39th Annual Conference of the European Prosthodontic Association

September 3–5, 2015
Prague, Czech Republic

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scores of 10 questions were calculated. Statistical analysis comprised descriptive statistics, independent sample t-test and 3 factor ANOVA.
Results: Although slightly lower CFQ summary scores (better self assessed chewing function) were registered in the 2 implant IOD group, in females and in patients of higher age no statistically significant differences were found for single factor assessments ($p > 0.05$). However, the 3 factor ANOVA revealed only one significant effect for the combination of two factors: number of implants and age group ($p = 0.028$).
Conclusions: Older people were more satisfied with 2 locator retained IODs. It seems to be acceptable treatment for completely edentulous elders considering chewing function.

Poster Presentation No. 23
Fatigue resistance of pure titanium wire fabricated by multi-directional forging

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Purpose: Fatigue failure of denture clasps decreases the retention of removable partial dentures (RPDs). It is commonly known that the fracture frequency of a titanium wire clasp is higher than that of a cobalt-chromium wire clasp. Application of Multi-directional forging (MDF), which is one of severe plastic deformation methods, to metals and alloys can drastically modify the properties. Especially, MDFing of pure titanium has shown an ease of use and abrasion resistance comparable to that of a titanium alloy. This study evaluated the fatigue resistance of a MDF pure titanium wire and a commercial titanium alloy wire.
Materials and Methods: A round (0.9 mm in diameter) wire made with a titanium alloy and an MDF pure titanium wire were used in this study. The clasp specimens (15-mm cantilever) were loaded at the free end by a 20 Hz fatigue-testing apparatus using an electromagnetic force with a constant deflection of 4.0 mm. Fatigue tests were continued until each specimen fractured. The data ($n = 5$) was analyzed by t-test ($\alpha = 0.05$).
Results: The MDF pure titanium wire showed about 1.4 times greater fatigue resistance as compared to that of the titanium alloy wires; the difference observed between them was significant ($p < 0.05$).
Conclusions: The fatigue resistance of MDF titanium is clearly superior to that of a titanium alloy. MDF of titanium wire clasps would contribute to the long-term use of RPDs.

Poster Presentation No. 24
The accuracy difference between surgical microscope and CBCT to find MB2 canal in mesiobuccal root of maxillary permanent first molar in Malay population

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Purpose: To investigate the accuracy difference between the surgical microscope and CBCT to find of extra canal MB2 in maxillary first molar among the Malay population.
Materials and Methods: This was an in-vitro cross-sectional study on total of 83 extracted maxillary

first permanent molars of Malay patients who attended the Polyclinic, Kulliyyah of Dentistry, IIUM. All teeth were cleaned, mounted in a wax box and were sent for a PA radiograph and cone beam computed tomography imaging. Cavity access was performed on all teeth followed by coronal patency under surgical microscope.
Results: Out of 83 teeth, 68% were found with MB2 canal. However, prevalence of MB2 canal found in both clinical and radiographic examinations was 68%. Kappa statistic between clinical and radiographic examination was 0.94 ($p < 0.001$).
Conclusions: This study showed that agreement between clinical and radiographic assessments was almost perfect (94%), the treatment can be proceed without expose the patient to extra radiation and it was found the high prevalence of MB2 canal among a sample of Malay population.

Poster Presentation No. 25

Could orthopantomograms be used to determine condylar guidance Angeles

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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. 26

The effect of implant diameter and length on stress distribution for single implant treatment using 3D FEM analysis

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Purpose: The aim of this simulation was to evaluate the effects of implant diameter and length on the stress exerted on peri-implant bone, to investigate the usefulness of virtual implant.
Materials and Methods: Three-dimensional (3D) finite element model of the mandibular bone was created from 3D x-ray CT scan images of healthy adult male. Simulating the clinical scenario of implant therapy at the mandibular first molar region, virtual extraction of this tooth was performed on the model and 12 different diameters and lengths experimental designed implants were virtually