

**Anti-Cardiolipin Antibodies Detection in Sera of Chronic Periodontitis Patients**NOOR RASHIDAH S<sup>1</sup>, HASLINA T<sup>2</sup>, WAN MAJDIAH WM<sup>3</sup>, ZAINUDDIN SLA<sup>2</sup>

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**Introduction:** Anti-cardiolipin (anti-CL) antibodies are known to promote vascular inflammation and thrombosis, have been observed to be increased in serum of periodontitis patients. **Objectives:** This study aimed to evaluate the levels of anti-CL antibodies (IgG and IgM), its association with periodontal parameters and the changes of the anti-CL level after scaling in chronic periodontitis (CP) patients. **Methods:** A cross-sectional study was conducted on 35 CP and 39 non-periodontitis (NP) patients aged 18 to 65 years old attending Hospital Universiti Sains Malaysia. Periodontal parameters such as plaque index, gingival index, periodontal pocket depth, and clinical attachment loss were recorded, followed by blood sampling for determination of serum level of IgG and IgM anti-CL antibodies using Enzyme-Linked Immunosorbent Assays (ELISA). All CP patients were subjected to oral hygiene instruction and full mouth scaling. Periodontal parameters recording and blood sampling were repeated at one month interval. Data was analyzed by using SPSS version 20.0 with  $p < 0.05$  was considered as significant. **Results:** The mean serum level of IgG (4.46 GPL Unit/ml) and IgM (3.28 MPL Unit/ml) was significantly higher in CP compared to NP group (IgG 3.22 GPL Unit/ml; IgM 2.57 MPL Unit/ml) with  $p = 0.002$  and  $p = 0.019$  for IgG and IgM respectively. Nonetheless the mean serum levels of anti-CL antibodies were not associated with periodontal parameters. Re-evaluation after one month full mouth scaling on 23 (65.7%) CP showed no significant changes of anti-CL antibody levels. **Conclusion:** We suggest that periodontal infections may involve in the stimulation of the anti-CL antibodies production. However, the effects of periodontal therapy on these antibody levels remained to be further investigated.

## Periodontal Therapy with Locally Applied Tetracycline In Chronic Periodontitis Patients

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**Introduction:** A successful treatment of periodontitis involves the ability to alter or eliminate the bacteria that cause the infection such as in chronic periodontitis. This led to the introduction of antibiotic in periodontal therapy. Tetracycline is used as a local delivery agent due to its broad spectrum antimicrobial activity, low toxicity, with additional properties like collagenase inhibition and inhibition of bone resorption. High level of tetracycline found in gingival fluid may reduce subgingival flora, thus promotes a better healing of the periodontium tissues.

**Objectives:** To compare the efficacy between locally applied antibiotics tetracycline fibers (Periodontal plus AB™) as an adjunct to scaling and root planing (SRP) and a single SRP for the treatment of chronic periodontitis. **Methods:** Thirty patients between the ages of 30-50 years old with generalized chronic periodontitis and probing pocket depth (PPD)  $\geq 5$  mm were recruited. They were randomised to receive either the tetracycline fibers with scaling and root planing (SRP) (T-SRP group) or SRP only (control group). Probing pocket depth (PPD), clinical attachment loss (CAL), and bleeding on probing percentages (BOP) were recorded at baseline, 1 month and 3 month post-treatment. Repeated measures ANOVA were carried out to examine the changes in pocket depth between the groups and between the review intervals. **Result:** PPD, CAL, and BOP at one months and three month after the interventions were statistically significant in both groups ( $p < 0.05$ ). Overall changes of PD, CAL and BOP of test and control groups were (1.79, 1.74), (0.87, 1.10) and (22.15, 14.74) respectively. However, there was no difference in the PPD, CAL and BOP between the tetracycline and control groups at one month and three month groups. **Conclusion:** Both locally applied tetracycline and SRP were equally successful in controlling the progression of disease in chronic periodontitis patients.

**Positive Effect of Non-Surgical Periodontal Therapies on Arterial Stiffness: A Pilot Trial**

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**Objectives:** To investigate the effect of different non-surgical periodontal therapies (NSPT) on level of radial artery stiffness (AIx) in chronic periodontitis patients. **Methods:** This is a pilot clinical trial study in total 20 systemically healthy patients with chronic periodontitis patients at Hospital Universiti Sains Malaysia (Hospital USM) Kubang Kerian. Patients were grouped randomly either in supra-gingival scaling (Sc) treatment group or scaling root planing (SRP) treatment group. Periodontal parameters, hs-CRP level, WBC count and AIx level were assessed before and after treatment. **Results:** This study showed reduction in all periodontal parameters after treatment for both types of NSPT's. Comparison between Sc and SRP groups showed that AIx level in SRP treatment group (n=6) was more reduction = -3.0 (6.88) % compared to Sc treatment group (n=14) = -2.0 (3.00) % although not statistically significant ( $P > 0.05$ ). **Conclusions:** Non-surgical periodontal therapy may have positive effect on reduction arterial stiffness and scaling root planing treatment was likely better improvement in reducing arterial stiffness compared to supra-gingival scaling only.

## **A CT Scan Analysis of Prosthetic Outcome of Customized Ocular Prosthesis in Congenital and Acquired Defect: A Case Report**

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**Objective:** This case study aims to recognize the prosthetic outcome of congenital and acquired defect through CT scan analysis and clinical evaluation. **Methods:** Two custom made ocular prosthesis were fabricated and issued to congenital and acquired defect cases accordingly. Prior fabrication of prosthesis a preoperative CT scan of defect orbit had been taken. Follow-ups were done after two months and prosthetic outcome was evaluated in terms of aesthetic and function. This outcome was compared with CT scan value. **Result:** Two custom made ocular prosthesis were fabricated and issued to congenital and acquired defect cases accordingly. Prior fabrication of prosthesis a preoperative CT scan of defect orbit had been taken. Follow-ups were done after two months and prosthetic outcome was evaluated in terms of aesthetic and function. This outcome was compared with CT scan value. **Conclusion:** Ocular prosthetic outcome of congenital case was found to be better than that of acquired case clinically. The amount of bone density and volumetric defect as being revealed by CT scan evaluation could be used to predict the outcome of ocular prosthesis. CT scan can be beneficial to determine the future prognosis of prosthesis.

**Key word:** eye defect, prosthesis, CT scan

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**An In Vitro Organotypic Oral Mucosal Equivalent Constructed By Co-Culturing of  
Immortalized Oral Keratinocyte Cell Line OKF-6 and Human Oral Fibroblasts on  
Acellular Dermis**

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**Objectives:** The objective of this study is to develop reproducible three-dimensional oral mucosa equivalent (OME) using immortalized oral keratinocytes cell lines (OKF 6) co-culture with normal human oral fibroblast (NHOF) on acellular dermis for in *in vitro* application studies. **Methods:** Two models of immortalized human oral keratinocytes (OKF 6) co-cultured with and without normal human oral fibroblast (NHOF) were seeded onto acellular dermis (Alloderm™) and allow to differentiate at air-liquid interface (ALI) for 7 days. Histology characterization was performed with haematoxylin & eosin (H&E stain) and features of tissue reconstruct were compared. **Results:** Oral mucosa equivalent (OME) co-cultured of OKF 6 cell lines with oral fibroblast form multi-layered epithelium (8-10 layers) with thicker basement membrane protein compared to monoculture model. **Conclusions:** Co-culture technique with normal human oral fibroblast (NHOF) on acellular dermis allows formation of multi-layered oral epithelium by immortalized oral keratinocytes which potentially applied for reproducible three-dimensional *in vitro* application studies.