Errata

Please, correct the changes in the abstracts that occured after printing the Congress Abstract Book. We apologise for overlooking the mistakes during preparation of the publication. The correct versions are following:

Oral Presentation No. 24 (page 40)

Factors inflncing the dimensional accuracy of 3D-printed full coverage dental restorations using stereolithography technology

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Purpose: With the advancement in CAD/CAM technology, additive manufacturing (AM) or 3D-printing is emerging in the dental fid and is promising in manufacturing of dental restorations. The aim of this study was to evaluate the effect of the build orientation (the angle of the support) and dimensions of the support (thick vs. thin support) on the dimensional accuracy of 3D-printed full coverage dental restorations.
Materials and Methods: A full dental crown was digitally designed and 3D-printed using stereo-lithography (SLA-AM) technology. Nine angles were used for the building orientation as follows: 90°, 120°, 135°, 150°, 180°, 210°, 225°, 240° and 270°. In each build orientation, the crown was printed using a narrow and a wide type of support. The specimens were digitally scanned using a high-resolution optical surface scanner. The dimensional accuracy was evaluated using digital subtraction technique. The 3D-digital fies, exported in standard triangulation language (STL) format, of the scanned printed crowns (test model) were superimposed with the STL fis of the designed crown (reference model) using Geomagic® studio; 2014. The average deviation between the two models and the root mean square estimate values (RMSE) were then evaluated. Additionally, the deviation pattern on colour map was further assessed.
Results: The build angle and different dimensions of the support structure are suggested to inflnce the dimensional accuracy of 3D-printed restorations. The lowest average deviation was found with the build angle of 120° for both thin and thick type of support (0.019 and 0.021 mm respectively). Further, the RMSE value recorded for thin type of support (0.029 mm) was lower compared to the thick type (0.031 mm), indicating a more accurate fi between the test and reference models. Conclusions: Within the limitations of this study, the preferred build orientation using SLA printing technology is 120° combined with the thin type of support. The selected build angle offers the highest accuracy of the printed restorations. It also offers the least needed surface support area which decreases the time needed for fishing and polishing

Poster Presentation No. 25 (page 71)

Could orthopantomograms be used to determine condylar guidance angles

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Purpose: Different clinical procedures are used to obtain numerical data on the condylar guidance angle. A method using orthopantomogram radiographic images (OPG) has been described in the literature. The aim of the present study was to verify the recommendation of this method in clinical use.
Materials and Methods: One panoramic radiographic image was randomly chosen from a group of 191 images from individuals who were free of the signs and symptoms of temporomandibular disorders and possessed intact dentition. The digital image was converted to analogue and printed. The study involved 21 dentists, who were asked to position four dots on both sides of the image (the orbitale and porion, and the most superior and the most inferior points of the jaw's articular surface). The marked images were then scanned. Using computer software, the points were connected with lines A and B on both sides. To evaluate the accuracy of the lines, the equation of the straight line was calculated and their slopes compared. The condylar guidance angle between lines A and B was calculated.
Results: The spread of the results for the condylar guidance angle on the right side was 30 degrees;

on the left side, it was more than 40 degrees. The SD for the slope of line A was 0.01 on both sides. The slope value of line B varied from 0.25 to 0.34.
Conclusions: The use of OPG to obtain the condylar guidance angle is not recommended in clinical use.

Poster Presentation No. 48 (page 83)
Effiacy of various pre-treatments on the bond strength of denture teeth to denture base resins

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Purpose: To evaluate the effect of different pre-treatments such as sandblasting, grounding with a carbide bur and Er,Cr:YSGG laser irradiation of different intensities (1 to 4 W) in the ridge lap area of acrylic resin denture teeth on the shear bond strength (SBS) to heat-polymerized polymethyl-methacrylate (PMMA) denture base resin.
Materials and Methods: A total of 70 central incisor denture teeth were used in this study and were divided into 7 groups as; control group (no surface treatment), grounded with a tungsten carbide bur, sandblasted with 120 µm Al2O3 particles and Er,Cr:YSGG laser irradiated with different intensities (1 to 4 W). All specimens then were subjected to SBS test at a crosshead speed of 1 mm/min until fracture. Data were analyzed with one-way ANOVA and post hoc Tukey-Kramer multiple comparisons tests ($p = 0.05$).
Results: Similar SBS values were obtained after air abrasion, grounding with a carbide bur and irradiation by an Er,Cr:YSGG laser at 1 to 4 W and no signifiant differences among surface treatments and control group ($p < 0.05$).
Conclusions: Bond strength of acrylic denture teeth to (PMMA) denture base material is independent of the surface pre-treatments with both Er,Cr:YSGG laser, sandblasting and grounding with a carbide bur. In addition, all surface treatments provided similar bond between the acrylic denturebase and teeth.

Poster Presentation No. 86 (page 102)
Flexural strength of fied dental prosthesis with and without fire reinforcement

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Purpose: Fibre reinforcement is recommended to enhance the stability of temporary bridges. The aim of this study was to evaluate the flxural strength of three-unit fied dental prosthesis (FDP) with and without fire reinforcement.
Materials and Methods: Three-unit FDPs were fabricated on a standardized master pattern with a premolar and molar using a deep-drawn fim. Five specimens were produced with the following materials, respectively: Structur Premium QM (SP), SP with Grand Tec (SPG), Tuff-Temp (TT), TT with Dentapreg (TTD), Luxatemp (LT) and Luxatemp with Ribbond (TTR). All specimens underwent artifiial ageing (mechanical loading 240,000 cycles, thermal undulation 5°/55 °C 5,000 cycles). To measure flxural strength, all specimens were loaded in a 3-point bending test rig until fracture in a universal testing machine (Zwick Roell Z010, preload 1 N, v = 1 mm/min). Statistical analysis was performed using SPSS 20.0 (Mann-Whitney U-test, $p < 0.05$).
Results: Highest flxural strength was found in specimens made of SP (1902 N ± 938 N). Lowest values were found in specimens made of TTD (1394 N ± 216 N). The values of the FDPs with and without fire reinforcement did not differ in a signifiant way ($p > 0.05$).
Conclusions: Fibre reinforcement did not lead to a signifiant increase in flxural strength. Therefore, the additional use of fires does not seem to be recommendable for clinical practice.

Poster Presentation No. 171 (page 143)

A case report: Treatment of peg-shaped lateral incisors with porcelain laminate veneers

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Purpose: Microdontia commonly affects maxillary lateral incisors called peg-shaped laterals. This situation creates an unpleasant smile. Porcelain laminate veneers (PLV) are being cited as the best restorative material due to its aesthetic specifiations and resistance to wear and staining. The aim of this study is to present the aesthetic improvement of peg-shaped lateral incisors by using PLVs.
Materials and Methods: A young adult patient had short, peg-shaped and retrusive lateral incisors. PVL was planned to develop mesiodistally and incisogingivally larger and protrusive lateral incisors. The case was focused on a clinical technique that involved the formation of a subgingival cervical chamfer and the removal of 0.5 mm enamel from buccal surface. In addition, overlapped incisal edges were created. Contact areas were not prepared. For the cementation, e.max express laminate veneers were etched with hydrofloric acid and silanized. Teeth were etched also with 37% phosphoric acid and bonding agent was applied to the teeth. PVL was then cemented with adhesive resin cement (Variolink).
Results: Peg-shaped laterals can be also treated by resin composite restorations or conventional crown restorations. This case was treated by PVL with a conservative preparation and a pleasant smile harmony was created for the young patient. The conservative preparation is anticipated that the long-term durability and aesthetics of PLV will be an advantage over composite resin restorations and crown restorations.
Conclusions: PVL must be preferred as a restorative material to correct tooth morphology abnormalities due to its aesthetic specifiations and resistance to wear and staining.