

The background of the cover features a large, stylized blue boat on a beach. The boat is positioned in the middle ground, with its bow pointing towards the right. The beach is a light tan color, and the background shows a hazy landscape with mountains under a pale sky. The overall aesthetic is clean and professional.

ORIGINAL RESEARCH

ORNAGRIN- A LIGHT TO LIFE

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The anatomy of the smile is an integral part of dentistry. To create a harmonious smile the dentist must maintain or create the normal curvature of the lips, proper exposure of the red zone of the lips, an undistorted philtrum and undisturbed nasolabial grooves. These entities, maintained in harmony with the exposed teeth, constitute the anatomy of a smile. In order that patients may be served properly, the smile must be understood, recorded, and analysed so that desirable aspects may be preserved and graceless components returned to attractiveness. Thus, this oral presentation aims in developing a software which helps in designing the smile of the patient prior rehabilitation to achieve optimum aesthetics in harmony with the surrounding structures.

AWARENESS AND ATTITUDES OF PATIENTS REGARDING OCCLUSAL DISORDERS – A QUESTIONNAIRE SURVEY.

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At every level of general practice a dentist routinely faces problems of sore teeth, excessive wear, loose teeth, temporomandibular joint disorders and Oro-facial pain. It a puzzling observation that the most prevalent evidence of damaged teeth is so routinely ignored, both in clinical practice and dental curriculum. Dentists are the only health professional who are trained to diagnose problems of teeth and to understand problems of masticatory system function. Every practitioner should be able to recognize it in its various forms, treat it, and when detected early enough, prevent it from destroying dentition. Patient participation in healthcare decision making improves the dental services and its outcomes. There is low level of awareness among people regarding Occlusal disorders and their treatment. Also, there is a paucity of information regarding awareness of patients and their attitude about occlusal diseases. This study was undertaken to investigate the knowledge, attitude and factors affecting decision making of patients regarding occlusal diseases.

COMPARISON OF DIMENSIONAL CHANGES OF INJECTION-MOLDED AND CONVENTIONAL (COMPRESSION MOLDED) HEAT-CURED ACRYLIC RESIN

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Dimensional changes occur during polymerization of acrylic resin denture bases. This study was done to compare the dimensional changes that occur using two different curing techniques – Compression molding and Injection molding. 20 specimens were fabricated for each group. For conventional compression molding technique (SR-Ivocap Triplex Hot) material was used and for Injection molding technique (SR-Ivocap High Impact) material was used. Dimensions of each specimen were measured and compared. After each water storage period, the acrylic resin specimens fabricated using injection molding technique exhibited less dimensional changes than specimens made using compression molding technique. Injection molding technique produces more dimensionally stable specimens thereby improve physical properties of denture bases..

EFFECT OF DIFFERENT FIBERS ON POLYMERIZATION SHRINKAGE OF POLYMETHYLMETHACRYLATE DENTURE BASES IN THE POSTERIOR PALATAL SEAL AREA.

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The retention of the complete denture is directly related to the adaptation of the base to the supporting oral tissues and is maximised when there is more intimate adaptation with the oral tissues. Polymethyl methacrylate (PMMA) based acrylic resin is used popularly for the fabrication of denture bases. In a clinical situation, decreased gap between the denture base and the tissue surface contributes to improved denture retention. The disadvantage of PMMA is polymerization shrinkage that occurs during processing. Its effects are particularly noticeable in the post-palatal seal regions of maxillary complete dentures. The chief reasons cited for the lack of adaptation of the denture base in post-palatal seal region of maxillary dentures are the volumetric shrinkage of resin and the reduced thickness and bulk of the denture base in the overlying area. Shrinkage of the denture base material is observed as a pulling away from the cast in the posterior mid-palatine area. The conventional processing technique causes polymerization shrinkage. As shrinkage occurs it breaks the retentive peripheral seal of the denture which affects the retention and stability of the denture.

EVALUATION OF CELL PROLIFERATION ON ELECTROLYTIC STIMULATION OF NOVEL HYDROGEL

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Bone healing happens in 3 phases over a period of minimum 12 weeks. As the healing progresses soft callus is replaced with hard bone. Various methods are being tried to bring about accelerated bone growth and one of them which gave excellent results are the endogenous and exogenous electric signals applied to the host. An extrinsic electrical stimulation functions as an imitator of the endogenous electronegative properties of the living bone to increases its capacity to heal hence here we subjected a hydrogel which is a combination of CHITOSAN-HYALURONIC ACID AND MORINGA where CHITOSAN and HYALURONIC ACID forms POLYELECTROLYTIC COMPLEX which has positive and negative charges and responds to the electric and magnetic fields by bringing about the bone growth. The novel hydrogel with MG63 cells was exposed to low-frequency electric field in a parallel plate capacitor system. To bring about the electrical stimulation. Later, the cell culture was subjected to MTT assay, Viable cell count was obtained with evaluation of cell growth and differentiation and the calcium deposition was studied using the Von Kossa's staining. The results indicated NO cytotoxicity and the cell response and proliferation was found to be better than the control group with minimum induction of electrical stimulus.

BRIMMING THE BEST STERILIZATION-AN INVITRO STUDY

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Introduction: Infection control is very important in dentistry. Both dentist and patients are at risk of communicating diseases during treatment procedures. Dental burs have been identified as a source of cross-contamination between patient and dental personnel. AIM & OBJECTIVE: evaluate the efficiency of the glass bead sterilizer for sterilization of instruments used for tooth preparation. MATERIALS AND METHODS: This study is done with dental handpiece, burs, mouth mirror, gingival cord packing instrument, used for tooth preparation after sterilization they were evaluated. BACKGROUND: Glass bead sterilizer is primarily used for sterilizing small handed instruments in dentistry. These units kill most of classes of fungi, bacteria and virus. It provides unique challenges to maintain sterile instruments in a practical and cost effective manner. Even though autoclave is the gold standard method of sterilization glass bead sterilization is one of the older sterilizing methods, still now it is used as chair side sterilizer of hand instruments. CONCLUSION-this study strongly recommends the use of glass bead sterilizer as a state of art method for rapid chair side sterilization efficiency and for routine use.

COMPARATIVE EVALUATION OF ACCURACY AND FINISH LINE DISTINCTION AMONG 3 INTRAORAL AND 3 EXTRAORAL SCANNERS; AN INVITRO STUDY

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Large amount of studies have been conducted on evaluation of accuracy of Computer aided designing Computer aided manufacturing (CAD CAM) scanners. But data is lacking regarding variation between intraoral scanners (IOS) and extraoral scanners (EOS) systems in depiction of critical finish line and finish line accuracy. This study aims on evaluating level of finish line accuracy(precision + trueness) and depiction of finish line by 3 IOS (CS 3500 and CS 3600 Carestream dental Rochester NY USA, CEREC omnicam sirona Beinsheim) and 3EOS / lab scanners (Ceramil MAP 400, Amann girbach, vorarl berg, Austria), Hybrid identical, Medit corp and MCX5 Sirona dentsply Germany). Ivory teeth with tooth preparation done on mandibular first molar having subgingival and supragingival finish line prepared with AF 350 Amanngirbach hand milling unit and the model is scanned with tomographic industrial scanner to get reference scan data. Null hypothesis generated through reference studies states that there is no such difference present between scanners. Data analysis is being done by aligning the reference scan and experimental scans, using best fit alignment and is compared using 3D Software GEOMAGIC CONTROL X 2017, 3D STUDIO GERMANY. Using the function of deviation analysis, the geomagic software exported an analysis report displayed in a colour map.

COMPARATIVE EVALUATION OF EFFECT OF HERBAL AND NON-HERBAL MOUTH RINSES ON THE SURFACE ROUGHNESS OF INDIRECT COMPOSITES RESIN-AN INVITRO STUDY.

ANAND V

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Indirect composite materials are used in prosthodontics for a variety of clinical applications, including inlays and onlays, laminated veneers, jacket crowns, implant-supported restorations. They are also used for anterior veneers and bridges as it requires minimal tooth preparation, less technique sensitive and cost effective. The increasing awareness of oral hygiene in today's society has resulted in the extensive use of mouth rinses. This study aims to find the effect of herbal and non-herbal rinses on the surface roughness of an indirect composite resin. 48 indirect composite samples were made using a standard acrylic mold. These samples were viewed under 10x stereomicroscope and polished until a scratch free surface is obtained. The samples were then immersed in two herbal and two non-herbal mouth rinses. The pre-immersion and post immersion surface roughness were measured and statistical analysis was done. The difference in the surface roughness created on the samples when immersed in these mouth rinses was seen to be statistically significant.

INFLUENCE OF GINGIVAL COLLAR HEIGHT AND TYPE OF LUTING CEMENT ON THE AMOUNT OF RESIDUAL EXCESS CEMENT IN IMPLANT RESTORATIONS: A CLINICAL STUDY

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Implant dentistry has been an accepted treatment modality for replacing missing teeth since last few decades. Implant restorations can be screw-retained, cement retained, or a combination of both. A major problem of cement retained prosthesis is the difficulty of removing residual excess cement. The aim of this study was to evaluate the amount of residual excess cement (REC) left undetected in implant restorations with different gingival collar height and to compare this with different types of implant luting cements. Thirty implant sites were selected from patients willing to undergo for study during the treatment for implant supported fixed prosthesis. They were classified into three groups based on the depth of gingival collar height as GROUP I(<2mm), GROUP II(2-4 mm) and GROUP III(>4mm). A straight abutment with shoulder finish line, a modified metal ceramic crown and three types of implant luting cements (Resin cement, Glass ionomer cement and Zincoxide noneugenol cement) were used in the study. The excess cement formed was collected and measured with an analytical balance and recorded. The measurements were subjected to statistical analysis. Based on this study we concluded that the amount of residual excess cement formed by all the three types of luting cements used in the study showed statistically significant increase as the depth of the gingival collar height increased. When comparing the residual excess cement formed by three implant luting cements in a group, it was significantly greatest for resin cement and lowest for zincoxide noneugenol cement.

COMPARATIVE EVALUATION OF MICROLEAKAGE AT IMPLANT ABUTMENT CONNECTIONS BETWEEN TWO TYPES OF ABUTMENTS UNDER OCCLUSAL LOAD: AN IN VITRO STUDY.

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One of the most widely accepted prosthetic treatment modalities for the replacement of missing teeth for restoring human masticatory function is dental implants. It has been noticed that there is wide variety of implant and associated prosthetic components available in the market. The abutment and the implant body are the two main parts of most dental implant systems. Due to the penetration of microorganisms, microgaps between the implant–abutment interface may cause microbial leakage. This penetration will result in bacterial colonisation through plaque formation at the interface of the implant–abutment complex, which will ultimately lead to inflammation in peri-implant soft and hard tissues. The study of implant–abutment connection is of great importance because it is the primary determinant of the strength and stability of an implant-supported restoration, which, in turn, determines the restoration's prosthetic stability. The present study evaluates the existence and rate of microleakage at implant abutment connection and compares the microleakage at implant-abutment interface between castable and prefabricated (custom made) abutments for a standard internal hex connection under occlusal load at different time intervals.

“CARUM CARVI – A POTENT ALTERNATIVE FOR TREATMENT OF DENTURE STOMATITIS

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Denture Sore Mouth (DSM) or Denture Stomatitis is found in 24-60 percent of denture wearers. Tissue conditioner is the most widely used modality of treatment for the abused tissues, ill-fitting denture, relining of immediate denture and other clinical applications. It is usually associated with Candida species especially Candida albicans. Therefore, anti-fungal agents were incorporated in the tissue conditioners to prolong its contact to produce the effect. The side-effects and chances of developing resistance to the drugs led to the advent of adding natural or herbal products. They provide significant advantages over chemical products as they are cheap, readily available and have minimal side effects. Carum carvi have been used as an antiulcerogenic, anthelmintic, antitumor, antiproliferative, antihyperglycemic and antimicrobial. It is used in phytomedicine as antifungal, molluscicides and anti-inflammatory. It contains carvone and limonene which are responsible for its anti-candida activity. The minimum inhibitory concentration of Carum carvi is proven to be 0.25µl/ml. The extract of Carum carvi was manually prepared using Clevenger's apparatus. The aim of the research was to evaluate the anti-candida activity and physical properties of the tissue conditioner when incorporated with Carum carvi. The candida adherence was assessed using Scanning electron microscope and the surface roughness was analysed using Atomic force microscopy. It was found that the incorporation of Carum carvi extract demonstrated a potent anti-candida activity with superior physical properties. Hence, it was concluded that Carum carvi can be used as a potent anti-candida agent for the treatment of Denture Stomatitis.

CO-RELATION OF FREEWAY SPACE USING PHOTOGRAPHS AND CEPHALOMETRY

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Aim: To determine a co-relation of freeway space using lateral profile photographs and cephalometric approach in North Indian population and establish a linear regression equation. Conclusion: The Pearson correlation analysis showed significant and high positive (direct) correlation between Sn-Me photograph and Sn-Me cephalogram suggesting that increase in one may be associated to increase in other and visa-a versa. In contrast, both Sn-Me photograph and Sn-Me cephalogram showed significant and high negative correlation with FWS clinical indicating that these may predict the FWS. Further, regression analysis showed both Sn-Me photograph and Sn-Me cephalogram alone can predict FWS significantly.

EVALUATING THE ANTIFUNGAL EFFICACY OF GARLIC EXTRACT INCORPORATED IN TWO PROPRIETARY BRANDS OF DENTURE CLEANSERS- AN INVITRO STUDY.

ANURADHA VIKAS PAWAR, LEEBA THOMAS

KLE VKIDS, BELGAUM

Garlic has been used as medicine since ancient times and has known to have antibacterial, antifungal and antiviral properties. Many studies have been conducted to check the antimicrobial effect of garlic in dentistry. Geriatric patients with dentures mainly deal with candidial infections (candidia associated denture stomatitis). Comparative studies of effect of garlic extract in a mouth wash versus chlorhexidine mouth wash revealed that garlic extract is equally effective as chlorhexidine mouth wash. Thus the side effects of chlorhexidine can be replaced with garlic extract mouth wash. This study was undertaken to check the antifungal activity of garlic extract incorporated in two denture cleansers against candida albicans. Thus it was concluded that the denture cleansers incorporated with garlic extract gave significant results against candida albicans as compared to the 2 proprietary brands of denture cleansers (control group).

AN IN VITRO STUDY TO EVALUATE AND COMPARE THE EFFECT OF PHOTODYNAMIC THERAPY, LASER AND TETRACYCLINE SOLUTION ON DECONTAMINATED DENTAL IMPLANTS – A PILOT STUDY

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Objectives: Peri-Implantitis is a common long term complication of dental implant treatment which leads to implant failure. Hence to promote osteointegration etiological treatment of peri-implantitis should be aimed to reduce bacterial infiltration. Thus various method has been used to treat peri-implantitis. The purpose of this study is to evaluate and compare the effects of photodynamic therapy laser and tetracycline solution on decontaminated dental implants. **Materials and Methods:** The study involves 15 titanium dental implants, low level laser, photosensitizer, tetracycline solution. The sterile implants will be carefully removed from the cases provided by manufacturer using titanium implant plier. These dental implants will be contaminated with *Staphylococcus aureus*. Once the implants are contaminated they will be further analyzed for decontamination using different procedures. The dental implants will be divided into 3 groups. Group 1 (n=5) decontamination using laser. Group 2 (n=5) decontamination using tetracycline. Group 3 (n=5) decontamination using photodynamic therapy using toluidine blue as photosensitizer. Bacterial decontamination will be quantitatively analyzed by culture medium and colony forming units. these will be performed by microscopic examination. the obtained data will statistically analyzed. **Results.** It is an ongoing study and the results will be concluded further.

“COMPARATIVE EVALUATION OF SAGITTAL CONDYLAR GUIDANCE OBTAINED FROM A CLINICAL METHOD - PROTRUSIVE INTEROCCLUSAL RECORD AND A RADIOGRAPHIC METHOD - CONE BEAM COMPUTED TOMOGRAPHY” – AN IN VIVO STUDY.

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Condylar path is the path traversed by the condyle in relation to the articular eminence during various mandibular movements. Condylar guidance is the mechanical form located in the upper posterior region of an articulator that controls the movement of its mobile member. The purpose of protrusive jaw relation is to set the condylar elements of the articulator so that they will reproduce inclinations, which are comparable to that of the patient's temporomandibular articulation. However, many practitioners rely on average values of condylar guidance, which range from 22 degrees to 65 degrees. If the individual inclination of the articular eminence is very steep or flat, guidance derived from the mean value settings may vary sufficiently leading to occlusal interferences during mandibular movements. It can be determined by various methods including inter-occlusal records, pantographic tracings, electronic jaw tracking devices and different radiographic methods. Studies have shown that compared to clinical methods, radiographic measurement involves stable bony landmarks, which can be standardized and are more accurate than other methods. However, there is little evidence in literature to suggest it in comparison with the prevalent methods. It can be argued that application of advanced imaging is unwarranted in Prosthodontics. But recently, Cone Beam Computed Tomography (CBCT) have made them safer, more accurate and comparatively cheaper resulting in their widespread application. This study, therefore aims at comparing condylar guidance measurements made using a conventional clinical method - protrusive inter-occlusal record and a radiographic method - CBCT in healthy adults.

EFFECTS OF HEAT TREATMENT AND FIRING CYCLES ON MARGINAL FIT OF ROUNDHOUSE IMPLANT SUPPORTED SLM PROSTHESIS – AN IN VITRO STUDY”

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The importance of marginal fit between implants and prosthesis' framework has been discussed extensively. When planning complete-arch implant supported rehabilitation, different Prosthodontic designs may be selected, such as multiple segmented frameworks or one complete arch piece, either screw or cement retained. In cases where the number or the positioning of implants does not allow the fabrication of a segmented framework, a complete arch, one-piece-fixed partial denture (FPD) design has to be chosen. In such cases, the achievement of a clinically acceptable marginal fit is more difficult. Studies also show that the longer the fixed partial dentures are, the larger is the risk of distortion. The fabrication of Co-Cr & Ti-Al restorations through conventional casting with lost wax technique results in increased number of errors due to multiple steps involved in the production. The SLM technique allows enhanced processing versatility and simplified production process. However, when the prosthesis fabricated by selective laser melting is subjected to repeated firing cycles, there can be a possibility of discrepancy in marginal fit, which is essential for the success of a roundhouse implant supported bridge. Minimal data is available on the effect of repeated firing on the marginal accuracy of roundhouse implant supported bridge. Therefore the purpose of this study is to evaluate the effect of heat treatment and repeated firing cycles on the marginal fit of roundhouse implant supported bridge fabricated using two different alloy

CHITOSAN BIOMATERIAL: A NEW ALTERNATIVE TO CHEMICAL DENTURE CLEANSERS

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Denture care is an indispensable element of general health of the denture wearers. Studies have shown that the prevalence of candida species increases upto 60 to 100 % in denture wearers. Candida albicans possess surface free energy closer to that of poly methyl methacrylate and display an affinity for the adherence to the tissue surface of the dentures. Hence, mechanical cleaning of dentures in conjunction with cleansers is mandatory in efficient removal of denture biofilm. Although there are different chemical denture cleansers, an efficient easily available biological alternative is not available. It was pointed out that the ingredients of chemical cleansers cause local and even systemic reactions. Immersion in chemical cleansers have also shown to effect the mechanical properties of the denture base resin such as flexural strength, colour stability etc. Chitin, which is a naturally abundant and renewable polymer derived from shells of crustaceans, arthropods and fungal cell wall, has excellent antifungal and antibacterial properties. This is obtained as a by-product of fishing industry. Chitosan is obtained by partial deacetylation of chitin. The biocompatibility, biodegradability and lack of toxicity of chitosan along with the antimicrobial property has led to its usage in various fields such as medicines, cosmetics, food, agriculture etc. However, the use of chitosan as a denture cleanser was never investigated. Hence, this paper aims at evaluating the antifungal activity of chitosan and its influence on the mechanical properties of denture base resin when used as denture cleanser.

PROTOTYPE TO ARREST TRAY DEVIATION DURING PLACEMENT

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AIM. Comparing the impression made with a conventional stock tray and using a new prototype impression template. **SAMPLE SIZE.** 1. 5 conventional impressions. 2. 5 impression made using the template. **MATERIALS & METHODOLOGY.** 1. Impression template. 2. Stock trays. 3. Elastomeric impression materials. To obtain an impression with the prototype template, the head movements are arrested. A vertical bar is positioned parallel to the long axis of the face which permits only the movement of the impression tray and the impression tray holder on the y axis. The Impression tray holder which is attached to the vertical bar is adjusted according to the occlusal table of the maxillary teeth. Appropriate tray selection is done. The selected tray is loaded with the elastomeric impression material (putty and spacer) and impression is made using the template. Impression tray is then removed after material sets and wash impression with light body is made in the similar way (dual impression technique). The template offers the same stable path of insertion of the impression tray thus eliminating the errors due to midline shift or wrong path of placement during wash impression and also helps in even pressure throughout the tray. The impressions are then made in the conventional method and both were compared. **RESULTS.** The impressions made using conventional method showed some degree of midline shift whereas the impressions made using the template had minimal or nil midline shift. The $p < 0.05$ and results were statistically significant.

AN IN-VITRO COMPARATIVE EVALUATION OF MARGINAL INTEGRITY AND AXIAL WALL ADAPTATION OF PROVISIONAL RESTORATIONS FABRICATED BY CAD/CAM WITH MANUALLY FABRICATED PROVISIONAL RESTORATIONS.

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Provisional restorations are fixed prosthesis, designed to enhance esthetics, stabilization and /or function for a limited period of time, after which it is to be replaced by a definitive prosthesis. One of the most important requirements for the provisional restoration is good adaptation. Polymerization shrinkage of provisional restorative materials can jeopardize the marginal integrity and axial wall adaptation. A lot of literature could be found for manually fabricated provisionals on the contrary less literature was found for CAD/CAM based provisional restorative materials. Hence, this study was planned to compare & evaluate the marginal integrity & axial wall adaptation of provisional restorations fabricated by CAD/CAM with those fabricated by self cure & light cure provisional restorative materials. A stainless steel model of prepared tooth was fabricated. The impression of the model was made using rubber based impression material & was poured with epoxy resin die. This die was sent to the laboratory to fabricate 10 CAD/CAM based provisional crowns and the rest 20 were made using self cure & light cure provisionals. The crowns were then thermocycled 100 cycles at 5° to 55° & sectioned from mid-buccal to mid-lingual surface. The sectioned samples were visualized under stereo microscope of 40x. The statistically calculated results will be discussed in the presentation.

A COMPARATIVE EVALUATION OF THE LINEAR DIMENSIONAL ACCURACY OF POLYVINYL SILOXANE IMPRESSION MATERIALS AFTER DISINFECTION WITH CHEMICAL, AUTOCLAVE, MICROWAVE AND ULTRAVIOLET RADIATIONS -AN IN VITRO STUDY

BINDU VEERGANGADHAR NITALI, ASWATHI R

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Dental impressions are negative imprint of oral structures that is used as a permanent record in the production of dental restoration or prosthesis. Constructing a model or cast from accurate impression is an important step in numerous dental procedures. Various impression materials are available in dentistry for making impressions. Elastomers are more commonly used accurate impression materials. Dental impressions represent a potential hazard to spread of infections to dentist and laboratory personal. Therefore center for disease control and american dental association have published guidelines for infection control which include disinfection of all dental impressions before they are and sent to the laboratory. These infection control procedures may affect the dimensional stability of impression materials. Many studies have been conducted to determine the dimensional stability, accuracy, surface roughness and wettability of polyvinyl siloxane impression material after sterilization. But the effects of disinfection on the linear dimensional stability were not demonstrated. Also numerous studies have compared the dimensional stability. But no similar study compared the linear dimensional stability of polyvinylsiloxane impression materials after different sterilization and disinfection procedures such as chemical disinfection, autoclave sterilization, microwave disinfection and ultraviolet irradiation methods. So there was a necessity to determine the linear dimensional changes of polyvinylsiloxane impression materials after different sterilization and disinfection methods such as chemical disinfection, autoclave sterilization, microwave disinfection and ultraviolet irradiation methods.

EVALUATION AND CORRELATION OF INTERCANINE DISTANCE FROM 3D BITE MARK WITH ENDOCANTHION, EXOCANTHION, BIZYGOMATIC, INTER-ALAR, INTER-COMMISSURAL AND BIGONIAL WIDTHS USING PHOTOGRAPHS - AN IN-VIVO STUDY.

C. VIDYALAKSHMI, ASMATH JEHAN

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Objectives: This study was done to evaluate the correlation between the important facial landmarks and the intercanine distance from a bite mark. **Materials and Methods:** This study was conducted among the out patients who fit into the inclusion criteria from the Department of Prosthodontics, SRM Dental College, Ramapuram. The participants were asked to bite on clay, which, eventually, was scanned using 3D laser scanner LPX 600 to measure their intercanine distance. The facial landmarks were obtained from life size photographs of the participants and their possible relationship with the measured intercanine distance was studied using computer software. Based on their correlation, an empirical relationship was derived with an intention to extend the result for a larger population. **Result:** Statistical analysis, indeed, shows correlation between the facial landmarks and the intercanine distance. Further, the empirical justification that was performed provided results that were in favour of this relation. **Conclusion:** Thus through this study the interconnection of the intercanine distance and various salient measurements of the face can be used to find out the facial outline of the suspect.

EVALUATION THE RETENTION AND SURFACE ROUGHNESS OF TWO DIFFERENT SURFACE TREATMENTS ON THE ZIRCONIUM DIOXIDE.

DEEPAK KUMAR

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USING PROFILE PROJECTOMETER AND UNIVERSAL TESTING MACHINE WE EVALUATE THE SURFACE ROUGHNESS AND RETENTION OF ZIRCONIUM DIOXIDE WITH TWO DIFFERENT SURFACE TREATMENTS- SANDBLASTING 110 μ m AND LASER TREATMENT(ER;YAG).ZIRCONIUM BLOCKS(NEXXZR) WERE MILLED BY CAD-CAM AND SINTERED ACCORDING TO MANUFACTURER'S INSTRUCTIONS.THESE SPECIMENS WERE DIVIDED INTO THREE GROUPS ACCORDING TO THE FOLLOWING SURFACE TREATMENTS; GROUP A -NO SURFACE TREATMENT(CONTROL),GROUP-B SANDBLASTING(110 μ m),GROUP-C ER;YAG LASER SURFACE TREATMENT. THE SURFACE ROUGHNESS WAS MEASURED BY USING A PROFILE PROJECTOMETER AND THEN ALL THE SAMPLES WERE PLACED IN A HUMIDIFIER FOR 24 HOURS TO SIMULATE THE ORAL CONDITIONS AND THE RETENTIVE STRENGTH WAS MEASURED BY USING UNIVERSAL TESTING MACHINE TO SIGNIFICANTLY IMPROVE THE BOND STRENGTH TO THE RESIN CEMENT.

COMPARATIVE ANALYSIS OF COLOUR STABILITY BETWEEN LITHIUM DISILICATE CERAMICS AND ZIRCONIA REINFORCED LITHIUM SILICATE CERAMICS AFTER IMMERSION IN COMMON BEVERAGE AND FOOD COLORING AGENT- AN IN VITRO STUDY

DEEPTIMOYEE GHOSH

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Changes in the restorative treatment patterns, as well as the introduction of new and improved restorative materials and techniques have led to an increased demand for esthetic dentistry. The colour of an esthetic restoration and its stability is important to its long-term success. Lithium disilicate has become popular for esthetic rehabilitation and is characterized by exceptional translucency. Preserving the colour of lithium disilicate is an essential determinant for the long-term clinical success of such restorations. Recently, zirconia reinforced lithium silicate ceramics has been introduced. Utilization of zirconia (10 % by weight) as a core material, has enhanced the mechanical properties of all-ceramic restorations. Glazing before the definitive cementation is important for the colour stability and stain resistance of ceramic restorations. However, occlusal adjustments after cementation of the final restoration, result in removal of the glazed layer, thus increasing the surface roughness. Rough surfaces reduce the amount of reflected light and consequently affect the colour of the restoration while increasing the chances for extrinsic staining. The purpose of this study is to compare the colour stability between lithium disilicate ceramics and zirconia reinforced lithium silicate ceramics between polished and glazed surface after immersion in common beverage and food coloring agent by a spectrophotometer..

AN IN- VITRO STUDY TO COMPARE THE FRACTURE RESISTANCE OF ENDODONTICALLY TREATED MOLARS RESTORED WITH FULL VENEER CROWN, ONLAY AND ENDO CROWNS

DHANANJAY ARORA

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Different preparations indicated for restoration of Endodontically treated teeth have their own drawbacks and limitations. This study is designed to assess the fracture resistance of teeth restored with conservative prosthetic restorations. Forty sound human molars will be selected and divided into four groups. Group 1 will be left intact (control), in all other groups minimal access cavity will be prepared analogous to a class 1 cavity preparation and root canal treatment will be performed thereafter, group 2 will be restored with full veneer crown after direct restoration of access cavity, group 3 with an Endocrown restorations will be fabricated in lithium disilicate and group 4 with Onlay restorations. Fracture resistance will be measured using a universal testing machine with load applied parallel to the long axis of tooth till tooth fractures. The mean loads of failure of each group will be statistically compared and the result will be assessed thereafter.

DENTURE ADHESIVE

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The success of complete dentures depends on sufficient retention. Denture adhesive are regularly used by denture wearers to improve the function of complete denture. We evaluated the effect of three different denture adhesives on the retention of maxillary complete denture using digital dynamometer. The retention test for control group, powder group, strip group, paste group was done using a customised force sensor device. Readings were subjected to ANOVA followed by post hoc test. Results show that the retention force value of strip group was the maximum, followed by paste group, powder group and the least retention force value was observed with control group.

EVALUATION OF THE FLEXURAL STRENGTH OF HEAT-POLYMERIZED POLY (METHYL METHACRYLATE) DENTURE RESIN REINFORCED WITH FIBERS

DHRUVI JOSHI, BOSKI GUPTA

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Many approaches have been made to improve the flexural strength & fracture resistance of acrylic resin dentures by reinforcing them with various supplementary compositional materials. The purpose of the present study was to assess the effect of glass fiber (C & B) reinforcement and nylon fiber reinforcement on flexural strength of heat cured denture bases as compared to the flexural strength of conventional heat cure denture base resin without fibre reinforcement. Specimens of standard dimensions were prepared for each of the four experimental groups. Each group was further subdivided into two subgroups on the basis of storage conditions (dry and wet). All the specimens were then subjected to a 3-point bending test and flexural strength was calculated. Statistical analysis was carried out. Results suggested that the flexural strength of the glass fiber group was the highest among the three groups, followed by the control group, i.e. fibre free denture base resin, and the lowest being that of the nylon fibre reinforced denture base resin.

COMPARATIVE EVALUATION OF WATER SORPTION AND SOLUBILITY OF COMMERCIALY AVAILABLE SELF ADHESIVE RESIN CEMENTS – AN IN-VITRO STUDY

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The clinical success of ceramic restorations relies strongly on the cementation process. Resin-based cements are widely used luting materials and compared to conventional luting agents, these resin cements can achieve better marginal seal, show retentive capability and possess adequate physical and mechanical properties, such as increased fracture resistance of overlying restorations, along with an optimal esthetic result. More recently, new materials were introduced called self-adhesive resin cements that were applied directly to enamel and dentin without previous use of an adhesive system. They have been invented to simplify the resin bonding process. These products include acidic and hydrophilic monomers in their composition, which simultaneously demineralize and infiltrate enamel and dentin, resulting in a strong bonding. In the oral environment, there is more sensitivity of the restoration to moisture, increasing the risk of bond degradation and cement dissolution at the marginal gap. Thus the sorption properties of the resin cement materials have an important value in terms of durability of indirect restorations. Most of the previous studies examined the sorption and solubility of polymeric materials in different immersion media such as water, artificial saliva and ethanol. However, few researches have evaluated the effect of acids produced by human dental plaque such as lactic acid on these properties. Hence, in-vitro study was done to evaluate the sorption and solubility characteristic of some self-adhesive resin cements when immersed in distilled water and lactic acid. Results of the study will be discussed in the presentation.

COMPARISON OF ANTIBACTERIAL ACTIVITY, FLEXURAL STRENGTH AND SOLUBILITY OF DIFFERENT COMMERCIALY AVAILABLE GLASS IONOMER CEMENTS MODIFIED BY INCORPORATION OF ANTIBACTERIAL AGENTS -AN IN VITRO STUDY

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ABSTRACT. TITLE – COMPARISON OF ANTIBACTERIAL ACTIVITY, FLEXURAL STRENGTH AND SOLUBILITY OF DIFFERENT COMMERCIALY AVAILABLE GLASS IONOMER CEMENTS MODIFIED BY INCORPORATION OF ANTIBACTERIAL AGENTS -AN IN VITRO STUDY. Glass ionomer cements (GICs) are currently the material of choice for permanent cementation of fixed dental prostheses. However, the probability of microleakage with GIC luted restorations remains a possible cause of failure till date. The incorporation of antibacterial agents in GIC may be a solution to this problem. Hence, this study is planned to evaluate the antibacterial efficacy of GIC after incorporation of antibacterial agents and their effects on the other properties of GIC if any..

IMPLANT-RETAINED AURICULAR PROSTHESIS: A CASE REPORT

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There has been a paradigm shift in the field of prosthodontics, need of multidisciplinary approach to cases has become main stay of practice and digitization with newer diagnostic modalities have made treatment outcome more reliable. In his case report a patient who lost his ear while serving in a remote inhabitable location was rehabilitated with implant retained prosthesis. Loss of ear lead to facial defect which resulted in no functional problem but some serious psychological problems that resulted in individual to avoid social contact. As a multidisciplinary approach OMDR specialist was consulted that modified CBCT imaging technique to provide 3D images of mastoid region and oral surgeons helped place 3 dental implants in the site. Conventional silicone prosthesis was not considered due to poor retention and need of additional adhesives. Post integration of dental implants a bar was fabricated to aid in retention. The prosthesis was made with RTV silicone and retained with bar and clips. The results left patient not just satisfied but thrilled as he returns to near normal life.

COMPARATIVE STUDY TO EVALUATE BONE LOSS AND ACCURACY AT OSTEOTOMY SITE USING SIMPLIFIED VS CONVENTIONAL DRILLING PROTOCOLS

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The success of the dental implant treatment has been built on the effective achievement and maintenance of Osseointegration. It has been clinically suggested that Osseointegration is dependent on various factors such as implant biocompatibility, design and surface state of the host bed, surgical technique, and loading conditions. One of the main objectives of the surgical technique is to obtain primary stability of the implant. The reduction of micromotion provides a basis for osteoconduction and subsequent bone remodeling. Movement at the micrometer range can induce a stress or strain that may hinder the wound healing process. Micromotion of more than 150 μm has been associated with bone resorption, fibrous tissue encapsulation, and inhibition of osteoblast growth, which can be the foundation for compromised Osseointegration. The steps of a surgical procedure may influence the interaction between the bone and implant in early phases of bone healing, and thus, it is of great interest to investigate. From a surgical perspective, the total surgical time of the simplified protocol from incision to closure would be significantly shortened and lead to fewer post-surgical complications. The purpose of this study is to compare the accuracy of osteotomy site preparation with simplified and conventional drilling protocols.

EFFECT OF DIFFERENT TIMES OF SEPARATION ON PROPERTIES OF TYPE III DENTAL STONE POURED INTO ALGINATE IMPRESSIONS INCORPORATED WITH ANTIBACTERIAL AGENTS

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AIM:To evaluate the surface roughness, hardness and surface detail reproduction of type III dental stone models obtained from two commercially available alginate impression materials incorporated with antibacterial agents after different times of separation. **OBJECTIVES:** To evaluate how different times of separation and incorporation of antibacterial agents into alginate impression materials will affect the Surface roughness, Hardness and Surface detail reproduction of Type III Dental stone models. The times of separation considered in this study will be 30 minutes, 9 hours and 24 hours respectively and the antibacterial agents used will be Chrorhexidine Digluconate, Povidone Iodine and Benzedamine. **MATERIALS AND METHODS:** Two different commercially available alginate materials (chromatic and regular) will be incorporated with three antibacterial agents i.e Chlorhexidine Digluconate, Povidone Iodine and Benzedamine prior to making impressions. The impressions will be made of a stainless steel die (ANSI/ADA specification no.18) and these will be poured with Type III Dental stone. The model will be separated from the impressions after 30 min, 9 hours and 24 hours respectively and these models will be tested for Surface roughness, Hardness and Surface detail reproduction. **CONCLUSION:** This is an ongoing study and the results will be accordingly tabulated and presented after the completion of the study.

REHABILITATION OF ACQUIRED MAXILLARY DEFECTS – A CASE SERIES

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Maxillectomy defects can result in oro antral communication that causes difficulty in swallowing, deglutition, impaired speech and facial disfigurement. Obturator prostheses are fabricated to seal these congenital and acquired defects of maxilla and depending on the extent of defect this type of prostheses may vary in size and shape. The Prosthodontist plays an important role in rehabilitation of such defects. This paper describes clinical reports of patients with acquired maxillary defects rehabilitated with obturator prostheses.

ANALYZING THE EFFECT OF ANTI-ASTHMATIC INHALER MEDICATION ON THE COLOUR STABILITY OF POLYMETHYLMETHACRYLATE DENTURE TEETH: A COMPARATIVE IN-VITRO STUDY

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AIM. To investigate the effect on anti-asthmatic inhaler medication on the colour stability of acrylic resin teeth (PMMA) used for dentures. **MATERIALS AND METHODOLOGY.** A comparative in-vitro analysis was done using cross-linked polymethylmethacrylate teeth, produced in two chromatic layers [Group A (n=90)] and three chromatic layers [Group B (n=90)]. Each group was sub-divided into 3 based on the type of tooth : anteriors, premolars and molars. Spectrophotometric values of the samples were recorded at baseline and at the end of the test period. The control comprised of denture teeth stored in artificial saliva. The acrylic teeth were exposed to salbutamol sulphate in metered doses of 100 mcg using a spacer and then stored in artificial saliva. The application was done twice a day for 6 months. Color change (Delta E) was calculated using the CIE 2000 formula. Statistical analysis was carried out using one way ANOVA and independent sample t-test. **RESULTS.** Treatment with salbutamol sulphate was found to effect a colour change ($p < 0.05$) on both the two and three layered chromatic teeth when compared with controls. However the inter-group differences were found to be non-significant. **CONCLUSION.** Within the limitations of the study, it was concluded that anti-asthmatic inhaler medication could potentially impact the colour stability of both two and three chromatic layered PMMA denture teeth. **KEYWORDS:** Salbutamol sulphate, polymethylmethacrylate teeth, spectrophotometer.

COMPARITIVE ANALYSIS OF BIOMECHANICAL BEHAVIOR OF POLY ETHER ETHER KETONE DENTAL IMPLANT FAMILY: A 3-DIMENSIONAL FINITE ELEMENT ANALYSIS

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The use of dental implants to provide support for replacement of missing teeth has a long and multifaceted history. In the past few years research on dental implant designs, materials and techniques has increased and is expected to expand in the future due to the recent growth of the global market for dental implants and the rising in the demand for cosmetic dentistry. PEEK (Poly ether ether ketone) is one such material which was introduced to improve the biomechanical efficacy. In 1992, PEEK was used for dental applications, first in the form of aesthetic abutments and later as implants, since then many variations in composition have been carried out to modify and improve upon working characteristics of the implant. The basic PEEK implant has been reinforced to improve its quality, which lead to the modification of basic PEEK implant. Thus 4 conventional composite PEEK implants were evolved: Carbon fibre reinforced-PEEK, Glass fibre reinforced-PEEK, Hydroxy apatite PEEK, Strontium reinforced hydroxy apatite PEEK. This paper focuses on the biomechanical efficacy of 5 PEEK dental implants consisting the basic PEEK and the 4 conventional composite dental implants by using three dimensional finite element analysis with respect to two different bone densities.

TIMING DENTURE RETENTION

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Denture retention is influenced by many factors among which wetting of the denture bases with saliva is an important one. Polymers including PMMA are poorly wetted by liquids like water, saliva etc...and it has been hypothesized that the wetting of the denture base may improve after contact with oral fluids because of the adsorption of certain components of the saliva on the polymer surface. But this adsorption is time dependent. The goals of this study were-. 1. To investigate if the wetting of the denture base and thereby its retention, would increase with time owing to adsorption of salivary components. 2. To determine the time taken by saliva to wet the surface of dentures thereby improving their retention.

BIOACTIVE GLASS- A NOVEL BIOSTATIC MATERIAL

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Bioactive glass or bioglass is a novel biocompatible material that has been increasingly used in the recent times in different dental materials because of its favourable properties like remineralisation and hydroxyapatite layer formation. Recent data has brought to light another important property which is its antimicrobial property. This property has been made use of by incorporating it in luting cements, restorative composites, root canal sealers, tissue conditioners and various other dental materials. Polymethyl methacrylate resin forms a major component in the field of prosthodontics. Although this material has fulfilled all the requirements to be an ideal denture base material, its susceptibility to microbial colonisation has always been a matter of concern. Therefore this study is an attempt to identify if Bioglass particles can be incorporated into denture base resins to impart antimicrobial action.

A PROPOSED LINEAR SKELETAL DISTANCE TO PREDICT OCCLUSAL VERTICAL DIMENSION: A CEPHALOMETRIC STUDY

KANCHAN

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Though the focus in Prosthodontics has shifted from removable to fixed prostheses with implants riding high, but the concepts like jaw relation remain as the baseline providing foundation to arbitrate the decisions for all prosthetic rehabilitation procedures. Loss of tooth may decrease the lower facial height and the jaw complex. The essential role of prosthodontics is to restore facial appearance, function, and masticatory ability and to maintain the patient's oral and general health. Different methods are used to restore the Occlusal vertical dimension (OVD) during prosthodontic treatment. A more accurate technique, therefore, is required to gain more precise and reproducible measurements of the OVD. The use of cephalometric radiographs has been suggested as a useful method of predicting the OVD by determining the correlation between certain craniofacial components (points, lines, and/or angles), which remain relatively unchanged after tooth loss. The aim of this study is to determine OVD by cranio-facial measurement using cephalometric analysis. Digital cephalometric radiographs with class I molar and skeletal relation were collected in JPEG format. The distance from nasion to sella and the distance from anterior nasal spine to menton were measured on the cephalometric radiographs, using ImageJ software.

APPRAISAL OF STUDENT'S PERCEPTION OF PROSTHODONTIC LEARNING ENVIRONMENT IN A TEACHING HOSPITAL IN MORADABAD, INDIA: A SURVEY

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Dental curriculum especially prosthodontics is vast which makes it difficult to visualize and correlate theory with practical aspects. In this regard, students constitute a stakeholder group that is able to provide unique information concerning effectiveness of the dental curriculum. Hence, a study was conducted to elicit and compare the differences in perception of the prosthodontic learning environment between the preclinical and clinical years of under-graduate curriculum and between under-graduate and post-graduate students of prosthodontics in a teaching institute in Moradabad, India. A total number of 400 students participated in the study. A 60-item closed-ended DCLES cross-sectional questionnaire was completed by the dental graduates of first, second, third and final year including interns and post-graduate students of department of prosthodontics. The questionnaire evaluated learning environment in seven areas. The data obtained was statistically analyzed and subjected to comparative evaluation. With regard to the perception of the prosthodontic learning environment statistically significant differences were found in flexibility, supportiveness, meaningful experience, organization and breadth of interest between pre-clinical and clinical years of undergraduate students ($p < 0.05$). When under-graduates and post-graduates were compared, significant differences were found in student to student interaction and emotional climate ($p < 0.05$). The study highlighted areas of strength and weakness from the student's perspective within a teaching dental institute. Identification of areas of concern can provide prosthodontic dental educators, a road map for quality enhancement, curriculum revision and increase student satisfaction with their dental education.

COMPARATIVE EVALUATION OF CLEANING EFFICACY OF DIFFERENT PRODUCTS ON CANDIDA ALBICANS CULTURED FROM COMPLETE DENTURE PATIENTS: A RANDOMIZED CONTROL TRIAL.

KARANPREET SINGH

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Human oral cavity harbors a number of microorganisms. Most the organisms do not harm us but there are other species that affect our health. Candida is one such organism. It is not considered harmful in healthy hosts but may cause opportunistic infections resulting in candidiasis. Old age necessitates wearing artificial dentures which results in changes in the oral environment and consequently oral flora. Dentures made from synthetic polymers like polymethylmethacrylate are micro porous in nature and, therefore, cause Candida to easily adhere and colonize. Denture cleanliness is thus of paramount importance to prevent the oral diseases among edentulous subjects. There has been a change in thinking globally, with a growing tendency to “go green.” Research has been focused recently on herbal medicines due to various reasons. There is very limited literature on use of herbal products as denture cleansers. The paper aims at the trail comparing the antimicrobial activity of triphala and neem with chlorhexidine on Candida albicans cultured from complete denture individuals. Swabs from complete denture patients are taken after immersion in the above mentioned solution and sent for microbiological investigation and the colony forming units are counted.

CAN DIGITAL TECHNOLOGY BE A FUTURE REPLACEMENT OF GOTHIC ARCH TRACERS??

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Balanced occlusion is required to enhance stability of complete dentures. One of the factors affecting balanced occlusion is condylar guidance. In clinical practice, condylar guidance is most often determined by using intra oral or extraoral gothic arch tracers. But, recording condylar guidance in uncooperative patients, or in conditions of resorbed ridges (compromised stability) is challenging. To overcome this, digital technology might be an alternative.

RELATIONSHIP OF INTERCONDYLAR DISTANCES WITH INTERDENTAL DISTANCES OF MAXILLARY ARCH IN POSITIONING UPPER POSTERIOR TEETH

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Aim : To find out the relationship of intercondylar distances of maxillary arch in dentate individuals among males and females. **Materials and method:** 128 dentate subjects of age group 24 – 40 yrs with absence of severe crowding, trauma or orthodontic treatment and craniofacial syndrome will be selected. They will be equally divided into 2 groups; Group A consisting of males and Group B consisting of females. Interfacial distances will be measured by facebow. The mean intermediate soft tissue thickness of 9mm on either side of face is subtracted from interfacial width to obtain the intercondylar distance. The intercondylar widths will be correlated with intercanine and intermolar distances intraorally. The anthropometric measurements thus obtained will be statistically analysed to determine the importance of intercondylar distances as a guideline for complete denture fabrication in edentulous patients.

COMPARITIVE EVALUATION OF ANTIFUNGAL ACTIVITY AND DRUG RELEASE OF THREE ANTIFUNGAL AGENTS INCORPORATED INTO A RESIN BASED SOFT LINER – AN INVITRO STUDY

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Candida-associated denture stomatitis is a very common inflammatory process affecting about 60% of the subjects' carrier of prosthesis. Denture soft liners provides cushioning effect between denture base and tissue surface so as to improve comfort to denture patients with ridge atrophy, thin and non-resilient mucosa, etc. Soft Liners exhibit porous surfaces that are favorable for the growth of microbes such as C albicans. To keep the tissue surface free of microbes and debris, meticulous denture hygiene has to be maintained. To overcome the disadvantages of conventional cleansing methods, topical & systemic administration of antifungal agents, the method of incorporation of the antifungal agents into the denture liners was developed and found to be effective. A polymeric system for intraoral drug delivery and release of the drugs over a period was found to be beneficial in preventing candida infections. Chlorhexidine is a biguanide agent that showed antifungal activity against C.albicans and it is suitable for intraoral drug delivery when incorporated into polymeric system. The Triazole antifungal agents such as Posaconazole and Voriconazole have excellent in vitro activities against all Candida species isolated from patients wearing dentures. This paper describes the invitro study performed to evaluate and compare the antifungal activity and drug release of three antifungal agents incorporated into Resin based soft liner.

AEROSOL: AN INFECTIOUS VECTOR IN DENTAL PRACTICE

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. Professional interest has developed concerning aerosols which are produced in dental clinics and the potential for disease transmission to clinicians and patients. Aerosol is created when high-powered devices need compressed air and water to work effectively. Most procedures performed by the dental team have the potential of creating contaminated aerosols and splatter. Aerosols are tiny particles or droplets which remain suspended in air. These aerosols represent an infectious hazard due to their gross contamination with microorganisms and blood. A fourfold increase of airborne bacteria has been observed in areas where aerosol producing equipment was used. Aerosols can float in air for considerable time before being inhaled by clinicians and other patients. There is some evidence for greater prevalence of respiratory diseases and elevated antibody levels to *Legionella pneumophila* in dental workers. Oral bacteria have been detected two meters from the procedure field, indicating the existence of aerosolized oral bacteria in dental practice. Bacterial diseases, viral infections and other skin infections are caused by the microorganisms which were isolated in dental aerosols. Increased use of turbine hand pieces is responsible for decreased air quality in the dental office due to increased aerosol contamination. Reducing the aerosol production, microbial load in the water tubing container will reduce the chances of cross-contamination in the dental surgery. The aim of this study is to evaluate and compare the efficacy of preprocedural mouth rinses in reducing the levels of viable bacteria in aerosols.

DENTURE CLEANSING RECOMMENDATIONS BY DENTISTS AND DENTURE CLEANSING HABITS OF DENTURE CONSUMERS.

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INTRODUCTION- Tooth loss in any adult population is highly likely to increase as the population ages because the factors that leads to the loss of teeth- dental caries, loss of periodontal support, a history of dentalveolar trauma. Complete dentures are the most common treatment for the loss of teeth in a dental arch. Therefore, correct prosthetic use and care is of great importance to patients, not only for aesthetic and functional reasons, but also for health of supporting tissue and maintenance of the prostheses itself. The dentist must guide and motivate the patient in complete denture maintenance. The present survey will reveal approaches and preferences of general dentists regarding denture cleansing and their recommendations to the patients and denture cleansing habits of denture wearers. **OBJECTIVE-** The purpose of this survey is to study way of recommendations, denture cleansing aids preferred by dentists and denture cleansing habits of denture wearers in Nagpur. **METHODOLOGY-**The study involves a questionnaire survey conducted among the dentists and denture wearers of Nagpur. **RESULT-** The results which are analyzed will be discussed during the presentation and will evaluate the denture cleansing recommendations followed by the dentists and habits of patients regarding denture cleansing.

ANALYSIS OF THE PSYCHO-SOCIAL IMPACT ON THE STEM CELL ASSISTED TOOTH REGENERATION CONCEPT PROMOTED BY ONLINE VIDEO SOCIAL MEDIA - A WORLD WIDE WEB ANALYSIS

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The regeneration of adult teeth will be more practically possible in the near future with the help of tissue engineering and newer expansion in stem cell therapy. Contemporary dentistry or stomatology widely restores missing teeth by dentures or dental implants till date. Experimental studies with animal models have exposed that the tooth crown formation can be regenerated using tissue engineering techniques that merge stem cells and recyclable scaffolds. Regenerative procedures with their bio-compatible advantages, would significantly replace dental implants in future. Today, YouTube has become the object of scientific research in different subject areas. It is also evident that YouTube-uploaded videos are highly cited by people pursuing social sciences, computer science, arts and humanities, engineering, medicine and dentistry. This effective online video social media sufficiently helps people stay aware of various health concepts world wide. The aim of this study is to analyze the psycho-social impact on the stem cell assisted tooth regeneration concept promoted by this online video social media among the population world wide.

A COMPARATIVE STRESS ANALYSIS IN DIFFERENT PROSTHETIC DESIGNS FOR UNILATERAL DISTAL EXTENSION SITUATION : AN IN VITRO STUDY

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The presence of posterior free-end edentulous areas are one of the most prevalent findings in cases of partial edentulousness. A problem of support, retention and stability is usually associated with distal extension situations thus making it a challenging task for the clinicians. The use of posterior implants has been suggested for stabilization of the distal extension bases and to carry the retentive elements for partial overdentures. The placement of posterior implants if anatomically possible, converts the edentulous situation from a distal extension Kennedy's Class I or II situation to a more biomechanically favourable Kennedy's Class III category. This study aims to evaluate and compare different treatment options available for distal extension situations and to provide for efficient rehabilitation of the distal extension situation. On a prepared model with a distal extension situation, different prosthetic designs will be fabricated and analysis of micro-strain measurements around the tooth and/or implant abutment will be evaluated. Thus results obtained will act as a guide for providing better treatment options to the clinician, ensuring better prosthetic rehabilitation for distal extension situations.

A COMPARATIVE EVALUATION OF MECHANICAL PROPERTIES OF AUTOCLAVABLE AND NON-AUTOCLAVABLE VINYLPOLYSILOXANE IMPRESSION MATERIAL

MANU GUPTA

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Background and objectives: The purpose of this in vitro study was to evaluate and compare the tear strength and tensile strength of autoclavable and non-autoclavable vinylpolysiloxane impression materials. **Materials and methods:** Two Vinylpolysiloxane impression materials (Affinis and Aquasil) were evaluated. 20 specimens each for evaluating tear strength and tensile strength were fabricated for both Affinis and Aquasil. Half of the specimens of both impression materials were randomly selected and served as control groups. The rest half of the specimens underwent autoclave sterilization for Affinis and chemical disinfection for Aquasil. All the samples were tested after 24 hours using an Instron Universal Testing Machine and were loaded until failure. The differences in mean values were compared with control group and were analyzed using independent sample t-test ($p < 0.05$). **Results:** The results showed that autoclave sterilization and chemical disinfection had no significant effect on tear strength and tensile strength of both Affinis and Aquasil respectively. However, the tear strength and tensile strength of Aquasil before/after disinfecting was significantly higher than Affinis before/after autoclaving. **Conclusion:** Autoclave sterilization and chemical disinfection had no statistically significant effect on the tested properties of Affinis and Aquasil respectively. So, autoclave sterilization could be considered as an effective method of sterilizing impressions to eliminate all forms of microorganisms in case of Affinis and Aquasil can be disinfected without deterioration in its properties.

KNOWLEDGE AND ATTITUDE OF THE PATIENTS TOWARDS DENTAL IMPLANTS -AN INSTITUTIONAL STUDY

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Common oral conditions have been shown to have a substantial effect on well-being and quality of life. The loss of one or more natural teeth often results in disability, as essential daily living activities, such as speaking and eating are impaired, and also in handicap, for example, by decreased social interaction because of embarrassment associated with denture wearing. The main role of prosthodontics is the rehabilitation of patients after loss of teeth and oral function. There are generally no accepted rules about how to estimate need, demand or utilization of prosthodontic services in most situations, since individual preferences play a very important role. Even with excellent prostheses, many patients experience difficulty with denture retention, speech and mastication. However, with the advent of new technology more restorative options have become available thereby, changing the face of demand for prosthodontic treatment. Among these, implant treatment has come into focus, since it provides excellent long-term results in rehabilitation of partially or completely edentulous patient. This study will be undertaken to access the level of knowledge and attitude of patients toward implant treatment as an option for replacement of missing teeth. The study will be undertaken at the six institutes in Ahmedabad and Gandhinagar district. Data will be gathered using a self-administered structured closed ended questionnaire.

KEYWORDS: Dental implants, knowledge, attitude and patients

A RETROSPECTIVE STUDY TO EVALUATE THE FINAL INSERTION TORQUE OF THE IMPLANTS PLACED IN DIFFERENT SITES AND OF DIFFERENT DIAMETERS IN DEPARTMENT OF PROSTHODONTICS, ARMY COLLEGE OF DENTAL SCIENCES, SECUNDERABAD

MAYANK MOHAN MALRA, SHINU DANIEL

ARMY COLLEGE OF DENTAL SCIENCES, SECUNDERABAD

Objectives of the study:. The purpose of the study is to find out if any,.

- 1) To evaluate the correlation exists between sites of implant placement and the final insertion torque values achieved at the end of implant placement.
- 2) To evaluate the correlation between influence of implant diameter on the final insertion torque values

EVALUATION OF INFLUENCE OF ERBIUM-DOPED YTTRIUM ALUMINIUM GARNET LASER ON THE PUSH OUT BOND STRENGTH OF FIBRE POST CEMENTED WITH RESIN CEMENT: AN IN-VITRO STUDY

MONALISA BAIDYA

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Intraradicular posts are often necessary for restoration of endodontically treated teeth. Fibre posts frequently fail due to debonding. Drilling during post preparation creates a smear layer consisting of gutta percha and remnants of root canal sealer. This smear layer covering the root canal surface directly affects the bond strength of dentin-resin interface. Proper irrigation or exposure to radiation removes the smear layer thereby increasing the strength of the cement bond with root canal dentin. So, this study has been carried out to compare the effect of Er-YAG laser and different irrigants in removal of smear layer to increase the bond strength of fibre post cemented with resin cement.

COMPARISON OF TONGUE PRESSURE ON HARD PALATE DURING SWALLOWING IN EDENTULOUS PATIENTS: AN INVIVO STUDY

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Tongue is a strongest organ of the oral cavity and it plays an important role in growth and development of the orofacial structures. The tongue is a powerful muscular organ that exerts strong pressure at frequent intervals during swallowing, mastication, speech and respiration. The contact between the tip of the tongue and hard palate acts as an anchor when the tongue holds the bolus in the oral cavity and propels it to the pharynx. The anchor function of the tongue is important for the improvement of swallowing pressure. Tongue pressure has been measured by pressure sensors which provides information about functional movements of the tongue during swallowing. This study enables us to get a visual feedback to promote motor learning of the subjects and to confirm whether or not the subjects can actually perform the movement aimed at by the therapist.

EVALUATING THE ACCURACY IN SHADE SELECTION BETWEEN DENTAL STUDENTS AND PROSTHODONTISTS

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The success of dental treatment is determined on the basis of esthetic and functional results. Esthetic success depend on the shade match of the restoration to surrounding tissues. The criteria for shade selection depends on dentist's skill, type of shade guide and lighting conditions. Few studies have examined the effect of dentist's physical and professional characteristics on shade matching. It is not easy to assess the differential effects of professional experience, age and eye fatigue as well as physiological variables such as color vision deficiency may lead to inconsistencies and bias. The aim of this study is to evaluate the efficacy and accuracy between dental surgeons and prosthodontists in shade selection.

OSSEODENSIFICATION WITH DENSAH: A HASSLE-FREE EXPANSION TECHNIQUE

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Lack of bone density has always been the biggest barrier to a dental implant procedure. Implant placement in such deficient bone conditions is challenging as it involves bone condensation. Osteotome technique is routinely followed, but the clinical decisions regarding the stability and osseointegration of implants positioned using this technique are conflicting and limited. To overcome this a novel biomechanical bone preparation technique called Osseodensification has been introduced utilising the Densah bur technology. This technique serves as a boon for placing implants in deficient bone facilitating ridge expansion and enhanced primary stability.

KNOWLEDGE, ATTITUDE AND PRACTICE OF BOXERS IN JABALPUR ON DENTAL TRAUMA PREVENTION BY MOUTHGUARD

NEHA MOHANTY

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Sports, particularly contact sports, represent one of the main causes of trauma with 19% of injuries involving head and face. Sports dentistry is one of the upcoming fields in dental profession. It involves the prevention and management of oro-facial injuries related to sports. Boxing is one such contact sport eliciting high risk oro-facial trauma. A properly fitting mouthguard is one of the most significant aspect in preventing orofacial injuries in boxing. The dentist plays a vital role in informing the athletes, coaches and their parents about prevention of facial trauma. The purpose of the study is to evaluate the occurrence of dental hard and soft tissue injuries during boxing as well as awareness and use of mouthguards among boxers in Jabalpur.

COMPARATIVE EVALUATION OF STRESS PATTERN AROUND TITANIUM AND ZIRCONIUM IMPLANTS - 3D (FEA).

NEHA VIJAYKUMAR, AKASH MITHRAN

SHARAVATHI DENTAL COLLEGE, SHIMOGA

Dental patients are becoming increasingly concerned with the materials coming into contact with their bodies and the impact of those materials on their health. Ideally dental implants used should be least toxic and least reactive. Titanium has been used as implant biomaterial since many years but it also has disadvantages of potential hypersensitivity and esthetics. To overcome these disadvantages of titanium implants, zirconia implants were introduced as an alternative to titanium. Zirconia is a non-metal ceramic material that is white in color and has all the traditional advantages of titanium. The long term clinical success of implants depends not only on implant biomaterial but also on the manner in which stress are transferred and distributed to the surrounding bone. Advances in finite element analysis (FEA) have made tremendous progress in its application to study stress pattern in implant prosthodontics. Finite element analysis has been used as an effective tool to evaluate the biomechanical properties of different types of dental implants. It has been widely used to model the design and functionality of dental implants and predict features of design optimization. This paper demonstrates the study of comparing the stress pattern in the bone surrounding titanium and zirconium implants.

EVALUATION OF TENSILE BOND STRENGTH OF RESIN CEMENT USED FOR CEMENTATION OF PEEK CROWNS NATURAL TEETH

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As the PEEK material is chemically inert, Surface modification and conditioning is mandatory before luting it with resin cements. The objective of the study is to determine the best combination of surface treatment and conditioning with two different types of systems. Samples of extracted teeth were selected and divided into two groups 1 and 2. The tooth were embedded in acrylic resin cylinder block till the level just below the cement-enamel junction. Fundamental principles were followed during tooth preparation. Each group were divided into two sub-groups. Surface treatment of the intaglio surface of the peek crowns were done with sand blasting with 50 microns for each sub-group. Adhesive bonding agent were applied and light cured before cementation of crowns. Two different resin cements were used for group's 1 and 2. The crowns were luted to their respective tooth with resin cement and excess cement was removed from the margins. Tensile bond strength of adhesion of PEEK crowns to tooth was evaluated with pull out test and results were statistically analysed.

COMMUNICATION: BEST WAY FOR A SUCCESSFUL RESTORATION - QUESTIONNAIRE BASED STUDY AMONG DENTAL PRACTITIONERS AND DENTAL LAB TECHNICIANS IN NAGPUR REGION.

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Aim. To examine the quality of communication between dental practitioners and dental technicians for fixed prosthodontics in Nagpur region. **Materials & Methods.** Pre-piloted questionnaire distributed to 100 Dental Practitioners and 20 Dental lab technicians in Nagpur region. Data was sought regarding the quality of written instructions and use of impression trays and materials for two varieties of fixed prosthodontics – porcelain fused- to-metal crowns, and conventional fixed partial dentures. The questionnaire was answered in a face-to-face interview and by email also. Data were analysed through parametric tests to identify significant values ($P < 0.05$). **Results.** Of the 120 participants surveyed, 90 (75%) answered to the questionnaire. Outcomes from this survey suggest that there is good communication among dentists and dental laboratories via work authorisation forms concerning disinfection of impression, clarity and accuracy of instructions, choice of impression material, choice of impression trays, choice of metal alloy, type of porcelain for use, and choice of margin and pontic design for the prosthesis. **Conclusion.** Data obtained from the responding laboratories included effectiveness of work authorisation forms. There were some comparable trends indicated by means of the moderate percentage of dental laboratories agreeing on lack of conversation via the dentists as reflected by using the work authorisation forms.

AN INVIVO COMPARATIVE EVALUATION OF CONDYLAR GUIDANCE VALUE FROM ADVANCED TOMOGRAPHY AND PANAROMIC RADIOGRAPH WITH INTEROCCLUSAL RECORD – ORIGINAL STUDY

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For a successful treatment outcome, a prosthesis has to be in harmony with the patients stomatognathic system. In edentulous subjects this is possible when the articulator is programmed according to the patient's condylar guidance to simulate the mandibular movements. Condylar guidance can be recorded clinically by various methods. Of these, gothic arch tracing and interocclusal records are commonly used. Several studies have shown that these methods are unreliable because of clinical error and these values have to be correlated with the values obtained through panoramic radiographs. With the advent of advanced tomography for dental applications, the condylar guidance values obtained may even give more accurate results than panoramic radiograph. So the main objective of the study is to compare the condylar guidance values obtained from the protrusive interocclusal records in semi adjustable articulator with those obtained by tracings from panoramic radiographs and advanced tomography in completely edentulous patients to find out which method is more reliable.

IN VITRO COMPARISON OF THE TENSILE BOND STRENGTH OF DENTURE ADHESIVES ON DENTURE BASES

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With several denture adhesives available, it is important for prosthodontists to make appropriate patient recommendations. The purpose of the study is to evaluate the tensile bond strength (TBS) of three cream denture adhesives and one wafer denture adhesive on two denture base materials at five time intervals up to 24 hours. Three cream denture adhesives Fixodent (Proctor & GambleTM), Super Poligrip (GlaxoSmithKlineTM), OliviaFix Gold (Bonyf AG) and one wafer denture adhesive SeaBond(CombeTM) will be tested with the Instron testing machine on two denture base resin cylinder models fabricated from two heat-polymerized acrylic resins (DPI and Meliodent). Laboratory prepared artificial saliva with mucin will be used for the control study. In accordance with ADA specifications, the TBS will be tested at 5 minutes, 3 hours, 6 hours, 12 hours and 24 hours after application of the adhesive. Maximum forces before failure will be recorded in mega pascals (MPa) and data will be subjected to a Two-way ANOVA ($P = .05$) using MINITAB software packages. Keywords: Denture adhesive, denture base, heat polymerised, tensile bond strength

IN VITRO STUDY TO EVALUATE AND COMPARE THE MARGINAL ADAPTATION OF CROWNS WITH DIFFERENT FINISH LINES USING ALL CERAMIC CAD/CAM SYSTEMS

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Ceramic restorations are widely used in dental practice to achieve the optimum esthetics demanded by patients. They offer better light transmission than other restorative options, which leads to improved reproduction of the colour and translucency of natural teeth. Computer-aided design/computer aided manufacturing (CAD/CAM) is increasingly being used by dental laboratories to fabricate dental prostheses. Marginal adaptation is one of the most important criteria for determining the clinical success of the dental restoration. Various factors such as design of finish line, method of fabrication of the restoration and materials used for fabrication of restoration affect the marginal fit of full crown restorations. This study compares the marginal adaptation of 3 types of all ceramic crowns: 1. Monolithic zirconia crowns. 2. Layered zirconia crowns. 3. Layered Lithium disilicate crowns. Manufactured using CAD/CAM systems for all ceramic crowns using 2 different finish lines; i.e. Heavy chamfer and Rounded shoulder which have been advocated for all-ceramic crowns and therefore have been chosen for this study. This study was conducted to evaluate the marginal adaptation of all ceramic crowns and effect of finish line designs on marginal adaptation using CAD/CAM system. Keywords: All ceramic crowns, Marginal adaptation, Finish Lines, CAD/CAM.

3D EVALUTATION OF FACEBOW TRANSFER OF THREE FACEBOW SYSTEMS: AN ORIGINAL STUDY

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In dentistry, orientation of maxillary cast in an articulator is a very crucial step, so is the face bow record. All spatial relationship of maxilla and mandible begins with its orientation on articulator same as in patient. A reference plane is established on face of patient with two posterior reference points located one on each side of face and one point is established on anterior aspect. Together these three points form horizontal reference plane, to which maxillary cast is oriented, recorded and transferred to articulator. If maxillary cast is articulated in a different spatial relation on articulator, discrepancy in arc of movements occur between patient and articulator. As prosthesis are fabricated on articulator as patient's laboratory substitute, significant interferences results in final prosthesis. Thus, an accurate record of maxillary cast becomes crucial whether its fixed removable dental prosthesis, aesthetics, full mouth rehabilitation, implants supported rehabilitation or complete dentures. This study evaluated the of accuracy of facebow transfer of three facebow systems in three dimensions with respect to CBCT obtained data as a gold standard.

SURVEY OF ESTHETIC PARAMETER IN RAJASTHANI POPULATION

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The esthetics of a smile is determined by various factors including symmetry, anatomy and position of teeth, periodontal visibility, and musculoskeletal relationships. In this survey of esthetic parameters in rajasthani population discussion about the criteria's as buccal corridor, golden proportion, smile line and deviation of dental midline from facial midline to right or left side will be done. In this study 200 subjects will be chosen from a localised area of rajasthan and photographs will be taken by placing patients head in frankfort horizontal plane and in natural light. Analysis will be done on the basis of the photographic criteria that how much the population follows these criteria without any orthodontic treatment. The results will be analysed on the basis of all the data collected from the population of all the criteria's and statistical analysis will be done and tabulated. This survey will be performed to check the prevalence of these criteria's in different population.

EVALUATION OF ANTIFUNGAL EFFICIENCY OF CITRONELLA OIL INCORPORATED IN ACRYLIC BASED SOFT LINER- AN INVITRO STUDY

PRANAV TULLE

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Denture soft liners are mainly used for therapeutic purpose in patients who are not able to tolerate denture induced stresses. The major disadvantage of these materials is their lack of antimicrobial activity. Colonization of resilient liners with micro-organisms along with poor oral hygiene is commonly associated with denture stomatitis. *Candida albicans* is most commonly isolated microorganism from oral cavity of patients with denture stomatitis. Commercially available denture cleansers mostly contain chemicals which may hamper the properties of the soft liners. Hence, there is a need to reduce the fungal activity with the use of natural antimicrobials. Essential oils of *Cymbopogon* species are known to possess antifungal properties. This study evaluates the mean inhibitory zone (MIZ) and antifungal activity of *Cymbopogon nardus* (Citronella oil) on acrylic based soft liners.

THE EFFECT OF CHEWING SIMULATION ON SURFACE ROUGHNESS OF ENAMEL WHEN OPPOSED BY FELDSPATHIC PORCELAIN RESTORATION.

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Dental restorative materials are used in restoring form and function of teeth with carious lesions or non-carious tooth surface loss. Crown and bridge restorative materials are still widely used as indirect restorations due to reliable quality, ease of use and excellent aesthetics does ensuring its consistent outcome. As patients demand for better esthetics has increased, it is important that the restorative material should closely mimic patient's natural dentition. An Ideal restorative material is considered, in terms of their strength, appearance, biocompatibility and resistance to wear by opposing teeth or restorations. There is a positive relationship between the hardness and abrasiveness of these materials against teeth. Advances in current technology have enabled simulation of the human chewing cycle in a laboratory using specific loads and frictional forces exerted by a chewing simulator stems where the wear behavior of dental restorative materials in-vitro can be determined by using a 3D profilometer to overcome the foreseen difficulties in-vivo methods. The purpose of this in vitro study was to investigate the change in surface roughness of natural enamel after antagonist wear against feldspathic porcelain restoration through a simulated chewing test using a three-dimensional (3D) profilometer.

CLINICAL ANALYSIS OF SHORT IMPLANTS

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The posterior region of the oral cavity offers a challenging clinical scenario for rehabilitation with dental implants. The resorption of the alveolar ridge, poor bone quality, the presence of the inferior alveolar nerve, the maxillary sinus and high occlusal forces might jeopardize the survival of the implant. It may, therefore, be necessary to increase the geometry and volume of the alveolar bone before instalment of dental implants. This can be obtained by grafting techniques, sinus elevation, and transposition of the inferior alveolar nerve or by the intrabony distraction of the alveolar process, which results in four to five surgical interventions. Therefore short implants have widened the options for implant installation. Short implants do not require the same pre-surgical treatment prior to installation as longer ones often do. Short implants may, therefore, have a reduced risk of interference with anatomic structures like the maxillary sinus or the inferior alveolar nerve. They may osseointegrate in atrophic alveolar ridges despite reduced bone volume. Stabilization of implants in the surrounding lamellar bone has been standardized using Resonance frequency analysis to reflect the bone/implant interface in documenting clinical implant stability. An adequate crestal bone level is considered to be an important clinical determinant for the success of implants. The marginal bone loss not only causes implant failure but also affects the esthetics due to changes in the gingival contour. This study was conducted to evaluate long term clinical performance of short implants.

COMPARATIVE EVALUATION OF THE COLOR STABILITY OF THREE DIFFERENT COMMERCIALLY AVAILABLE DENTURE BASE RESINS-AN IN-VITRO STUDY

PREET SONI

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The most important dimension of aesthetics is color. Apart from the other properties of acrylic resin, developing its color to match with the color of oral mucosa and teeth makes it the material of choice for its universal application in denture prosthesis. In denture prosthesis though the denture teeth are aesthetically more important and are noticed significantly, the denture base is equally important for its aesthetics in many patients if not all. Discoloration of acrylic resin denture base when it comes in contact with various food materials and beverages in the oral cavity may cause aesthetic concern to a denture wearer. For many years, acrylic resin has been successfully used for denture fabrication. It has many advantages, like its ease of manipulation, low cost, adequate physical and mechanical properties, biocompatibility, and satisfactory appearance. However, these materials exhibit, over time, unsatisfactory characteristics such as loss of elasticity, abrasion, porosity, and color change. Color stability is one of the most important clinical properties for dental materials, and color change may be an indicator of aging or damaging of materials. Furthermore, the aesthetic appearance of a prosthesis is certainly an important feature required by patients and must satisfy their expectations. The color change of a polymeric material may be caused by intrinsic and extrinsic factors. Keeping the above in mind, the study was undertaken to evaluate the effect of food colorants on the color stability of three different commercially available Denture Base Resins.

CAN LOSS OF POSTERIOR TEETH CONTACT LEAD TO HEARING LOSS IN GERIATRIC POPULATION? – A CROSS-SECTIONAL STUDY

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Presbycusis(loss of hearing with age), leads to depression, social isolation and can be mistaken for memory loss or decreased cognition in elderly. Over time, with loss of hearing, both quality and longevity of life may be compromised. Presbycusis is a complex sensorineural pattern of injury rather than solely physiological age-related process. Medical risk factors, such as hypertension, diabetes mellitus, etc., apparently play a smaller role, with the exact underlying cause not fully understood. Socioeconomic status also influences the occurrence of presbycusis. Studies found across the disciplines of neuroscience, neurophysiology, otolaryngology, and dentistry have indicated association between dentate status and hearing. Little progress has been made to identify exogenous factors which contribute to presbycusis, or determine extent to which these factors lead to loss of hearing. This study is set to investigate possible role of oral condition (primarily dentate status) in decline of aural health accompanying aging.

EVALUATION OF RETENTION IN COMPLETE DENTURE USING DIFFERENT BORDER MOLDING MATERIALS

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AIM: The aim of this study is to evaluate the effect of different border moulding materials on the retention of upper complete dentures. **MATERIALS AND METHODS:** Ten patients were selected from the Department of Prosthodontics in Meenakshi Ammal Dental College, Chennai of age group 40-70 years for the study. For each patient after making preliminary impressions, three special trays were fabricated with visible light polymerizing tray material. Then Border molding was done using three different materials- Green stick compound, Putty rubber based material and Visible light polymerizing material followed by master impressions which were made using light body rubber-based material. The master casts were poured in dental stone. Three heat polymerizing denture bases were fabricated with wire loop on the palatal aspect of the denture base for each patient. Digital force gauge was used to evaluate and compare the retention of upper denture bases.

COLOURING UP YOUR EFFICIENCY

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JSS DENTAL COLLEGE, MYSORE

Mastication is defined as a group of stomatognathic phenomena designed for mechanical food processing that includes grinding and breaking down of food into smaller molecules to be swallowed. The process of chewing, which range from 10 to 40 masticatory cycles allows food to be effectively reduced in size and moistened by saliva, thus forming a bolus. A reduction in the physiological secretion of gastric acid is characteristic of the aging human process which calls for the importance of efficient mastication to start food digestion processes. The loss of natural teeth not only results in aesthetic issues to individuals, but also seriously risk masticatory function. Mastication in subjects with complete dentures is a non-preferential process, wherein particles of all sizes are ground at random. This is contrary to the chewing process by natural dentitions in which coarse particles are ground more rapidly than the fine particles as chewing proceeds. Masticatory efficiency in edentulous patient is 6-10% that of the dentulous patient, because of the debilitating condition of the patient, it is important to know how residual ridge surface area is going to affect the masticatory efficiency. Colorimetric and sieve methods are accepted methods to check for the masticatory efficiency of both dentulous and edentulous patients. This paper correlates two methods (colorimetric and sieve methods) to check the masticatory efficiency in edentulous patients and compare same with the mandibular ridge surface area.

BIO FUNCTIONALITY– INDICATOR OF GENERAL HEALTH? - A RESEARCH STUDY

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The reduced masticatory ability may lead to changes in dietary selection with the risk of an impaired nutritional status, especially in elderly complete denture (CD), removable denture (RPD), fixed partial denture (FPD) wearers. As masticatory efficiency diminishes drastically in partially and completely edentulous patients, several researches have studied over the past two decades how the dietary intake and nutrition varies when the different types of oral rehabilitation are provided. To improve oral health outcomes, an adequate knowledge of the way the individuals use health services and the factors predictive of this behaviour is essential. In this modern era of information and technology, we may comprehend the ever-increasing awareness and heightened consumer rights regarding general health issues. The aim of the study is to find the co-relation between the biofunctionality with general health using a hierarchical dental functional classification system. As a result, the American Dietetic Association recently stated that oral health and nutrition have a synergistic bidirectional relationship. There is evidence that good oral health generally has very positive effects on the nutritional intake of older adults.

RADIOGRAPHIC ESTIMATION OF SAFE ZONE IN IMPLANT PLANNING BY MEASURING THE ANTERIOR LOOP LENGTH OF INFERIOR ALVEOLAR NERVE – A OBSERVATIONAL STUDY

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NEED FOR STUDY. The path of the inferior alveolar nerve often loops backwards while exiting the mental foramen and might spread medially to the foramen. Critical Evaluation of this area is necessary in implant planning as implant placement may cause damage to the anterior loop of the inferior alveolar nerve.

OBJECTIVE OF THE STUDY. The objective of the study is to evaluate the presence of anterior loop, estimate the length of the anterior loop and its age related variations with the anterior loop length.

MATERIAL AND METHODS. A total of 60 Digital Volumetric Tomographs (DVT) and Digital Imaging and Communications in Medicine (DICOM) files of patients will be acquired according to the 3 age groups: 15-30, 30 -45, 45-60. This data will be imported into a commercial software. Using the software, the Inferior alveolar canal will be traced along with its anterior loop. The vertical length of the nerve will be estimated from the canal to the opening of the mental foramen from cross sectional view and translated to panoramic view. The following data will be subjected to statistical analysis.

RESULT. This is an ongoing study of which the results will be updated shortly.

TKP COATED TITANIUM: A NOVEL APPROACH FOR EARLY OSSEOINTEGRATION

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An important goal in implantology is to achieve a faster, stronger and more predictable bone-to-implant integration for early loading. It can be extended to patients with poor bone density & compromised anatomical sites. So, the approach of early osseointegration has been studied by implementing various surface treatments and coating methods. Presently, standard SLA (Sandblasted and acid etched) surface modification for CP titanium is one of the method used in clinical practice today. The main goal of many experimental studies was to determine whether bone apposition could be enhanced by titanium surfaces coated with osteogenic materials as compared with the SLA treated surfaces of titanium. A novel biomaterial is reported and used in my study that is Tamarind Kernel Polysaccharide (TKP), coated over the CP Titanium Grade IV disks to promote mineralization and differentiation of human osteogenic Saos2 cells, in vitro. Various parameters such as Cell Viability, Cell Mineralization, Cell Maturation, Cell attachment were assessed and compared in both groups. It is interestingly observed that the TKP coated titanium surface promoted enhanced bone apposition & mineralisation earlier in comparison to SLA surface treated CP titanium. TKP coated implant surfaces have potential to be tested for greater osseointegration in in vivo studies.

ADHERENCE OF CANDIDA ALBICANS TO SURFACE-MODIFIED DENTURE RESIN SURFACES WITH POLYTETRAFLUOROETHYLENE(PTFE) POLYMER

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INTRODUCTION: Candidiasis is the most susceptible in immunocompromised patients. In denture wearers, candidiasis is aggravated by the adhesion of *C.albicans* to tissue fitting surface of maxillary denture base, which serves as an effective reservoir of microorganisms. The initial attachment of *Candida* on palatal mucosa and mucosal surface of the denture is an essential step in colonization and pathogenesis. Attempts have been made to inhibit candidal adhesion and subsequent colonization on the denture resin surface through the use of a wide range of antifungal agents; however the efficacy of this method of treatment is transient and does not offer a long-term effect. Polytetrafluoroethylene (PTFE) polymer possesses inherent non-stick properties mainly because of its low surface energy and the minimum friction coefficient. There has been studies that investigated whether a PTFE coating reduces biofilm formation on orthodontic brackets. **OBJECTIVES:** Effects of *Candida albicans* adhesion on PMMA samples coated with Polytetrafluoroethylene (PTFE). **METHODOLOGY:** Two groups were tested [Group 1: control, pure PMMA; Group 2: pure PMMA coated with Polytetrafluoroethylene (PTFE)]. 10 resin specimens for each group were polymerized, and 2 experimental subgroups for each surface type were devised, consisting of 2 and 4 days of incubation in *C.albicans* suspension. The surface area of adherent *C. albicans* stained with Gram's crystal violet was examined under a light microscope. This is done to calculate the percent surface area containing adherent *C. albicans*.

CORTICAL PLASTICITY WITH IMPLANT SUPPORTED PROSTHESIS

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Edentulous patients with implant-supported prostheses report improved tactile discriminative capabilities and motor function compared with when they wore complete dentures. Osseoperception is defined as the ability to identify kinesthetic sensation without the input from periodontal mechanoreceptors. This sensation is generated from the temporomandibular joint, masticatory muscle, mucosa, and periosteum, and provides sensory and motor information related to mandible movements and occlusion. The aim of this pilot study is to analyze the cortical plasticity occurring in patients with implant-supported prostheses. Two edentulous patients with implant-supported overdenture dentures and traditional complete dentures were recruited for a clenching task. They were scanned by functional magnetic resonance imaging (fMRI), to generate activation brain maps. Increased blood oxygen level dependent signals in the primary sensorimotor cortex were found in patients with implant-supported fixed dentures. Other activated areas included prefrontal cortex, Broca's area, premotor cortex, supplementary motor area, superior temporal gyrus, insular, basal ganglion, and hippocampus. We suggest that sensory and motor feedback to the central nervous system can be partially restored by implants supported dentures. Activation of the primary sensorimotor cortex in patients with implant-supported dentures might explain the improved tactile, stereognostic ability, and mastication functions, which are more similar to the natural dentition.

A SURVEY FOR ASSESSMENT OF USE OF PEEK CROWNS OVER CONVENTIONAL PFM CROWNS IN WESTERN MAHARASHTRA REGION.

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Several materials have been used for fixed dental prostheses. Commonly used materials for fixed dental prostheses (FDPs) are metal alloys, porcelains, ceramics and recently PEEK. In prosthetic dentistry, thus far, there has been a versatile use of PEEK material for crowns or bridges, clasps in the field of removable dental prostheses, implant supported bars, and provisional abutments. The physico-chemical properties of PEEK FDPs have several advantages over the conventional fixed prosthetic materials. But it is observed that patients are reluctant to opt for PEEK crowns because of several reasons like availability of materials in laboratory, cost factors, lack of knowledge about PEEK material etc. Also there is not much information available with respect to the assessment of use of PEEK crowns when compared to PFM crowns. So the present survey was conducted to assess the use of PEEK crowns over conventional PFM crowns in western Maharashtra. A survey sheet was prepared based on the questionnaires. The feedback was gathered individually which was then statistically analyzed to achieve the objectives of the study.

COMPARATIVE EVALUATION OF DIMENSIONAL STABILITY AND COMPRESSIVE RESISTANCE OF THREE INTEROCCLUSAL RECORDING MATERIALS – AN INVITRO STUDY

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Aim: To compare the dimensional stability and compressive resistance of three interocclusal recording materials. **Objective:** To evaluate and compare the dimensional stability and compressive resistance of three commercially available interocclusal recording materials in two-dimensional plane using standard techniques of measurement. **MATERIALS AND METHODOLOGY:** A stainless steel master cylindrical die was machine tooled. (ADA.19). Three hollow stainless-steel trays (10mm id) were machine tooled and made to fit snugly over the cylindrical master die. Difference in the heights of the trays and the die is 2mm, 4mm and 6mm. Three horizontal lines in the centre of the circle equidistant from each other were intersected by two vertical lines such that distance $AB=CD=EF=7.816\text{mm}$ is made. The samples were stored in tightly sealed containers and kept for 24 hours in an air-conditioned room at 25°C. Using universal testing machine (INSTRON), test samples will be loaded at a constant compressive force of 25N for 1 minute and subjected to a for dimensional changes. **Results:** Among the three materials evaluated, Poyether had better compressive resistance and least dimensional changes

POSITION OF TEETH AND DIMENSIONS OF BONY WALLS IN ANTERIOR MAXILLA FOR IMMEDIATE IMPLANT PLACEMENT - A CBCT CLASSIFICATION

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In the recent years, the need and high esthetic demands for anterior teeth replacement has led to the development of immediate implant placement (IIP). This is the challenging treatment option and presents a higher risk of complications. For the effective esthetic outcomes of IIP, facial bone thickness and height is one of the most important influencing factors. Very few studies have classified tooth positions and thickness of bony wall in anterior maxilla relative to IIP. Purpose of this study is to present a new working classification for position of maxillary anterior teeth viewed on CBCT scans. The tooth positions classified in this study will be helpful for proper patient selection and accurate implant placement strategy.

COMPARATIVE EVALUATION OF DEGREE OF CONVERSION, COLOUR STABILITY, AND WATER SORPTION OF A RESIN BASED SOFT LINER MODIFIED BY INCORPORATION OF THREE ANTIFUNGAL AGENTS- AN IN VITRO STUDY

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The use of soft liners in dentures is an important adjunct in the treatment of patients particularly those who are medically compromised. Polymeric systems enabling controlled drug-release have been suggested for a range of dental therapeutic applications. It has been suggested that impregnating with an antimicrobial such as chlorhexidine (CHX) may influence the polymerization and the degree of conversion (DC) of the polymer which may have an impact on its mechanical properties of soft liners. Colour stability and water sorption are two important criteria that provide information on the serviceability of these soft liner materials. The balance between component release and fluid absorption by soft liners results in material expansion, distortion, increase in hardness and roughness. The incomplete polymerization of the polymer as a result of the presence of drug particles alters the mechanical and physical properties of the soft liners. The Triazole antifungal agents such as Posaconazole and Voriconazole have excellent in vitro activities against all *Candida* specie isolated from patients wearing dentures. This paper describes the in-vitro study performed to evaluate and compare the degree of conversion, colour stability, and water sorption of a commercially available resin- based denture soft liner material modified by incorporation of three antifungal agents

COMPARATIVE ASSESSMENT OF THE ACCURACY OF GINGIVAL RETRACTION TECHNIQUES IN INTRAORAL DIGITAL IMPRESSIONS USING MEROCEL AND LASER

SAIMA

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Aim : Assessing the accuracy of intraoral digital impression in relation to the gingival retraction done using two different methods, during crown preparation procedure for FPD. **Background:** Success of fixed restorative dentistry is dependent on many factors including the accuracy in marginal positioning of the restoration onto the prepared finish line of the abutment. Retraction cords and pastes have been a valuable adjunct for many years to help dilate the sulcus, thus exposing the preparation margins for an optimal impression. The dentistry today is more technologically inclined. The term 'Digital dentistry' is becoming increasingly popular and is gaining its access into multiple clinical scenarios. However, the compatibility of digital technology for that particular situation is important. The compatibility of digital impression with use of gingival retraction for an accurate marginal positioning of the restoration has not been explored in all its aspects. **Methodology:** This clinical report focuses on the evaluation of compatibility of the intraoral digital impression in relation to the gingival retraction done using two different advanced gingival retraction methods namely Merocele strips and Laser diode. Digital measurement shall be taken before and after the retraction using the digital software between finish line and the crest of marginal gingival. The obtained values shall be subjected to statistical analysis and a plausible result obtained from it.

ABILITY OF HAMULAR NOTCH INCISIVE PAPILLA PLANE EVALUATOR IN QUEST FOR ORIENTING THE OCCLUSAL PLANE IN DENTULOUS SUBJECTS

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Prosthetic rehabilitation of a patient with deficient dentition or disordered occlusal plane will execute great deal of challenge to the operators so as to establish correct occlusal plane to restore natural esthetics, speech and function. It is important to establish the plane of occlusion as close as possible to the position, which was previously occupied by the natural dentition to ensure normal function of stomatognathic system, Various anatomical land marks were used for the orientation of occlusal plane, but accuracy of most locations can be adversely affected by the irregularity and asymmetry of the face. Arbitrary use of the reference planes may affect the 3D orientation of the maxillary cast and inclination of occlusal plane. Hence, the functional and esthetic result of intended prosthetic rehabilitation may be compromised. To minimize these errors, we require landmarks which can better guide the clinician in establishing occlusal plane and identify the reference landmarks that can be recorded on the cast and scanned, one such plane reported in literature is hamular notch incisive papilla plane (HIP) and considered most reliable as this plane remains unaltered even after teeth loss and residual ridge resorption. In previous studies CAD designing, HIP analyser, Computer Tomography were used to evaluate the parallelism of occlusal and HIP plane but there are no studies measuring distance between them and significance of HIP Evaluator. So this study was intended to assess the reliability of HIP Evaluator for the orientation of occlusal plane in dentate individuals.

EVALUATION AND COMPARISON OF WATER SORPTION AND VISCOELASTICITY OF THREE COMMERCIALY AVAILABLE LONG-TERM SOFT LINING MATERIALS

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Relining is the process of adding a specific material to the tissue side of the denture to fill the space between the denture and the tissues. biologic supporting tissues used in complete dentures are vulnerable to time dependant changes and hence it is necessary to ensure proper fit, function and comfort of the prosthesis for the patient. The aim of the study was to evaluate and compare the water sorption and viscoelasticity of three commercially available soft lining materials before and after artificial ageing. the results were obtained by statistically analysing the data.

MICROBIOLOGICAL ANALYSIS OF SCREW ACCESS HOLE PLUGGING MATERIAL AND IMPLANT RECESS IN THREE DIFFERENT IMPLANT ABUTMENT CONNECTIONS: A COMPARATIVE IN-VITRO STUDY

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Most implant systems used nowadays consist of 2-part system and there is a microgap at the implant abutment interface. The bacterial accumulation that occurs at this microgap can cause peri-implant mucositis and peri-implantitis. The implant abutment interface located at the level of the alveolar crest, may facilitate seepage of the fluid and macromolecules derived from the saliva and the crevicular fluid. The leakage occurs between the abutment–implant interface and/or through the abutment screw access channel, which may constitute risks to the clinical success of the implants. This study aims to comparatively evaluate the three different implant abutment connections- Internal hex, Cone screw and Conical hex with respect to their performance in in- vitro bacterial seal analysis along with evaluation of efficacy of cotton pellet, cotton pellet with 1% chlorhexidine and polytetrafluoroethylene tape as plugging material in reducing the micro leakage from the screw access hole. Implants with their respective prosthetic implant abutments will be divided into 3 groups based on their implant abutment connection. Each group will be further divided into subgroup containing cotton pellet and polytetrafluoroethylene tape as plugging materials. Each implant abutment complex will then be analysed for bacterial contamination.

“EFFECT OF HEAT TREATMENT AND FIRING CYCLES ON THE FLEXURAL STRENGTH OF CHROME-COBALT ALLOY AND TITANIUM-ALUMINIUM ALLOY BARS FABRICATED BY SELECTIVE LASER MELTING –AN IN VITRO STUDY”

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Technologies involved in metal manufacturing through casting have made tremendous progress. With the introduction of Milling technologies precision was redefined, also the speed of material manufacturing reduced the treatment time. However Milling was a subtractive technology resulted in material wastage. These were addressed in newer modes of manufacturing like Metal Printing. Rapid Prototyping is a common name used for technologies used for directly producing three dimensional shaped products from CAD file or digitally scanned data. Selective Laser Sintering and Selective Laser Melting are layer wise material addition techniques that allow generating a complex 3D parts by selectively consolidating successive layers of powder material on top of each other using thermal energy and computer controlled laser beam. The material is produced in a Digital environment hence it has the advantage of shortening the production process as well as reducing the wastage. However, metal layering showed higher residual porosity resulting in a weak structure. Compared to DMLS, SLM has shown reduction in residual porosity. In order to produce a fully dense material the printed prosthesis is subjected to further heat treatment. This is associated with increased mechanical properties. In addition, the prosthesis maybe subjected to ceramic firing. This may alter the final flexural strength which is crucial in the longevity of the prosthesis. As there are very few studies substantiating the above claim, this study was undertaken to evaluate the flexural strength which is of vital importance in long term use.

EVALUATION OF FRACTURE RESISTANCE OF THREE DIFFERENT CORE MATERIALS WITH THREE DIFFERENT CAVITY PREPARATION DESIGNS ON THREE DIFFERENT TEETH -AN INVITRO STUDY

SHOBANA.T

RAJAH MUTHIAH DENTAL COLLEGE AND HOSPITAL. KOTHANGUDI, TAMIL NADU

INTRODUCTION. A foundation or core restoration is often required after tooth fracture or extensive dental caries removal. Because the core becomes an integral part of the load bearing structure of the tooth. **PURPOSE.** To evaluate the fracture resistance of three different core materials with three different cavity preparation designs on three different endodontically treated teeth. **MATERIALS AND METHODS.** Freshly extracted maxillary premolar, maxillary molar and mandibular molar three in each are used as specimens. The specimens were endodontically treated and they were divided into three groups- X, Y, Z [Class I, Class II(MO), Class II(MOD)]. After preparation, the samples were duplicated and resin samples were made with 30. Total of 270 specimens were obtained. 30 specimen in each subgroup was divided into three subdivisions equally for three different materials. These specimens were acid etched and restored with Ever X posterior, Fluorocore, Filtek Z250 and tested in universal testing machine. **RESULTS.** The data obtained were tabulated along with bar graphs and statistically analyzed using one way ANOVA and Student 't' test. This study shows that there is significant difference in 3 different materials, Ever X shows higher mean fracture resistance (1948.11) than other 2 materials. Class II showed highest fracture resistance(1938.11) than other groups. **CONCLUSION.** Within the limitations of the study, it can be concluded that Ever X posterior showed highest fracture resistance when compared to Fluorocore and Filtek Z250. Class II cavity shows the higher fracture resistance followed by class I and MOD preparation.

COMPARATIVE EVALUATION OF HARDNESS AND DIMENSIONAL ACCURACY OF INTEROCCLUSAL RECORDS MADE BY NEW THERMOPLASTIC MATERIAL- POLYCAPROLACTONE AND POLYVINYL SILOXANE- AN IN VITRO STUDY

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ABSTRACT: The interocclusal recording materials should have excellent dimensional stability and ability to produce accurate records with minimal distortion. Various interocclusal recording materials are being introduced in routine clinical practice for precise recording and transferring of accurate existing occlusal records for articulation of patient's diagnostic or working casts in the fabrication of good satisfactory prosthesis. Currently, elastomeric materials such as polyether and polyvinyl siloxane has been widely used for the same purpose. It is proven that the polyvinylsiloxane is the most dimensionally stable, accurate and has the highest surface hardness. A novel thermoplastic material polycaprolactone is one such material which can be used to take interocclusal records. There is no single comparative study on the hardness and dimensional accuracy of interocclusal records made by polycaprolactone and polyvinyl siloxane. **Materials and method:** In this in-vitro study, standardized stainless steel die as per ADA specification number 19 was fabricated. A total of 15 impression of each material was made. Measurements were made using a measuring stereomicroscope. Distance between the cross lines reproduced in the sample was measured for dimensional accuracy. The hardness of each sample was checked using durometer. **Result:** Results of t- test can be statistically significant for hardness and dimensional stability $p < 0.05$. **Conclusion:** Polycaprolactone can be use as an interocclusal record material with respect to its hardness and dimensional stability properties.

COMPARISON BETWEEN DOMESTIC AND COMMERCIALY AVAILABLE DISINFECTANTS ON ACRYLIC DENTURE BASE RESINS BY EVALUATING SURFACE ROUGHNESS AND FLEXURAL STRENGTH: AN IN-VITRO STUDY

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ABSTRACT. Comparison between domestic and commercially available disinfectants on acrylic denture base resins by evaluating surface roughness and flexural strength: An in-vitro study. **AIM:** To evaluate the surface roughness and flexural strength on the denture base acrylic resins with both domestic and commercially available disinfectants. **OBJECTIVE:** To compare the differences of the domestic and the commercially available disinfectants on the acrylic denture base resin through the assessment of the surface roughness and flexural strength. The time of immersion of the denture base resin in the disinfectant allotted is 10minutes and in water is about 8hours daily. **MATERIAL AND METHOD:** domestically available disinfectants are lemon juice and vinegar, neem extract and the commercially available disinfectants includes the Corega tablets (sodium perborate), sodium hypochlorite, chlorohexidine. Heat cure acrylic bars will be fabricated by conventional technique. The samples will be immersed into the different types disinfectants respectively for 10 minutes, and then in water for 8 hours and further evaluation of the surface roughness and flexural strength following 7, 14, 21 days respectively. **CONCLUSION:** This is an ongoing study, and results will be published accordingly tabulated and presented after completion of the study.

EVALUATION OF METHYL METHACRYLATE MONOMER CYTOTOXICITY IN DENTAL PERSONNEL USING BUCCAL MICRONUCLEUS CYTOME ASSAY

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Methyl methacrylate (MMA), a monomer of acrylic resin, has a wide variety of dental, medical and industrial applications. The leaching out of monomer content of MMA is concerned with the toxicity of dentures made by heat cure and self cure acrylic resin. The oral effects of residual monomer (MMA) following polymerisation have been extensively investigated. In the dental laboratory where dental personnel make prostheses, they are occupationally exposed to MMA. Regular contact with and chronic inhalation of MMA has caused toxic side effects, ranging from allergic contact dermatitis, stomatitis, liver toxicity, hemorrhage, and necrosis of lung tissue. Buccal mucosal cells readily form micronuclei in response to toxic exposure, they are used as a source of tissue for monitoring human exposure to toxic substances encountered in occupational and environmental settings. Thus in this paper presentation I am evaluating the MMA cytotoxicity in dental personnel using buccal micronucleus cytome assay.

NEW DEVICE FOR PLACEMENT OF MAXILLARY CENTRAL INCISORS.

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Maxillary central incisors, located in the premaxilla is the anterior continuation of the hard palate. After the loss of maxillary anterior teeth, the resorption pattern of the residual ridge is along the direction and inclination of roots and the alveolar bone. The resorption along the mid palatine suture is minimal to negligible. Maxillary central incisor is the starting point for institution of prosthodontic rehabilitation, its proper placement is still an enigma. The various methods and procedures used to relocate the maxillary central incisors are linear and angular measurements compared with the cranial base or the maxilla. As the curvature of the hard palate along the mid palatine suture nearly remains constant even after the loss of the maxillary anterior teeth. An attempt has been made to use the cant of this curvature to relocate the position of maxillary central incisor using a new device.

THE QUEST FOR THE BEST: IN THE REALM OF JAW SIMULATION

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Articulator, being a prosthodontist's tool, helps in mastering the restoration of occlusion. Face-bows were developed in conjunction with articulators to orient the maxillary arch to the transverse hinge axis. The maxillary cast in the articulator acts as a baseline from which all occlusal relationships start. It is assumed that after face-bow transfer the occlusal plane of the mounted casts should be parallel to the Frankfort horizontal plane. This thus helps in simulating the exact patient orientation and in obtaining the best occlusion with harmonious contacts. Literature provides sparse information of the comparison of the articulators with the most meticulous transfer and methods to obtain a precise orientation of occlusal plane. Through this study, by involving thirty dentate individuals an attempt has been made to find out the most accurate device which can accurately orient the occlusal plane inclination of the maxillary models. Findings were compared with Cephalometry which is considered to be the anthropometric gold standard. This scientific paper presentation will try to unveil the conundrums of commonly used dental relators and will introduce an innovative method for facilitating occlusal adjustments.

COMPARATIVE EVALUATION OF WEAR RESISTANCE OF COMMERCIALY AVAILABLE ARTIFICIAL DENTURE TEETH-AN IN VITRO STUDY

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Purpose: The most important requirement of denture teeth is high wear resistance to preserve good occlusal stability and relationship. This study aimed to determine and compare the wear performance of different denture teeth. **Method:** Four commercially available denture teeth are randomly selected for the study according to price. The wear resistance is measured using pin-on-disc tribometer, in the presence of artificial saliva at a constant temperature (37°C). One loading cycle consist of a vertical 1mm impact and a subsequent lateral 1mm sliding movement under load. Cyclic loading of 64 N was applied for 10000 cycles. The maximum depth of the wear trace beneath the unworn surface is taken as the amount of wear. **Conclusion:** Denture teeth showed significantly different in vitro wear performance. Difference may be due to composition of materials and polymer structure.

COMPLETE DENTURES: PERSONALIZED!!

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SRM KATTANKULATHUR DENTAL COLLEGE, CHENNAI

Characterization of complete dentures has become an emerging trend in prosthodontics in order to achieve superior esthetics in edentulous patients. Several methods have been advocated in an attempt to customize the artificial teeth and dentures bases according to the patients' needs. Tinting the denture bases to reproduce the colour and shade of the natural oral tissues is being commonly done in dental laboratories. This paper presentation features an improvised method of matching the shade of the gingiva using a spectrophotometer and incorporating the same shade as near normal as possible using the usual staining methods. This method can help to enhance the esthetics of the complete denture wearer successfully.

COMPARATIVE EVALUATION OF CRESTAL BONE LEVELS AROUND DENTAL IMPLANTS AS INFLUENCED BY CONVENTIONAL AND DIODE LASER SECOND STAGE SURGERY USING CBCT & DIGITAL RADIOGRAPHY – A PILOT STUDY

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Lasers have been providing promising results as far as surgical exposures & their post-operative healing is concerned. Literature is suggestive of increased bone loss whenever a full or partial thickness flap is raised. Second stage surgery is often overlooked and is considered non-essential phase but actually could determine the health of the peri-implant tissue. Use of diode laser at 2nd stage surgery eliminates the requirement of raising a flap. This phase gives an excellent opportunity to preserve, reconstruct and even maneuver the soft tissue to optimize the soft tissue profile around the implant components. This study was conducted in 5 completely edentulous male patients in whom 2 implants were placed. The study was divided into two groups i.e. Group 1 & Group 2 with 5 implants in each group depending on the method employed for second stage exposure and it was an in-vivo split mouth study. For group 1, a conventional protocol & for group 2, a Diode Laser was used to perform the second stage implant exposure at 8 weeks after implant placement. Digital Radiographs & CBCT scans were done at regular intervals to evaluate crestal bone levels.

SMART MATERIAL FOR ORAL DRUG DELIVERY

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Wound healing is a multifarious and vibrant process of damaged cellular structures, re-establishment of tissue integrity, and maintenance of the homeostasis. The hydrogel technology has been an integral part of human health care, the present study highlights the role of hydrogels in drug delivery. Oral trauma by characterized by painful ulcerations of the oral mucosa and are among the most common oral diseases which can affect quality of life especially for a prosthesis wearer. Topical application of specific drugs for the treatment of buccal mucosal diseases like oral ulcers is the common approach for many clinicians. The hydrogel technology has been an integral part of human health care the present study highlights the role of hydrogels in drug delivery. Our study focused on combining topical drug delivery through a hydrogel gel for the treatment of oral ulcers. Countless studies have demonstrated the healing powers of aloe Vera gel. It is also known to possess Anti-inflammatory, Antibacterial, Antifungal, Antiviral, Wound Healing, Pain Relief Treatment of minor burns, skin abrasions, and irritations. Two forms of hydrogels were prepared one with aloe Vera and one with benzocaine and both were compared to check which formulation could be better used for treatment of oral ulcers. Various parameters like folding strength, tensile strength, surface pH, drug content, drug release and ex-vivo mucoadhesive strength were analysed.

EFFECT OF IMPLANT DEPTH AND IMPLANT ANGULATION ON THE IMPLANT IMPRESSION

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Differing implant angulations and depths of implants in different clinical scenarios may lead to distortion in recording the exact implant position while making the impression. An accurate impression of the implant position is the key to the success or failure of the prosthesis to be given. There are a lot of variables that may come into play while making the impression that ultimately lead to distortion in the impression which later on affects the fit of the prosthesis. The aim of this study is to measure the amount of distortion occurring three-dimensionally, while making the impression

REDEFINING GOLD STANDARDS FOR DENTAL IMPLANT SUCCESS

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MARATHA MANDAL DENTAL COLLEGE, BELGAUM

Precision medicine as a disruptive force is based on standardization. The same holds true for the field of dentistry. Though there are basic standardization protocols that were established by the pioneers in implant dentistry, changing times and enhanced knowledge call out for a better understanding of the application of these standardizations, which eventually lead upto laying down a new set of protocols, hence redefining precision. Redefined precision will in turn enable clinicians deliver better standard of care. This paper deals with the precise measurement of 3 crucial parameters - Bone Density, Insertion Torque, and Implant Stability ; across various dental implant case scenarios. The implant-tissue interface is a dynamic region of interaction that completely changes character from its genesis to its maturity through the modeling and remodeling of the surrounding bone. Hence the 3 parameters being measured here help us cater to precision dentistry at various levels of oral rehabilitation using implants;. Bone Density - Pre Operatively & Post Operatively. Insertion Torque - During Surgical Phase. Implant Stability - both Primary and Secondary Stability. All this data has then been beautifully coalesced to give birth to a new scoring index, hence redefining precision. This index guides the clinician towards a better planning of a suitable prosthetic design and an appropriate occlusal scheme. Variations observed in the score at different time intervals can help the clinician alter the time allowed for healing, the timing of implant loading, and the occlusal design of the prosthesis.

COMPARATIVE EVALUATION OF SHEAR BOND STRENGTH BETWEEN GLASS FIBER REINFORCED POST AND RESIN BASED LUTING AGENT AFTER VARIOUS SURFACE TREATMENTS-AN INVITRO STUDY

VANDANA RAJPUT, SANDHYA.G. SAWARE

SHARAVATHI DENTAL COLLEGE, SHIMOGA

Comparative evaluation of shear bond strength between glass fiber reinforced post and resin based luting agent after various surface treatments - An invitro study. Preservation of the natural dentition is an important factor in effort to promote good oral health. Various methods of restoring pulpless teeth have been reported for more than 200 years. The artificial crowns used at that time were either made up of natural crowns made of ivory. Endodontically treated teeth with defective coronal aspects very often need to be restored with a post and core as foundation for the final restoration. The post systems available are custom made posts and prefabricated post. Fiber reinforced posts reduces chair time, treatment cost and also easy removal if endodontic retreatment is required. Failure of restoration using fiber reinforced posts occurs due to dislodgement of the post most frequently at the post adhesive junction. Several studies reveal that sandblasting along with surface treatment with different types of silane coupling agent increases the bond strength. Studies have also shown that despite of the increased surface available for bonding the resin luting agent, sandblasting alone did not significantly improve the bond strength between the post and core material, unless it was not followed by silanization. There were no studies conducted to compare both the type of silane coupling agents. Hence a study was conducted to compare and evaluate the shear bond strength between glass fiber reinforced post and resin based luting agent after various surface treatments.

ASSESSMENT OF THE KNOWLEDGE ABOUT ROUTINE LABORATORY PROCEDURES IN FABRICATION OF FIXED DENTAL PROSTHESES AMONGST DENTAL LABORATORIES.

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The success of fixed dental prosthesis (FDPs) delivered to the patients depend upon the implementation of appropriate laboratory procedures and dental materials which are required during fabrication of that prosthesis. Inappropriate technique during it's fabrication may not always hamper the esthetic end results or fit, but may also hamper the longevity as well. Thus knowledge about the dental materials as well as the basic laboratory procedures among the dental laboratories should be regularly assessed to assure good quality work. This survey was conducted to assess the knowledge among laboratory technicians regarding the routinely used laboratory procedures and materials for fabrication of FDPs in dental laboratories in Western Maharashtra region with the help of a validated questionnaire. A survey sheet was prepared based on this questionnaire that was circulated personally. The feedback was then gathered individually from laboratory technicians in Western Maharashtra region and was then statistically analyzed to achieve the objectives of the study.

EFFICACY OF AN HERBAL PASTE AS DENTURE CLEANSER- A PILOT STUDY

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Prostheses are often neglected in maintenance due to nature of design, age, lack of awareness, leading to microbial contamination. Microorganisms like *Candida albicans* grow on dentures in the mouth. Over the years commercially available denture cleansers have been the only mode of cleaning/disinfecting dentures. These usually contain many chemical substances which could be harmful to the patients. Nowadays people prefer natural products for day-to-day use, thus naturally available substances and traditionally used as cleansers can be checked for cleaning ability. A short study was conducted to check the efficacy of an herbal paste as denture cleanser.

ASSOCIATION BETWEEN AGE GROUPS & OCCLUSAL PLANE USING CUSTOMIZED BROADRICK'S OCCLUSAL PLANE ANALYZER AMONG 18-60 YEARS OLD POPULATION IN KHED TALUKA CITY: A CROSS SECTIONAL STUDY

VARSHARANI DHAKNE

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The determination of occlusal plane is one of the most important clinical procedures in Prosthodontic rehabilitation of the patients. Correct occlusal plane of orientation is one of the most important factors for the stability of the removable dentures and for the achievement of good esthetics, phonetic and masticatory function as well as for the patient's satisfaction. When the occlusal plane of orientation is lost by complete or partial edentulism, it should be relocated correctly by means of Prosthodontic restoration. In prosthodontics to locate the correct occlusal plane one of the instruments used is Broadrick's Occlusal Plane Analyzer (BOPA) which is easiest and hassle free. BOPA is used to determine and achieve an occlusal plane that fulfills both the functional, occlusal as well as the aesthetic requirement in cases that require full mouth rehabilitation. Total 40 subjects are selected 20 from urban area & 20 from rural area of 18 to 60 years of age group. Out of 40 subjects 20 are females and 20 are males. This study is done to show association between age groups & occlusal plane using customized Broadrick's occlusal plane analyzer among 18-60 years old population in khed taluka city.

SAFETY ASSESSMENT OF HUMAN DENTAL PULP DERIVED MESENCHYMAL STEM CELLS ADMINISTERED BY INTRA MUCOSAL AND INTRA BONY ROUTES IN RABBITS- AN ANIMAL STUDY

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Stem cells have enormous potential to reduce sufferings of many diseases that currently have no effective therapy. Stem cells are master cells that have capability for self-renewal, potency and capability to differentiate to many cell types. The adult mesenchymal stem cells are being used in the head and neck region for orofacial regeneration (including enamel, dentin, pulp and alveolar bone) with their proliferative and regenerative properties, their use in the treatment of oral mucosal lesions is still in initial stages. As regenerative medicine is the next level in medical science, the use of mesenchymal stem cells has been a hope of possible solution to prevent many diseases. At present, it is challenging to treat completely and partially edentulous patients with oral mucosal lesions like oral sub mucous fibrosis, oral ulcers, oral mucositis, denture stomatitis, oral carcinomas and implant treatment modalities in prosthodontics. This study aims to evaluate the safety and histopathological changes of human dental pulp derived mesenchymal stem cells administered by intra mucosal and intra bony on rabbits.