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PROCEEDINGS

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2DO CONGRESO INTERNACIONAL DE ESPECIALIDADES ODONTOLÓGICAS

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October 2-4, 2024

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WORDS FROM THE PRESIDENT

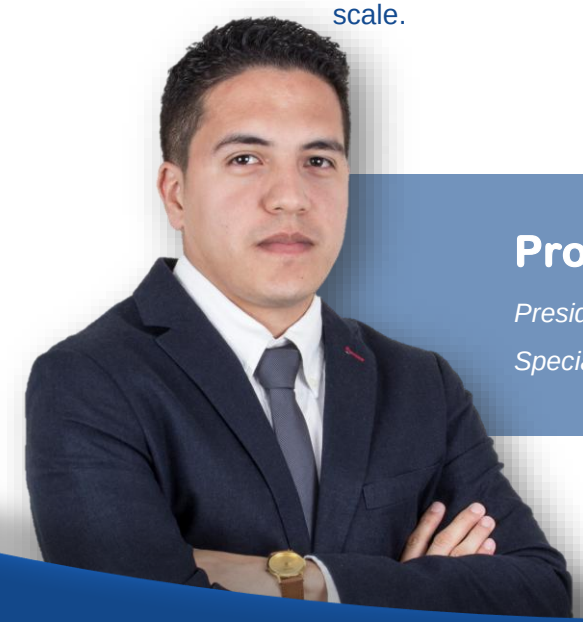
The Second International Congress of Dental Specialties CIEO 2024, organized by the School of Dentistry at UEES, successfully concluded, leaving a significant mark in the field of dentistry. The event brought together 5 national and 30 international speakers, who shared their expertise and knowledge with attendees, including students and dentists from different cities across Ecuador, contributing to the training and professional development of those in the field.

During the congress, multiple activities were held in five simultaneous rooms, featuring a wide range of lectures, hands-on workshops, and interactive panel discussions. These activities provided an opportunity for participants to engage directly with leading experts, ask questions, and discuss the latest advancements in dental science. Additionally, practical courses were offered in the School of Dentistry building, where attendees were able to refine their clinical skills and techniques in a unique academic environment. This combination of theoretical and practical learning created a well-rounded educational experience for all participants.

Furthermore, the event featured the participation of prominent dental associations, such as the Orthodontic and Orthopedic Society of Guayas, the Endodontic Society of Guayas, the Ecuadorian Orthodontic Society, and the Ecuadorian section of the IADR, along with commercial entities from the dental sector. These companies showcased the latest technologies and products for clinical development, offering participants an insight into cutting-edge tools and innovations that are shaping the future of dentistry.

One of the most anticipated moments of the event was the awarding of the scientific poster competition, in the categories of Clinical Case and Original Research. The winners of the Original Research category qualified for a second stage, where they will compete for the prestigious Hatton Award at the IADR to be held in Barcelona. This opportunity provides an unparalleled platform for these researchers to present their work on an international stage, allowing them to continue excelling in the field of dental research and contributing to the advancement of knowledge in the profession.

The CIEO 2024 Congress reaffirms UEES's commitment to academic excellence, innovation in dentistry, and the promotion of collaboration between institutions and professionals on a global scale.



Prof. Dr. Pablo Benítez Sellán

President of the 2nd International Congress of Dental Specialties (CIEO)

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CC

Case Report

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CC 01

PORCINE COLLAGEN MATRICES FOR THE TREATMENT OF MULTIPLE GINGIVAL RECESSIONS: A CASE REPORT WITH FOUR YEARS FOLLOW-UP

Arellano MV*[1], Tinajero MA[1], Pigossi SC[2], Cirelli JA[3], Cirelli T[4]

1- School of Dentistry, Universidad Internacional del Ecuador (UIDE), Quito, Ecuador

2- School of Dentistry, Universidade Federal de Uberlandia (UFU), Uberlandia, Brazil

3- School of Dentistry, Sao Paulo State University (UNESP), São Paulo, Brazil

4- School of Dentistry, University Center of Associated School (UNIFAE), São Paulo, Brazil

Gingival recession refers to the apical displacement of gum tissue, primarily caused by biofilm accumulation. The standard treatment involves the coronal advanced flap technique with connective tissue graft, but this method has drawbacks, including increased morbidity, postoperative complications, and extended surgical times. In response to these challenges, collagen matrices have been developed that eliminate the need for a donor site. This case report examines the effectiveness of the porcine matrices Mucoderm® and Fibro-Gide® in a 37-year-old male patient with multiple bilateral Miller Class I gingival recessions. Following root planning, 37% phosphoric acid was applied before the matrices were placed. At the 60 day follow-up, complete root coverage and a noticeable increase in keratinized tissue were observed on the Fibro-Gide® side. After one year, no significant differences were found between the two matrices, with high patient satisfaction. The flap technique used avoided vertical incisions that could compromise blood supply. Fibro-Gide® was evaluated for its stability and rapid tissue integration, and to our knowledge, there have been no clinical studies published to assess its effectiveness in recession coverage. Conversely, Mucoderm® was chosen for its revascularization properties, making it comparable to connective tissue grafts in soft tissue thickening. In conclusion, both matrices demonstrated effectiveness in this case. However, further studies are necessary to explore their clinical potential and long-term limitations.

Keywords: Collagen; Gingival recession; Graft

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CC 02

EVALUATION OF THE EFFICACY OF THE MODIFIED FREE GINGIVAL GRAFT TECHNIQUE.

Sandy GB*[1]; Roberto LW; Antonio L[1]

1- School of Dentistry, Universidad Espíritu Santo (UEES), Samborondón, Ecuador.

In this clinical case, a 56-year-old female patient arrives at the UEES dental clinic due to diastemas in her lower teeth and she wanted to have them fixed with orthodontics. Regarding the general diagnosis, the patient presented moderate separation of the anterior-inferior sector. Regarding the treatment plan; periodontal hygiene phase: patient motivation and education, oral physiotherapy, sub- and supragingival scaling, scaling and root planning, coronal polishing. Corrective phase:Prosthetic: occlusal guard, Orthodontics: anterior-inferior sector intrusion, correct habit of pushing tongue forward. Periodontal: free gingival graft (preventive method before starting orthodontics due to the thin phenotype and absence of keratinized gum in the lower anterior sector). Root surface exposure by GR is frequently associated with dentin hypersensitivity, root caries, non-carious cervical lesions (NCCL), poor plaque control, and unaesthetic appearance. Numerous periodontal plastic surgery techniques have been suggested for the treatment of GRs. Connective tissue graft (CTG) with coronally advanced flap (CAF), obtaining keratinized tissue gain and achieving predictable treatment results. Another widely used procedure is the tunnel technique, which refers to the use of a supraperiosteal flap, improving the vascularity of the flap and graft. There are other techniques when unfavorable mucogingival conditions have to be managed, such as the marginal insertion of the frenulum, a shallow vestibule, among others, and the free gingival graft (FGI) has been proposed. The IGL is a soft tissue graft taken from the palate with the overlying epithelium.

Keywords: Gingival recessions; Gingival graft; Gingival phenotype

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CC 03

MANAGEMENT OF POST-ORTHODONTIC GINGIVAL RECESSIONS: PERIODONTAL PLASTIC SURGERY AND COMPOSITE CERVICAL RESTORATIONS

Garcia AKV*[1], Vasquez PSG[2]

1- Facultad de Ciencias de la Salud, Universidad José Antonio Páez, Venezuela
2- Facultad de Ciencias de la Salud, Universidad Peruana Cayetano Heredia, Perú

This clinical case describes a 35-year-old patient with gingival recession and exposure of dental necks following prolonged orthodontic treatment. Clinical evaluation revealed root exposure and significant gum involvement. The recession, associated with poor dental positioning of the teeth, resulted in sensitivity and aesthetic deterioration. A combined treatment was proposed, involving the removal of leaky restorations and a connective tissue graft from the palate to cover the affected areas. This surgical technique aimed to restore gingival thickness, while new composite resin restorations at the cervical level covered the exposed surfaces, ensuring aesthetic and functional integration. Results showed 85% gingival coverage, a 70% reduction in dental sensitivity, and a significant improvement in dental aesthetics. The discussion focuses on the relationship between orthodontics and periodontal health, highlighting that gingival recession is a common side effect in orthodontic patients, with a prevalence of up to 35%. This case provides new insights into the effectiveness of combined techniques in the rehabilitation of gingival recessions, suggesting that multidisciplinary management and the combination of gingival grafts and cervical restorations are effective in rehabilitating post-orthodontic recessions, offering a viable aesthetic and functional solution that improves the patient's quality of life. Additionally, it emphasizes that incorporating periodontal evaluations during orthodontic treatment can prevent complications, setting a precedent for future research in this field.

Keywords: Orthodontics; Gingival recession; Periodontal plastic surgery; Composite restorations

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CC 04

MANAGEMENT OF C-SHAPED ROOT CANAL WITH INTENTIONAL REPLANTATION: CASE REPORT

Ortiz G*[1], Ramos AK[1]

1- School of Dentistry, Universidad Espíritu Santo (UEES), Samborondón, Ecuador.

Several meta-analysis studies show that the survival rate ranges between 88 and 95%, taking into account that its possible complications include inflammatory root resorption (0-27%) and ankylosis (0-25%). The purpose of this case report is to show the clinical procedures of the intentional replantation technique as an alternative to the resolution of a complex case. A 27-year-old female patient presented pain after a previously performed treatment. The x-ray showed a previously treated tooth and the presence of a post. Retreatment was carried out, the post was removed and filled, and subsequently a persistent sinus tract presented after retreatment. Intentional replantation was planned; Prior to this, the tooth was left in disocclusion and prophylactic antibiotics were administered. The next step was anesthesia and atraumatic extraction was performed, trying to avoid damage to the periodontal ligament with forceps. The alveolus was protected from filling with blood and simultaneously the granulomatous tissue was removed, limiting itself to the apical alveolar area of the tooth. Untreated canals were observed in the apical third under a microscope, and the fragment was cut while keeping the root surface moist with sterile saline solution. The total work time was 10 min, which was enough time to prepare the apical third by resecting the apical 3 mm with a high-speed carbide bur and preparing it using an ultrasound tip to then be sealed with white MTA putty. Next, the tooth was reinserted into its alveolus with subsequent placement of a flexible splint to maintain the tooth, limiting its movement. The case has been monitored for 8 months without symptoms, with subsequent check-ups scheduled for up to 3 years.

Keywords: root canal, replantation, preservation

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CC 05

MULTIDISCIPLINARY MANAGEMENT OF DENTOALVEOLAR TRAUMA

Freire Calxito K*[1], Ramos AK[1]

1- School of Dentistry, Universidad Espíritu Santo (UEES), Samborondón, Ecuador.

This case report describes a 17-year-old male patient who presented at the school of dentistry clinic with pain in the upper anterior teeth due to a dentoalveolar trauma that had progressed over 72 hours. Radiographic studies were ordered, revealing displacement of tooth #2.1, and a lateral luxation was diagnosed. The affected area was cleaned with saline solution, 3% mepivacaine without vasoconstrictor was infiltrated in the vestibular area of tooth #2.1, and a regional nasopalatine nerve block was performed. An atraumatic extraction was carried out using forceps #150, and the tooth was carefully repositioned until it reached the bottom of the alveolar socket. In the same appointment, splinting was performed using a 16x22 braided wire, which provided the necessary flexibility to promote periodontal ligament healing. Ibuprofen 400 mg and amoxicillin 500 mg were prescribed as part of the postoperative pharmacological management. After four weeks, a sinus tract was observed on tooth #2.1, and the mobility of the tooth was assessed to proceed with root canal treatment. Conventional clamps were not used on this tooth; instead, Wedjets from the Coltene brand were used to ensure isolation without compromising the tooth due to the force exerted by the clamp. The multidisciplinary approach in this clinical case was essential for the success of the treatment. Collaboration between the specialties of endodontics, periodontics, and orthodontics allowed for a comprehensive management of the dentoalveolar trauma presented by the patient. This interdisciplinary approach not only improved the prognosis of the affected tooth but also optimized the functional and aesthetic outcome for the patient.

Keywords: Luxation; Avulsion; Endodontic

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CC 06

COLOR REPRODUCTION WITH ARTIFICIAL INTELLIGENCE SOFTWARE ASSISTANCE IN CERAMIC VENEER ON FUSED TOOTH WITH CHROMATIC ALTERATION: CASE REPORT

Mendoza ML*[1], Delgado C[1], Garcia C[1], Ledergeber R[1], Benítez PLS[1]

1- School of Dentistry, Universidad Espíritu Santo (UEES), Samborondón, Ecuador.

This report demonstrates the use of artificial intelligence (AI) for precise color reproduction in ceramic veneers applied to a fused tooth with chromatic alteration. The restoration involved a left central incisor fused with significant chromatic alterations. The clinical procedure included a surgical phase with a connective tissue graft to improve the gingival contour, followed by the use of a digital workflow to plan ceramic crowns (E.max CAD, Ivoclar Vivadent) on the adjacent teeth. Color selection was performed using the Optishade mobile application (Styleitaliano) connected to a spectrophotometer. Subsequently, the Matisse software was used to generate a custom ceramic recipe, considering the influence of layer thickness and background color. Finally, the veneer was cemented under absolute isolation, ensuring aesthetic and functional precision. The results showed that the Matisse software allowed for highly accurate color reproduction, achieving natural integration with the adjacent teeth and eliminating the need for corrections. AI reduces the inconsistencies of traditional subjective color selection methods, optimizing the entire restorative process. In conclusion, AI applied to ceramic restorations significantly improves aesthetic precision, offering efficient solutions for complex cases such as fused teeth.

Keywords: Artificial Intelligence; Veneer; Ceramic

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CC 07

3D PRINTED COMPLETE DENTURE WITH AN ANALOG-DIGITAL WORKFLOW: CASE REPORT

Ullauri A*[1], García E[1], Benítez PLS[1]

1- School of Dentistry, Universidad Espíritu Santo (UEES), Samborondón, Ecuador.

Complete dentures often present significant challenges regarding precision and stability. With advances in 3D printing technologies and combined analog-digital workflows, new approaches have been developed that optimize both clinical efficiency and functional and aesthetic outcomes. This case report presents the treatment of a 70-year-old edentulous female patient, managed with an analog-digital workflow and fabricated through 3D printing. Preliminary impressions were taken using alginate for the lower jaw and digital scanning for the upper jaw. Base plates were designed and 3D printed, over which wax rims were placed for the determination of vertical dimension and centric relation. Subsequently, border molding was performed with the base, and a functional impression was taken using light body silicone. After obtaining the final impressions, a prototype printed in biocompatible resin was tested to evaluate occlusal and esthetic adjustments. Finally, the definitive prosthesis was 3D printed using a high-precision printer. The process significantly reduced both clinical and laboratory time, with increased precision in denture adaptation and occlusion. The patient expressed excellent satisfaction with the final result, reporting improved comfort, functionality, and aesthetics compared to previous experiences with conventional dentures. This treatment approach, by integrating analog techniques with digital technologies, optimized both treatment efficiency and predictability.

Keywords: Complete Denture; 3D printing; Digital

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CC 08

WEAR MEASUREMENT USING METROLOGY SOFTWARE COMPARING TWO TYPES OF CAD/CAM MATERIALS USED IN ONLAY RESTORATIONS: CASE SERIES.

Lomas GD*[1], Saavedra G[1], Bresciani E[1], Benitez PLS[1]

1- School of Dentistry, Universidad Espíritu Santo (UEES), Samborondón, Ecuador.

This study aimed to demonstrate, through metrology software, the wear of onlay restorations using two CAD/CAM materials: composite resin (Grandio Bloc, Voco) and lithium disilicate (EmaxCAD, Ivoclar). Intraoral scanning and metrology software (GOM Inspect) were employed to measure the wear in four patients over a 1-year follow-up period. After tooth preparation, the restorations were digitally designed with Exocad software and fabricated using CAD/CAM technology with the Ceramill Motion 2 milling unit (AmannGirrbach). The lithium disilicate restorations underwent a crystallization process prior to cementation. The restorations were cemented following standardized protocols: the lithium disilicate surfaces were treated with hydrofluoric acid and silane, while the resin restorations were cemented with dual-cure resin cement. Clinical evaluations and intraoral scans were conducted at 6 months and 1 year, comparing the results to the baseline measurements. The results showed insignificant wear in both materials. The composite resin restorations exhibited slightly more wear than the lithium disilicate restorations, though still within clinically acceptable limits. CAD/CAM technology and metrology software allowed for precise evaluation, with lithium disilicate demonstrating superior mechanical properties. This approach enhances the longevity of restorations through regular monitoring and necessary adjustments.

Keywords: CAD/CAM; Composite resin; Ceramic; Wear

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CC 09

EFFECT OF DUAL PHOTOBIOMODULATION ON HEALING AFTER ROOT COVERAGE WITH DIFFERENT TISSUE GRAFTS.

Benalcázar JK*[1], Carvalho JL[2], Oliveira GJPL[2], Tinajero MA[1]

1- School of Dentistry, Universidad Internacional del Ecuador (UIDE), Quito, Ecuador
2- School of Dentistry, Universidade Federal de Uberlandia (UFU), Uberlandia, Brazil

This study evaluates the effectiveness of dual-wavelength photobiomodulation (PBMT) in periodontal tissue healing following coronally advanced flap surgery for root coverage, using either connective tissue grafts (CTG) or porcine collagen dermal matrix (MDS) in a randomized clinical trial involving 32 patients with bilateral gingival recessions. A split-mouth design was utilized for the study, allowing each patient to receive treatment on both sides. The recessions were treated with and without PBMT, applying red and infrared wavelengths across 5 sessions. Clinical parameters, including probing depth, clinical attachment level, recession height, and the thickness and height of keratinized mucosa, were assessed, along with the percentage of root coverage at 1, 3, 6, and 12 months. Pain and aesthetics were evaluated using a VAS scale, and cytokine expression was analyzed through proteomics on days 3 and 7 postoperatively. The results indicated that PBMT increased root coverage and reduced recession height, particularly in the MDS group. The CTG graft showed a significant increase in keratinized mucosa thickness, achieving over 90% root coverage compared to the MDS group. These findings align with previous studies showing CTG's effectiveness in enhancing mucosal thickness, while MDS combined with PBMT provided acceptable long-term outcomes. PBMT improved healing and clinical results in both groups, with superior aesthetic and tissue outcomes observed in the CTG group.

Keywords: Phototherapy; Periodontal Surgical Procedures; Tissue Healing

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CC 10

CEMENT-RETAINED UNITARY REHABILITATION WITH DYNAMIC SCREW FOR ANGULATION CORRECTION: CASE REPORT

Sarduy AS*[1], Marcillo OT[1]

1- School of Dentistry, Universidad Espíritu Santo (UEES), Samborondón, Ecuador.

Placing a unitary implant in an inadequate angulation can complicate rehabilitation. In this context, dynamic screws are a key solution, allowing to maintain the reversibility of the crown on the implant. They offer advantages such as a high torque, correction of the chimney outlet in occlusal or palatine, and facilitate digital planning. Describe the rehabilitation process of a cement-screwed unitary crown using a dynamic screw. 44-year-old female patient, ASA I, goes to the Postgraduate clinic to rehabilitate an implant (BioHorizons Tapered Internal 3.4 x 12 mm, Birmingham, USA). We designed a monolithic zirconium crown (Zir Cad Prime BL4, Ivoclar Digital) screwed with a dynamic screw (Precision Angled Screw, Biohorizons, USA). We carry out the APC protocol for cementing on the hybrid pillar. The surface sandblasting is carried out in the Basic Eco (Renfert) sandblaster at 2 bars of pressure and 10mm distance. For cementation we use the Bisco Duo Link Universal Adhesive Cementation System Kit, where Z-Prime was the joining agent and with the Resin Luting Cement Dual - Cure (Schaumburg, Illinois, USA). UU, 1981) we cement the crown on the hybrid pillar. The dynamic screw is essential in dental implantology to ensure the reversibility, stability, functionality and aesthetics of rehabilitations in implants with incorrect angulation.

Keywords: Dynamic screw; Implant; Crown

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CC 11

MODIFIED SLING AND TAG SUTURE, A LESS INVASIVE AND MORE STABLE APPROACH FOR CORONALLY ADVANCED FLAP SUTURING: A CASE REPORT

Arellano MV[1], Graças M[2], Ledergerber R[3], Tinajero M[1], Frazao V[2], Gonzales J[4], Gomez JC[4]

1- School of Dentistry, Universidad Internacional del Ecuador (UIDE), Quito, Ecuador
2- Núcleo Odontologia, Centro Universitário Arnaldo Janssen, Belo Horizonte, Brazil
3- School of Dentistry, Universidad Espíritu Santo (UEES), Samborondón, Ecuador
4- Centro Universitario de Ciencias de la Salud, Universidad de Guadalajara, México

In recent decades, the predictability of recession coverage has seen significant advancements. The success of mucogingival surgeries is attributed to various factors, among which the choice of materials and suture techniques is fundamental. Several authors have proposed different techniques for suturing papillae in root coverage surgery, all aiming to stabilize the flap without compromising its vascularization. This study presents the case of a 30-year-old healthy, non-smoking male patient with multiple Type 1 gingival recessions in the second quadrant. This condition was addressed with a coronally advanced flap (CAF) combined with a connective tissue graft and sutured with a modification of the Sling and Tag conventional technique. After 7 months, complete root coverage was achieved in all treated teeth. The modified technique integrates the Sling and Tag suture with a suspension technique, requiring fewer papilla perforations. This is advantageous, as sutures can induce tissue reactions and increase the risk of wound infection. Future studies should explore the association and comparison of the proposed technique with other flap stabilization methods, its impact on root coverage surgeries, specific indications for the different techniques, and more. In conclusion, the modified technique presents a less invasive approach compared to the original Sling and Tag method, potentially leading to improved clinical outcomes and those reported by patients.

Keywords: Gingival recession; Surgical flap; Suture technique

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Original Research

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OR 01

PERIODONTAL SCREENING AND RECORDING, STANDARDIZATION AND IMPROVEMENT FOR CLINICAL PRACTICE

Benalcázar JK*[1], Tinajero F[2], Mancheno M[3], Encalada C[4], Carpio V[5], Tinajero MA[1]

1- School of Dentistry, Universidad Internacional del Ecuador (UIDE), Quito, Ecuador.
2- School of Dentistry,Universidad de los Hemisferios, Quito, Ecuador.
3- School of Dentistry, Universidad Tecnológica Equinoccial, Quito, Ecuador.
4- School of Dentistry, Universidad Central del Ecuador, Quito, Ecuador.
5- School of Dentistry, Universidad San Francisco de Quito, Quito, Ecuador.

This study presents a bibliometric analysis of research on the Periodontal Screening and Recording (PSR) from 2017 to 2022 in Scopus, with the objective of developing a guide for its implementation in dental clinics to facilitate periodontal assessment and early disease detection. A total of 40 publications were identified, with Italy leading in research output (10 studies), and dentistry being the primary contributing field (21 documents). Journals published 92% of the articles. The developed guide includes steps for equipment preparation, patient instruction, and the evaluation of factors such as dental mobility and calculus. Results indicate that the PSR is crucial for timely intervention and enhances dentist-patient communication by facilitating an understanding of periodontal status, thus encouraging active patient participation in treatment. The PSR implementation standardized assessments, improves the quality of care, and contributes to dental research, although adjustments may be necessary in complex cases. In conclusion, PSR is effective for early detection and prevention of periodontal complications, supporting long-term oral health.

Key words: Periodontal Index; Periodontal Diseases; Preventive Dentistry

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OR 02

PREVALENCE OF SKELETAL MALOCCLUSIONS IN 3D ANALYSIS OF PATIENTS FROM THE CLINIC OF THE "UNIVERSIDAD SAN FRANCISCO DE QUITO"

Crespo ME*[1], Gutiérrez CG[1], Meneses C[1]

1- School of Dentistry, Universidad San Francisco de Quito, Quito, Ecuador.

With the 3D Orthodontic diagnostic tools that we have as graduate students, our interest in starting to use it from day one was born and we asked ourselves the following question: What is the prevalence of 3D skeletal malocclusions in the clinic of the Universidad San Francisco de Quito? The main purpose of the study is to determine the prevalence of skeletal malocclusions in CBCT scans of patients aged 21 to 60 years with Steiner craniometric tracings from the USFQ clinic. It's a descriptive study with a sample of 22 CBCT. Romexis software will be used with Steiner analysis. Data processing will be performed with IBM SPSS. The distribution of patients by skeletal class, according to Steiner, Class II was the most prevalent, corresponding to 68.2% of the sample, then Class I at 31.8% and finally Class III didn't present data. In the study made in the province of Guayas, Layana determined that class I is more frequent, then class II and finally class III. On the other hand, Borja, in the province of Azuay, the most frequent malocclusion is skeletal class III. Both the province of Chimborazo by Sánchez and in the province of Pichincha by Guerrero determined that the most frequent malocclusion is Class II, followed by class I and finally class III, which agrees with our results. The craniometric tracings help us to have a more precise diagnosis, therefore more studies with this analysis are recommended to know the prevalence in Quito.

Keywords: Skeletal; Orthodontic; Cone-Beam Computed Tomography

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OR 03

WAITING TIME AND WAYS OF ACCESSING SPECIALIZED HEALTH SERVICES IN PUBLIC HOSPITALS IN ECUADOR.

Figueroa S*[1], Ayala E[1], Armijos F[1]

1- School of Dentistry, Universidad Espíritu Santo (UEES), Samborondón, Ecuador.

To determine the average waiting time to receive specialized medical care in public hospitals in Ecuador and to analyze the functioning of the referral and counter-referral systems, in order to identify areas for improvement in the management and equity of access to these services. A cross-sectional study was conducted using structured surveys of patients who received specialized consultations at 26 public hospitals in Ecuador. The sample included 5,309 patients, proportionally selected according to the number of outpatient visits. The questionnaire included questions about sociodemographic, ethnocultural aspects, and waiting times to access services. Data were analyzed using descriptive and inferential statistics through SPSS software. The results indicated that waiting times for specialized care are prolonged, with many patients waiting months for a consultation. It was observed that informal access, such as using personal networks, can shorten waiting times but also creates inequities in the healthcare system. Additionally, inefficiencies in the referral and counter-referral system contribute to these long waiting times. The referral and counter-referral system in Ecuador is not functioning optimally, resulting in prolonged waiting times and unequal access to specialized health services. System management improvements are needed to reduce waiting times and ensure more equitable access for all patients.

Keywords: Waiting time; Specialized medical; Public Hospitals.

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OR 04

MEASUREMENT OF MASTICATION EFFICIENCY IN PATIENTS CARRIERS OF REMOVABLE PARTIAL PROSTHESES

Ocampo EP*[1], López KN[2], Barciela MLG[2], Graú IL[2], Soto AR[2]

1- School of Dentistry, Universidad Católica de Santiago de Guayaquil, Guayaquil, Ecuador
2- Facultad de Estomatología, Universidad de Ciencias Médicas de la Habana, Cuba

Masticatory efficiency measures the quality of the masticatory function, evaluating how many chewing strokes are necessary to adequately crush food. The objective of the present study was to determine the masticatory efficiency in patients with removable partial dentures treated at the dental clinic of the Catholic University of Santiago de Guayaquil during the period A – 2024.Longitudinal, descriptive study. The study population consisted of 30 patients wearing removable partial dentures who performed 20 chewing strokes to evaluate chewing efficiency. Chewing gum was used (Bubble Boy brand; green and red color; 3 cm long x 1 cm wide). The data were analyzed using the digital image analysis system of the Perceptodent program. To analyze the results, normality tests were applied using the Kolmogorov-Smirnov and Shapiro Wilk methods and the Wilcoxon signed rank test method to test hypotheses. The Masticatory Efficiency was higher in Women, with 80%, compared to men, who obtained 60%. An association was found between chewing efficiency and the number of teeth. The greatest differences in improvement after treatment: CLASS I (45% to 60%) and CLASS I – TOTAL (60% to 65%) according to the Kennedy Classification. Wilcoxon showed that the application of prosthetic treatment produces a significant improvement in Masticatory Efficiency (Z = 2.994; P = 0.003). These findings support the effectiveness of removable partial dentures as a viable solution to restore masticatory function in patients, contributing significantly to their quality of life.

Keywords: Mastication Efficiency, Dental Prosthesis, Kennedy classes

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OR 05

PERCEPTION OF DENTAL STUDENTS IN THE USE OF INTRAORAL SCANNING: A PILOT STUDY

Sánchez MP*[1], Sandoval CP[1], Benitez PLS[1]

1- School of Dentistry, Universidad Espíritu Santo (UEES), Samborondón, Ecuador.

This study evaluated the perceptions and performance of dental students before and after training on the use of intraoral scanners. The study was approved by the Human Research Ethics Committee of the Instituto Superior Tecnológico Portoviejo, under protocol number 1721144105. Twenty students without prior experience in using this technology participated, completing a questionnaire before and after the training. The training included both theoretical sessions, which covered the principles and functioning of intraoral scanning technology, and practical sessions using the TRIOS 3 (3Shape, Copenhagen, Denmark) scanner. Students practiced scanning on a typodont attached to a mannequin head, simulating a real clinical environment. After the training, significant improvements were observed in all evaluated areas: familiarity with the technology increased from 1.90 to 5.35, comfort from 4.25 to 7.50, confidence from 3.30 to 7.00, perception of accuracy from 3.80 to 7.10, and software competency from 3.85 to 7.40. Statistical tests confirmed significant differences ($p < 0.001$) in perceptions and performance. The results suggest that proper training enhances technical competence and builds confidence in using advanced technologies, benefiting clinical practice in dentistry. This study emphasizes the need for integrating both theoretical and hands-on training with digital tools like intraoral scanning into dental education curricula to prepare students for future professional practice.

Keywords: Intraoral scanner; Training; Perception.

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OR 06

EFFECT OF STAINING SOLUTION ON THE GLOSS AND BRIGHTNESS STABILITY OF 3D-PRINTED RESINS FOR PERMANENT CROWNS: AN IN VITRO STUDY

Mendoza A*[1], Santos L[2], Bresciani E[2], Benítez PLS[1]

1- School of Dentistry, Universidad Espíritu Santo (UEES), Samborondón, Ecuador.
2- Instituto de Ciência e Tecnologia, Universidade Estadual Paulista, São José dos Campos, Brasil

This study investigated the impact of various staining solutions on the stability of gloss and lightness in 3D-printed resins used for permanent dental crowns. The study analyzed how factors such as printing orientation and sample thickness influence the aesthetic properties of these resins, particularly in terms of their durability under daily exposure to staining agents. Disk-shaped resin samples were fabricated with thicknesses of 1.5 mm and 2.0 mm, printed in three orientations: 45 degrees, vertical, and perpendicular. The samples were immersed in staining solutions, including coffee, tea, and red wine, for 21 days, with measurements of gloss and brightness taken using high-precision spectrophotometers to assess changes before and after exposure. The results revealed that printing orientation significantly affects the gloss of the resins ($p=0.020$), with vertically printed samples showing greater gloss stability. While sample thickness did not significantly impact gloss, it did influence brightness, with thinner samples displaying higher brightness levels ($p<0.001$). A significant interaction between thickness and printing orientation was also observed regarding brightness ($p<0.001$), suggesting the need for careful consideration of both factors in clinical practice. These findings indicate that selecting the appropriate printing orientation and optimizing the thickness can enhance the aesthetic durability of permanent crowns, improving their resistance to discoloration caused by common oral staining agents and contributing to long-lasting esthetic results in dental restorations.

Keywords: 3D printing; Gloss; Crown

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OR 07

BRUXISM AND CLINICAL MANIFESTATIONS IN THE STOMATOGNATHIC SYSTEM IN DENTAL STUDENTS

Mosquera T*[1], Heredia E[1]

1- School of Dentistry, Universidad Católica de Santiago de Guayaquil, Guayaquil, Ecuador

Bruxism is a phenomenon characterized by the involuntary contraction of the masticatory muscles under non-physiological conditions, leading to intermittent masticatory movements and potentially causing various severe health complications. There are two main types of bruxism: sleep bruxism (SB) and awake bruxism (AB). The complications of bruxism are diverse and can affect dental health and quality of life. To identify students of the UCSG dentistry program with a diagnosis of bruxism (Bruxis Status). It is an observational, descriptive, cross-sectional study among students of the Dentistry program at UCSG during the period A-2024 to identify bruxism and the relationship of the selected variables with this entity. This study was approved by the Ethics Committee for Research in Human Beings of the Catholic University of Santiago de Guayaquil, with an approval code of protocol No: CEISH-UCSG-005-2024. A final sample of 425 students was obtained in which the BRUXIS STATUS was applied. The present study demonstrated that a high percentage of students in the UCSG dental program were diagnosed with bruxism. The most relevant signs and symptoms include occlusal wear and fatigue of the masticatory muscles. These findings underline the importance of developing and implementing specific preventive and management strategies aimed at mitigating the physical consequences of this disorder.

Keywords: Bruxism; Awake; Sleep

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