUS MANUFACTURERS - AN INVITRO STUDY

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Conflicts of Interest: Nil
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Abstract:

Introduction: Orthodontic fixed appliance therapy is one of the common treatment modes for treating different types of malocclusions. Knowing the micro biota that colonizes the unused orthodontic appliances is important for implementing specific sterilization and disinfection measures before the start of treatment.

Aims and Objectives: The aim of the present study was to assess the microbial contamination of orthodontic Buccal tubes, Arch wires and Brackets from various manufacturers.

Material and Methods: The study included 6 Buccal tubes, 6Arch wires and 6 Brackets belonging to 4 different manufactures which were divided into 12 specimen groups for microbiological culture. The number of colonies appeared were counted and enumerated in the form of (colony forming unit) cfu/ml and were subjected to SEM analysis for the detection of bacteria.

Results: The results showed highest cfu/ml in American orthodontics (AO) brackets accounting for 08 cfu/ml, 04 cfu/ml in 3M Arch wires and 02 cfu/ml in AO Buccal tubes, the remaining samples did not show any colonies.

Conclusion: Hence study highlights the need for manufacturers to state the sterility of their products and for practitioners to ensure the sterility of materials before use and not to assume that all items are sterile.

Keywords: Sterilization; Orthodontic Buccal tubes, Archwire, Brackets, Microbial contamination.

Introduction

In a survey conducted on the various specialty practitioners of the dental faculty, based on the risk of contracting hepatitis, orthodontists were the second highest among the group in contracting hepatitis because, sterilization, asepsis and universal precautions to prevent infectious disease transmission were often neglected in dental practice.[1]

More microorganisms are found in the oral cavity than in any other part of the body. So, in dentistry for preventing the spread of infectious diseases sterilization techniques are more important.[2] Infectious diseases include oral and respiratory infections such as tuberculosis, blood-borne infections, and air- and dust-borne infections.[3]

According to Thompson and Bogues the orthodontic instruments and materials are sterilized by following methods. The methods in descending order of usage are chemical disinfection, steam autoclave, wash and scrub only, hot-air oven, central sterilization, and flaming in alcoho1. [4]

The risk of cross infection is difficult to assess because the oral cavity carries many types of infective agents.[4]

Considering the fact that the rate at which newer strains evolve with time and older strains develop resistance, it has become a constant challenge through time and in the years to come.

Sterilization is a process by which an article, surface or medium is freed of all micro-organisms either in vegetative or spore state.[1] Disinfection refers to the destruction of pathogenic microorganisms only and often applied to procedures which are incapable of destroying spores and certain resistant pathogenic microorganisms such as tubercle bacilli and hepatitis viruses.[5]

The ideal regimen for sterilization includes the following requirements:[6] A) Prevent transmission of microbial pathogens from one patient to another. B) Require a minimal amount of time. C)Leave instruments undamaged. D)Sterilize a wide assortment of instruments

Lucas et al[7] have demonstrated that orthodontic treatment procedures can cause bacteraemia by aerobic and anaerobic bacteria.

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Custom-Made Clear Aligner (CMCA Appliance)

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Type of Publication: Case Report

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Abstract

Tooth rotations are most commonly seen problem and very difficult to treat. It is a malposition caused due to abnormal turning of a tooth to its long axis. Rotation correction can be achieved either by couple forces or by single force and stop. The aim of the present study is to correct the rotation with a new technique custom-made clear aligner. It is made to derotate teeth by essix sheet and template is made for standardization with kesling setup done to derotate teeth. Cases where they do not require braces it is alternative method easy to fabricate in laboratory and economical.

Keywords: CMCA, Tooth Rotation, Orthodontic

Introduction

Tooth rotation is the one of the problem among the eruption disturbances which poses greater difficulty for correction. There are various methods for the correction of tooth rotation. For rotation correction, pure couple is required, but till date, none of the mechanics provides pure couple and all have some translator vector involved in them. Here a new developed technique for rotation correction, which solely provides pure couple to derotate tooth, and is based on the natural organization of gingival circular fibers.[1]

In fixed orthodontic treatment finishing of tooth rotation often cause more difficulty. Now a day's one of the most esthetic choice is clear aligners,[2,3] but compared with fixed orthodontic treatment it is ease for maintaining oral hygiene.[4,5] From a biomechanical point of view these two approaches are not equivalent.

A new technique custom-made clear aligner is made to derotate teeth by essix sheet and template is made for standardization with kesling setup done to derotate teeth. Cases where they do not require braces it is alternative method easy to fabricate in laboratory and economical.

Diagnosis and Treatment plan

Case report

A 17 years old male patient reported to the orthodontic office with the chief complaint of irregularly placed single tooth in the upper front region. (Fig:1,2) On clinical examination it reveals 3mm overjet 2mm overbite with severely rotated 21 and spacing between 21,11, 22 and 23, mild lower anterior crowding with

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Anti-Microbial Photodynamic Therapy for Gingivitis in Orthodontic Patients

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Type of Publication: Original Research Article
Conflicts of Interest: Nil

Abstract

Objective: The objective of the study is to know the efficacy of antimicrobial photodynamic therapy in eradicating pathogenic bacteria in patients undergoing fixed orthodontic therapy

Methodology: 30 subjects with gingivitis undergoing orthodontic treatment at Department of Orthodontics. Subjects were randomly divided in to 3 groups of 10 patients each GROUP A: Toludine blue & LED,

Group B: Methylene blue & LED ,GROUP C: LED. Initially plaque index and modified gingival index were recorded. After recording the plaque index and modified gingival index scaling was done. Toludine blue or methylene blue is applied over gingiva and exposed with LED light for 2minutes. Patients were recalled after 2 weeks and plaque index and modified gingival index were again recorded.

Results: The results of present study shows a statistically significant difference within each group before & after treatment

Conclusion: There are no additional effects as compared with conventional treatment alone. With regard to eradicating bacteria

Introduction

Gingivitis is a frequently seen consequence of fixed orthodontic therapy.

It is routinely treated through conventional methods like scaling and root planning .Recent modality for treatment of Gingivitis:

"**Photodynamic Therapy**"

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Esthetic Evaluation of Smiling Profiles In Relation To Incisor Labolingual Inclination And Maxillary Anteroposterior Position – A Photographic Study

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Type of Publication: Original Research Article

Conflicts of Interest: Nil

Abstract

Aim: To test the null hypothesis that there is no effect of labiolingual inclination of maxillary incisor and anteroposterior position (AP) of maxilla on smiling profiles in young adults.

Method: Facial smiling profile of an young female adult with class I dental and skeletal malocclusion was selected as a subject. Subject's repeatable smiling profile photograph was altered with photoshop S2(version 9.0) digital imaging program to obtain 3 series comprising 15 smiling profile photographs. In first step of alteration of photographs only one parameter was changed i.e, anteroposterior position (AP) of maxilla in horizontal plane. In the next step each profile photograph divided in to 3 subgroups. The sample of individuals rating these pictures comprised 25 orthodontists, 25 prosthodontists, 25 senior dental students and 25 laypeople who had no previous orthodontic treatment done. The Kruskal-Wallis test was used to compare the rankings of the images between the 4 professional groups

Results: Significant differences ($p<0.001$)were detected when ratings of each photograph in each of individual facial type was compared.

Conclusion: The hypothesis was rejected. The aesthetic perception of labiolingual inclination and anteroposterior position differ in different groups and which plays a key role in formulating different treatment plans for different facial patterns.

Introduction

Facial esthetics, in particular profile esthetics, is one of the motives that encourage most patients to seek orthodontic care.1-3 Although orthodontic treatment is based mainly on occlusal relationships, great attention has recently been paid to obtaining optimal facial profile esthetics and soft tissue–hard tissue relationship.4 And orthodontic treatment that adheres strictly to cephalometric standards

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Bar Connector Retained Overdenture: A Superior Mode of Rehabiltation of Partially Edentulous Arch:A Case Report

Abstract

Introduction: The modality of treatment for partial edentulousness was to provide an partial denture or convert them into completely edentulous situation followed by a complete denture but due to the intervention of attachments in modern prosthodontics has led to the improved the success of the prosthesis by providing enhanced retention, stabiltity and longeitivity of the prosthesis.

Key Words

Retention; stability; overdentures; connector

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INTRODUCTION

Rehabilitation of a partially edentulous patient can be established using a wide range of prosthetic treatment options depending upon the clinical need and demand, restoration of the lost tooth structure can be achieved by using conventional removable partial denture, overdenture, fixed partial denture or dental implants.[1] Patient satisfaction is often based on esthetics, retention of prosthesis, placement of appropriate attachment may positively enhance clinical success of prosthesis. An over denture is defined as a removable partial or complete denture that covers and rests on one or more remaining natural teeth, roots, and/or dental implants.[2] The earlier modality of treatment of partial edentulousness with reduced number of teeth was to render them completely edentulous and provide them a complete denture or an over denture with support of remaining natural teeth. The goal of preserving roots are to prevent alveolar bone resorption, provide better load transmission, maintain sensory feedback and achieve better stability of denture with emphasis on psychological aspect of not being completely edentulous.[3]

OBJECTIVE

To report a clinical case of oral rehabilitation of a partially edentulous mandibular arch using tooth supported overdentures and attachments.

CASE REPORT

A 45 year old female patient was presented to Department Of Prosthodontics Including Crown & Bridge & Oral Implantology, KIMS Dental College Amalapuram with few natural teeth remaining in both the arches; clinical and radiographic examination revealed the periodontal health of the abutment teeth (Fig. 1), extraction of grossly decayed teeth, root stumps & restoration of carious teeth were done followed by a removable partial denture for upper arch and a bar connector retained overdenture for lower arch, the various treatment modalities for this case are, placement of implants, fabrication of conventional removable partial denture, bar connector retained overdenture.

TREATMENT PROCEDURE

A conventional removable partial denture was fabricated for the maxillary arch. In the mandibular arch endodontic treatment, post and core build up was done for the abutment teeth, and the teeth were prepared to receive full coverage porcelain fused to metal restorations. A cast partial denture was fabricated for replacement of the posterior teeth. Occclusal rests and seats were prepared on 33, 35, 44, 45; lingual bar was the major connector.

DISCUSSION

According to Dr Muller de van "the preservation of that which remains is of utmost importance and not

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Identification of *Candida* species in type 2 diabetic patients using three different staining techniques

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ABSTRACT

Oral candidiasis is a condition commonly seen in patients with systemic diseases such as diabetes, a common and globally growing health problem associated with many risk factors. The objective of the study was to identify *Candida albicans* in cultures and compare various cytologic stains used for diagnosis of oral candidiasis. Ninety type 2 diabetic individuals were chosen for the study group. The control group contained 30 non-diabetic individuals. Random blood sugar levels were analyzed for all diabetic and non-diabetic patients. Gram stain, periodic acid-Schiff technique (PAS) and calcofluor white were used for staining buccal mucosa smears collected from all individuals. An oral rinse was collected from all subjects and inoculated on Sabouraud dextrose agar (SBA) to confirm *Candida* positivity. Results for *Candida* positivity from one patient show variability between the three stains. Cultures showed higher values of these variables i.e. specificity, sensitivity and positive predictive values for *Candida* identification as compared to the staining results. This study showed detection of *C. albicans* in the oral cavity was better using SBA culture media than stained exfoliative smears.

KEYWORDS

Calcofluour white; oral candidiasis; Gram; PAS; Sabouraud dextrose agar; type 2 diabetes

Introduction

Candida species are a group of dimorphic fungi which are considered one of the most predominant causes of invasive infections. Currently, there are 200 species within the genus *Candida* of which the following have medical importance i.e. *C. albicans*, *C. tropicalis*, *C. pseudotropicalis*, and *C. glabrata* [1]. Oral candidiasis is a common opportunistic infection of oral cavity caused by an overgrowth of *Candida* species, the most common being *Candida albicans*. *Candida* infections are thought to be endogenous, acquired through prior colonization where local reduction in host resistance results in overgrowth of this oral yeast flora. *Candida* species are capable of initiating serious infections in immunocompromised patients. Oral candidiasis is a condition frequently seen in patients with systemic diseases such as diabetes, a globally growing health problem associated with many risk factors [2]. The present study investigated oral yeast colonization and evaluated its association with type 2 diabetes mellitus.

Experimental design

The institutional ethics committee evaluated the research project for scientific content, study design, and adherence to ethical guidelines based on Indian Council of Medical Research Guidelines approved by Vishnu Dental College. A prospective study was conducted with a sample size of 120 individuals. The inclusion criterion was 90 patients diagnosed with type 2 diabetes by a diabetologist. The control group of 30 age matched individuals had no history of diabetes, no oral lesions, systemic diseases, significant drug histories and their random blood glucose levels were within the normal range (70–130 mg/dl) (Figure 1).

Materials and methods

Three cytological smears from each individual were made using a wooden tongue depressor. Cells were gently scraped from three areas of normal appearing, right buccal mucosa and transferred on to the slides (Figure 2). The first smear was air dried, and rapid spray fixative (Biofix™, Bio Lab Diagnostics, Mumbai, India) was used on the remaining two smears [3].

Staining

The three smears taken from each text subject were stained as listed below and following the kit protocols given by the manufacturing company.

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Modified Mandibular Metal Stock Tray-for proper access to Lingual Sulcus on the Mandibular Cast

Abstract

For any prosthesis to be correctly designed and fabricated, accurate patients' models are necessary with a complete area which prosthesis could occupy, is to be well reproduced on the model. A simple modification of mandibular metal stock tray to obtain a model with a sufficient accessibility to mandibular lingual area is discussed in the present technique.

Key Words

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INTRODUCTION

Impression tray can be defined as a receptacle into which suitable impression material is placed to make a negative likeness.[1,2] A wide variety of trays with different sizes are available. The area which should be included in the impression is usually greater than the prosthesis actually occupies. Lingual flange area of mandibular cast is very often not well exposed while pouring the impression which may shorten the lingual extension of the prosthesis. With simple modification of the trays, a mandibular model which provides a sufficient access to lingual flange can be obtained.[3]

TECHNIQUE

Attach three small metal strips to mandibular border of lingual flange (above 3mm of tray border) with spot welder. Make an acrylic plate of 3mm-4mm thickness of inverted U-shape exactly fitting the space between two lingual flanges of tray such a way that plate is around 2mm above the tray border. Make three (19guaze) U-shaped with perpendicular bend of 2-4mm length. Attach wire clip to acrylic plate with perpendicular extension of wire clip. Before pouring the impression cut the excess impression material from the lingual side to expose the metal clip without distorting the impression border. Pour the impression of the anatomic area and attach acrylic plate to the tray engaging the metal clips. Complete the second pour with inversion technique, after the stone sets, remove the acrylic plate and cast can be obtained.

DISCUSSION

Dental Cast serve as a Three-Dimensional replica of teeth and associated structures to study, diagnose and carry out the prosthetic procedure. Commonly irreversible hydrocolloid impression materials are used in Removable partial denture and as a preliminary impression material in complete denture prosthesis.[4] Obtaining the accurate mandibular casts demand systematic attention to the multitude of minor details particularly to make lingual flanges easily accessible, which may otherwise need use of bevelled chisels to clear the area.[3] This technique explains a simple method of modifying the mandibular perforated metal stock tray to get a cast with a better access to the lingual sulcus area.

CONCLUSION

The need to make an accurate impression is fundamental to the practice of prosthodontics. This necessitates the careful assessment of impression trays, materials and techniques, which provides a cast with a good coverage of proposed denture bearing area. This technique explains a simple modification to achieve the basic goal of Prosthodontics.

REFERENCES

1. Fenn HRB, Liddelow KP, Gimson AP. Clinical Dental Prosthetics. 2nd edn. New Delhi: CBS Publishers;2004
2. The glossary of prosthodontic terms. J Prosthet Dent 2005;94:10.

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RESEARCH ARTICLE

ROLE OF PLATELET RICH FIBRIN (PRF) IN THE REGENERATION OF OSSEOUS DEFECTS IN THE JAWS

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ABSTRACT

Background: The healing potential of platelet growth factors has generated interest in using Platelet-Rich Fibrin (PRF) in osseous defects. A prospective study was performed to determine if periapical osseous defects treated with platelet-rich fibrin exhibit enhanced healing when along alloplastic bone graft material.

Methods: Periapical defects in ten patients were treated with PRF and hydroxyapatite. Radiological evaluation of healing was done at 1month, 3 months and 6 months. Histologic evaluation was done at the end of 6 months.

Results: Bone Healing was seen in the PRF treated sites. By the end of 3 months all the defects showed resorption of the graft material and by the end of 6 months all the defects showed osseous fill and matured bone formation.

Conclusion: PRF along with bone graft material can be used for rapid regeneration of osseous defects.

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INTRODUCTION

Osseous regeneration in the periapical defects as a result of trauma orpathology in oral and maxillofacial region has been a challenge. Usually it takes 9-12 months for complete osseous regeneration in the defects after peri apical surgery. Keeping in view of the prolonged time for healing, different bio materials are being tried to accelerate the regenerative process. Though the use of autogenous bone has remained the gold standard in restoring bone defects, there are some limitations like limited quantity available, need for second surgical site, prolonged operative times and donor site morbidity (Thorwarth *et al.*, 2005). To overcome these difficulties alloplastic bone substitutes have come into use. The most commonly used is synthetic hydroxyapatite due to its chemical composition being similar to that of human bone, its non- toxic nature, its high chemical stability with less inflammation and antigenic reactions. Another important property is that the microstructure can be controlled to promote formation of pores that allow migration of blood vessels and bone tissues into the material enhancing the osteoconductive property and early resorption of the substitute thereby fastening bone regeneration (Ravi Shankar, 2011). The next step in osseous regeneration is tissue engineering that is achieved by introduction of platelet concentrates, which utilize the inherent property of platelets to release various growth factors thereby accelerating the healing process. One such recent innovation in dentistry is the preparation and use of platelet rich plasma (PRP), which is a concentration of platelets and growth factors found in platelets. PRP has enjoyed a great increase in popularity in the Oral and Maxillofacial Surgical practice. It is very well documented that application of PRP enhances healing in various procedures (Shobha *et al.*, 2011). A new platelet concentrate was introduced in France in the year 1978 by Choukroun called Platelet- rich Fibrin (PRF) which has the advantage of natural way of activation, prolonged release of growth factors, slow polymerization and simplified production protocols (Dohan *et al.*, 2006). This has encouraged us to radiographicallyevaluate the efficacy of the platelet rich fibrin along with hydroxyapatite in the healing of periapical defects.

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REVIEW ARTICLE

Saliva: Newer Avenues in the Era of Molecular Biology, Diagnostic and Prognostic Application

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The salivary fluid has an old history of study, but its physiological importance has only been recognized recently. In the past 50 years, the pace of salivary research has accelerated with the advent of new techniques that illuminated the biochemical and physicochemical properties of saliva. The interest in saliva increased, further, with the finding that saliva is filled with hundreds of components that might serve to detect systemic diseases and/or act as an evidence of exposure to various harmful substances as well as provide biomarkers of health and disease. The role of saliva in the diagnosis as well as monitoring of glycemic control has, also, been attracting attention of clinical researchers in recent times although results have been conflicting. To conclude, saliva is a whole, diverse fluid that serves various purposes discussed in detail in the literature. The recent introduction of molecular biology opens up, once again, new vistas and a new search of the role of salivary fluid as a potential diagnostic tool which has an added advantage of being noninvasive. The present review presents such insight into the possible use of salivary fluid as a potential diagnostic and prognostic tool for the search of numerous diseases as well as for monitoring the treatment outcomes and assesses prognosis in such varied states of derangements of metabolic functions.

Key words: Saliva, diagnostics, systemic diseases, forensic applications

INTRODUCTION

The salivary fluid is an exocrine secretion consisting of approximately 99% water with a variety of electrolytes including sodium, potassium, calcium, magnesium, chlorides, bicarbonates, phosphates, and proteins represented by enzymes, immunoglobulins and other antimicrobial factors, mucosal glycoproteins, and traces of albumin with glucose and nitrogenous products such as urea and ammonia secreted mainly by three pairs of major salivary glands, namely parotid, submandibular, and sublingual glands. A plethora of minor salivary glands distributed over the buccal mucosa, lips, and along the mucosa of the upper aerodigestive tract present from the nasal cavity to the larynx and pharynx, also, participate in this secretion. Together, they are responsible for the remaining 5% of saliva secreted in humans.[1-4] It is considered that humans secrete approximately 0.5 L of saliva per day in response to stimulation of the sympathetic and parasympathetic sections of the autonomic nervous system.[3-5] Whole saliva is a multiglandular secretion complex consisting of gingival fluid, desquamated epithelial cells, microorganisms and products of their metabolism, food debris, leukocytes, and mucus from the nasal cavity and the larynx and pharynx. Saliva has varied functions from tissue repair to protection, digestion, taste, and

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CASE REPORT

Split Post and Core

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ABSTRACT

The questions that arise during the restoration of a tooth are not new ones. The replacement of missing tooth structure has been practiced by various cultures for thousands of years. There are numerous references to the importance of healthy teeth in the Old Testament, much of which deals with the period antedating 1000 BC. No wonder then that man has made every effort to restore lost tooth structure. Attempts to restore pulpless teeth using posts have been recorded for more than 200 years. Here is where the role of posts comes into play.

Keywords: Canal, Cast, Core, Post.

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INTRODUCTION

The successful treatment of a grossly decayed tooth with pulpal disease depends not only on good endodontic therapy but also on a good prosthodontic reconstruction.[1] The primary purpose of the post is to retain a core that can be used to retain definitive prosthesis. Post and core help prevent coronal fractures when remaining coronal structure is thin. Cast post and core is indicated when there is substantial loss of coronal structure.[2] The following post and core systems are commonly employed to restore the endodontically treated teeth.

In prefabricated post systems, traditionally, the cast post and core has been the means of restoring teeth with insufficient remaining structure. Cast post and core is the gold standard when restoring a grossly destructed tooth.[3] Prefabricated post systems are available in a variety of materials. They are preformed posts around which a composite core is built up. Prefabricated post systems save time and can provide satisfactory results.[4] Teeth restored with cast post and core system exhibit significantly higher fracture resistance followed by titanium and glass fiber post and core system. This can be attributed to the fact that cast post has better physic mechanical properties in comparison to prefabricated post system.[5] If a canal requires extensive preparation, a well-adapted cast post and core restoration will be more retentive than prefabricated posts. Split cast metal post and core is indicated for multirooted teeth with divergent roots having grossly decayed coronal structure.

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CASE REPORT

A male patient aged 23 years presented to the Department of Prosthodontics with a chief complaint of a broken restoration. On examination, tooth 36 had a fractured amalgam restoration and the remaining tooth structure was minimal (Figs 1 and 2).

Treatment Plan

- Crown lengthening
- Custom made split post and core
- Restoration with a NiCr crown
- Two mm of crown lengthening (Fig. 3) was done on the lingual aspect of 36
- The post space (Fig. 4) was prepared after removal of the gutta-percha from the two mesial canals and the distal canal. Gutta-percha needed for apical seal was left in the canals.

Fig. 1: Intraoral preoperative

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Comparative evaluation of effect of q mix on the push out bond strength of epoxy resin based sealer: An in vitro study

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Type of Publication: Original Research Article

Conflicts of Interest: Nil

Abstract

Aim: The aim of this study is to evaluate the in-vitro effect of three different final irrigating solutions on the push out bond strength of AH Plus sealer.

Materials and Methods: Forty single rooted maxillary canines were collected. After standardisation of canal length all the specimens were enlarged using Protaper nickel-titanium rotary instruments to size #F3 at the working length. All teeth were randomly divided into four groups based on the final irrigation regimen as: Group1 QMix (n=10), Group 2 MTAD (n=10), Group 3 Tubulicid-Plus (n=10) and Group 4 saline (n=10). Later samples are Obturated with gutta-percha and AH-plus sealer. 2mm thick transverse sections are obtained from each tooth. Selected sections are subjected to push out bond strength testing using the universal testing machine at a constant speed of 0.5mm/min applied apico coronally.

Results: The data was subjected to statistical analysis by one way ANOVA and pair wise comparison by Newman-Keuls multiple posthoc procedures. Among all the groups QMix showed highest bond strength

Conclusion: Within the limitations of the study, the maximum push out bond strength of sealer is seen in the specimens irrigated with QMix than remaining final irrigating solutions.

Keywords: Irrigating solutions, MTAD, Push out bond strength, QMix.

Introduction

Various factors determine the success of endodontic treatment which includes thorough shaping, cleaning and three dimensional sealing of the root canal system. [1]

Ability of mechanical instrumentation alone to clean and eliminate debris is limited. Peters *et al* reported whatever may be the instrumentation technique certain walls of root canal remain untouched during cleaning and shaping. [2] Anatomical areas like lateral canals, isthmuses, and deltas remain uninstrumented. Hence Irrigation plays critical role in success of root canal treatment by eliminating debris and microorganisms from such areas.[3]

Sodium hypochlorite is used as most commonly used irrigating solutions in endodontics due to its antimicrobial action and its ability to dissolve necrotic tissue. However,

Original Article

Comparative evaluation of apical extrusion of intracanal bacteria using ProTaper Next, Mtwo, and ProTaper rotary systems: An *in vitro* study

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Abstract

Aim: The aim of this study was to evaluate the number of intracanal bacteria extruded apically after instrumentation with three different nickel–titanium rotary instruments.

Materials and Methodology: Forty freshly extracted mandibular premolars were selected, access cavities were prepared, and the teeth were mounted in the bacterial collection apparatus. Root canals were contaminated with a suspension of *Enterococcus faecalis* and incubated for 24 h at 37°C. The contaminated teeth were divided into four groups of 10 teeth each according to the rotary system used for instrumentation: Group 1: ProTaper universal files, Group 2: MTwo files, Group 3: ProTaper Next files, and Group 4: Control group (no instrumentation). Bacteria extruded after preparations were collected into vials. The number of colony-forming units (CFUs) was determined for each sample.

Statistical Analysis: The data obtained were analyzed using the one-way analysis of variance followed by *post hoc* Tukey's test with a $P = 0.05$ as the level for statistical significance.

Results: The results suggested a statistically significant difference in the number of CFUs between four experimental groups ($P < 0.001$).

Conclusion: Least amount of bacterial extrusion was seen in ProTaper Next Group while more bacterial extrusion was seen in MTwo Group.

Keywords: Apical bacterial extrusion; *Enterococcus faecalis*; MTwo files; ProTaper files; ProTaper Next files

INTRODUCTION

The successful endodontic treatment must be directed toward the elimination of bacteria, their products from the root canal system, and this objective can be achieved by thorough chemo-mechanical preparation. Despite strict length control, almost all instruments and preparation techniques used for the root canal treatment are associated with debris extrusion, which contains dentin chips, pulp tissue, microorganisms and/or irrigants, into the periradicular tissue. This extrusion may potentially result in postoperative flare-ups.[1] Bacteria extruded mainly include Gram-positive, Gram-negative bacteria, and obligate anaerobes. *Enterococcus faecalis* (*E. faecalis*) has been identified as a species most commonly recovered from the posttreatment diseases.[2]

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Endodontic management of invasive cervical resorption: A case report

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Type of Publication: Case Report

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Abstract

Dental Resorption is a challenge to dentists due to the complexity of the process. Invasive cervical resorption of the tooth is a rare and uncommon phenomenon and if not treated may lead to loss of tooth structure. Successful management of Invasive cervical resorption depends on the location, size, accessibility and structural integrity of the tooth and periodontium after treatment. The present case demonstrates invasive cervical root resorption with surgical approach using biocompatible restorative material.

Keywords: Invasive cervical resorption, Fibre reinforced composite, EndoSequence

Introduction

Invasive cervical resorption(ICR) is a relatively rare, insidious, and aggressive form of localized external tooth resorption that involves the surface of root below epithelial attachment and coronal to supporting alveolar process.[1] The term 'ICR' was coined by Heithersay. Heithersay classified ICR depending on the amount of invasion.[2]

Class 1: A small invasive resorptive lesion near the cervical area with shallow penetration into the dentin

Class 2: A well-defined invasive resorptive lesion that has penetrated close to the coronal pulp chamber but shows little or no extension into the radicular dentin

Class 3: A deeper invasion of dentin by resorbing tissue not only involving the coronal dentin but also extending into the coronal third of the root

Class 4: A large, invasive resorptive process that has extended beyond the coronal third of the root

The diagnosis of ICR is done by radiographic images. Lesions vary in the shape from well-delineated radiolucencies with irregular borders, and on clinical examination, they are painless with a small root defect in the cervical region. Histopathologically, the resorbed area shows highly vascular fibrous tissue with multinucleated osteoclastic cells adjacent to the dentin surface.[3] The main treatment goal for ICR includes the removal of the granulation tissue and to seal the affected dentinal tubules. This procedure, if necessary, can be achieved by the exposure of the resorption lacuna surgically or orthodontically.

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ORIGINAL RESEARCH

Scanning Electron Microscopic Evaluation of Smear Layer Removal Ability of Novel Irrigant QMix compared with Others at Apical Third of the Root

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ABSTRACT

Aim: The success of an endodontic treatment depends on the complete elimination of the microorganisms from the root canal system for which effective eradication of smear layer is crucial. Hence, various final irrigating solutions were introduced in endodontics. The aim of this *in vitro* study is to compare the smear layer removal efficacy of different final irrigating solutions at the apical third of the root canal through scanning electron microscopic (SEM) image analysis.

Materials and methods: Forty human single-rooted mandibular premolar teeth were taken and decoronated to standardize the canal length. Each tooth was prepared endodontically with same chemomechanical technique and the teeth were randomly divided into four groups based on the final irrigation regimen. Group I: saline, group II: Tubulicid Plus, group III: BioPure MTAD, and group IV: QMix. After final irrigation, SEM evaluation was done for the assessment of removal of the smear layer at apical third, and data were analyzed using the Kruskal–Wallis test and Mann–Whitney U test.

Results: Intergroup comparison of the groups showed statistically significant differences in the smear layer removal efficacy of irrigating solutions tested. QMix is most effective in the removal of smear layer when compared with other tested irrigating solutions.

Conclusion: QMix is the most effective final irrigating solution for smear layer removal followed by MTAD and Tubulicid Plus.

Clinical significance: Final irrigating solution plays a major role in the elimination of smear layer, thereby enhancing the hermetic seal of obturating materials, resulting in greater success rate of root canal treatment. Further research is required regarding the use of QMix on smear layer removal and also its effect on ultrastructural changes in dentin.

Keywords: Laboratory research, MTAD, QMix, Root canal irrigation, Scanning electron microscopy, Smear layer, Tubulicid Plus.

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INTRODUCTION

The success of endodontic treatment depends on the complete three-dimensional sealing of the root canal system.[1] Even after meticulous care, cleaning and shaping procedures with various root canal instruments leave an amorphous, granular, and irregular layer covering root canal dentin known as smear layer.[2]

The smear layer is composed of both organic and inorganic substances, such as microorganisms, odontoblastic processes, and necrotic material covering the root canal walls and openings of the dentinal tubules.[3] It acts as a barrier for the effective penetration of intracanal medicaments and sealers into the dentinal tubules.[4,5] In addition, it may increase postobturation microleakage and may serve as a source of nutrients for some species of intracanal microbiota.[6,7]

For smear layer removal, various irrigating solutions, such as citric acids, phosphoric acid, sodium hypochlorite, ethylenediaminetetraacetic acid (EDTA), EDTA plus Cetavlon, and carbamide peroxide have been used.[8]

Several other new irrigating agents like MTAD,[9] QMix[10] have been introduced as final irrigating solutions for effective smear layer removal.

The present study aimed to evaluate the smear layer removal ability of different final irrigating solutions in the apical third.

Case Report

Suction Cup Induced Palatal Fistula: Surgical Closure by Palatal Rotational Flap

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Abstract

Construction of complete denture with adequate retention is a complex procedure. Use of suction cup in a maxillary denture is one of the techniques to improve retention. Palatal Suction cup, which provides high retention by inducing negative pressure on the mucosal surface, is not being recommended because of its pathological effect on the palatal tissues leading to palatal perforation. Surgical closure of palatal perforation is challenging, technique sensitive, and it can be achieved by different surgical methods depending on the size and location of the defect. In this case report, we present a patient with palatal perforation due to prolonged use of a denture with a suction cup for over 10 years, which was surgically closed by a palatal rotational flap. The result was good as the defect was successfully closed and the donor site healed uneventfully.

Keywords: Palatal fistula, Palatal rotational flap, Suction cup, Surgical closure

Introduction

A break in the structural integrity of the palate leading to oro nasal communication is called palatal fistula,[1] which may be due to a genetic defect such as cleft lip and palate, an infection such as osteomyelitis or traumainduced by wearing a maxillary complete denture with a suction cup.[2] A suction cup because of its constant pressure on the palatal mucosa can lead to the necrosis of the palatal mucosa and the bone leading to communication between the oral cavity and nasal cavity.[3]

Palatal fistulas are often symptomatic, depending on their size, and location. Symptoms include hyper nasality of phonation due to audible nasal air escape during speech, leakage of fluids into the nasal cavity, and lodging of food with the risk of infection. Depending on the extent of functional impairment, a palatal fistula may have psychological, social, and developmental consequences so it should be repaired.[4]

There are various methods of surgical closure depending on the size and destruction of tissues around the fistula. These options are local advancement flaps such as palatal flaps, tongue flap, nasolabial flaps, and buccal fat pad. Distant pedicle flaps such as myofascial flap, forehead flap, and temporoparietal fascial flap.[5] In this case, we preferred a palatal rotational flap due to the small size of the perforation and the absence of soft tissue thickness around the perforation.

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Original Article

Association between ABO Blood Groups and Dermatoglyphics with Periodontal Status among Individuals: A Pilot Study

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Abstract

Aim: The present study will be conducted to determine any correlation between periodontal diseases and ABO blood groups and dermatoglyphics pattern. **Material and Method:** Periodontal examination will consists of probing pocket depth, and clinical attachment level. Healthy participants displayed periodontal pocket depth and attachment loss <3 mm, and no clinical sign of gingivitis. The gingivitis patients displayed periodontal pocket depth >4 mm, no attachment loss with signs of gingivitis. Periodontitis patients exhibited at least one site with periodontal pocket depth more than 4 mm and attachment loss more than 3 mm.Thumb prints of each patient were recorded using ink pad method. They were then classified into different forms like arches, whorls and loops. **Result:** It was observed that there was no statistical significant association between periodontal status and blood groups. On statistical analysis significant association was found only between Left Thumbprints and periodontal status where patients with radial thumbprint were more prone to develop periodontal status. **Conclusion:** Within the limits of the study dermatoglyphics can be of potential diagnostic aid in determining genetic basis of periodontal diseases. However, further large scale qualitative and quantitative research will aid in proving the rightfulness of present study and investigate the biological plausibility to explain the association.

Keywords: ABO blood groups, Finger prints, periodontal disease

Introduction

Periodontal disease results in pathologic destruction of the periodontal tissues. It comprises a heterogeneous group of infectious diseases caused by the interaction of plaque bacteria and the host. Increasing evidence has shown genetic predisposition on causing diseases of the periodontium. Various studies have been conducted to establish a correlation between periodontal diseases and genetic predisposition.[1]

A relative correlation of various phenotypes in blood groups and certain diseases has been studied, where it has been observed that individuals with blood Group A were prone to developing gall stones, tumors of salivary glands, diabetes mellitus, etc.[2] Few studies have associated periodontal diseases with Rh factor.[3,4] Several blood grouping systems have been identified so far, commonly used being ABO system. These systems are determined by the presence of different proteins present on the surface of red blood cells (RBCs). The antigens of ABO system are not only found on RBC membrane but also in plasma.[5] Some researchers claim that there is positive correlation between ABO blood group and periodontal diseases.[6-8]

Dermatoglyphics is the art and science of patterns on pads of fingers. Every individual has a unique set of fingerprints, which are genetically determined, and hence remains constant for the entire life span.[9] As mentioned above genetics play a major role in causing periodontal diseases with other environmental etiologies.[10] Thus, it is remarkable to emphasize the role of genetic factors in patients with periodontal disease also. Based on this hypothesis, several studies have been conducted to

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Original Article

Evaluation of Knowledge, Attitude, and Practice about Bioethics and Biosafety in Use of Biomaterials among Dental Practitioners

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Abstract

Context: There has been a plethora of biomaterials being routinely used for comprehensive oral rehabilitation. Dental professionals therefore need to take great care, both clinically and ethically, in analyzing the risks and benefits that may come with the use of these materials. **Aims:** The present questionnaire study was undertaken with the aim to evaluate the knowledge, attitude, and practice of dental practitioners regarding biosafety and bioethics in use of biomaterials. **Settings and Design:** The study was a questionnaire based. The data were gathered over a period of 3 months and had cross-sectional design. **Materials and Methods:** A questionnaire was drawn up containing questions pertaining to profile of the participant, knowledge of specialist regarding biomaterials, importance of patient autonomy, informed consent and bioethics and biosafety issues. The total number of participants was 100 professionals, equating to 66.66% of the total study sample. **Results:** The study revealed that knowledge showed significant association with qualification and years of work experience. Ninety-six percent of specialists agree that it is necessary to explain biological effects of biomaterials to the patients. Ninety percent of specialists were aware of bioethics and biosafety issues with the use of biomaterials. Only 79% of specialists referred to the biosafety manual of the biomaterials. **Conclusions:** Eighty percent dental practitioners have adequate knowledge regarding bioethics and biosafety of biomaterials. Even though these have considerably enhanced the treatment outcomes, but at times, the improper application and lack of safety precaution with these have raised many moral and ethical issues.

Keywords: Bioethics, biomaterials, biosafety, dentistry

Introduction

Every year, a huge number of teeth are lost due to dental caries, trauma or periodontal diseases. Regenerating lost teeth or their components is a dream for every dental professional. Regenerative therapy has an advantage over traditional surgical approaches in that the original tissues are re-established, not replaced through a reparative process. In recent years, scientific discoveries in dentistry have introduced new products that have been rapidly absorbed into clinical practice. There has been a plethora of biomaterials and related biomedical technology, in the form of various rehabilitative dental materials and maxillofacial implants, being routinely used for comprehensive oral rehabilitation. Biomaterial is defined as any pharmacologically inert material that is capable of interacting with living organism without causing adverse reactions either at the site of implant or across whole organism.[1] When these products are used, they come into direct contact with living tissues, such as dentin, pulp, the alveolar bone and periodontal tissue, and sometimes stay in contact for prolonged periods.

Significant advances in the use of biomaterials in clinical dentistry over the last decade mean that these materials are now used as powerful therapeutic tools in surgical procedures,

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Original Article

Awareness on Bioterrorism among qualified dentists in a teaching dental institution in southern India

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ABSTRACT

Background: Bioterrorism covers a vast spectrum of concerns, from catastrophic terrorism with mass casualties, to micro-events using low technology but producing civil unrest, disruption, disease, disabilities, and death. In such a situation, the medical community should educate the public about the threat. Education of the dental profession regarding the medical and oral manifestations of diseases that may result from a bioterrorist attack will be important. Thus, our aim of the study was to assess the knowledge, practice, and attitude toward bioterrorism among postgraduate dental students and dental staff in a private institution.

Methods: Using convenience sampling, postgraduate dental students and the teaching staff of an institute in Guntur were given a questionnaire to assess them regarding bioterrorism. The questionnaires were collected, and the Chi-square test was performed with IBM. SPSS Statistics version 20 windows program software.

Results: About 61.9% of postgraduate dental students and dental staff were aware of the term bioterrorism. More than 68.18% of postgraduate dental students and 67.7% of dental staff were not aware of the pathogenic agents of bioterrorism, and they have not attended either any lecture on it.

Conclusion: Dental staff had better knowledge about bioterrorism compared to postgraduate dental students. Hence, there is a need to include training and education in the predoctoral dental and dental hygiene curriculums and developing CE courses for practicing dental professionals.

Key words: Bioterrorism, dentists, dental institution, healthcare

INTRODUCTION

The primary objective of the war is to render the opponent incapable of offering resistance. Ideally, this is carried out by assassinating as many troops as possible by the force of arms. The major weapons that were used for killing include hand grenades, bullets, bombs, landmines, etc., that all do their bloody duty. However, the thought that biological material can kill more effectively and with less cost, effort, and destruction than the conventional use of bullets which makes it an attractive alternative weapon.[1] Biological agents spread through the air, water, or food. Some can also spread from person

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CASE REPORT

Non-syndromic bilateral buccal lipomas - A case report with a variable presentation in a single case

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Keywords:
Atypical lipoma, Buccal mucosa, Fatty tumor, Lipoma, Mouth

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Abstract

Lipoma is a benign connective tissue neoplasms composed of mature adipocytes. They occur commonly in the head-and-neck region, but lipomas derived from oral mucosal lining are very rare. However, the patients may present after they attain considerable size leading to difficulty in speaking or chewing food. The surgical excision remains the choice of treatment but for most lipomas, but a pre-surgical histo-pathological study is warranted. The malignant counterpart or "liposarcoma" could be the worst and rare consequence of longstanding untreated or atypical lipomas. The purpose of the report is to highlight on variable presentation of bilateral oral lipomas in the non-syndromic patient. A 72-year-old patient had reported with a large-sized oral swelling with apprehensiveness and a suspicion of oral cancers. The examination revealed a giant well-circumscribed swelling of the right buccal mucosa and as dispersed bits of palpable mass on the left buccal mucosa, both of which were diagnosed as lipomas. The left-sided lesion was not the compliant of the patient, had an atypical presentation. The history was re-established and dermatological consultation was negative for any associated syndromes or conditions for multiple lipomas. Surgical excision was successfully performed with no recurrence after 12 months duration. The case report summarizes that oral lipomas may present atypically and bilaterally in buccal mucosae. The importance of comprehensive oral examination and identification of histopathological variant and to rule out malignant counterpart were highlighted in this case.

Introduction

Lipomas are the most common benign mesenchymal neoplasms seen in the fat-sourced body spaces, but the lack of site-specificity made them "universal tumours" or "ubiquitous tumours."[1] The prevalence of these tumors is 1–4% amongst all oral neoplasms.[1] The buccal mucosa is common reported sites for occurrence, while the floor of the mouth, lips, palate, and gingiva are rare sites.[2-4] The primary etiology is a traumatic event or chromosomal alterations in 12q13–15 region (upto 65%).[1,3,5] The pathogenesis underlying lipomas is explained to occur due to sudden overgrowth of cells (hypertrophy theory) or infusion of cells (metaplasia theory) or as part of syndromes (embryonic multipotent/hormonal theory).[1]

We report a case of bilateral buccal lipomas in a patient without any other identifiable cause of syndrome. The patient concerns, unusual clinical findings, differential diagnosis, importance of histological examination, and the management are described in this report.

Case Report

A 72-year-old male patient presented with a chief complaint of swelling inner part of the right cheek for 3 years which being subjected to self-trauma while chewing food. The swelling was described to be slowly progressive. The medical, dental, and family histories were not contributory. On examination of right buccal mucosa showed a solitary, pedunculated, well-defined swelling of size 3 cm × 3 cm having a smooth surface [Figure 1a]. The swelling was partially trans-illuminant. On palpation, the swelling had a soft consistency, non-tender, and slipped under the tip of the finger. A provisional diagnosis of soft tissue lipoma was made with a differential diagnosis of mucous retention

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Case Report

A RARE PRESENTATION OF ODONTOGENIC KERATOCYST IN POSTERIOR MAXILLA MIMICKING A RESIDUAL CYST – A DIAGNOSTIC DILEMMA

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ABSTRACT

Keratocystic odontogenic tumor was previously considered as a common cyst of developmental origin but now it is considered as a tumor of the oral cavity with high recurrence rate, potential aggressive behaviour, defined histopathological features and it has an ability to mimic other jaw cysts.

Present study is a case report of a 45 years old female presenting with KCOT occurrence in the right maxilla, which is unusual and its appearance in the maxillary sinus is very uncommon. On clinical and radiographic examination, a provisional diagnosis of Residual cyst was given. Histopathological examination only revealed Keratocystic Odontogenic Tumor. The lesion was successfully treated surgically by complete enucleation and no recurrence has been observed on follow-up. The aim of the study is to report and distinguish a case of keratocystic odontogenic tumor simulating Residual cyst because of its aggressive behavior to prevent its high recurrence rate. This case emphasis on including KCOT in the differential diagnosis of radiolucencies occurring in the oro facial skeleton.

INTRODUCTION

Odontogenic keratocyst (OKC) is the third most common odontogenic cyst and comprises about 12% of all the cysts occurring in the maxillofacial region. The most significant change in the 2017 classification of developmental odontogenic cysts was that the term "keratocystic odontogenic tumor" was moved from the neoplastic category (2005) to the cyst category. [1]

Kcot is a relatively common jaw tumor, it has been reached a pronounced peak frequency in the second and the third decades with more frequency in men. The mandible is more involved than the maxilla, with a higher incidence in the posterior body and ascending ramus.(2)

Clinical and radiographic presentation of keratocystic odontogenic tumor (KCOT), poses a major diagnostic dilemma as they can be located at various sites mimicking other pathologies. (3) As they are often confused with other cysts and tumours because of vague appearances and similar features so it is very much important to diagnose the KCOT from other odontogenic cysts. (4)

Similar in our case OKC occurred in edentulous area of right posterior maxilla with history of long term presence but it cannot be proved clinically or radiological as OKC but on histopathology it was proved. So complete diagnosis and proper treatment is necessary to reduce recurrences.

CASE REPORT

A 45 years old female patient reported to the Department of Oral & Maxillo facial surgery with a chief complaint of swelling on upper right region of jaw since 1 year. Initially patient was asymptomatic, later on sudden onset of swelling with pus discharge intraorally in that area. Swelling was smaller in size and gradually increased to present size. Patient gives history of extraction 5 years back after which she had experienced mild pain during chewing for which she had taken medication from local dentist; patient is diabetic and hypertensive since 2 years and under medication.

On examination

Extra orally front and lateral profile showing mild facial fullness of right cheek and tenderness over right side of cheek. Supero inferiorly from right infra orbital margin to the alveolar ridge, antero posteriorly from ala of nose to 2cms away from anterior border of tragus. On palpation swelling is firm in consistency, mildly tender, compressible and no local rise in temperature and colour. (Figure 1)

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Case Report

Impacted Fish Bone in Buccal Space Associated with an Abscess: Role of Point-of-Care Ultrasonography in Dental Emergencies

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Abstract

Fish bone impaction in buccal space abscess is an uncommon dental scenario. A case of young adult with partially edentulous state contributing to this emergency is presented. The history, clinical imaging findings, surgical procedure, and checklist for clinical assessment are briefly described. The point-of-care ultrasonography (POCUS) was used in our case to identify, locate, and perform an ultrasonography-guided removal of impacted fish bone in consolidated abscess of the buccal space. The role of POCUS in cases of dental swellings or uncommon emergencies is emphasized in clinical settings.

Keywords: Buccal space abscess, color Doppler ultrasound, fish bone impaction, foreign body, point-of-care ultrasonography

Introduction

A foreign body in the oral cavity or upper gastrointestinal tract occurs as an accidental consequence along with food being chewed or ingested. In nearly 90% of cases, the foreign body passes all the length of the gastrointestinal tract naturally. It has been reported that in 10%–20% of cases, a noninvasive intervention is necessary, while surgery is required in <1% of cases.[1] The most commonly ingested foreign body is a fish bone and considered an emergency when swallowed into the esophagus or further into the intestines.[1] The foreign body entering orally, if not simply excreted by system, may lodge/persist (impaction), cause perforation, bleeding, and ulcers, and may also cause peritonitis leading to death in exceptional cases.[2] The possibility of such complications is considered with fish bones and must be located and confirmed by imaging. Although radiography can be used, the preferable option is the computed tomography (CT).[3] The impacted fish bones of the upper digestive tract are reported to occur in palatine tonsils, base of the tongue, valleculae, and the pyriform sinus.[4] Dentures, age extremities (children and old aged), fast eating, and mental retardation are predisposing factors of such incidents.[4] The most common reason for dentures being presented in reason for fish bone swallowing was "loss of perception to identify the hard structure".[4] We present a case with lost lower molar teeth (partial edentulism) that had led to the lodgment of fish bone into the adjacent buccal mucosa during rapid chewing. The nonenhanced high-resolution CT scans are considered the gold standard for imaging fish bone impactions in the upper gastrointestinal tract;[1,5] however, considering the palpable swelling and accessibility of suspected anatomical site, an ultrasonography was attempted.

Case Report

A 21-year-old male presented with a complaint of a right facial swelling for 2 weeks. He had trauma history to his inner part of the cheek due to a suspected prick by fish thorn/bone. The

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Materials used to maintain integrity of enamel in Orthodontics: an update

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ABSTRACT

After Orthodontic treatment, it's just as crucial to restore a healthy and normal tooth structure as it is to achieve the aims of Orthodontics. Orthodontic treatment has the potential to cause some damage to dental enamel. Orthodontists should make every effort to minimize damage to dental tooth enamel. These enamel lesions, such as white spot lesions, are managed first by developing appropriate dental hygiene habits and prophylaxis with topical fluorides, high-fluoride toothpaste, fluoride mouthwashes, gels, varnishes, fluoride-containing bonding materials, fluoride-containing luting cement, and fluorides in elastomers. Other materials and treatments include casein phosphopeptides-amorphous calcium phosphate, probiotics, carbamide peroxide, polyols, sealants, microabrasion, resin infiltration, antiseptics, and lasers, have recently been recommended. This article reviews the current information regarding the various materials used to manage enamel demineralization and promote remineralization during and after orthodontic treatment.

1. Introduction

Restoring a healthy and normal tooth structure after the end of Orthodontic treatment is as important as accomplishing the goals of Orthodontics. If orthodontic therapy is beneficial to the patient, the treatment advantages should significantly outweigh any adverse sequelae that the treatment might cause [1]. The clinician should be aware of the problems during the treatment procedures to prevent, minimize, and manage the possible adverse effects of orthodontic treatment.

Orthodontic procedures such as conditioning and etching of enamel, debonding of brackets, removal of resin debris and resin cement from the enamel surface, and enamel reduction or stripping are a few of the many causes of enamel damage related to iatrogenicity [1]. The presence of fixed orthodontic appliances causes an increasing number of retention sites due to brackets, bands, wires, and other applications making cleaning teeth more difficult [2]. White spot lesions (WSLs) result from prolonged plaque accumulation on the affected surface of the teeth.

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ORIGINAL RESEARCH

Preference of restorative material for class V restoration among BDS students, interns, practising dentists and post graduate students: A cross sectional survey

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Abstract

Aim: To compare and evaluate the preferences of restorative material in class V lesions restored with composite resin, Glass ionomer cement amongst BDS students, Interns, practising dentists and post graduate students.

Materials and methodology: 100 class V cavities were prepared in Maxillary central incisors in selected patients amongst general population. After proper selection and identification, four groups of patient were formed and each group involved 25 patients each. Restorative material was randomly selected and each group was involving composite and GIC. In this study these cavities were divided into four groups: Group A (□ = 25)—restored by Bds students, Group B (□ = 25)—restored by Interns, Group C (□ = 25)—restored by practising dentists and Group D (n= 25) restored by Post graduate students in the department. After proper restoration of the cavity the preferences of restoring groups were asked and evaluated by the questionnaires.

Conclusion: Within the limitations of this study, none of these materials were free from microleakage. Both materials showed microleakage at gingival margins compared to occlusal margins. Among all the groups GIC showed the least microleakage at the gingival wall. Since Isolation is difficult in GIC therefore Composite was preferred by practising dentists and Post graduate students.

Key words:microleakage, composite resin, Glass ionomer cement.

Original Article

Comparative Evaluation of Cognitive Behavioral Therapy and Regular Health Education in Reducing Nicotine Dependence among Cigarette Smokers: A Randomized Controlled Trial

Praveen Kumar Varma Datla[1], Nagarjuna Prasad Mukarla[2], Pavan Kumar Chiluvuri[3], Sai Siva Naga Gayathri Naidu[4], Raghudeep Darisi[3], Kondapalli Tulasi Priya[5], Anudeep Kapalavayi[6]

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Abstract

Introduction: It is important to introspect if the methods used in tobacco cessation counseling are effective in achieving abstinence and reducing nicotine dependence among tobacco users. The objective of this study was to evaluate the effectiveness of cognitive behavioral therapy (CBT) at tobacco cessation clinics in a teaching dental institution in reducing nicotine dependence among dental patients with the habit of cigarette smoking in comparison to regular health education to quit tobacco. **Materials and Methods:** This prospective, randomized controlled trial was conducted in a teaching dental institution in the state of Andhra Pradesh. 160 self-reported current cigarette smokers with no tobacco chewing habits participated in the study. 80 each were assigned to the intervention group and control group where CBT for cessation of cigarette smoking and regular health education to quit smoking were provided, respectively. Data relating to frequency of cigarette smoking and nicotine dependence scores using Fagerstrom nicotine dependence scale were collected at baseline. Both the groups were followed up for 4 months in two-monthly intervals. IBM SPSS version 20 software was used for data analysis. **Results:** While there was no significant difference in the mean nicotine dependence score between the study groups at baseline, a statistically significant difference was observed between the groups at follow up visits. Repeated measures analysis of variance revealed significant reduction in nicotine dependence scores with time in the intervention group ($P = 0.004$), whereas the differences in the control group between different study time points were not significant ($P = 0.39$). It was also observed that the frequency of cigarette smoking reduced significantly between the baseline and follow-up visits in the intervention group (Cochran's Q-test; $P = 0.028$). **Conclusion:** The findings of this study provide an insight into the fact that CBT as tobacco cessation counseling technique is effective in reducing nicotine dependence among subjects seeking oral health care.

Keywords: Dental Council of India, Fagerstrom scale, nicotine dependence

Introduction

Tobacco consumption emerged as one of the most common and most deleterious habits in the recent decades.[1] The global statistics reveal the ubiquitous nature of tobacco use.[2] In India, the habit of tobacco consumption is very prevalent with nearly 30% of all adults consuming tobacco in one form or the other.[3] The contribution of tobacco toward a country's disease burden and the range of negative health outcomes tobacco could be responsible for led to the identification of tobacco consumption as a global epidemic.[4] In the Indian context, lot of efforts have been directed toward making people aware of the ill effects of tobacco. The Indian government launched National Tobacco Control Programme in 2007 to bring down

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Case Report

A RARE PRESENTATION OF ODONTOGENIC KERATOCYST IN POSTERIOR MAXILLA MIMICKING A RESIDUAL CYST – A DIAGNOSTIC DILEMMA

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ABSTRACT

Keratocystic odontogenic tumor was previously considered as a common cyst of developmental origin but now it is considered as a tumor of the oral cavity with high recurrence rate, potential aggressive behaviour, defined histopathological features and it has an ability to mimic other jaw cysts.

Present study is a case report of a 45 years old female presenting with KCOT occurrence in the right maxilla, which is unusual and its appearance in the maxillary sinus is very uncommon. On clinical and radiographic examination, a provisional diagnosis of Residual cyst was given. Histopathological examination only revealed Keratocystic Odontogenic Tumor. The lesion was successfully treated surgically by complete enucleation and no recurrence has been observed on follow-up. The aim of the study is to report and distinguish a case of keratocystic odontogenic tumor simulating Residual cyst because of its aggressive behavior to prevent its high recurrence rate. This case emphasis on including KCOT in the differential diagnosis of radiolucencies occurring in the oro facial skeleton.

INTRODUCTION

Odontogenic keratocyst (OKC) is the third most common odontogenic cyst and comprises about 12% of all the cysts occurring in the maxillofacial region. The most significant change in the 2017 classification of developmental odontogenic cysts was that the term "keratocystic odontogenic tumor" was moved from the neoplastic category (2005) to the cyst category. [1]

Kcot is a relatively common jaw tumor, it has been reached a pronounced peak frequency in the second and the third decades with more frequency in men. The mandible is more involved than the maxilla, with a higher incidence in the posterior body and ascending ramus.(2)

Clinical and radiographic presentation of keratocystic odontogenic tumor (KCOT), poses a major diagnostic dilemma as they can be located at various sites mimicking other pathologies. (3) As they are often confused with other cysts and tumours because of vague appearances and similar features so it is very much important to diagnose the KCOT from other odontogenic cysts. (4)

Similar in our case OKC occurred in edentulous area of right posterior maxilla with history of long term presence but it cannot be proved clinically or radiological as OKC but on histopathology it was proved. So complete diagnosis and proper treatment is necessary to reduce recurrences.

CASE REPORT

A 45 years old female patient reported to the Department of Oral & Maxillo facial surgery with a chief complaint of swelling on upper right region of jaw since 1 year. Initially patient was asymptomatic, later on sudden onset of swelling with pus discharge intraorally in that area. Swelling was smaller in size and gradually increased to present size. Patient gives history of extraction 5 years back after which she had experienced mild pain during chewing for which she had taken medication from local dentist; patient is diabetic and hypertensive since 2 years and under medication.

On examination

Extra orally front and lateral profile showing mild facial fullness of right cheek and tenderness over right side of cheek. Supero inferiorly from right infra orbital margin to the alveolar ridge, antero posteriorly from ala of nose to 2cms away from anterior border of tragus. On palpation swelling is firm in consistency, mildly tender, compressible and no local rise in temperature and colour. (Figure 1)

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RESEARCH ARTICLE

SOLITARY PERIPHERAL OSTEOMA OF THE MANDIBLE: A CASE REPORT

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Abstract

Osteomas are benign, slow growing oestrogenic tumours. They are often occurring in the craniofacial bones but rarely originate from the mandible. Osteomas have three varieties as central, peripheral and extra skeletal. Central and peripheral osteomas are often seen in the facial bones. Peripheral osteoma often located in the frontal, ethmoid and maxillary sinus, but rarely occurs in the jaws. Usually they are asymptomatic and discovered incidentally during radiological and clinical examinations. Osteomas are characterized with well-defined, rounded or oval radiopaque mass in the computed tomography. Herein, we report a rare case of peripheral osteoma of the lower part of the mandible in a 21-year-old male with radiologic and pathologic findings.

Introduction:-

Osteomas are uncommon, slow-growing, benign osteogenic neoplasm's that arise most frequently in the craniofacial skeleton[1]. It may be classified as peripheral, central or extra skeletal. A peripheral osteoma arises from the periosteum, a central osteoma from endosteum and an extra skeletal osteoma in the soft tissue[2]. Histopathologically, osteomas may be of two types; compact and cancellous. Compact osteomas consist of dense, compact bone with a few marrow spaces, while cancellous osteoma is characterized by bony trabeculae and a fibro fatty marrow enclosing osteoblasts which resembles mature bone[3].

Most of the cases of peripheral osteoma appear to have a very slow growth rate, are asymptomatic and produce swelling and asymmetry[4]. The pathogenesis of the peripheral osteoma is unclear. It has been considered to be a true neoplasm, developmental anomaly, or a reactive lesion triggered by trauma, muscle traction, or a infection[1].

The most common location of the peripheral osteoma is the skull. However, lesions do seldom occur in the mandible, especially on the lingual aspect, inferior border and body of the mandible and at the angle region[2, 3].

There is no predilection for age or sex and it may affect young adults. Radio graphically, appears a well circumscribed radiopaque mass that appear round/ ovoid in shape[1].

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Original Article

Effectiveness of immediate loading protocol over conventional loading protocol in mandibular posterior region – A comparative prospective clinical study

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Abstract

Background: The topic of type of loading for a dental implant is currently in debate in dentistry for the past 2 decades. The study was aimed to compare the effectiveness of immediate loading protocol over conventional loading protocol in respect to bone loss and clinical parameters in mandibular posterior region which is common edentulous region having sufficient amount of bone.

Materials and Methods: A prospective clinical comparative study was on 20 participants assigned into Group A (n = 10; delayed loading) and Group B (n = 10; immediate loading). The participants were given Adin Touareg-S implants with titanium Grade 4 abutments conventionally in Group A and immediately in Group B. The outcomes evaluated were radiographic assessments marginal bone loss (MBL) and clinical soft-tissue assessments plaque index (PI), gingival index (GI), PI, and calculus index (CI). The unpaired t-test was used to compare the intergroup means of these parameters keeping the level of significance was set at $P < 0.05$.

Results: The MBL comparisons between Groups A and B have not yielded any significant differences ($P > 0.05$ when compared from the 3rd, 6th, 9th, to 12th month) after implant placement. The mean value of PI, GI, and CI was not significantly different in the intergroup comparisons in the 3rd, 6th, 9th, and 12th month comparisons.

Conclusion: There were no significant differences in the MBL, GI, PI, and CI between the immediate and conventionally loaded implants in mandibular posterior region. The immediate loading can be considered as an alternative to conventional loading in the mandibular posterior region.

Introduction

The replacement of lost natural teeth by end osseous implants has been considered to be the most significant advancement in the restorative dentistry. It is the standard care for reconstruction of edentulous arches due to favorable and high survival rate. The objective of implant-based treatment is to provide a controlled delivery of functional loads to osseous structures and maintain mechanical stability of the prosthesis.[1] The restoration dictates the implant position rather than osseous anatomy alone. It is important that the surgeon evaluates the role of implant position, shape, healing time, and the provisional restoration to achieve the objective of implant treatment.[1]

The present surge in the use of implants was initiated by Per Ingvar Branemark. He showed that titanium implants could become permanently incorporated within bone through his experiments. As per the original protocol stated by Branemark, dental implant placement is a two staged surgery with a submerged healing period of at least 3 months in jaw bone.[2,3] This time period allows the implant to osseointegrate and minimizes the risk of infection as the tissue around the implant is allowed to heal without any exposure to the external environment. Later, a second surgery is to be performed to connect the healing abutment.[2] However, during this intermediate period, there are chances of the development of various unwanted sqeal such as bone resorption (vertical and horizontal), gingival recession, and migration of tooth into the edentulous space can

Case Report

Impacted Fish Bone in Buccal Space Associated with an Abscess: Role of Point-of-care Ultrasonography in Dental Emergencies

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Abstract

Fish bone impaction in buccal space abscess is an uncommon dental scenario. A case of young adult with partially edentulous state contributing to this emergency is presented. The history, clinical imaging findings, surgical procedure, and checklist for clinical assessment are briefly described. The point-of-care ultrasonography (POCUS) was used in our case to identify, locate, and perform an ultrasonography-guided removal of impacted fish bone in consolidated abscess of the buccal space. The role of POCUS in cases of dental swellings or uncommon emergencies is emphasized in clinical settings.

Keywords: Buccal space abscess, color Doppler ultrasound, fish bone impaction, foreign body, point-of-care ultrasonography

Introduction

A foreign body in the oral cavity or upper gastrointestinal tract occurs as an accidental consequence along with food being chewed or ingested. In nearly 90% of cases, the foreign body passes all the length of the gastrointestinal tract naturally. It has been reported that in 10%–20% of cases, a noninvasive intervention is necessary, while surgery is required in <1% of cases.[1] The most commonly ingested foreign body is a fish bone and considered an emergency when swallowed into the esophagus or further into the intestines.[1] The foreign body entering orally, if not simply excreted by system, may lodge/persist (impaction), cause perforation, bleeding, and ulcers, and may also cause peritonitis leading to death in exceptional cases.[2] The possibility of such complications is considered with fish bones and must be located and confirmed by imaging. Although radiography can be used, the preferable option is the computed tomography (CT).[3] The impacted fish bones of the upper digestive tract are reported to occur in palatine tonsils, base of the tongue, valleculae, and the pyriform sinus.[4] Dentures, age extremities (children and old aged), fast eating, and mental retardation are predisposing factors of such incidents.[4] The most common reason for dentures being presented in reason for fish bone swallowing was "loss of perception to identify the hard structure".[4] We present a case with lost lower molar teeth (partial edentulism) that had led to the lodgment of fish bone into the adjacent buccal mucosa during rapid chewing. The nonenhanced high-resolution CT scans are considered the gold standard for imaging fish bone impactions in the upper gastrointestinal tract;[1,5] however, considering the palpable swelling and accessibility of suspected anatomical site, an ultrasonography was attempted.

Case Report

A 21-year-old male presented with a complaint of a right facial swelling for 2 weeks. He had trauma history to his inner part of the cheek due to a suspected prick by fish thorn/bone. The

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Immediate Placement of Endosseous Implant in Esthetic Zone in Extraction Socket

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Abstract

The maintenance of existing anatomical structures is easier than their recreation. Hence in this study it has been advocated to perform provisionalization with a non-functional prosthesis immediately following stage-1 surgery in immediate tooth replacement. Based on the results of this 6 months study immediate placement and provisionalization of anterior, single, rough surface, threaded implants can optimize peri-implant esthetics by maintaining the existing hard and soft tissue architecture of the tooth indicated for extraction. More long term prospective and controlled clinical studies with a large sample and rough coated and threaded implants are mandatory to document the effective outcome of this treatment technique.

Keywords: Endosseous implant, aesthetic zone, peri-implant space, bone levels, soft tissue levels.

Introduction

In order to overcome the disadvantages associated with the conventional techniques like fixed partial dentures and removable partial dentures the concept of dental implants has been introduced. This implant concept has been developed over a period of time with the introduction of modifications in implant design and surface treatments. But there are certain disadvantages associated with this treatment protocol like extended treatment period, need for removable denture during initial healing period, need for multiple surgeries, post extraction resorption of bone, loss of soft tissue and compromised aesthetics, therefore in order to overcome the problems associated with this conventional implant treatment protocol the concept of immediate placement and provisionalization of implants has been introduced.The aim of this present study is to

Cyanoacrylate: An alternative to silk sutures: A comparative clinical study

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ABSTRACT

Aim: The aim of the study is to compare silk sutures and n-butyl-2-cyanoacrylate tissue adhesive in intraoral wound closure and contrast the effects through the assessment of time taken to close the wound, time taken for securing hemostasis, postoperative pain, swelling, bleeding, incidence of postoperative wound infection, and wound dehiscence.

Materials and Methods: This study included a total of 20 patients of both genders who required alveoloplasty either bilateral in the same arch or in the upper and lower arches. In the selected patients, the surgical sites were randomly divided into two treatment groups. In group I, surgical wounds closed with n-butyl-2-cyanoacrylate tissue adhesive and silk sutures were used for group II wound closure and the parameters were assessed.

Results: Clinically and statistically, there was significant improvement in cyanoacrylate-treated wounds. The time taken for wound closure with n-butyl-2-cyanoacrylate was lesser. Early hemostasis was achieved with n-butyl-2-cyanoacrylate. The postoperative pain, swelling, and bleeding were less with n-butyl-2-cyanoacrylate. Higher incidence of wound infection and wound dehiscence were observed in wounds treated with silk sutures.

Conclusion: Cyanoacrylate causes less tissue reaction and achieves immediate hemostasis. The procedure is relatively painless and quicker. There are benefits of protection from wound infection and wound dehiscence. So it may be concluded that n-butyl-2-cyanoacrylate can be used for intraoral wound closure effectively.

Key words: Alveoloplasty, 3-0 black braided silk, n-butyl-2-cyanoacrylate, tissue adhesive

INTRODUCTION

Incision is the basic step for surgical procedures. After a surgical approach, suitable closure and optimum maintenance of the surgical area are the most important factors that affect proper wound healing and the surgical success.[1]

The conventional method of wound closure causes trauma during needle penetration while passing through the tissues and provides a "wick down" through which bacteria can gain access to the underlying tissues and it has been proved that the presence of suture material itself increases the susceptibility to infection. It may also lead to complications such as stitch abscess, epithelial

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CASE REPORT

Non-syndromic bilateral buccal lipomas - A case report with a variable presentation in a single case

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Abstract

Lipoma is a benign connective tissue neoplasms composed of mature adipocytes. They occur commonly in the head-and-neck region, but lipomas derived from oral mucosal lining are very rare. However, the patients may present after they attain considerable size leading to difficulty in speaking or chewing food. The surgical excision remains the choice of treatment but for most lipomas, but a pre-surgical histo-pathological study is warranted. The malignant counterpart or "liposarcoma" could be the worst and rare consequence of longstanding untreated or atypical lipomas. The purpose of the report is to highlight on variable presentation of bilateral oral lipomas in the non-syndromic patient. A 72-year-old patient had reported with a large-sized oral swelling with apprehensiveness and a suspicion of oral cancers. The examination revealed a giant well-circumscribed swelling of the right buccal mucosa and as dispersed bits of palpable mass on the left buccal mucosa, both of which were diagnosed as lipomas. The left-sided lesion was not the compliant of the patient, had an atypical presentation. The history was re-established and dermatological consultation was negative for any associated syndromes or conditions for multiple lipomas. Surgical excision was successfully performed with no recurrence after 12 months duration. The case report summarizes that oral lipomas may present atypically and bilaterally in buccal mucosae. The importance of comprehensive oral examination and identification of histopathological variant and to rule out malignant counterpart were highlighted in this case.

Introduction

Lipomas are the most common benign mesenchymal neoplasms seen in the fat-sourced body spaces, but the lack of site-specificity made them "universal tumours" or "ubiquitous tumours."[1] The prevalence of these tumors is 1–4% amongst all oral neoplasms.[1] The buccal mucosa is common reported sites for occurrence, while the floor of the mouth, lips, palate, and gingiva are rare sites.[2-4] The primary etiology is a traumatic event or chromosomal alterations in 12q13–15 region (upto 65%).[1,2,5] The pathogenesis underlying lipomas is explained to occur due to sudden overgrowth of cells (hypertrophy theory) or infusion of cells (metaplasia theory) or as part of syndromes (embryonic multipotent/hormonal theory).[1]

We report a case of bilateral buccal lipomas in a patient without any other identifiable cause of syndrome. The patient concerns, unusual clinical findings, differential diagnosis, importance of histological examination, and the management are described in this report.

Case Report

A 72-year-old male patient presented with a chief complaint of swelling inner part of the right cheek for 3 years which being subjected to self-trauma while chewing food. The swelling was described to be slowly progressive. The medical, dental, and family histories were not contributory. On examination of right buccal mucosa showed a solitary, pedunculated, well-defined swelling of size 3 cm × 3 cm having a smooth surface [Figure 1a]. The swelling was partially trans-illuminant. On palpation, the swelling had a soft consistency, non-tender, and slipped under the tip of the finger. A provisional diagnosis of soft tissue lipoma was made with a differential diagnosis of mucous retention

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RESEARCH ARTICLE

SOLITARY PERIPHERAL OSTEOMA OF THE MANDIBLE: A CASE REPORT

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Abstract

Osteomas are benign, slow growing oestrogenic tumours. They are often occurring in the craniofacial bones but rarely originate from the mandible. Osteomas have three varieties as central, peripheral and extra skeletal. Central and peripheral osteomas are often seen in the facial bones. Peripheral osteoma often located in the frontal, ethmoid and maxillary sinus, but rarely occurs in the jaws. Usually they are asymptomatic and discovered incidentally during radiological and clinical examinations. Osteomas are characterized with well-defined, rounded or oval radiopaque mass in the computed tomography. Herein, we report a rare case of peripheral osteoma of the lower part of the mandible in a 21-year-old male with radiologic and pathologic findings.

Introduction:-

Osteomas are uncommon, slow-growing, benign osteogenic neoplasm's that arise most frequently in the craniofacial skeleton[1]. It may be classified as peripheral, central or extra skeletal. A peripheral osteoma arises from the periosteum, a central osteoma from endosteum and an extra skeletal osteoma in the soft tissue[2]. Histopathologically, osteomas may be of two types; compact and cancellous. Compact osteomas consist of dense, compact bone with a few marrow spaces, while cancellous osteoma is characterized by bony trabeculae and a fibro fatty marrow enclosing osteoblasts which resembles mature bone[3].

Most of the cases of peripheral osteoma appear to have a very slow growth rate, are asymptomatic and produce swelling and asymmetry[4]. The pathogenesis of the peripheral osteoma is unclear. It has been considered to be a true neoplasm, developmental anomaly, or a reactive lesion triggered by trauma, muscle traction, or a infection[1].

The most common location of the peripheral osteoma is the skull. However, lesions do seldom occur in the mandible, especially on the lingual aspect, inferior border and body of the mandible and at the angle region[2,3].

There is no predilection for age or sex and it may affect young adults. Radio graphically, appears a well circumscribed radiopaque mass that appear round/ ovoid in shape[1].

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Case Report

A RARE PRESENTATION OF ODONTOGENIC KERATOCYST IN POSTERIOR MAXILLA MIMICKING A RESIDUAL CYST – A DIAGNOSTIC DILEMMA

Phani Himaja Devi Vaaka., Naren Kishore Rayudu., Gandikota Kartheek., Sumalatha MN Gadiputi Sreedhar and Sri Sesha Kameswari Vadrevu

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ABSTRACT

Keratocystic odontogenic tumor was previously considered as a common cyst of developmental origin but now it is considered as a tumor of the oral cavity with high recurrence rate, potential aggressive behaviour, defined histopathological features and it has an ability to mimic other jaw cysts.

Present study is a case report of a 45 years old female presenting with KCOT occurrence in the right maxilla, which is unusual and its appearance in the maxillary sinus is very uncommon. On clinical and radiographic examination, a provisional diagnosis of Residual cyst was given. Histopathological examination only revealed Keratocystic Odontogenic Tumor. The lesion was successfully treated surgically by complete enucleation and no recurrence has been observed on follow-up. The aim of the study is to report and distinguish a case of keratocystic odontogenic tumor simulating Residual cyst because of its aggressive behavior to prevent its high recurrence rate. This case emphasis on including KCOT in the differential diagnosis of radiolucencies occurring in the oro facial skeleton.

INTRODUCTION

Odontogenic keratocyst (OKC) is the third most common odontogenic cyst and comprises about 12% of all the cysts occurring in the maxillofacial region. The most significant change in the 2017 classification of developmental odontogenic cysts was that the term "keratocystic odontogenic tumor" was moved from the neoplastic category (2005) to the cyst category. [1]

Kcot is a relatively common jaw tumor, it has been reached a pronounced peak frequency in the second and the third decades with more frequency in men. The mandible is more involved than the maxilla, with a higher incidence in the posterior body and ascending ramus.(2)

Clinical and radiographic presentation of keratocystic odontogenic tumor (KCOT), poses a major diagnostic dilemma as they can be located at various sites mimicking other pathologies. (3) As they are often confused with other cysts and tumours because of vague appearances and similar features so it is very much important to diagnose the KCOT from other odontogenic cysts. (4)

Similar in our case OKC occurred in edentulous area of right posterior maxilla with history of long term presence but it cannot be proved clinically or radiological as OKC but on histopathology it was proved. So complete diagnosis and proper treatment is necessary to reduce recurrences.

CASE REPORT

A 45 years old female patient reported to the Department of Oral & Maxillo facial surgery with a chief complaint of swelling on upper right region of jaw since 1 year. Initially patient was asymptomatic, later on sudden onset of swelling with pus discharge intraorally in that area. Swelling was smaller in size and gradually increased to present size. Patient gives history of extraction 5 years back after which she had experienced mild pain during chewing for which she had taken medication from local dentist; patient is diabetic and hypertensive since 2 years and under medication.

On examination

Extra orally front and lateral profile showing mild facial fullness of right cheek and tenderness over right side of cheek. Supero inferiorly from right infra orbital margin to the alveolar ridge, antero posteriorly from ala of nose to 2cms away from anterior border of tragus. On palpation swelling is firm in consistency, mildly tender, compressible and no local rise in temperature and colour. (Figure 1)

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ORIGINAL RESEARCH PAPER

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EVALUATION OF SURFACE QUALITY AND DIMENSIONAL ACCURACY OF ELASTOMERIC IMPRESSION MATERIALS AFTER VARIOUS DISINFECTION PROTOCOLS

Prosthodontics

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Dr. Sumeet sharma	Professor and HOD
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Dr. Rizwanulla	Lecturer
Dr.Y.Chandra Mouli	Lecturer

ABSTRACT

To evaluate surface quality and dimensional accuracy of elastomeric impression materials after various disinfection protocols. A Total of 150 samples were made i.e..50 from each type of impression material. Specimens were immersed in disinfectant solutions namely 0.2% chlorhexidine,5.25% hypo,0.2% povidone iodine, running tap water and ozone water for disinfection and examined for surface quality using stereomicroscope and dimensional accuracy using digital Vernier calipers. Silicones exhibited best dimensional accuracy & surface quality when treated with ozone water after 24 hours of disinfection whereas polyether exhibited good surface quality & dimensional accuracy when treated with control (tap water) after 24 hours of disinfection.

KEYWORDS

Elastomers, Stainless steel die, Disinfectants.

INTRODUCTION

During routine dental procedures, dental professionals are exposed to various contaminants from blood and saliva either directly or indirectly.Majority of these organisms results into significant risk to dental professionals such as hepatitis, HIV etc..[1]

To reduce this risk, dental impressions must be disinfected after their removing from oral cavity before they are sent to the laboratory for prosthesis fabrication. Even though the importance of dental impression disinfection is still highlighted and its performance according to manufacturer instructions should ensure almost 100% antimicrobial decontamination, this step is often underestimated and the education in this area is still not sufficient.

The most frequently used chemical disinfectants are glutaraldehyde, formaldehyde, alcohol, iodine solution, synthetic phenol, sodium hypochlorite and other chlorine releasing solutions.

Studies conducted by Ahila *et al.* (2012) showed no significant dimensional changes following disinfection of silicone impressions. During the detail, reproduction evaluation of consistent rating of 1 was recorded for all specimens.[8] Studies conducted by Amin et al showed that addition and condensation silicone displayed superior qualities in terms of dimensional stability and surface quality.[9] Studies conducted by saber et al showed that disinfection by iodophor resulted in more dimensional changes compared to sodium hypochlorite.[7]

This study is based on evaluation of surface quality and dimensional accuracy of elastomeric impression materials after various disinfection protocols.

MATERIALS AND METHODS:

A Total of 150 samples were made i.e..50 from each type of impression material-Addition silicone, Condensation silicone and Polyether. Specimens were immersed in disinfectant solutions- 0.2% chlorhexidine, 5.25% hypo, 0.2% povidone iodine, running tap water and ozone water for disinfection and examined for surface quality using stereomicroscope and dimensional accuracy using digital Vernier calipers.

DIE SPECIFICATIONS:

A stainless steel die was prepared according to ADA specification number 19 with length 31mm, outer and inner diameter 38mm and 29.97mm and height of inner diameter 3mm.

It consists of 3 horizontal parallel lines named as X, Y, Z -Distance between each line is 2.25mm.

It consists of 2 parallel vertical lines-AB and A B -Distance between each line is 25mm.

Die consists of a ring which acts as a mold of 6mm height with outer and inner diameter 38mm and 30mm respectively.

SAMPLE PREPARATION:

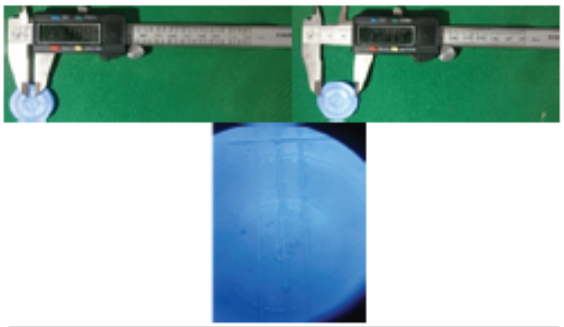
A total of 150 samples were made from each type of impression material i.e..50 samples from addition silicone,50 samples from condensation silicone and 50 samples from polyether material.

DISINFECTION:

These samples which were prepared were subjected to disinfection with different disinfectants and checked for surface quality and dimensional accuracy for 15 minutes,24 hours and 48 hours respectively using immersion technique.

Of 50 samples from different impression materials, 10 samples were disinfected in ozone water,10 samples in regular tap water, 10 samples hypo, 10 samples in chlorhexidine and 10 samples in povidone iodine. After 5-10 minutes of disinfection, all samples were taken off from respective disinfectants and checked for surface quality and dimensional accuracy using stereomicroscope and digital vernier calipers respectively within 15 minutes,24 hours and 48 hours of disinfection.

MEASUREMENT OF SURFACE QUALITY AND DIMENSIONAL ACCURACY:



MEASUREMENT OF DISTANCE BETWEEN X,Y,Z LINES USING VERNIER CALIPERS

SURFACE QUALITY RATINGS:

Surface qualities of samples were measured using stereomicroscope of

ORIGINAL RESEARCH PAPER

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INTERNATIONAL JOURNAL OF SCIENTIFIC RESEARCH

EFFECT OF VARIOUS STERILIZATION AND DISINFECTION PROTOCOLS OF TOOTH PREPARATION BURS ON THEIR CUTTING EFFICIENCY AND THEIR RELATION TO THE SURFACE ROUGHNESS OF TOOTH PREPARATION – AN INVITRO STUDY

Prosthodontics

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ABSTRACT

AIM: This study aims to evaluate the effect of sterilization and disinfection of rotary diamond burs on their cutting efficiency and their relation to their surface roughness. **MATERIALS AND METHODS:** A total of 12 (n=12) burs and acrylic typodont teeth of (n=36) were taken which consists of Diamond TF-13 (MANI) (n=6) and Tungsten carbide bur 169L bur (Prima Dental, Prima Classic) (n=6). These burs were divided into 6 groups. Each group consists of Sub Groups A & B. Sub Group A in each Group Contains Diamond TF-13 (n=1) and Sub Group B in each group contains Tungsten carbide bur 169L bur (n=1). Each single Group is subjected to different methods of sterilization and disinfection with Autoclave, Hot air oven, Ultrasonic, Glass bead, Chemical Disinfection (KORSOLEX) after the tooth preparation. Samples of crown preparation were prepared by placing the mounted tooth on a Modified Milling Machine. After each use, these diamonds and burs were sterilized for 3 cycles of tooth preparation simultaneously and the tooth were evaluated for the surface roughness with a surface profilometer and the resultant values were noted and statistically analyzed. The burs were evaluated for the surface quality under Stereomicroscope and scores were given from 0 to 5 according to the grits and wear present on the surface of the burs. **CLINICAL SIGNIFICANCE:** Diamond rotary burs should be sterilized and disinfected as it has become a mandatory protocol for the dental professionals to prevent cross-contamination and cross infection between the dentist and dental personnel. However, different sterilization and disinfection methods can have undesirable effects on the ability of the burs to effectively reduce the tooth structure. Irrespective of the type of bur and sterilization process used, the cutting efficiency decreases after multiple usage of the burs.

KEYWORDS

Sterilization, Disinfection, Surface roughness, Cutting efficiency

INTRODUCTION:

In dentistry, infection control is a major concern due to risk of transmission of communicable disease. As the field of dentistry deals with various nature of oral flora which deals with combination of both aerobic and anaerobic bacteria, the risk of cross infection can be four to five folds more in the dental personnel as well as the dentists and next line of people would be the patients, laboratory technicians. Dental burs are used in fixed prosthesis and for several purposes like tooth preparation, finishing and polishing, cavity preparation, etc., which is the major source of cross contamination, due to the necrotic tissue, saliva, blood and potential pathogens As to overcome this, sterilization and disinfection has become a mandatory protocol for the dental professionals. Due to complex architecture of dental burs, pre – cleaning and sub sequent sterilization is mandatory after every usage. So, proper attention should be taken for adequate cleaning.

The most common sterilization and disinfection methods for rotary cutting instruments are dry heat, autoclaving, microwave irradiation, and immersion in chemical solutions and Trueing & Dressing. Even though these procedures are important and found to be safe for a dental treatment, these may result in alterations in the surface and subsurface characteristics that effect the cutting efficiency. The present study aims to evaluate the effect of various sterilization and disinfection protocols of tooth preparation burs and their cutting efficiency and their relation to surface roughness of tooth preparation after subjecting them to multiple sterilization and disinfection cycles.

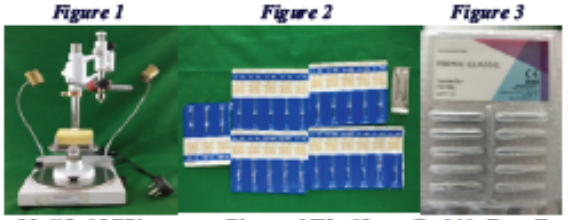
MATERIALS AND METHODOLOGY:

In this study, two types of burs were included; Diamond TF-13 (MANI) (n=6) and Tungsten carbide 169L bur (Prima Dental, Prima Classic) (n=6) making a total number of 12 burs (n=12), and an acrylic typodont tooth of tooth number 36 (n=36). Sample size of burs (n=12) were divided into 6 groups which were each group is further divided into Subgroups "A & B". Sub group 'A' in each group Consists of Diamond Bur TF – 13, & Sub group 'B' Consists of Tungsten Carbide FG 169L.

Grouping was done as follows:

GROUP 1	CONTROL	1A – TF-13
		1B – 169L bur
GROUP 2	AUTOCLAVE	2A – TF-13
		2B – 169L bur
GROUP 3	HOTAIR OVEN	3A – TF-13
		3B – 169L
GROUP 4	ULTRA SONIC	4A – TF-13
		4B – 169L bur
GROUP 5	GLASS BEAD	5A – TF-13
		5B – 169L bur
GROUP 6	CHEMICAL DISINFECTION (KORSOLEX)	6A – TF-13
		6B – 169L bur

Figure 1 *Figure 2* *Figure 3*



Modified Milling Machine **Diamond Tf – 13** **Carbide Burs Fg 169l**

Each group consisted of two types of burs, i.e, Diamond burs TF-13 (MANI) (n=6) (Figure 2) and Tungsten carbide bur 169L bur (Prima Dental, Prima Classic) (n=6) (Figure 3). A Surface Profilometer (MEXITECH SURFACE ROUGHNESS TESTER SRT-6200) (Figure 9) is used for measuring the surface roughness of the prepared tooth.

SAMPLE PREPARATION:

Each typodont tooth was mounted on a stone block (2.5 × 2.5 cm) up to 2mm above the cement to enamel junction. The rotary diamond and burs

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Curse Behind the Curtain- Arnold Chiari Syndrome Type 1 A Rare Case Report

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Type of Publication: Case Report

Conflicts of Interest: Nil

Abstract

Chiari malformations are developmental abnormalities involving hindbrain. It is a condition in which brain extends into spinal cord. A 21 year old male patient visited dental hospital for his routine dental evaluation. As an incidental finding it was identified and further by radiographic evaluation. Most of times it will be asympomatic and show its manifestations in late 30 s. patient should be monitored with regular intervals. Symptomatic findings like pain can be relived by using NSAIDS, Muscle relaxants etc.. If required surgical management can also be done. Early identification of lesion may prevent the secondary complications.

Keywords: Asympomatic, Rhombencephalon, Cranioventra, Pathological Herniations

Introduction

Chiari Malformations comprises group of abnormalities involving Rhombencephalon (Hind Brain) and contents of the CranioVentral junction. Chiari malformations are pathological herniations of hindbrain through the foramen magnum and into the cervical spinal cord. In 1883, John Cleland described a case of hindbrain malformation, which was found during autopsy. Hans Chiari, an Austrian pathologist, gave a detailed description of hindbrain malformations after performing post-mortem examination of forty cases in the year 1891 to 1896. Hence named as Chiari malformations.[1] Chiari stated in his descriptions that these malformations are congenital anomalies of the hindbrain characterized by downward elongation of the brain stem and cerebellum into the cervical portion of spinal cord.[2] Chiari classified the hindbrain malformations basing on their anatomical variations into type I, II and III and type IV malformation.[3] According to the theory given by Daniel and Strich, Chiari Malformations are mainly because of developmental arrest, especially in the progression of pontine flexure during 28th and 29th day of gestation.[4] The theory of overgrowth suggest that the overgrowth of neural plate before neurulation prevents fusion of neural folds. Barry et al reported two cases of human foetuses of 17 and 18 weeks of development with increased volume of cerebellum and brain stem having Chiari malformation.[5] and also observed that cerebellum

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Original Research Paper

Prosthodontics

ORAL STEREOGNOSTIC EFFICIENCY AMONG DENTULOUS AND EDENTULOUS PATIENTS

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ABSTRACT

Aim/ Objective: To evaluate oral stereognostic efficiency among dentulous and edentulous patients. **Introduction:** Stereognosis is the ability of the person to identify shape, size, texture, weight of an object using tactile sensations without looking at them. **Methodology:** The study was conducted to examine the difference in oral sensory function by testing the subjects with their oral stereognostic ability (OSA) and to determine the effect of wearing complete dentures on OSA. The OSA tests were conducted with various shapes of wax pellets approved by NIDR for stereognosis. A total of 20 dentate and 20 edentulous subjects free from oral symptoms and pathologies participated in this study. Before starting the study, subjects inclusion and exclusion criteria was informed. **Results:** The answers were recorded using Mc cord and smith three-point scale. ANOVA and paired t-tests were used to examine significant differences. P-values <0.005 were considered to be statistically significant. The OSA score in dentate subjects was significantly higher than in edentate subjects. **Conclusion:** Oral stereognostic ability decreases with age; however, oral sensory function was not significantly different between fully dentate persons and complete denture wearers in the elderly.

KEYWORDS : Stereognosis, wax pellets, oral sensory perception.

INTRODUCTION:

Stereognosis – Ability of a person to recognize size, shape, texture, weight of an object using tactile sensations without looking at them. (Figure- 1)

Edentulism whether it is complete or partial has a long term effect on the systemic health of the individual. Impaired eating and swallowing functions significantly decrease the quality of life (QOL).

In this study, we focused on the ability to recognize the size and shape of items placed in the mouth, and investigated the oral stereognostic ability, aiming at developing a rehabilitation method that targets recovery of the oral stereognostic ability.'

AIMS AND OBJECTIVES:

1. To evaluate oral stereognostic ability between dentate and completely edentulous individuals who have been rehabilitated with complete removable dentures and also to study oral perceptive skills to the presence or absence of teeth and to patient evaluation of prosthesis.
2. To determine effect of wearing complete dentures on oral Stereognosis.

METHODOLOGY:

This study was carried out at the department of prosthodontics, KIMS dental college and hospital, Amalapuram.

A total of 40 patients were participated of which 20 patients were dentate with full complement of teeth, except third molars and 20 were edentulous patients, who were edentulous for more than 10 years.

20 wax pellets of different shapes, which were approved by National institute for diagnosis and research (NIDR) for stereognosis were made. American national institute of health has categorized 20 wax pellets of varying shapes into 6 categories (Table- 1), of which first category includes polygonal shape which includes wax pellets 1-4, second category includes wax pellets of triangular shape numbered 5-7, third category includes star shaped pellets from 8-10, fourth category includes wax pellets of circular shape from 11-12, fifth category includes convex-shaped group with no corners and the ends swelling convexly numbered 13-16 and sixth category includes concave-shaped group with no corners and a concave middle numbered 17-20 (Figure- 2). These are rated according to smith and Mc cord three point rating scale.(Table-2)

Stereognostic Test Procedure: (figure No: 3)

The test procedure was as follows. The test was carried out between 2:00 and 5:00 p.m. in a quiet room, where the subject was seated comfortably in an upright position. Subjects were told they should use their tongue and palate to identify the shape. They were instructed to respond as quickly as possible and to avoid biting on the test pieces. (Figure- 3)

Pictures of all 20 test pieces were shown to the subject and the corresponding picture was pointed out for each shape. To prevent a learning effect, no practice trials were held. Each of the 20 pieces was presented twice. The 40 presentations were made in random order. Participants were not informed of the correct answers at any point during testing.

With the eyes closed, one of the 20 test pieces was randomly selected and placed on the middle of the tongue. The subject was asked to move the piece in the mouth to determine its shape, choosing the corresponding shape from 2D pictures of the 20 variously shaped test pieces.' The test was completed when all 20 test pieces had been evaluated in this manner. The total scores ranges from 0 to 40.

Therefore, the higher the score, the higher the accuracy of Oral stereognosis. To prevent any learning effect, no practice trials were allowed.

RESULTS:

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