

Oral Presentation

Oral Presentation 1

TITLE:- MARPE (Microimplants Assisted Rapid Palatal Expansion): SYSTEMATIC REVIEW

AUTHORS: *Pitino M¹, Martínez Asunsolo P², Paredes Gallardo V³, Gandía Franco JL⁴*

Master de Ortodoncia, Universidad de Valencia: 1 Resident Master, 2 Master Faculty, 3 Master Assistant Director, 4 Master Director.

Introduction: The rapid palatal expansion (RPE) it's a reliable treatment during prepuberal age, but different studies demonstrated that this technique behaves unwanted effects in adult age because of the fusion of maxillaries and intermaxillaries sutures. Surgical intervention with corticotomies applied on intermaxillaries sutures to allow palatal expansion (SARPE), it's one of the treatments indicated in adults with maxillar compression, but this technique presents many complications. Palatal expansion in adults using microimplants supported appliances may be an effective method to achieve good results avoiding surgical procedures.

Objectives: The purpose of this systematic review was to evaluate the reliability and efficiency of Microimplants supported appliances as palatal expanders in adults who presented a maxillar transversal compression (minimum 6 mm), with the goal to establish if it is possible to avoid surgical intervention by corticotomies (SARPE) in these cases.

Material and Methods: A systematic review was realized on the following medical databases: Medline, Cochrane Library, Scopus y Embase. Respecting the pre-established search keywords, all the articles published in the last ten years were included,

Results: From the first research 275 articles were found. Since inclusion and exclusion criterias were applied, the total number of 23 articles were selected.

Conclusions: The reliability and efficiency of Microimplants supported appliances as palatal expanders in adults who presented a maxillar transversal compression (minimum 6 mm) has not been tested on many clinical trials yet. Even though, in the medical literature we can report some articles supporting the efficiency of this treatment on this kind of patients (especially in young adults).

Oral Presentation 2

TITLE:- BONE DENSITY IN MAXILAR TUBEROSITY

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Objectives: To examine the bone density of the maxillary tuberosity in width, measured in the axial plane, in height and length measured in the sagittal plane and to define the area of highest density and bone quality.

Material and Methods: A total of 175 patients of both sexes with ages between 20 and 50 years were selected and their CBCT images were obtained and studied.

Results: Hounsfield units, which measure the bone density of the maxillary tuberosity in the established planes, are not an accurate measurement method. Although there are variations in the bone quality that this location presents, indicative patterns have been determined prior to the insertion of micro screws for orthodontic purposes such as the determination of a significant increase in bone density - measured in height in the sagittal plane - progressive from the most distal region of the distobuccal root of the second molar superior to the most distal region of the maxillary tuberosity.

Conclusions: The determination of the bone density of the maxillary tuberosity together with the study of its anatomical characteristics (width, height and length) using the conic beam computed tomography, provide useful information for the correct placement of the miniscrews in this region.

Oral Presentation 3

TITLE:- ANALYSIS OF SMILE ANOMALY PERCEPTION BY UNDER-GRADUATE STUDENTS

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Objectives: The objectives of this study were: 1. To know the anomaly that is most perceived as unsightly and which parameters are less recognizable by the population. 2. Analyze the changes produced in the perception of the aesthetics of the smile when the anomalies studied increase. 3. Compare the perception of smile anomalies between dental students and other degrees. 4. Assess whether having received orthodontic treatment influences the perception of the smile. 5. Evaluate if there are differences in the perception of the aesthetics of the smile according to the sex of the evaluators.

Material and Methods: A study was carried out whose sample consisted of 166 students divided into 4 degrees; Medicine, Dentistry, Mechanical Engineering and Technical Architecture. The methodology was based on showing different photographs of a smile with modifications that altered its harmony. Subsequently, they had to evaluate these smiles on a score scale of 1 to 10 (1: Nothing aesthetic and 10: Very aesthetic).

Results: The data were analyzed statistically. There were differences in the perception of smile among the students of the different Degrees, mainly in the students of Dentistry.

Conclusions: 1. The alterations of the features change the aesthetic perception of the smile. 2. The traits generate in their alterations, different degrees of disapproval. 3. The university degree studied is the most determining aspect of aesthetic evaluations. 4. Having taken orthodontic treatment does not affect the qualifications of the evaluators. 5. The sex of the individual is the least influential factor on aesthetic perception.

Oral Presentation 4

TITLE:- COMPARATIVE STUDY OF TWO DIFFERENT BRACKET BASES AND TWO BONDING SYSTEMS

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Acid enamel etching has been the clinically accepted procedure by which current fixed devices are routinely cemented in the patient's mouth. In the current market there is a wide variety of materials available that allow clinically acceptable degrees of adhesion. The objective of the present study is to compare the bond strength of two different bracket bases (meshes vs micro-columns) by means of two adhesion protocols.

To carry out the present study, 60 human central incisors were used, which were divided into 4 groups of 15 samples each depending on the type of base of the bracket (meshes or micro-columns) and the adhesion protocol to be used, comparing two types of adhesives. different (Orthosolo vs Transbond XT). Using a type 4411 Instron cyclic loading machine, the bracket was de-stressed, with a force parallel to the surface of the tooth in the inciso-apical direction at a speed of 1mm / min. The adhesive force to debond each bracket was measured in Megapascals (N / mm²). The results showed that the brackets with the base of micro-columns cemented with Orthosolo adhesive had a superior adhesion strength to the rest of the groups, the results being statistically significant when the value is ($P < 0.05$.) We can conclude in this study that the brackets with the base of micro-columns cemented with the Orthosolo adhesive are those that present a

significantly greater adhesive force than the brackets with traditional base.

Oral Presentation 5

TITLE:- USE OF THE GOSLON INDEX FOR THE ASSESSMENT OF PATIENTS WITH CLEFT LIP AND PALATE

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Objective: Orofacial clefts are one of the most frequent defects of the newborn. The GOSLON index allows us to categorize the dental relations of these patients in order to evaluate and compare the Results: of different therapeutic approaches. The aim is to determine which type of orofacial cleft is the most predominant, as well as the most frequent type of malocclusion and if there is an association between both sexes. We want to evaluate the severity of the malocclusion by applying the GOSLON index and determining its reliability.

Material and Methods: 100 patients with cleft lip and palate from the Master of Orthodontics of the University of València and the Department of Plastic Surgery of the Hospital Universitario del Niño Jesús in Madrid were selected and divided according to the type of cleft they presented. The 65 plaster models of patients with unilateral cleft lip and palate were analyzed and classified into one of the 5 groups of the GOSLON index.

Results: Unilateral cleft lip and palate was the most predominant. The prevailing malocclusion was Class III and no significant differences were found between both sexes. The GOSLON 3 was the most found. The application of the GOSLON index has turned out to be reliable and trustworthy.

Conclusions: The GOSLON index is a reliable method that allows us to categorize in an easy way the different malocclusions derived from a unilateral cleft of the lip and palate in order to evaluate the effectiveness of different therapeutic approaches.

Oral Presentation 6

TITLE:- WHITENING IN VITAL TEETH: COMPARISON BETWEEN CLINICAL TREATMENT AND COMBINED TREATMENT

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Objective: The aim of this study was to verify that there will be greater whitening in teeth treated with combined bleaching than in those that have been applied a clinical one and to evaluate the efficiency of the clinical treatment, those cases in which it is not able, or it is not wanted, to carry out the home phase.

Material and Methods: They were used 66 extracted anterior teeth, which were divided into two study groups. On the one hand, the control group (CG) consisted of 33 teeth, which were treated with a clinical guideline using 37.5% hydrogen peroxide (Polaooffice + ®), in a single session of 4 applications of 8 minutes. On the other hand, the study group (SG) consisted of 33 teeth, which were treated with a combined guideline, applying first a clinical treatment as in the CG and, a home treatment with carbamide peroxide at 16% (Polanight®) for 22 days, 90 minutes a day. The colour of the tooth was measured before and after each treatment and was made through an individualized whitening splint with a spectrophotometer (VITA Easyshade V®).

Results: The 66teeth were bleached, showing an increase in luminosity and a shift towards the blue and green colours, where b (yellow-blue axis) was the only variable with a statistically significant change ($p < 0.001$). The CG obtained a significantly higher absolute value ($p < 0.001$) than the SG, being 12.99 for the first one and 19.70 for the second one.

Conclusions: Combined therapy bleached more than clinical one, but both techniques were effective. In addition, it is affirmed that the clinical guideline is valid for those cases in which it is not able, or it is not wanted, to carry out the home phase, since there is no great difference in the CIELab values obtained between groups.

Oral Presentation 7

TITLE:- PROSPECTIVE CLINICAL STUDY OF ZIRCONA FULL-COVERAGE RESTORATIONS ON TEETH PREPARED WITHOUT FINISH LINE: RESULTS AFTER THREE-YEAR FOLLOW-UP

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Objectives: To evaluate the clinical and periodontal behaviour of full-coverage restorations on teeth prepared with the BOPT technique.

Materials and Methods: The study included 147 teeth, between 74 crowns and 27 bridges, from 52 patients. The sample was divided into two groups, crown abutment tooth ($n = 74$) and bridge abutment tooth ($n = 73$), in which the following parameters were measured over a 3-year follow-up: gingival thickness, marginal stability, probing depth, inflammation, bleeding, plaque index, complications and level of patient satisfaction.

Results: The survival rate was 96.5%. At the biological level there was no statistically significant relationship between the restorations and the inflammation of the surrounding gingiva ($p = 0.341$). The rate of recessions was practically null, affecting only 2 crowns, so it is not significant ($p = 0.154$). The thickness of the gum around the crowns had a significant increase of 32.5% the first year ($p < 0.001$), maintaining this thickness throughout the 3 years.

Conclusions: After three years of follow-up, restorations performed on preparations without a termination line achieve satisfactory biomechanical results.

Oral Presentation 8

TITLE:- EVALUATION OF THE SURVIVAL RATE OF SINGLE METAL CERAMIC RESTORATIONS VERSUS RESIN NANO CERAMIC IN IMPLANTS: A 5-YEAR PROSPECTIVE STUDY

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Objective: The aim of this study was to evaluate the behaviour of two kind of restorations (metal ceramic and resin nano ceramic) in implants.

Material and Methods: 42 patients, between 35 and 65 years old, received implant restorations in posterior edentulous areas. After the bone healing period of osseointegration, a random selection was made: half of the implants (n=25) were restored with metal ceramic crowns (group I) using temporary cements while the remaining implants supported resin nano ceramic crowns (group II) with resin cements. All single crowns were bonded on titanium abutments. The biomechanical data analysis of implants and crowns included biological, mechanical and esthetic parameters.

Results: In this study the survival rate for dental implants was 98%. We obtained 80% of success in resin nano ceramic crowns and the survival rate for metal ceramic restorations was 100% after a follow-up period of five years.

Conclusion: Single metal ceramic crowns showed higher survival rates than resin nano ceramics crowns.

Oral Presentation 9

TITLE:- DIFFERENCES IN PERI-IMPLANT BONE LOSS AROUND IMPLANTS WITH DIFFERENT PROSTHETIC CONNECTIONS: A TWO-YEAR PROSPECTIVE CLINICAL TRIAL

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Objective: To analyze peri-implant bone loss around six different types of implant-prosthetic connection over a 2-year follow-up.

Materials and Methods: The patient sample included 61 subjects, 36 men and 25 women, who received a total of 120 implants divided into six groups (n=20), three with crestally, and three with supracrestally placed implants, with different internal connections, placed in posterior sectors (molar and premolar), bearing one-piece CAD-CAM restorations screwed directly to each implant prosthetic platform. Bone height was measured from parallelized periapical radiographs taken at the moment of loading and two years later.

Results: Statistical analysis identified significant differences in bone loss between the different types of connection, the implant with internal hex and convergent transmucosal collar showing the least bone loss ($p<0.001$) in comparison with the other designs. Supracrestally placed implants underwent less bone loss than crestally placed implants ($p=0.025$). The mandible presented significantly less bone modification than the upper maxilla ($p=0.020$).

Conclusions: Peri-implant bone loss is influenced by the morphology of the prosthetic platform, by the level of implant placement in relation to the bone crest (crestal or subcrestal), and by the dental arch in which the implant is placed.

Oral Presentation 10

TITLE:- ANALYSIS OF PERI-IMPLANT BONE LOSS IN RELATION TO THE CORONAL MORPHOLOGY OF SUPRACRESTALLY PLACED IMPLANTS

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Objective: To analyze peri-implant bone loss around two types of implant, one with convergent and the other with divergent transmucosal collar.

Materials and Methods: Twenty-one patients received 42 implants divided into two groups, one with convergent collar (n=21) and the other with divergent collar (n=21); each patient received two implants one in each group. Each pair of implants was placed in the same arch (upper or lower), in molar or premolar positions; all were placed supracrestally. All surgery was performed by the same clinician. The implants supported prosthetic restorations screwed directly to the implants' prosthetic platforms. Peri-implant bone loss was measured from apical radiographs at the moment of loading and two years later.

Results: Statistical analysis found greater mean bone loss around implants with divergent collar (0.60 ± 0.63 mm) than around implants with convergent collar (0.29 ± 0.34 mm). Implants with convergent collar showed significantly less bone loss values when placed

in the lower arch, compared with divergent implants placed in the same arch ($p=0.028$). But in the upper arch, the two collar designs obtained similar bone loss values ($p=0.328$).

Conclusions: Bone loss around implants with convergent collar is less than around implants with divergent collar. Less peri-implant bone loss occurs in the mandible.

Oral Presentation 11

TITLE:-ANALYSIS OF 4 DIGITAL IMPRESSION SYSTEMS IN 6 IMPLANT ON UPPER MAXILLA REHABILITATION. PRELIMINARY STUDY

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Objective: Evaluate clinical management and compare characteristics, advantages and disadvantages of the different digital scanning systems applied to digital workflow in Implant Prostheses.

Material and Methods: To carry out this analysis we took 10 records with each of the following systems: True Definition ® (3M®), iTero® (Align Technology®), Cerec Omnicam® (Sirona®) and 3Shape® (Trios®), from a reference master model with six implants simulating a completely edentulous upper maxilla patient.

Results: 3Shape® system offers advantages such as, speed, easy management and less overlap. On the other hand Cerec Omnicam® proposes a simple and accurate way for obtaining information in video format without needing the use powder. In True Definition®'s case, the need of using powder and time restrictions for data obtaining has made it difficult for us to use. While with iTero®, we must take into account the large size of the intraoral camera, the difficulties of its use and the overlap shown in multiple implant cases. The scanning of a full maxillary arch with six implants does not show precision within the tolerable margins that we expect. We collect STL files for a future study of accuracy in different intraoral scanners.

Conclusions: Full arch impressions with intraoral scanners for 6 implant rehabilitations do not achieve, at present, the fitness we need for mechanized structures to adjust in a passive way within our tolerable ranges. Most common problems noticed during the use of the systems at issue have been: the intraoral camera size, scanning speed and the use of powder.

Oral Presentation 12

TITLE:- CONTRIBUTION OF ANTIRETROVIRAL THERAPY IN AIDS ASSOCIATED NEOPLASMS

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Introduction: The Human Immunodeficiency virus (HIV) infection and the Acquired Immunodeficiency Syndrome (AIDS) are related to a high likelihood to develop skin and oral mucosa neoplasia, being Kaposi's Sarcoma (KS) and non-Hodgkin Lymphoma (NHL) the main diseases developed. The main goal of this work is to know how the Introduction: of Antiretroviral Therapy (ART) has changed the incidence and principal characteristics of HIV.

Material and Methods: A literature review was carried out, choosing articles related to tumors associated with AIDS and changes in incidence during ART were selected. This literature review has been based on PubMed, Up To Date, LILACS, Chocrane and Medline base data. Too old articles or which were not related to this topic were excluded.

Results: A total of 25 articles published in the last 10 years were selected. Between 25% and 40% of the HIV infected patients were seen to develop neoplasia. Moreover, 20% of the neoplasia developed were KS and 10% were NHL. As the HIV disease progresses, the risk of lymphoma increases, a difference of Kaposi's Sarcoma, which has a constant incidence throughout the disease. Change incidence, morbidity and mortality has been seen with the introduction of antiretrovirals.

Discussion: At the onset of the AIDS epidemic, there was a dramatic increase in KS and NHL. A large decrease in the incidence of KS and NHL and a better prognosis was achieved with the use of ART than in the pre-ART era, as well as a important increase in the incidence of non-AIDS-defining cancers.

Oral Presentation 13

TITLE:- INFLUENCE OF MICROBIOLOGY ON ENDODONTIC FAILURE. UPDATE OF IRRIGATION THERAPEUTIC PLANNING

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Introduction: The main cause of endodontic failure is the persistence of microorganisms, which are organized forming biofilms and become resistant to disinfection measures, causing an intraradicular and/or extraradicular infection. Therefore, for a more effective bacterial eradication, the endodontic instrumentation has to be implemented with abundant irrigation. The most used irrigants are NaOCl, CHX and EDTA, released in the ducts with different techniques such as the syringe, manual agitation, apical pressure, sonic or ultrasonic activation, PIPS and PDT. The objective of this review is to know the microbiota associated with endodontic failure, as well as its therapy with irrigating solutions and establish an irrigation protocol.

Material and Methods: Systematic search of scientific articles in the databases PubMed, Medline and Google Scholar, with the following keywords Endodontic, Failure, Irrigation, Retreatment and Irrigation protocol in endodontics retreatment and with the following exclusion criteria Articles of "case report "Articles with publication date prior to 2000.

Results: 75 articles were included, 27 of microbiology and 48 of irrigation. *E. faecalis* was the most frequently isolated organism. NaOCl and CHX were the best irrigant in terms of immediate and long-term antimicrobial efficacy, respectively. The most suitable irrigation protocol consists of: 2.5% NaOCl activated with ultrasound followed by a final wash with 7% MA or 0.2% CTR combined with 2% CHX.

Discussion: Most authors highlight *E. faecalis* as the main microorganism in cases of endodontic failure, but there are studies that isolate to a greater extent other bacteria such as *Fusobacterium nucleatum* and *Propionibacterium*. There is also no concordant opinion on: which is the most effective irrigator, which activation method is the most effective and which irrigation protocol should be applied.

Oral Presentation 14

TITLE:- COMPARATIVE ANALYSIS OF THE ENZYMIC ACTIVITY OF SALIVARY LACTATE DEHYDROGENASE IN PATIENTS WITH PERIODONTAL DISEASE

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The main objective of this study was to evaluate the variations in salivary lactate dehydrogenase (LDH) before and after 30 days of a basic periodontal treatment in patients with bleeding on probing (BOP) and probing depth (PD) of ≤ 6 mm, and to compare it with a healthy control group.

It has been selected 10 periodontal healthy patients (CPITN 0), as a control group, and 10 patients with periodontal disease. Patients were selected between 30 and 65 years old. The group with periodontal disease were based on the parameters such as PD (≤ 6 mm), BOP, plaque index (PI), gingival index (GI), clinical attachment level (CAL) and radiological study. The main variable was the concentration in U/L of salivary LDH. In the control group, was made a single determination of LDH, and two determinations for the study group, before and after 30 days of a basic periodontal treatment. The LDH determinations were carried out by double beam spectrophotometry (UV-Visible 190-1100 nm), making each determination by triplicate and using the mean of these three determinations as the final value of each patient and time of the study. The control group was compared with the study group before and after the treatment with T test and the study group before and after the treatment with T test for paired data. The mean value of LDH in the control group was 187.11 ± 49.93 , in the study group before treatment of 274.80 ± 53.65 (significantly higher $p=0.001$). After basic periodontal treatment, LDH was 214.17 ± 39.74 (not significantly different from the control group, but significantly lower than the value obtained before treatment $p=0.01$).

The salivary LDH evaluated by spectrophotometry can be considered a good enzymatic biomarker of favourable evolution in periodontal disease after a basic periodontal treatment.

Oral Presentation 15

TITLE:- PERIODONTAL PLASTIC SURGERY IN A GINGIVAL SMILE CASE WITH ALTERED PASSIVE ERUPTION AND THE PRESENCE OF AN INFRAOCCCLUDED IMPLANT

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Gingival smile is a clinical situation characterized by excessive gingival display during smile. Its main therapeutic indication is aesthetics. Dental implants placed in growing patients behave like ankylosed teeth. During vertical alveolar growth, the lack of eruptive potential of implant-supported restorations can produce a discrepancy in the occlusal plane with long-term aesthetic and functional complications.

The patient suffered avulsion of the right central incisor when he was a child and an implant was placed at the age of 18. He attended the faculty at 34, showing a striking disharmony between the gingival margins of the second sextant and the infraocclusion of the implant. After hygienic phase, a connective tissue graft was performed and the tissue was modeled with a new provisional crown with a fitting emergence profile. After healing, a crown lengthening was carried out to solve the combined discrepancy of the implant infraocclusion and the gingival smile. In this surgery, a second connective graft was carried out to improve the interincisal volume. Once the surgical phase was completed, the prosthetic phase was continued to close the embrasures and harmonize the smile.

The follow-up is shown over 32 months until the gingival margins are equalized and the prosthetic phase was completed. The final result is exposed after two years of evolution.

In the case presented, the aesthetic discrepancy is caused by the confluence of the infraocclusion of the implant crown placed when the patient had not ceased alveolar growth and the presence of altered passive eruption.

The combination of different techniques of periodontal plastic surgery allowed leveling margins that joined with the subsequent prosthetic treatment achieved a satisfactory aesthetic result and maintainable in the long term.

Oral Presentation 16

TITLE:- IMPLANT-SUPPORTED FIXED FULL-ARCH REHABILITATION WITHOUT BONE GRAFTING IN SEVERELY ATROPHIC MAXILLAE: A 10 TO 12 YEAR RETROSPECTIVE FOLLOW-UP STUDY

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Objective: To assess the clinical, radiographic and patient-related outcomes of patients with severe atrophy of the upper maxilla (Cawood & Howell class V) rehabilitated with fixed full-arch prosthesis on dental implants placed in anatomical buttresses and remnant bone.

Material and Methods: An observational retrospective clinical study was made with a minimum follow-up period of 10 years. An analysis of the following parameters was made: a) peri-implant parameters (plaque index, modified gingival index, probing depth, millimeters of keratinized mucosa, and the presence or absence of peri-implant disease), b) marginal bone loss, c) implant survival rate and d) patient satisfaction based on a visual analog scale.

Results: Ten patients and 71 dental implants were studied, with a mean follow-up period of 126 months (range 120-144). The mean plaque index was 1 ± 0.5 , with a mean probing depth of 2.3 mm (range 1-4 mm). Sixty-one percent and 39% of the implants presented a modified gingival index of 1 and 2, respectively, and the mean keratinized mucosa width was 5.8 mm. The peri-implant soft tissues remained healthy except in two patients in which food impaction upon the prosthesis and a deficient oral hygiene, respectively, produced peri-implant mucositis. The mean marginal bone loss of the implants was 0.7 ± 0.4 mm. The implant survival rate was 97.2%, and the overall mean patient satisfaction score was 90 (range 0-100). Prosthesis cleaning ease scored lowest on the VAS.

Conclusions: In our limited sample of patients with severe maxillary atrophy (Cawood and Howell class V), the placement of dental implants in anatomical buttresses and remnant bone, associated to rehabilitation

with full-arch fixed prostheses, was found to be an adequate treatment option in the long-term.

Oral Presentation 17

TITLE: CLINICAL EVALUATION OF PORCELAIN VENEERS WITH A MEAN FOLLOW-UP OF 5 YEARS

AUTHORS: Ruiz Bell E ¹, Faus Matoses V ², Faus Matoses I ³, Salvatore S ⁴, Alegre Domingo T ⁴, Faus Llácer VJ ⁵

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Objectives: The aim of this study was to evaluate the clinical outcome of 364 conventional feldspathic veneers and to analyze the influence of bruxism and the use of occlusal splint.

Material and Methods: Porcelain restorations (n=364) were placed in 64 patients between January 2009 and December 2013 by two professors of the Master of Restorative Dentistry and Endodontics (Valencia University). The clinical examination determined the presence of failures (fractures and debondings) and the presence of bruxism (with use of occlusal splint or without it). The results were statistically analyzed using the Kaplan-Meier methodology. Statistical significance was set at $p \leq 0.05$.

Results: The mean observation time was 5.2 ± 1.7 years. Forty patients presented a parafunctional habit. This group included: 257 veneers bonded in patients with bruxism activity using splints and 36 veneers in patients with bruxism activity not using splints. There were 7.7% fractures and 1.9% debondings. The estimated cumulative survival rate was 93.7% at 3 years, 91% at 5 years and 87.1% at 8 years. The cumulative survival rate in patients with bruxism not using splints was reduced to 63.9% at 8 years.

Conclusions: Conventional feldspathic porcelain veneers are a predictable treatment option that provides excellent clinical results. Not using occlusal splint influenced significantly, decreasing the time until the appearance of an irreparable problem.

Oral Presentation 18

TITLE: TRANSLUCENCY OF MONOLITHIC HYBRID CUBIC/TETRAGONAL ZIRCONIA CROWNS VS. LITIUM DISILICATE: AN *IN VITRO* STUDY

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Purpose: In this *in vitro* study are assessed the optical properties of novel hybrid zirconia, a third-generation zirconia that shows a crystalline cubic and tetragonal structure, with the aim of improving its translucency. These were compared with the first-generation tetragonal zirconia and with lithium disilicate, widely studied.

Material and Methods: Hundred multilayered zirconia and CAD high-translucency grade L-DIS were milled. These monolithic crowns were made in the shape of molars using the CAD/CAM technique. All of them were designed from two CAD files, in thicknesses of 1.0 and 1.5 mm and subdivided into 5 groups (n = 20): 3 M™ Lava™ Esthetic Fluorescent (LAVA 1.0 EF), Blu Zirkon Multilayer 600 (BZ 1.0), Chang's Aurora Multilayered gradation (ChA 1.0), IPS e.max CAD HT (L-DIS H T 1.5), Katana ML (Y-TZP 1.0). The colour chosen in all of them was the A2. Translucency of the crowns was measured by total transmission, using a photoradiometer in a dark chamber. The normality of distribution and homogeneity of variance (homoscedasticity) of the data were assessed by the Shapiro-Wilk and Levene test.

Results: When the ceramic crowns were analysed, in terms of Tt, with the method used, they showed significantly different translucency levels: L-DIS HT 1.5 > BZ 1.0 > ChA 1.0 > Y-TZP 1.0 > LAVA EF 1.0 (for the Tt ($P < .01$)).

Conclusion: Owing to their higher translucency, hybrid zirconia ceramic appears to be a promising material for highly esthetic, anatomic contour restorations, however further studies are needed to test the mechanical properties and fatigue strength of these novel zirconia translucent crowns.

Oral Presentation 19

TITLE: ANTIHYPERTENSIVE DRUGS; EFFECTS IN THE ORAL CAVITY – LITERATURE REVIEW

AUTHORS: Lloría MI ¹, Gallud MD ², Ribes C ³, Sheth C ⁴, Bagán L ⁵, Bagán JV ⁶

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Introduction: High blood pressure (HBP) is a major problem for public health and currently is considered to be the most important risk factor for cardiovascular disease. It is regarded as the leading cause of death in the world. In Spain it is estimated that 49% of the adult population aged between 40 and 70 years is hypertensive. Recent studies have suggested a relationship between periodontal disease and hypertension, and have also described a series of oral changes in hypertensive patients, such as; gingival hyperplasia, hyposalivation, sialadenosis, lichenoid reactions, loss of taste, and burning mouth syndrome.

Material and Methods: A literature review was performed using following databases; PubMed, Scopus and Web of Science, limited to articles published during 10 years in Spanish and English. We included case reports, case series, cohort studies, clinical trials and systematic reviews. Experimental studies and case reports from animal studies were excluded.

Results: We found 40 articles; 12 literature reviews and 28 trials, which linked the consumption of anti-hypertension medication with adverse effects in the oral cavity. The most frequent oral manifestations described were xerostomia and gingival hyperplastic lesions.

Conclusion: Further clinical trials and case series are needed to be able to analyze the effects in the oral cavity of this group of drugs.

Oral Presentation 20

TITLE: REDETERMINATION SET-UP CLIN-CHEK

AUTHORS: Olmos Izquierdo V

Summary: We define the terms (anglicisms) frequently used in orthodontics and we have found that their real meaning is not always known. It is an attempt to get closer to the real knowledge of them.

Oral Presentation 21

TITLE:- ASSOCIATION BETWEEN MAXIL-LARY SINUSES ALTERATIONS AND ODON-TOGENIC ORIGIN LESIONS, IN PATIENTS ASSESSED WITH CONE-BEAM COMPUTED TOMOGRAPHY: A SYSTEMATIC REVIEW AND META-ANALYSIS

AUTHORS: Soto Peñaloza D, Peñarrocha Oltra S, Peñarrocha Diago M, Bagán JV

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Introduction: Antral teeth pathologies, such as periapical lesions (PAL), were associated with the appearance of sinus membrane thickening (SMT) and odontogenic maxillary sinusitis (OMS). The present work was aimed to assess if there is an association between maxillary sinuses alterations and odontogenic origin lesions, in patients underwent to cone beam computed tomography (CBCT).

Material and Methods: A broad electronic search was conducted in main databases and grey literature, including MEDLINE via Pubmed, EMBASE, Cochrane library, Web of Science, LILACS y OpenGrey. The MeSH, Emtree and other free-text terms were employed. The methodological assessment of included studies was performed using the Newcastle-Ottawa Scale (NOS) for observational studies. A random effects model was used for the meta-analysis.

Results: The initial search identified 717 potentially eligible titles. After duplicates removal and title and abstract screening, 68 were selected for full-text assessment. From these 22 studies (3 case-control, 19 cross-sectional) were finally included for the methodological assessment, the studies showed moderate and low risk of bias. Periapical lesions (PAL) occurrence showed a significant association regarding sinus membrane thickening (SMT) and odontogenic maxillary sinusitis (OMS) with [OR=2.43 (95% CI: 1.71-3.46); I²=34.5%] and [OR=1.77 (95% CI: 1.20-2.61); I²=35.5%] respectively. Mucous retention cysts and opacities were reported in fewer studies.

Conclusion: Exposure to PAL is associated with SMT and OMS appearance, assessed through CBCT. The LPA presence showed to increase the odds up to 2.4 and 1.7 times to occur SMT>2mm and OMS respectively, compared to not exposed group. The quality of evidence provided in the present analysis is moderate, though the effect size of estimation may vary in future, though not their direction. More research in this area is warranted to confirm these results.

Oral Presentation 22

TITLE:- MINIMALLY INVASIVE RESTORATIVE APPROACH IN TOOTH WEAR AND GINGIVAL-SMILE

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Tooth wear is defined as the loss of tooth substance in the absence of caries and plaque. It is considered pathological when the degree of destruction is excessive or the rate of loss is rapid, causing functional, aesthetic or sensitivity problems. Tooth surface loss can present in various clinical forms with a wide range of etiological factors. Excessive gingival display (EGD), commonly termed gummy smile, is a condition characterized by an overexposure of the maxillary gingiva while smiling. It is distinguished by showing more than 2.5-3 mm.

Case report: A 32-year-old male with tooth wear was diagnosed in the anterior and posterior region due to an inadequate occlusion guidance, thus a consequent reduction of the occlusal vertical dimension and with the chief complaint of a “gummy smile”. A comprehensive treatment plan that incorporated an interdisciplinary restorative and surgery approach was carried out in order to ensure a minimally invasive treatment. Mandibular and maxillary molars were restored by direct composite restorations. Due to the case characteristics, minimum thickness feldspathic ceramic veneers were indicated for the four maxillary incisors. The final restorative phase was achieved by checking the restorations for any occlusal interference. Finally lip repositioning procedure was made to correct the gummy smile.

Conclusion: Interdisciplinary treatment is the best option in cases of anterior guidance rehabilitation in which minimal invasiveness is required. In the present case, the functional and aesthetic parameters required by the patients were achieved, thus satisfying his needs. Lip repositioning technique is a simple procedure that offers an excellent alternative to other procedures with higher morbidity rates.

Oral Presentation 23

TITLE:- PROTAPER GOLD Y PATHMAX PRO FILES: COMPARISON OF DYNAMIC CYCLIC FATIGUE RESISTANCE

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Objective: The aim of this study was to compare the cyclic fatigue resistance of Protaper Gold and PathMax Pro files.

Material and Methods: Eighty files were used for this study, 40 files 25.08 of PathMax Pro and 40 files 25.08 of Protaper Gold. A custom-made device was used for the dynamic cyclic fatigue test. It presented an artificial curved stainless steel canal with a length of 21 mm, a 60° angle of curvature and a radius of 5 mm. Files rotated freely in the canal at a constant speed using a torque-controlled motor. All the instruments were operated with a 3-mm/s axial movement until fracture occurred to simulate the clinical use of these. The time to failure of the files was recorded in seconds. The number of cycles to failure (NCF) was calculated for each group. Data were statistically analyzed using t-test with the level of significance set at 0.05.

Results: The fatigue life of PathMax Pro was higher (1385.0 ± 846.1 NCF) compared with Protaper Gold (825.0 ± 213.8 NCF). PathMax Pro showed significantly higher number of cycles to failure than Protaper Gold ($p < 0.05$). The variability of NCFs of both groups was significantly different. The group of Protaper Gold files behaved very stable around its average, presenting a quite predictable life time. In contrast, PathMax Pro files oscillated in a very wide time range.

Conclusions: Within the present study limitations, PathMax Pro files had significantly higher cyclic fatigue resistance than Protaper Gold.

Oral Presentation 24

TITLE:- *IN VITRO* EVALUATION OF THE INFLUENCE OF IRRIGATING SOLUTIONS ON THE ACCURACY OF TWO ELECTRONIC APEX LOCATORS

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Objective: The aim of this study in vitro was to evaluate the accuracy of two electronic apex locators Ipx II and Woodpex III after cleaning and shaping the root canals, for determining working length in the presence of different irrigation solutions: 2% chlorhexidine gluconate, 5,25% sodium hypochlorite and 18% ethylenediaminetetraacetic acid.

Material and Methods: 70 single rooted human teeth were selected. The teeth were sectioned at the cement enamel junction and the actual working lengths were determined by subtracting 0.5 mm from the anatomical root length of the tooth. Next, measurements of the working length were obtained using the electronic apex locators Ipx II and Woodpex III in the presence of the different irrigation solutions. After the collection of the obtained measurements, the statistical analysis was carried out with the SPSS program. The level of significance of the analyzes was established at $p \leq 0.05$.

Results: The application of the irrigant does not significantly modify the accuracy of the electronic apex locators. Only with chlorhexidine 2% and for the Woodpex III system there is a weak tendency to do so.

Conclusions: The electronic locators of apex Ipx II and Woodpex III can be used, being able to obtain precise measurements and clinically satisfactory results in both dry and wet canals.

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Introduction: Tooth wear is characterized by the loss of enamel and/or dentin surface due to non-bacterial causes. The etiology of tooth wear is multifactorial. Interdisciplinary adhesive and orthodontic dentistry is successful in the management of tooth wear and very little invasive.

Clinical case: A 44-year-old female patient attended the clinic due to dentine hypersensitivity that increased with chewing and history of pain in the temporomandibular joint treated years before. On examination, dental wear was observed in anterior and posterior sectors, malocclusion, tetracycline staining and compensatory extrusion of some anterior and posterior teeth.

First of all, an orthodontic phase was carried out for the intrusion of the anterior sector, balance of gingival zenith, selective intrusion of the posterior sector and distalization of the upper arch. In this phase transparent aligners and micro-screws were used. The placement of micro-screws had two functions: to distalize the upper arch and selectively intrude the posterior teeth. As a result we achieved, in addition to correct the malocclusion, create enough space for the restoration of the anterior and posterior sector avoiding the increase of the vertical dimension and therefore any type of condylar movement that could worsen the patient's joint pathology. Finally, it was restored with posterior composite onlays and feldspathic veneers. The anterior teeth carving, guided with the mock-up, was minimally invasive thanks to the previous orthodontic treatment.

Discussion: The interdisciplinary approach between orthodontics and restorative dentistry allowed us to solve the dentine hypersensitivity problems of the patient. We obtained interocclusal space to restore the wear that produced it, without increasing the vertical dimension, which would have increased the risk of the exacerbation of the joint pathology. In addition we had vestibular-lingual space, so the carving of the teeth was almost non-existent.

Oral Presentation 25

TITLE:-- MINIMALLY INVASIVE REHABILITATION OF TOOTH WEAR THROUGH TRANSPARENT ALIGNERS, INDIRECT RESTORATIONS AND FELDESPATHIC VENEERS

AUTHORS: Ibáñez López L ¹, Faus Matoses V ², Faus Matoses I ³, Faus Llacer V ⁴

Oral Presentation 26

TITLE:- ENDODONTICS & SINGLE IMPLANTS

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Introduction: The current challenge in dentistry, in cases of endodontic pathologies with questionable prognosis, consists of deciding, together with the patient, if the tooth is maintained or replaced by unitary implants, after the evaluation of the clinical, radiographic results, as well as the most influential prognostic factors in both therapies. The objective of this work is to analyze the success, survival and failure rates of minimally invasive endodontics (MIE) and of single implants (SI), to try to resolve the dilemma between them.

Material and Methods: Bibliographic search in Pubmed, Google Scholar and “Descubre” (UEV) databases, using the following keywords: endodontics, retreatment, apical surgery, single implants, success-survival.failure rates; and applying inclusion and exclusion criteria.

Results: 42 studies were included: 12 reviews, 2 meta-analysis, 24 clinical studies and 4 research. The primary endodontics refer to an overall success and failure rate of 91.4% and 13.7%. Success is reduced to 55.6%, when endodontic treatment and coronal restoration was inadequate. Retreatment refers success and failure rates of 85.8% and 16.2%, determined by improvements in techniques and technologies, in addition to the intervention of specialists. For the same reason, microsurgery showed a success of 80.8% compared to the traditional 57.82%. Survival is poorly evaluated and rates of 85.8% for primary endodontics and 89% for retreatment are reported. The SI refer to a survival and a failure of 96.13% and 6.2%, the maintenance phases are necessary for their long-term conservation.

Discussion: The disjunction between MIE and SI cannot be solved definitively because they are complementary therapies with disparate success-failure-survival criteria, and therefore not comparable to each other, so that each case must be assessed individually.

Oral Presentation 27

TITLE:- CENTERING ABILITY OF RECIPROC BLUE & WAVEONE GOLD IN SIMULATED S-SHAPED CANALS

AUTHORS: Amin Y¹, Faus Matoses V², Alegre T³, Dolz M⁴, Faus Llácer V⁵

Objective: The aim of this study was to compare the shaping ability of two single file reciprocating systems (Reciproc Blue and WaveOne Gold) in simulated S-shaped canals.

Material and Methods: Thirty-six S-shaped canals in resin blocks were prepared to an apical diameter of 0.25 using Reciproc Blue R25 (VDW, Munich, Germany) and WaveOne Gold primary (Dentsply Maillefer, Ballaigues, Switzerland). All the resin blocks were checked for patency using a size 10 K-file (Dentsply Maillefer, Ballaigues, Switzerland) and randomly divided into two groups (n=20). Composite images were taken pre and post instrumentation and superimposed using Adobe Photoshop. The amount of resin removed by each filing system was measured in AutoCad and analysed. Canal aberrations and preparation times were recorded.

Results: No file fracture was identified in either group. Reciproc Blue showed better centering ability than WaveOne Gold. Reciproc Blue R25 was able to follow the trajectory of the double curvature of the S-shaped canal until working length unlike WaveOne Gold primary, which was incapable.

Conclusion: Within the limitations of this study, Reciproc Blue was able to shape S-shaped canals more efficiently and more rapidly while WaveOne Gold generated apical transportation in the majority of the cases.

Oral Presentation 28

TITLE:- EVALUATION OF TWO DIFFERENT RE-TREATMENT TECHNIQUES IN STRAIGHT ROOT CANALS BY USING MICRO-COMPUTED TOMOGRAPHY

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Objectives: The objective was to evaluate the efficiency of ProTaper Gold and Reciproc Blue files in guttapercha removal from straight root canals with micro-computed tomography.

Material and Methods: Fifty-two human extracted teeth were selected. All the procedures were carried out by the same operator under a dental microscope. Teeth were decoronated to a standard root length of 16mm. Initial root canal instrumentation was carried out with ProTaper Gold rotary system until F2 (25/08) file. Root canals were filled with continuous wave of condensation technique. For retreatment, specimens were divided into two groups (n=26). In ProTaper Gold group, teeth were reinstrumented until F4 file (40/06). In Reciproc Blue group, specimens were reinstrumented with R40 file (40/06) Micro-tomography scans were performed before and after retreatment procedures. Volume of remaining filling material after retreatment was registred, as well as total retreatment time (in minutes) and the existence of separated instruments. The hypothesis of normality and the equality of variance were evaluated by using Kolmogorov test and Levene test. In cases of normality between variables t-test was employed. The level of significance was established at $P < 0.05$.

Results: The average remaining filling material in ProTaper Gold group was 4,41% (2,41-5,88%), while in the Reciproc Blue group was 4,18% (2,44-5,91%). The average retreatment time in ProTaper Gold group was $2,40 \pm 1,47$ minutes. In the Reciproc Blue group the average retreatment time was $2,71 \pm 1,47$ minutes.

Conclusions: There are not statistically significant differences between ProTaper Gold and Reciproc Blue groups in terms of filling material removal capacity and average retreatment working time.

Oral Presentation 29

TITLE:- EFFECT OF TEMPERATURE ON THE DYNAMIC CYCLIC FATIGUE OF ROTARY ENDODONTIC INSTRUMENTS PROTAPER NEXT

AUTHORS: Arnandis Calot JM¹, Faus Matoses V², Sauro S³, Martínez Viñarta M³, Dolz Solsona M³, Faus Llácer VJ⁴

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Objective: The objective of this invitro study was evaluate relationship between cyclic fatigue resistance and temperature of Protaper Next files.

Materials and Methods: 52 Protaper Next X2 files were selected, they were randomly divided into 2 groups of 26 instruments, according to the temperature at witch the test were performed, 20°C and 37°C. A custom-made device was manufactured to carry out the dynamic cyclic fatigue test, it was able to make insertion and disinsertion axil movements of the files inside the canal, adjusted to 3mm / second to simulate its clinical use. Device's canal was made of stainless steel and it was 21mm long, conicity 09, curved angle of 60° and a radius of 5mm. Thanks to another custom-made device, temperature indicated in each group was controlled and maintained. The files were driven by an electric X-Smart endodontic motor following a continuous rotation at maximum torque (5.2 Ncm) and at a speed of 300 rpm. To perform the dynamic cyclic fatigue test, time to the hundredth of second was calculated and translated to the number of cycles to the fracture (NCF). Data were statistically analyzed using a two-way analysis of variance with a level of significance of $P < 0.05$.

Results: At 20°C the maximum value of NCF was recorded, reducing it with the increase in temperature until reaching its minimum at 37°C.

Conclusions: The temperature negatively influences the resistance to cyclic fatigue of Protaper Next instrument. As the temperature increases, the cycles that are capable to suppor until the fracture are reduced.

Oral Presentation 30

TITLE:- HEMOSTATIC AGENTS IN PERIAPICAL SURGERY: A RANDOMIZED STUDY OF ALUMINIUM CHLORIDE VERSUS ELECTROCAUTERIZATION

AUTHORS: Cervera Ballester J, Menéndez Nieto I, Maestre Ferrín L, Peñarrocha Diago M

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Introduction: The aim of this study was to evaluate the efficacy of two hemostatic agents during periapical surgery; and their relationship with patient and tooth parameters.

Materials and Methods: A prospective study was designed with two randomized parallel groups, established depending on the hemostatic agent used: aluminum chloride and electrocauterization. The surgeon and two independent blinded examiners

judged the initial and final bleeding. The analysis of the hemorrhage control was judged before and after the application of the hemostatic agents by the surgeon and two examiners independently, and recorded it as: 0 (no hemorrhage control), 1 (slight but apparent intermittent bleeding persisted after application of the material), or 2 (complete hemorrhage control).

Results: Sixty patients with a periradicular lesion in the esthetic zone, were enrolled in this study and divided into two groups of 30 patients. In aluminum chloride group a complete hemorrhage control was achieved in 24 cases and in electrocauterization group in 18 cases ($p < .05$). A relationship between sex and the effectiveness of hemostasis was found, a female patient increases the possibility of achieving a complete hemorrhage control.

Conclusions: The outcome was better in the aluminum chloride group than in the electrocauterization group; as well as in female than men patient.

Oral Presentation 31

TITLE:- INCREASING VERTICAL DIMENSION TO RESTORE ANTERIOR GUIDE: TWO APPROACHES TO GET ONE RESULT

AUTHORS: Gormaz Urrutia V¹, Faus Matoses V², Faus Matoses I³, Faus LLácer V⁴, Dolz Solsona M³

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Introduction: The lack of Interincisal space represents a big challenge when rehabilitating a patient. That is why it is necessary to assess how to approach these cases, and evaluating if the space needed may be obtained only by restorative treatment or from an interdisciplinary treatment, to achieve the most conservative therapy possible.

Case Report: Two male patients came to the clinic. The first one complaining about a progressive wear on his anterior teeth and the other one due to a high sensibility while chewing. In the first one, molar erosions and loss of vertical dimension were noted. In the second patient, an overbite was observed, but no wear in the posterior dentition. Therefore, both cases presented an interocclusal space that caused attrition on anterior teeth which wasn't enough to provide a proper anterior guide. The treatment plan in both cases was a vertical dimension increase and the anterior guide rehabilitation. In the first case (where

posterior teeth wear was noted) this was achieved by three treatment phases: Firstly, a restorative phase, placing direct composites on posterior teeth increasing vertical dimension; followed by an orthodontic phase; and a final restorative phase placing feldspathic veneers on upper incisors. In the second case in contrast with the first one, vertical dimension increase and anterior guide rehabilitation were achieved in two treatment phases: an orthodontic phase to extrude posterior teeth and a consequent vertical dimension increase and a restorative phase consisting in feldspathic veneers in upper incisors.

Conclusion: Interdisciplinary treatment performed by different specialists enables the resolution of complex cases. It is very important to customize each diagnosis and to plan every case individually, as well as the communication between professionals as with the patient. So that satisfactory clinical results can be accomplished.

Oral Presentation 32

TITLE:- HARMONIZATION OF THE AESTHETICS OF THE SMILE AND TIMES OF ACTION IN THE INTERDISCIPLINARY TREATMENT ENDO-ORTO-RESTO-PERIO

AUTHORS: Ramírez Murciano B, Faus Matoses V, Faus Matoses N, Faus LLácer V

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Introduction: In dental practice, there must be synergy between the different dental disciplines in order to achieve an adequate diagnosis, treatment planning and execution in compromised dental situations.

Clinical case: A 61-year-old female patient came to our office complaining about the aesthetics of the fixed partial zirconia denture. Since her smile showed the zeniths, it was proposed to change the bridge, previously improving the conditions of the surrounding tissues, balancing those zeniths and thus achieving the harmonization of the aesthetic parameters after the placement of the new bridge.

Therefore, the interdisciplinary treatment plan included endodontic retreatment and internal bleaching of 2.2 to obtain a substrate with an ideal color, so that the restoration did not have to opacify an unfavorable color. Subsequently, an orthodontic treatment phase in which transparent aligners were combined with lingual orthodontics, using the latter to perform extrusion movements that are less indicated for transparent aligners. The extrusion was slow, obtaining coronal migration of the 2.2 gingiva. In addition, a connective tissue graft was necessary to create a correct emergence profile of 2.3. In a later step, the gingival tissues were

thickened with fixed partial provisional ovoid denture. And finally, a zirconia fixed partial denture was placed, which ceramic was only charged on the vestibular faces.

Conclusions: The integration of the different disciplines led to a satisfactory final aesthetic and functional result.

Oral Presentation 33

TITLE:- MINIMAL INVASIVE TRANSCRESTAL SINUS LIFT MODIFIED TECHNIQUE

AUTHORS: *Alonso J¹, García Sala F¹, Pellicer B¹, Cases A¹, García Dalmau C², Fons Badal C¹*

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Introduction: In the posterior areas of the upper maxilla it is common to find lack of residual bone to insert implants due to the proximity of the maxillary sinus. As a consequence, several techniques have been developed with the aim to increase bone volume in this location and to insert the implant in the same clinical sesión.

Clinical cases:

Case 1: Sinus lateral wall, based on the Caldwell-Luc approach, as path to insert graft materials in the sinus.

Case 2: Crestal approach with osteotomes and hammer.

Case 3: Minimally invasive transcresal techniques (burs and stoppers). New material injected with cartridge is used.

Discussion: Sinus lateral wall causes undisireble morbidity and high incidence of complications.

Crestal osteotomes approach often presents difficult handling and limited access to the posterior region.

Improvement in macrodesign and microstructure of implant surface in addition to recent development of minimally invasive transcresal techniques (burs and stoppers) allow clinicians to perform sinus grafting in cases with less than 5 mm of residual bone. Regarding to this technique, scientific literature shows bone gain ranging from 2,5 mm to 8,6 mm with a lower rate of complications compared to osteotomes, less morbidity than lateral approach and higher treatment acceptance by patients. Nowadays, this kind of approach is becoming a routine procedure in implant therapy.

The engineered release of Si, Ca and P ions from NovaBone results in the stimulation of families of genes that are known to be critical in the repair and regeneration of bone tissue.

Oral Presentation 34

TITLE:- STUDY OF THE ADHESIVE OPTIMIZATION OF A UNIVERSAL ADHESIVE APPLIED IN SELF-ETCH MODE

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Objectives: The aim of this study was to evaluate, with a shear bond strenght testing, the effect that was produced in the Scotchbond Universal (3M ESPE) bond, applied in self-etch mode and double coating, by the addition of a third layer of hydrophobic resin coat or a third layer of high charge fluid resin.

Material and Methods: Two adhesive systems were tested: Clearfil SE Bond® (Kuraray), two-step self-etch adhesive, and Scotchbond Universal®, universal adhesive applied in self-etch mode (SE).

The buccal, lingual, mesial and distal faces of 20 molars (n=20) were ground until the dentin was exposed, and 80 3 mm diameter cylinders made of Filtek Supreme XTE® (3M ESPE) composite were bonded directly. The 80 molar faces were divided into 4 groups (n=20) depending on the type of adhesive used and the adhesive strategy approached. As control group, the Clearfil SE Bond® (CSE), Scotchbond Universal® (SBU), Scotchbond Universal® + Heliobond® (Ivoclar Vivadent) [SBU + HE] y Scotchbond Universal® + Universal High Flow® (GC) [SBU + UHF]. Afterwards, samples underwent shear bond strength testing in order to determine the bond strength of each group. Data were evaluated by one-way ANOVA followed by multiple comparisons ($p=0,05$).

Results: SBU obtained higher values than CSE ($22,07 \pm 4,36$; $18,92 \pm 5,79$ Mpa, respectively). The SBU bond strength didn't increase with the addition of HE ($19,25 \pm 5,52$ Mpa) ($p=0,282$) and even decreased after the application of UHF ($15,63 \pm 5,73$ Mpa) ($p=0,001$).

Conclusion: Increasing to 2 the layers number of SBU optimizes the adhesion in SE mode, improving the bond strength values and the dentin bond quality compared to the Gold Standard CSE ($p=0,05$).

Oral Presentation 35

TITLE:- CLINICAL BEHAVIOR OF MONOLITHIC ZIRCONIA COMPLETE CROWNS. PROSPECTIVE STUDY WITH THREE-YEAR FOLLOW-UP

AUTHORS: *Sánchez González MT¹, Agustín Panadero R², González De Cossío I³, Roig Vanaclocha A³, Fons Font A⁴, Solá Ruíz MF⁵*

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5 Contracted Professor, Department of Dental Medicine, Faculty of Medicine and Dentistry, University of Valencia, Spain.

Objectives: To assess the clinical behavior of monolithic zirconia complete crowns, analyzing the biology of supporting teeth, mechanical parameters, aesthetic changes, as well as patient satisfaction.

Materials and Methods: A total of 50 monolithic zirconia crowns on posterior teeth, placed in 38 patients were examined 6 months, 1 year, 2 years and 3 years after bonding. Analysis was based on the following parameters: anamnesis, intraoral exploration, occlusion, periapical radiographs, and a patient satisfaction test.

Results: Exploration did not find any fractures or fissures, although two cases of debonding were registered. No(aesthetic) changes in color were noted. No patients reported hypersensitivity. No changes in pulp vitality were found. No occlusal changes were observed. Patient satisfaction was 9 on a scale of 0-10.

Conclusions: The restoration of posterior teeth with monolithic zirconia crowns is a predictable treatment in the short and medium term. The restorations do not undergo any aesthetic alterations (color). It is likely that when tooth preparation is minimal and conserves the existing dental tissues as far as possible, this will avoid pulp disorders, fractures, and secondary caries. Patient satisfaction with this treatment is high.

Oral Presentation 36

TITLE:- PROTOCOL FOR DIGITAL VOLUMETRIC ANALYSIS IN DENTISTRY

AUTHORS: *París Fuertes C¹, Rech Ortega C², Román Rodríguez JL², Solá Ruíz MF³, Labaig Rueda C⁴, Agustín Panadero R⁵*

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Objective: To describe a protocol for volumetric analysis using intraoral scanner software.

Materials and Methods: Presentation of a series of clinical cases in which pre- and post-operative quantitative volumetric analysis was performed. These involved muco-gingival, regenerative and resective procedures; excision of oral mucosa lesions; and modifications of gingival margins associated with the cervical emergence of restorations.

Results: Using this digital technology ("best fit" of STL archives) made the structural changes in soft tissues (gums and mucosa) and hard tissues (teeth) easily visible.

Conclusions: The digital technologies available on the market represent an important advance for the visual analysis and volumetric evaluation of changes to soft tissues, teeth, or restorations. Such techniques are a useful tool in both clinical practice and research.

Oral Presentation 37

TITLE:- PASSIVE FIT IN IMPLANT-SUPPORTED FIXED RESTORATIONS: CONVENTIONAL IMPRESSION TECHNIQUE VERSUS DIGITAL WORKFLOW

AUTHORS: *Herrero Román N¹, García Engra G², Sánchez González MT¹, García-Sala Bonmatí F², Mañes Ferrer JF², Rech Ortega C²*

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Introduction: The treatment of edentulous patients with implant-supported prostheses produces predictable and successful results that overcome the functional deficiencies of conventional prostheses. Digital impression techniques constitute new working methods that obtain successful outcomes when applied to implant-supported prostheses, although they do suffer some limitations. The objective of this study was to describe the clinical procedure for rehabilitation by means of fixed implant-supported prostheses using digital impression techniques, analyzing the passive fit of verification stents in radiographs.

Clinical cases: Three cases were treated in the clinic

pertaining to the Master's Program in Prosthodontics and Occlusion at the University of Valencia (Spain), rehabilitating cases with fixed implant-supported prostheses using the True Definition® (3M® ESPE) digital impression system. Analyzing the passive fit of verification stents by means of the Sheffield Test performed on stereolithographic models, a certain lack of fit was observed. This made it necessary to bring the treatment to completion using conventional impression technique with elastomeric materials, which the Sheffield Fit Test found to produce adequate passive fit. **Discussion:** The precision of impression-taking and the adequate fit of prosthodontic treatments will ensure their success, functionality, and longevity. Recent studies have evaluated digital impression techniques in cases involving more than four implants, comparing the method with conventional techniques using elastomeric materials. At present, digital techniques do not produce adequate passive fit in cases of fixed implanted-supported rehabilitations.

Oral Presentation 38

TITLE:-- INDIRECT OCCLUSAL VENEERS: CAD-CAM MATERIALS AND BONDING TECHNIQUE

AUTHORS: *García Engra G¹, Román Rodríguez JL², Martí Martí B³, Casas Terrón J², González Angulo E², Fernández Estevan L²*

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Objective: To study the influence of immediate dentin sealing on the fracture resistance of CAD-CAM materials.

Material and Methods: Twenty samples were fabricated from the following materials: IPS Emax CAD® (Ivoclar Vivadent); VITA SUPRINITY® (VITA Zangfabrik); VITA ENAMIC® (VITA Zahnfabrik); and Lava™ Ultimate (3M ESPE). Molars were conserved in physiological serum and ground in order to expose the dentin. Immediate dentin sealing was performed following the protocol established by Pascal Magne, which consists of etching the dentin surface with 37.5% orthophosphoric acid for 15 seconds and then applying Optibond FL®. (Kerr Corp) two-step adhesive. All the ceramic discs were bonded by means of pre-heated (68°) composite onto the prepared molars. Each sample underwent static load testing until fracture. The

fracture resistance of the different materials underwent statistical analysis, applying parametric tests.

Results: The highest fracture resistance values were registered for the lithium disilicate ceramic IPS Emax CAD® obtaining resistance of 6601.84 MPa, followed by the hybrid materials VITA SUPRINITY® (4766.5 MPa), VITA ENAMIC® (4163.94 MPa) and Lava™ Ultimate (3111.75 MPa), respectively. The results were compared with a preliminary study in which the materials were bonded following the recommendations of each manufacturer. The data were analyzed to determine the effect of the bonding technique on the fracture resistance of CAD-CAM materials used for dental restoration.

Conclusions: The behavior of esthetic restoration materials for the posterior sector depends on both the material's composition and the bonding technique employed.

Oral Presentation 39

TITLE:- MULTIDISCIPLINARY TREATMENT OF A CLEFT PATIENT. A CASE REPORT

AUTHORS: *Tejero Martínez A¹, Rodríguez de Guzmán Barrera J², Mohamed Hamed F³, Gandía Franco JL⁴*

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Introduction: Cleft lip and palate are the most common craniofacial anomalies and birth defects globally and the dental therapy of this kind of patients means a difficult challenge.

Case Report: This report describes the dental treatment of a 12-years-old boy with unilateral cleft lip and palate on the right side, skeletal and dental class III, anterior cross-bite, brachyfacial pattern, asymmetric maxillary arch constriction and maxillary palatal impaction of the right canine.

Discussion: There are different treatments for cleft patients. To achieve optimal results in this complex case, a multidisciplinary approach was adopted, involving different specialties as maxillofacial surgery, dental aesthetics and orthodontics. The treatment plan frequently includes an early phase with a device to get a maxillary advancement. In this case, a Progenie Quad-Helix was used to achieve a slow palatal expansion, combined with a face-mask to correct the anterior cross-

bite. Later, a Pendex device was attached to get space for the upper canines and premolars. On the other hand, the Cleft lip and palate is a congenital deformity which often involves dental anomalies, such as variation in tooth size and position. A second stage with fixed orthodontic therapy becomes necessary and a bone graft is commonly indispensable. This patient was treated with braces to bring the upper impacted canine from the right palatal region, achieving an ideal place in the maxillary arch. When the orthodontic therapy was finished, an aesthetic restoration was carried out to improve the microdontia of the upper incisors. However, a secondary bone grafting wasn't needed. The treatment turns out a very important improvement of the occlusion, getting a molar and canine class I, and of the dental aesthetics, having a positive effect on his self-esteem.

Oral Presentation 40

TITLE:- RELATIONSHIP BETWEEN THE PERIORAL MUSCLE ACTIVITY, THE LIP COMPETENCE AND THE VERTICAL RELATION OF THE INCISORS

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Máster de Ortodoncia, Universidad de Valencia, España

Objectives: Evaluate the association between the electromyography activity of the perioral muscles in patients with or without lip competence and increased or decreased overbite.

Material y Methods: This study was approved by the Ethics Committee of the University of Valencia. The sample was composed by 35 patients that came to the orthodontic degree program for undergoing an orthodontic treatment. Patients with syndromes and craniofacial anomalies were excluded. The muscular activity by surface's electromyography of orbicularis oris muscles was recorded during 5 position: rest, maximum clenching, labial contraction, deglutition of saliva and of 2 ml of water.

Results: The muscular activity of facial muscles showed a relationship statistically significant between the electromyographic activity and the presence of lip incompetence and anterior open-bite. These patients showed a higher activity of the orbicularis oris muscle due to the effort needed to lip closure during the analysed activities.

Conclusions: Exist a relationship statistically significant between the muscular activity of perioral muscle, the lip competence and the vertical relation of the incisors.

posters

POSTER 1

TITLE:- RADIOLOGICAL ALTERATIONS IN PATIENTS WITH DEGENERATIVE JOINT DISEASE OF THE TEMPOROMANDIBULAR JOINT

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Introduction: Degenerative joint disease (DJD-osteoarthritis) of the temporomandibular joint (TMJ) is a diagnostic challenge due to the anatomical variations of the condyle that simulate it and the frequent discrepancy between clinical signs and radiographic alterations. The objective is to present the radiographic signs currently accepted for the diagnosis of DJD according to the Diagnostic Criteria for Temporomandibular Disorders (DC/TMD) and show images of them.

Material and Methods: Medline search was carried out with the sequence (“degenerative joint disease” OR osteoarthritis) AND temporomandibular AND (“computed tomography” OR “magnetic resonance” OR “panoramic X-ray”) and 20-year time frame. Those articles related to the objective of the study that included at least sensitivity and specificity evaluation have been selected manually.

Results: The diagnostic signs of DJD are osteophytes or subchondral cysts or condylar erosion or generalized sclerosis. Cortical sclerosis and/or condylar flattening are not currently considered defining signs of DJD because they represent, in many cases, normal anatomical variations, signs of remodelling or variations associated with age.

Conclusion: Computed tomography is the technique of choice for the diagnosis of DJD and the radiographic signs that define the disease are osteophytes or subchondral cysts or condylar erosion or generalized sclerosis. Magnetic resonance imaging is less sensitive for the diagnosis of EAD but allows better visualization of the soft tissues. The panoramic radiograph is of little value in the diagnosis of DJD.

POSTER 2

TITLE:- PERIODONTAL DISEASE IN CASES DIAGNOSTICATED WITH ANDERSEN TAWIL SYNDROME

AUTHORS: *Fuenmayor Garcés A¹, Pérez Lanza P², Almiñana Pastor P³, López Roldán A⁴, Gil Loscos F⁵, Alpiste Illueca F⁶*

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Introduction: Andersen-Tawil syndrome is a rare genetic disorder with an unknown incidence. Around 100 cases have been reported with this condition all over the world. It is characterized by the symptoms of periodic paralysis, cardiac dysrhythmias and distinctive skeletal facial features. The Andersen-Tawil syndrome is classified into two categories related to their genetic causes. Type 1, which represents about 60% of all cases, is caused by mutations in KCNJ2 gene. Recently, a second related gene has been identified, KCNJ5. The remaining 40% of cases is designated as type 2 due to an unknown cause.

Clinical cases: We present two cases of patients diagnosed with Andersen Tawil syndrome, mother and daughter, treated in the Department of Periodontics at the University of Valencia.

The first complete visit is made with anamnesis, periodontal chart, full radiographic examination and diagnostic photos. And it was complemented taking samples of the crevicular fluid of both patients. A line of research in our department focuses on the study of possible epigenetic markers (microRNAs) characteristic of periodontal disease in the gingival crevicular fluid. That is why we found interest in taking samples to analyze and compare them.

As a result, it was carried out the basic periodontal treatment to both of them.

Discussion: Periodontal diseases are related to certain systemic pathologies. As for Andersen syndrome, alterations have been described at the oral level, such as delayed eruption of the permanent dentition, multiple agenesis (lateral incisors), ogival palate, cleft palate and hypoplasia of the maxilla and mandible, but there are no references regarding to periodontal diseases.

This is why we would like to know if there is an association between both pathologies. The taking of crevicular fluid is a painless diagnostic method that could be useful in a large number of situations.

POSTER 3

TITLE:-AESTHETIC CROWNS IN PEDIATRIC DENTISTRY: A LITERATURE REVIEW

AUTHORS: *Esplugues Estrella C, Blanquer Ferri M, Faubel Ibañez A, Selva Ribera I, Estrella Sanchis F, Catalá Pizarro M*

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Introduction: The treatment of choice for temporary teeth with significant structural damage are preformed crowns. Their principal aim is to cover the whole surface to protect and preserve the dental structure, restoring form, function and aesthetics. For decades, the preformed stainless steel crowns have been used successfully, however, due to current aesthetic demands from parents, for the last 20 years, the range of possible materials has grown, and more aesthetic options have been developed, such as zirconium crowns.

Material and Methods: A literature review has been carried out through the search of different databases (PubMed, Web of Science, Scopus, Embase, Cochrane), using the key words: Aesthetic crowns, children aesthetic, restoration, pediatric dentistry.

Results: In the 80s, in order to give an aesthetic aspect to stainless steel crowns, open-faced crown techniques were published, while in the 90s metallic crowns with aesthetic front were developed. Composite crowns, executed through the strip-crown technique have also been used extensively. The advent of prefor-med Zirconium crowns in 2010 was regarded as a significant step in aesthetic dental treatment in the field of paediatric dentistry.

Discussion: The preformed crown constitutes a common treatment option in paediatric dentistry. The aesthetic demand in children is higher and makes an evaluation of the indications, advantages, efficiency and satisfaction of the parents between different current options necessary.

POSTER 4

TITLE:-GENDER DETERMINATION THROUGH DENTAL STONE CASTS IN A CAUCASIAN POPULATION

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Objective: Establish parameters at the dental level that allow the identification of an individual's sex, and

determine if there is a predominant palatal rugae pattern.

Material and Methods: We included 150 dental stone casts belonging to 75 men and 75 women, aged between 18 and 60 years. The mesiodistal width (MD) of the 4 upper incisors was analyzed. The width (MD), labiolingual diameter (LL), coronal height (AC) and cervical dimension (DC) were recorded in the canines. The intercanine distance (DIC) of both maxilla and mandible was analyzed. The length of palatal rugae was recorded according to the model proposed by Kapali. The morphological patterns present according to Thomas and Kotze and Silva were counted and identified as: straight, curved, wavy, circular or point, including the unifications of these: convergent and divergent.

Results: The correlation between height and width of the canines with respect to sex is statistically significant ($p < 0.05$). Men get higher measurements on all dental parameters. However, there are no statistically significant differences by sex in the total number of rugae, their position or length. With regard to the type of rugae, statistically significant differences were found, with men having 33.5% wavy type compared to 28.46% in women, and 5.43% of point type compared to 7.70% in women.

Conclusions: There is a significant difference in teeth at the biometric level between men and women. Palatal rugae have a predominant wavy pattern in men that allows gender identification. Likewise, women present a straight pattern more frequently.

POSTER 5

TITLE:- ANTEROSUPERIOR AESTHETIC REHABILITATION WITH FELDESPATHIC VENEERS BY VERTICAL- BOPT PREPARATION

AUTHORS: *Hernández Maset M¹, Salom Fontana A¹, Faus López J², Ausina Escrhuella D³, Agustín Panadero R^{3,4}*

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Introduction: Due to the aesthetic demand in the fixed prosthetic rehabilitations, and as well the patient as the clinician prefer a minimum invasive treatment, we are forced to know techniques which result in a long term stability and with the fewer damage on the soft tissues.

One of the most frequent complications amongst the fixed prosthodontics on natural teeth is the apical migration on the gingival margin. With the BOPT technique we claim to guide the tissues in a periodontal way through the prosthetic restoration.

Simultaneously, thanks to the new materials introduction allowing minimum thickness we are able to carry out preparations minimally invasive preserving the maximum hard tissue structure and preventing some complications like dentin sensitivity or pulpal affectation at the same time.

Case report: The case reported describes the rehabilitation of the upper anterior teeth by the means of feldspathic porcelain veneers (Vita Luxe Forte®) with BOPT (Biologically Oriented Preparation Technique) on the cervical margins.

Patient requires aesthetic results and preserve hard tissues as far as possible.

Discussion: In this case report we set out the BOPT preparation considering the authors' statements on their research, it is capable of making migrate the gum and swell it at the same time, holding a long term gingival margin.

We can see the gingival armony that we get through this technique and how we cover the aesthetic demand of the patient at the same time.

Thanks to the new materials we achieve excellents results with the máximo dentine and enamel conservation.

POSTER 6

TITLE:- IMMEDIATE IMPLANT IN ESTHETIC ZONE WITH SOCKET SHIELD AND BOPT RESTORATION

AUTHORS: *Tomás Pérez M¹, Reger S¹, Faus López J², Agustín Panadero R^{3,4}, Ausina Escríhuela D⁴*

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Introduction: Mainly during the first three months after dental extraction a loss of bone and gingival volume related to surgical trauma and interruption of irrigation by the periodontal ligamento to bundle bone takes place. Particularly in the esthetic area, the successive deficiencies of hard and soft tissue can compromise the optimal positioning and the overall esthetic result of the implant.

Clinical case: A female patient of 66 years without relevant medical history came at the clinic with a horizontal fracture of the endodontically treated teeth 12 and 11. Tooth 12 was cutted below the bone crest to maintain the bone. On tooth 11 the surgical technique of the "Socket Shield" with immediate implantation was combined with the prosthetic technique of "BOPT" on implants to reduce dimensional changes and get a good bone and gingival volume giving volume stability.

Discussion: In order to avoid bone resorption, the "Socket Shield" technique has been developed as an effective method to preserve the buccal bone plate and the gingival profile. It is based on maintaining a root fragment with its periodontal ligament, which guarantees the blood supply of the alveolar bone, associated with the placement of an immediate implant. To accomplish a greater preservation of the peri-implant tissues during the prosthetic phase, the "Biologically Oriented Preparation Technique" (BOPT) is performed. In this technique a prosthetic abutment without finish line is used, which in combination with an transgingival implant with convergent prosthetic platform permits to give space to the soft tissues. Allowing in this way the modeling of the emergence profile for a good esthetic result. At the same time, a healthy and thickened gingiva that seals around the implant is achieved, giving long-term tissue stability.

POSTER 7

TITLE:- TREATMENT OF THE AGENESIS OF UPPER PREMOLARS REHABILITATED WITH TRANSMUCOSAL CONVERGENT NECK IMPLANTS FOLLOWING THE B.O.P.T TECHNIQUE

AUTHORS: *Simó Picó M¹, Domenech Climent T¹, Faus López J², Agustín Panadero R^{3,4}, Ausina Escríhuela D⁴*

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Introduction: According to diverse statistics researches carried out, absences of second upper premolars constitute a percentage that revolves around 10% of dental agenesis.

Currently there are several treatment alternatives among which we can highlight: fixed and removable prosthesis, orthodontics and implants.

Clinical case: In this case, the patient presented an agenesis of the second upper left premolar. Due to the absence of definitive dental germ, the bone availability of the region was reduced as a result of hyperneumatization of the maxillary sinus. In order to place the implant simultaneously, we proceeded to perform a sinus floor elevation using the lateral approach technique.

We proceeded to perform the surgery after the radiographic study. Once elevated the mucoperiosteal flap, an osteotomy was performed to delimit the bone window; For this, a piezoelectric equipment was used under constant irrigation. The osseous bed was worked and the bone filling was performed with Straumann® Xenograft bovine graft.

Simultaneously, a PRAMA® implant (Sweden&Martina, Due Carrare, Italia) was placed as it complies with the B.O.P.T treatment philosophy. This technique improves the marginal adaptation of the prosthetic crown and allows a better conservation of the soft tissues since it helps to ensure that the collagen fibers of the biological peri-implant width remain stable and thick.

After six months waiting, we proceeded to take impressions for the preparation of a screwed definitive crown.

Discussion: PRAMA® implants allow maintaining greater health of the peri-implant tissues as well as obtaining a mimicry under the soft tissues thanks to its transgingival golden neck.

POSTER 8

TITLE:-BIOCERAMICS IN INVASIVE CERVICAL RESORPTION: A CASE REPORT

AUTHORS: *Traver Sorribes JJ^{1,2}, Gomilla Garcia A², Traver Sorribes MM¹, Faus López J³, Ausina Escrihuela D⁴, Agustín Panadero R^{4,5}*

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Introduction: The success or failure of an invasive cervical resorption (ICR) lies in a correct early diagnosis so, if the situation is dealt with appropriately, the affected tooth is preserved.

Clinical case: Our case presents a 25-year-old woman, who finished her orthodontics treatment 2 years ago,

without any medication or pathology of interest, reporting swelling and bleeding in 1.1. The clinical examination diagnosis was invasive cervical resorption. In the requested Cone Beam CT, the damaged area was observed. It was a type 3 ICR extending towards the coronal dentine as well as the cervical third of the root. The first procedure treated the 1.1 canals with (warm) continuous wave technique, to apply an apical seal, and a coronal reconstruction, to apply a coronal seal. Then, in a surgical approach, a full-thickness stripping with intrasulcular incision was performed from 2.1 distal to 1.2 distal, keeping the papilla. The stripping was done over the mucogingival junction. All the adjacent granulomatous tissue was eliminated, as well as the affected root and coronal dentine. Controlling the bleeding and with a sterile gauze, Trichloroacetic acid (90%) was applied on the affected area with a cotton ball. The area was flushed with abundant water and dried. The damaged area was reconstructed with biodentine and the flap was replaced. After it heals, the coronal area will be reconstructed with aesthetic composites.

Discussion: ICRs may occur due to various etiologies, trauma, non-vital bleaching, dental braces, bruxism, periodontal treatment. This case report, 6 months after treatment, proves that the correct use of tools and materials can help us be successful in our treatments.

POSTER 9

TITLE:- SUBCUTANEOUS EMPHYSEMA AFTER A DIRECT SINUS LIFT: A CASE REPORT

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Introduction: Subcutaneous oral emphysema is defined as penetration of pressurized air into the tissue spaces. One of the possible air intakes is through the bone window made during the direct sinus lift. There are only 3 cases published in the literature of subcutaneous emphysema with this etiology. It is important that the dentist carefully instruct the patient about the postsurgical protocol that must be carried out to reduce the risk of this complication.

Clinical case: A 52-year-old patient undergoing a maxillary direct sinus lift for the future placement of

implants in the posterior area. A few hours after the surgery, the patient repeatedly sneezed with his mouth closed three times, immediately causing a large swelling in the left periorbital area that prevented him from opening the eye. After clinical and radiological examination, it was determined that it was a subcutaneous emphysema. The prescribed treatment was antibiotics.

Discussion: Subcutaneous emphysema is a benign and usually self-limited entity, which usually resolves spontaneously.

Most authors agree on the use of turbines as the most frequent etiology. Other reasons, however, have also been reported in the literature as endodontic treatment and the use of dental lasers. The main clinical manifestations that make us establish a correct differential diagnosis are redness, oedema and crepitating palpation of the soft tissues. In general, patients do not report pain, limited to a slight discomfort generated by swelling.

POSTER 10

TITLE:- CLINICAL PARAMETERS OF IMPLANTS PLACED IN HEALED SITES USING FLAPPED AND FLAPLESS TECHNIQUES: A SYSTEMATIC REVIEW

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Background: Dental implant placement using flapless surgery is a minimally invasive technique that improves blood supply compared with flapped surgery.

Objective: The aim of this systematic review was to evaluate the clinical parameters following implant surgery in healed sites, using two procedures: flapped vs. flapless surgery.

Materials and Methods: A detailed electronic search was carried out in the PubMed/Medline, Embase and Cochrane Library databases. All the studies included with a prospective controlled design were considered separately, depending on whether they had been conducted on animals or humans. The following data were recorded in all the included studies: number of implants, failures, location (maxilla, mandible), type of rehabilitation (partial or single), follow-up and flap design. The variables selected for comparison in the animal

studies were the following: flap design, gingival index, mucosal height, recession and probing pocket depth. In humans studies the variables were as follows: flap design, plaque index, gingival index, recession, probing pocket depth, papilla index and keratinized gingiva.

Results: Ten studies were included, six were experimental studies and four were clinical studies. Studies in animals showed better results using the flapless technique in the parameters analyzed. There is no consensus in the clinical parameters analyzed in human studies, but there is a trend to better results using flapless approach.

Conclusion: The animal studies included in the present review show that implants placed in healed sites with a flapless approach have better clinical parameters than the flapped procedure in a short-term follow-up. In human studies, there is no consensus about which technique offer better results in terms of clinical parameters. Therefore, more research in humans is required in order to overcome the limitations and contrast these results.

POSTER 11

TITLE:- PERIAPICAL SURGERY WITH A NEW RETROGRADE ROOT CANAL FILLING: TRI-CALCIUM SILICATE CEMENT (BIODENTI-NETM)

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Introduction: The prognosis of periapical surgery has been improved in the last years with the use of new instruments and materials. Mineral trioxide aggregate (MTA) is considered the cement of choice for periapical surgery, however new calcium silicate-based material named Biodentine seems to improve some of the properties of MTA.

Clinical case: In the first report, the patient was referred with pain due to a persistent apical lesion after 6 months of endodontic retreatment. On radiographic examination, a radiolucent area surrounding the apex of the first upper right premolar was observed. In case 2, the patient presented pain in the left lateral incisor.

The periapical radiograph did not show a pathological state around the apex, however, a small amount of extruded endodontic cement could be observed in the periapical region. In both cases, the periapical surgery procedure was performed with Biodentine. After 1 year of follow-up, the teeth were asymptomatic, there were no gingival recessions and the periodontal probing depth was normal. Periapical radiographs showed complete bone regeneration around the apices.

Discussion: In last years, MTA has been considered such as “gold standard” material to periapical retrograde filling after demonstrating better results than other materials studied. Recently, a new calcium silicate-based material, Biodentine™, at the beginning developed for restorative dentistry, began to be used such as retrograde filling material. The faster setting time, easier manipulation and the low cost seems at this moment the better advantages to Biodentine™ compared with MTA. The absence of studies with large and long-term series make the prognosis of periapical surgery with this new material remains an unknown.

POSTER 12

TITLE:- IMMEDIATE PARTIAL REHABILITATION WITH ARTICULATED PROSTHESIS ON IMPLANTS PLACED WITH COMPUTER-GUIDED SURGERY. PROSPECTIVE CASE SERIES WITH 3-5 YEARS FOLLOW UP

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Objective: The aim of this study was to evaluate the success of implants placed with computer-guided surgery and immediate loading in free-end partial rehabilitations. A further aim was to describe and assess the success and complications of articulated immediate loading prosthesis.

Material and Methods: In the study were included patients who needed partial free-end maxillary or free-end mandibular implant rehabilitations. A CBCT was carried out to all patients and implant planning was performed with Straumann CoDiagnostiX® program. Surgical templates were manufactured with goniX®. Presurgical partial articulated prosthesis (with metal joint linking the different crowns of the temporary

bridge) were drawn up with the aid of surgical templates. Straumann Bone Level® SLActive were used in all the patients involved in this study. All the implants were placed with a minimum torque of 30 N/cm. Radiological adjustment and complications of the articulated immediate prosthesis and implant survival were recorded. The definitive prosthesis was placed 3 month after implant placement.

Five partial free-end maxillary and two partial free-end mandibular implant rehabilitations were performed. Four of them were a 3 unit bridge with 2 implants, two of them were a 2 unit bridge with 2 implants and the other one was a 4 unit bridge with 3 implants.

Results: Correct adjustment of the immediate loading rehabilitations were observed radiographically in all cases. No prosthesis complications (screw loosening or breakage or prosthesis breakage) were recorded. No implant failure was recorded after a follow up period of 3 to 5 years since implant loading.

Conclusion: According to the results of this preliminary study, success of implants placed with computer-guided surgery and immediate loading in free-end partial rehabilitations was 100%. No complications of articulated immediate loading prosthesis were recorded.

POSTER 13

TITLE:- COMPARISON OF PERIAPICAL RADIOGRAPHY, PANORAMIC RADIOGRAPHY AND CONE BEAM COMPUTED TOMOGRAPHY FOR DIAGNOSIS OF APICAL PERIODONTITIS

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Objectives: To compare the diagnostic sensitivity of periapical radiography and panoramic radiography versus cone beam computed tomography (CBCT) and the measurements done with the three diagnostics methods.

Material and Methods: The sample consisted of 35 patients with 45 apical periodontitis, who undergone a periapical radiography, a panoramic radiography and a CBCT as a diagnostic method before they were submitted to an apical surgery. Through the three methods the presence, or not, of the periapical lesion was studied, measuring also, in the cases where the

infectious area was seen, the maximum height and the maximum width of each area.

Results: Of the 45 periapical lesions, 8 were not discernible neither periapical radiography nor panoramic radiography, and all of them were visible on CBCT. Regarding the measurements done on the three methods, significant differences were seen between the two-dimensional radiographies and the CBCT as far as height was concerned, and these were bigger on the CBCT. In the width and in the areas, there were not seen significant differences.

Conclusions: CBCT got a diagnostic sensitivity of 100%, versus periapical and panoramic radiographs which obtained 82 %. The heights measured with CBCT were significantly higher than the ones measured on periapical and panoramic radiographs.

POSTER 14

TITLE:- IMPLANT SURGERY WITHOUT DRILLING AND IMMEDIATE TEMPORIZATION WITH BOPT CROWN: A CLINICAL CASE

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Introduction: In low density bones, conventional drilling system wastes the scarce residual bone. The Magnetic Mallet is an innovative instrument for implant surgery and for the protocols of compaction and bone expansion. It allows to obtain a force of impact of high density and short duration that prevents in the patient the vertiginous benign paroxysmal syndrome. The objective was to carry out an atraumatic implant surgery and to make a composite provisional crown with an immediate charge modeled in the mouth.

Clinical case: A 34-year-old patient without pathologies of interest came to the office to replace the second right upper premolar. Once the CBCT was studied, it was decided to perform implant surgery without lifting a flap neither drills, using a system of impactors of controllable intensity and short duration (Magnetic Mallet). The first osteotome has the active tip and the rest of the osteotomes have a blunt tip to enlarge the alveolus, compacting the bone against the walls. This system was combined with threaded expanders that allowed to shape the turns of the implant. Once the bed was worked, a Prama RF 3'8 x 10 mm implant was placed. Ostell mesio-distal was 73

ISQ and vestibule-palatal 70 ISQ, so it was proceeded to perform the immediate load. A castable laboratory abutment was screwed and cut to create retentions and obtain a correct interocclusal space. The provisional with composite directly on the castable pillar freehand. Later it was unscrewed to mold the emergency type BOPT and a correct polishing to the screwed crown.

Discussion: Being a very non-invasive technique with mucosal tissues, it can be provisionalized in the mouth immediately, which provides a simplification of the procedure with the treatment of clinical studies and immediate aesthetics.

POSTER 15

TITLE:- BIOLOGICAL COMPLICATIONS ASSOCIATE TO THE ALL-ON-4 TREATMENT CONCEPT: A SYSTEMATIC REVIEW

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Introduction: The All-on-4 treatment concept pursues the placement of four dental implants (2 axial and 2 tilted), allowing the immediate loading a fixed prosthesis. Specific data regards biological complications such as implant failures, mucositis and peri-implantitis is scarce, being for utmost importance due to the high prevalence this pathology. In an attempt to offer the most reliable and accurate data we perform a systematic review to respond the following focused question: "In edentulous patients or with severely resorbed jaws that receive dental implants for immediate full-arch implant-supported restorations following the all-on-four treatment concept, what are the biological complications reported in available literature with at least 36 months of follow up?"

Material and Methods: Literature searches were conducted by two independent reviewers. Publications that did not meet the inclusion criteria were excluded. In the case of disagreement, consensus was reached through discussion with a third reviewer. Databases were screened: MEDLINE, EMBASE, and the Cochrane Library. In addition, electronic screening was made of the 'grey literature', as recommended by

the AMSTAR guidelines. The search contemplated papers published without language restrictions from January 2005 up to and including April 2017. The methodological quality of observational studies was assessed with the Newcastle-Ottawa Scale.

Results: Of the 260 articles found, only 24 papers provided sufficient information. We classified the biological complications according to the reviewed literature, pain, infection, edema and peri-implant pathology. Only 6 authors defined peri-implant disease. This indicates that articles about the All-on-Four concept have an heterogeneity explanation of the reasons of failure. From the 14249 implants, 175 failed. peri-implant pathology was observed in 90 implants, 33 implants with mucositis and 57 with peri-implantitis. Implants with signs of peri-implant pathology underwent different non-surgical and surgical approaches, and followed a maintenance protocol.

Conclusions: The definition of the biological complications of the All-on-Four treatment concept is very poorly described. Indicate a lack of long-term follow-up.

POSTER 16

TITLE:- DENTAL BLEACHING IN VITAL TEETH: COMBINED VERSUS IN OFFICE TREATMENT

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Objetives: To determine the ΔE and color parameter changes in teeth treated with combined teeth whitening technique.

Material and Methods: Nine patients were selected and treated with a combined tooth bleaching technique: office bleaching with a chemoactivated 38% hydrogen peroxide (3 applications of 15 minutes each); and home bleaching with individualized splints with a 16% carbamide peroxide gel (90 minutes a day until tooth color stabilization).

The color was registered in 6 index teeth (1.3, 1.1, 2.1, 2.3, 3.3 and 4.3) with the Vita Easy Shade V spectrophotometer. The CIELab space color parameters were recorded: L, a * and b * before starting the treatment and one week after concluding the phase of home bleaching. The ΔE was calculated with initial and

final parameters. A comparison test of nonparametric related means (Wilcoxon test) was applied to assess change statistical significance (p value <0.05).

Results: There were significant changes in the three color parameters between the initial and final measurement. The parameter L (luminosity) increased significantly from 81.4 to 84.7, the parameter a * (amount of red) went from -0.80 to -2.06 and the parameter b * was reduced from 19.1 to 11.0. The increase of ΔE has been estimated in 10.9 (95% IC between 9.4 and 12.5). No significant differences in whitening in index teeth has been observed.

Conclusions: It has been shown that this combined tooth bleaching technique, using 38% hydrogen peroxide in the office and between 5-16 weeks of home treatment with splints with 16% carbamide peroxide, is effective to treat moderate or severe dental discolorations.

POSTER 17

TITLE:- CONSERVATIVE TREATMENT IN MEDICATION-RELATED OSTEONECROSIS OF THE JAW

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Background: Medication-related osteonecrosis of the jaw (MRONJ) is a serious adverse drug reaction caused by (BF) or by other pharmacological or anti-angiogenic drugs. Consisting of a particular form of chronic osteomyelitis. This condition is rare and advances in diagnosis and management may reduce the risk of its development and offer valuable treatment options for these patients. The effectiveness use of management and treatment of MRONJ remains poorly understood.

Material and Methods: A literature search was made of PubMed, the Cochrane Library, and Scopus databases was conducted covering the period 2014-2018, to identify randomized controlled trials, nonrandomized controlled trials, and prospective cohort studies, to evaluate comparatively the effectiveness of management strategies for the treatment of MRONJ.

Results: A total of 36 studies with a medium-to-high risk of bias that met the inclusion criteria of this review compared with medical treatment of local antimicrobials with or without systemic antimicrobials, the study investigators associated surgical treatment with higher odds of complete resolution of the condition. The effectiveness of other therapies, such as bisphosphonate

drug holidays, local application of platelet-derived growth factor, β -bone marrow stem cell intralesional transplantation teriparatide or hyperbaric oxygen, tissue grafting, or low-level laser therapy, was uncertain.

Conclusions: On the basis of the results of the studies suggested that there are higher odds of resolving MRONJ with surgical treatment in the case of bone exposure with symptoms. compared with medical treatment. Conservative treatment is preferred in early stages without symptoms. Further high-quality research and clinical studies are required for conclusive statements to be made regarding treatment strategies and protocols for management of MRONJ.

POSTER 18

TITLE:- OSTEOBLAST EVOLUTION AND DIFFERENTIATION ON GRADE 5 TITANIUM DISCS WITH ADDITION OF MELATONIN

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Objective: To observe and analyze the behavior and differentiation of osteoblast cells cultured *in vitro* on titanium discs, comparing surface roughness and the presence/absence of melatonin.

Materials and Methods: Osteoblast cells (MG63) were cultured on 120 Grade 5 titanium discs divided into three groups: E: discs treated with dual acid etching; ECP: discs treated with dual acid etching and calcium phosphate; M: machined discs (control group). Before osteoblast culture, surface roughness was examined under a confocal microscope and by scanning electron microscopy (SEM). After 72 hours culture, cell proliferation and morphology was evaluated under the confocal microscopy and SEM. The relative expression of genes ALPL, BGLAP, COL1A1, PHEX and SPARC were quantified in relation to osteoblast proliferation, by means of reverse transcription polymerase chain reaction (RT-PCR) technique.

Results: Surface roughness analysis (Ra) found that ECP discs presented the most roughness, (Ra=0.354 μ m); followed by E (0.266 μ m) and M (0.131 μ m) with statistically significant differences ($p<0.001$). The addition of melatonin increased cell proliferation in

all groups although statistical significance was only reached in Group M ($p=0.0079$). Among the genes quantified, a statistically significant increase in PHEX was observed.

Conclusions: The addition of melatonin increases osteoblast proliferation and differentiation, favoring dental implant osseointegration.

POSTER 19

TITLE:- CLINICAL MANAGEMENT OF DEVELOPMENTAL ENAMEL AND DENTIN DEFECTS

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Introduction: There are different types of developmental enamel and dentin defects, some of which generate single or multiple white patches that can give the tooth surface a mottled appearance. Traditionally, these have been eliminated with rotary instruments, replacing the dental substrate tissue with composite resins. Recent developments in minimally invasive dentistry propose chemical abrasion treatments to reduce the quantity of dental tissue eliminated.

Clinical case: A 29-year-old woman without relevant medical antecedents. Color modification was quantified using a spectrophotometer. Combined vital tooth whitening was performed: three clinical sessions of 37.5% hydrogen peroxide whitening with photoactivation, and 2 weeks of home treatment with carbamide peroxide (for 2 hours daily for 2 weeks) in order to improve the color of the teeth, imitating the color of the white patches. Then chemical abrasion was performed with 6.6% hydrochloric acid containing silicon carbide microparticles. To treat the surface roughness and loss of luminosity generated, treatment ended with polishing using rubber cups and contra angle brushes, followed by a further week of whitening at home.

Discussion: In patients with white patches, more patches may appear during the whitening process but when treatment has been completed the color is homogenized, compensating for the additional patches. Chemical abrasion treatment resolves cases of less

depth (up to 0.2mm); for greater depths infiltrating with resin is indicated. Cases presenting greater affectation are treated with placement of an enamel and/or dentin composite.

POSTER 20

TITLE:- EFFECTIVENESS OF SURGICAL PROCEDURES IN ORTHODONTICS FOR THE ACCELERATION OF TOOTH MOVEMENT

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Introduction: The demand for orthodontic treatment has increased in recent years, and its duration causes concern among patients. The existence of surgical methods that shorten the time of treatment dates back more than 100 years, although in recent decades they have gained interest. Assessing the effectiveness of these techniques to reduce the duration of orthodontic treatment has been the objective of this work.

Material and Methods: The search for articles is performed in the Medline, Cochrane and Scopus databases. Carrying out 3 independent search lines: corticotomy, minimally invasive surgical methods and microosteoperforations (MOP's), all of them associated with orthodontic treatment and in which the duration of this treatment will be evaluated.

Results: Of the 17 included articles, 9 were clinical trials (6 of corticotomy, 1 of piezocision, 1 of both corticotomy and piezocision and 1 of micro-osteoperforation) and 8 reviews. The results indicate that these techniques are effective, reducing the time of the orthodontic treatment, ending up being two times faster than conventional orthodontics.

Discussion: Corticotomies, piezocision and MOPs linked to orthodontics are effective in shortening the duration of orthodontic treatment. Currently there is little scientific evidence, so more randomized and quality clinical trials are necessary to obtain conclusive results. They are presented, then, as promising techniques in the field of orthodontics.

POSTER 21

TITLE:- REMINERALIZATION THERAPY VERSUS OTHER NON-REMINERALIZATION THERAPY FOR TREATING POST-ORTHODONTIC WHITE SPOT LESIONS. SYSTEMATIC REVIEW

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Background: One of the adverse effects of orthodontic treatment is the appearance of white spot lesions resulting from enamel demineralization. The objective of this systematic review was to establish a treatment of choice that both repairs mineral loss and improves dental esthetics.

Material and Methods: This systematic review identified relevant articles listed in five databases – Pubmed, Cochrane, Scopus, Embase and Web Of Science – using a combination of search terms referring to orthodontics, demineralization, and treatment. After critically reading the complete articles, the review analyzed 14 papers, ten on remineralization therapy, and four on non-remineralizing therapy.

Results: Among the studies of remineralizing therapy, neither fluoride mouthwashes nor phosphopeptide toothpastes, with or without fluoride, had any positive effect in addition to oral hygiene maintenance with fluoride toothpaste. 5% sodium fluoride varnish was the only therapy to show a statistically significant improvement in comparison with the control group. Among non-remineralizing therapies, both resin infiltration and bleaching camouflaged white spot lesions. Large variations in results were found among the studies reviewed due to the different methods employed.

Discussion: There is no clear evidence to determine a treatment of choice that is capable of repairing white spot lesions and producing good esthetic outcomes. 5% sodium fluoride varnish is the only therapy that repairs mineral lesions, while those that produce the best esthetic outcomes are resin infiltration and bleaching.

POSTER 22

TITLE:- EFFECTS OF BIMAXILLARY ADVANCEMENT SURGERY ON THE UPPER AIRWAY AND ON OBSTRUCTIVE SLEEP APNEA SYNDROME. A META-ANALYSIS

AUTHORS: Rojo Sanchis C ¹, García Sanz V ², Paredes Gallardo V ², Montiel Company JM ³, Bellot Arcís C ², Gandía Franco JL ³

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Introduction: Upper airway changes following bimaxillary advancement surgery to treat obstructive sleep apnea syndrome remain controversial. The main objective of this systematic review and meta-analysis was to investigate the effects of bimaxillary advancement surgery on the upper airway (UA) of obstructive sleep apnea syndrome patients through examining changes three-dimensionally in vertical and supine position and through changes in oximetric variables (AHI, RDI, O2 Sat) and in the quality of life measured by the Epworth sleepiness scale (ESS).

Material and Methods: A thorough search of the PubMed, Scopus, Embase and Cochrane databases and a grey literature search (Opengrey) were conducted. No limit was placed on publication year or language. The inclusion criteria were: adult obstructive sleep apnea patients who had undergone bimaxillary advancement surgery, three-dimensional CBCT or CT and oximetric measurements and at least six weeks follow-up. Sample sizes of under 10 patients were excluded. Finally, 26 articles were included in the qualitative review and 23 in the meta-analysis.

Results: The statistically significant estimated increase in airway space was 8.91 cm³ (IC-95% 6.61 to 5.54) in vertical position and 6.05 cm³ (IC-95% 11.20 to 6.56) in supine position. The mean fall in AHI was 45.6 events/hour (IC-95% 50.37 to 40.82); the reduction in RDI was 50.4 events/hour, the increase of oxygen saturation was 8.99% (IC-95% 5.20 to 12.77). The reduction in ESS was 10.5 points (IC-95% 12.52 to 8.46).

Conclusions: Bimaxillary advancement surgery has been shown to be beneficial in terms of increased upper airway size, improved oximetric indicators and the quality of life measured on the Epworth sleepiness scale.

POSTER 23

TITLE:- DENTAL MANAGEMENT IN PATIENTS WITH LIVER DISEASE

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Introduction: The presence of oral manifestations in patients with liver disease, such as the appearance of hemorrhages, petechiae, jaundice of the mucous membranes and sialoadenosis, among others, may be concomitant with the appearance of hepatic dysfunction and its detection could indicate a decompensation of the disease. In addition, during the management of the patient with liver disease, it has to be considered some important and frequent complications like the risk of contagion (for healthcare personnel and other patients), the risk of bleeding and the risk of toxicity due to alteration of the metabolism of certain drugs.

Material and Methods: The aim of the present study was to provide a thorough literature review of the oral manifestations in patients with liver disease, and the dental management of such patients. A Medline-PubMed, Cochrane and Scopus search was conducted of the English and Spanish literature over the last 10 years.

Results: Patients with liver disease usually present a worse oral status, as well as a greater number of caries, periodontal disease and in some cases salivary alterations, both quantitative and qualitative. Sjögren's Syndrome and oral lichen planus have also been related to this disease. Regarding dental management, an interconsultation should be carried out with the specialist to establish the dental treatment plan considering the degree of alteration of the liver function. In addition the barrier methods to avoid the transmission of the virus should be taken into account, as well as the application of hemostatic measures subsequent to the performance of bloody processes and dose adjustment of hepatic metabolism drugs.

POSTER 24

TITLE:- GOSLON YARDSTICK INDEX IN PATIENTS WITH UNILATERAL CLEFT LIP AND PALATE: A SYSTEMATIC REVIEW

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Introduction: There are several indices to measure the treatment outcome in patients with cleft lip and palate (FLP), the Goslon index being widely used to evaluate the treatment outcome in patients with unilateral FLP and to compare the results of the treatment, closely related to the growth maxillary.

Objectives: To analyze the predictive validity of the Goslon index and assess whether it is a useful method to study the relationships of the dental arch as a prognosis for treatment in FLP patients.

Material and Methods: A systematic review was carried out in 4 databases: Medline, Cochrane Library, Scopus and Embase, along with a manual search and the databases of the main journals of the specialty. In addition, an electronic search of “gray literature” was conducted.

Results: A total of 301 articles were obtained, duplicates were excluded and after reading the title and abstract, those not related to the research question were excluded, leaving a total of 21. After a complete reading of the articles, 3 were selected. studies because they were the only ones that met the inclusion criteria. The different studies showed predictive validity between 42.2% and 64.7%.

Conclusions: There isn't enough evidence in the literature about the predictive validity of the Goslon index in patients with FLP.

POSTER 25

TITLE:- FACTORS PREDICTING MALIGNANT TRANSFORMATION OF ORAL LEUKOPLAKIA

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Background: Oral leukoplakia (LO) is defined as a predominantly white plaque that can not be characterized clinically or pathologically as any other disorder. It is the most frequent malignant disorder of the oral cavity, it is estimated that its malignant transformation is 1-2%.

Objectives: To carry out a review on the risk factors for malignant transformation of LO published in the literature.

Material and Methods: We reviewed the Pubmed-Medline database for articles published between 2008 and 2018 with the keywords “oral leukoplakia” and “risk factors”.

Results: The evidence suggests that a large proportion of oral squamous cell carcinoma is associated with long-term pre-existing LO. Of the recognized factors that increase the risk of malignant transformation, the most important indicator is the presence of epithelial dysplasia, which is often correlated with a non-homogeneous clinical presentation. However, it must be recognized that there are some dysplastic lesions that may be clinically stable or even evolve to complete regression, although the latter is quite infrequent.

Conclusions: The factors that are considered most important in the malignant transformation of oral leukoplakia are: female sex, presence of *C.albicans*, leukoplakias with long evolution, leukoplakias in non-smokers (idiopathic leucoplasias), localization in tongue and / or mouth floor, size > 200mm², the not homogenous clinical type and the presence of high-grade epithelial dysplasia.

POSTER 26

TITLE:- ORAL DISEASE IN THE RENAL PATIENT

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Introduction: Patients with chronic renal failure (CRF) treated with hemodialysis present a poorer oral status than the healthy population. In addition, poor oral health is associated with inflammation and malnutrition, which can affect their underlying disease. Moreover these patients and those who have a kidney transplant, can pose a challenge for treatment in the dental office due to their systemic and pharmacological conditions.

Material and Methods: We did a literature review of oral disease in the renal patient. We searched in Medline (Pubmed), Scopus and Cochrane databases. We used the following keywords with the Boolean operators AND and OR and different search equations: renal failure, hemodialysis, renal transplant, dental, oral disease, oral health. We searched for publications of the last 15 years, in humans, in English and in Spanish. After reading the abstracts and the application

of quality filters, the repeated articles were eliminated. In addition, those articles that due to their content were not suitable for the revision were eliminated too.

Results: The edentulism varied from 6,4% to 42% according to different studies and DMFT index was moderate to high. The prevalence of periodontitis varied by global region from 27,1% to 77,5%. Oral hygiene (plaque index) according to different studies also varied from 1.4 to 2.1. Mucosal disease included mucosal ulceration, oral candidiasis and oral herpetic lesions. Up to 69% of hemodialysis patients reported xerostomia and difficulty for swallowing.

Conclusions: Oral disease is frequent in CRF patients, may reflect the lack of dental care and the application of preventive measures and may be a determinant for the general health in these patients. It is important to follow up and treat these patients to improve their quality of life.

POSTER 27

TITLE:- RELATIONSHIP BETWEEN ROOT CARIES AND THE PRESENCE OF *CANDIDA ALBICANS* IN REMOVABLE PROSTHESIS CARRIERS

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Objective: Among the risk factors related to root caries, in addition to the exposure of the root to the environment and the reduction of salivary flow due to age and polypharmacy, the changes in the microbiotic of the bacterial plaque are added together with the Over the years. It has been demonstrated that from the age of 65-70 years, *Candida albicans* increases its presence in the oral cavity, especially in prosthesis carriers, a circumstance that influences the oral ecosystem and could be another risk factor for root caries.

The aim is to relate the characteristic of being a carrier of removable prostheses with the appearance of root caries in the abutment teeth and the presence of yeast of the genus *Candida* in the bacterial plaque of the prosthesis and the surface of the caries lesion.

Material and Methods: Samples are taken in patients older than 65 years, carriers of removable prostheses with root caries (cases) and without root caries

(controls), planted in petri dishes with Chromogenic Agar for *Candidas spp*, CHROMagar R and incubation at 37° for 72h.

Results: The presence of yeast in the plate of the prosthesis closest to the tooth facing is higher in patients with root caries, there is also an association between the presence of yeast in the tissue and the type of prosthesis being higher in the skeletal. Regarding the relationship between the type of prosthesis and the development of root caries, no significant differences have been obtained.

Conclusion: It is demonstrated that the presence of yeasts in the prosthesis plate closest to the lesions is higher in patients with caries than in patients without root caries, this difference being statistically significant.

POSTER 28

TITLE:- ORAL MANIFESTATIONS OF HAEMATOLOGICAL DISEASES

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Introduction: Red blood cells or erythrocytes, white blood cells or leukocytes and platelets or thrombocytes are the building blocks of blood. The qualitative and quantitative alterations of these elements produce different forms of illness that can be expressed in the oral cavity and, therefore, determine the dental treatment. Within these alterations highlight the different types of anemia, leukemia and lymphoma.

Material and Methods: A search was made in Medline and Scopus databases with the key words “anemia”, “leukemia”, “lymphoma” and “mouth”, using Boolean operators and 5-year time limits. Those articles related to the objective of the study have been manually selected.

Results: Iron-deficiency anemia is characterized by painful tongue and atrophy of the lingual papillae. In leukemia, pallor of mucous membranes, petechiae, ulcers and gingival hemorrhages are frequent; the presence of gingival hypertrophy or persistent bleeding after dental extraction is considered a warning sign. The common form of presentation of lymphomas in the cervicofacial area is a painless tumor of rapid growth. In the oral cavity can debut as a tumor, not always painful, as an ulcer or affecting diffuse structures such as the gum.

Conclusion: Oral manifestations of hematological diseases should be taken into consideration by the dentist, especially malignant forms. Gingival hypertrophy, persistent bleeding and/or the appearance of a tumor or an ulcer in a short period of time should be considered as warning signs.

POSTER 29

TITLE:- RELATIONSHIP OF PERIODONTAL PATHOLOGY WITH PERSONALITY TRAITS AND PSYCHOLOGICAL FACTORS. "A CASE REPORT"

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Introduction: Previous studies have observed an association between psychological stress and gingival inflammation (Hilbert 2006), as well as the relationship between anxiety and depression with Periodontitis (Axtelius 1998). However, there is limited information regarding the relationship between periodontal pathology and the personality traits of patients.

Stress may result in a lower resistance of the host against the aggression of the bacteria related to Periodontitis and trigger an immuno-inflammatory response in the host's periodontal tissues (Page RC 1997). Bacterial pathogens are required to initiate the Periodontitis process, however, it has become evident that their only presence is not sufficient to cause or initiate the destruction of periodontal tissues (Birkedal-Hansen 1993).

Clinical Case: It is reported a clinical case of a 30-year-old patient, without relevant systemic diseases and with a history of Periodontitis previously treated and in periodontal supportive therapy.

He attended the office of the Periodontics and Osseointegration Postgraduate at the University of Valencia after 18 months without attending maintenance visits. The first visit, after this period without treatment, was organized in two phases:

1st Phase

- Clinical examination: a complete periodontal study was performed observing gingival inflammation in the antero-superior and inferior sectors, abundant bleeding on probing, periodontal pockets of 9-12mm deep, grade II and III mobility and large plaque and calculus accumulation.

- Radiological examination: 18 periapical radiographs showing generalized horizontal bone loss, accurate in D of 2.2 and 5th sextant.

2nd Phase

- Psychological analysis: battery of psychological tests with 200 questions to assess personality traits, stress, perceived stress and psycho-social factors.

Basic periodontal treatment: 4 sessions of scaling and root planing, oral hygiene instructions, 0.12% chlorhexidine mouthwash and antibiotic treatment.

Discussion: An attempt is made to find a relationship between the periodontal parameters and the psychological factors and associated personality traits. Currently, there is enough evidence to ensure that that stress and psychosocial factors have a negative impact on periodontal tissues (Bakri 2013). However, there is no evidence between the relationship of personality traits and periodontal pathology. Therefore, in the present study this association is considered as a possible risk factor in the development of periodontitis, as well as in the appearance of new outbreaks in previously treated and stabilized patients.