**ORAL 1**

**STAINING EFFECTS OF TEA, TOBACCO, AND TURMERIC ON MICROHYBRID AND NANOHYBRID RESIN-BASED COMPOSITES.**

Mallota N*1, Shenoy P1, Acharya S1

1Manipal College of Dental Sciences, Mangalore, Manipal University, India.
2Kasturba Medical College, Manipal, Manipal University, India.
3Manipal College of Dental Sciences, Manipal, Manipal University, India.

Objectives: Environmental discoloration by colored stains, especially food stains, is a commonly encountered problem with resin-based composite materials (RBCs). This study investigated the effects of three indigenous food stains (Tea, Tobacco, Turmeric) on a nanohybrid (Ceram-X-Mono), a microhybrid posterior (P 60), and an universal microhybrid (Z100) resin-based composite (RBC). **Materials and Methods:** Thirty-six disk shaped specimens were fabricated (10 mm x 2 mm) for each type of resin-based composite material using a polytetrafluoroethylene (PTFE) sheet. Specimens from each group were randomly distributed into three subgroups (n=12) for each of the used stains. The baseline color values were measured using a spectrophotometer according to CIELab color scale. They were immersed in the staining solutions for a period of 3h/day x 15 days. Following this the color change value (ΔE) was calculated. **Results:** All the tested groups showed a clinical perceptible color change (ΔE values =3.3 or >3.3), except for tea stained P60 (ΔE=3.15) and Z100 (ΔE=1.63) groups. Turmeric caused the most significant color change for all the tested resin-based composites. Least amount of color change was observed in Z100 (Tea, ΔE=1.63; Tobacco, ΔE=13.59; Turmeric, ΔE=38.77) group that was statistically significant from P60 (Tea, ΔE=3.15; Tobacco, ΔE=18.83; Turmeric, ΔE=57.72) and Ceram-X-Mono (Tea, ΔE=3.32; Tobacco, ΔE=18.83; Turmeric, ΔE=53.95) groups. **Conclusion:** Within the limits of the current investigation and for the concentrations of stain tested, it can be concluded that, Turmeric has the maximum staining capacity for all the tested RBCs, with P60 and Ceram-X-Mono having less stain resistance than Z100.

Keywords: Filler content; Stainability; Tobacco; Turmeric

**ORAL 2**

**CLINICAL EVALUATION OF A BIORESORBABLE MEMBRANE (POLYGLACTIN 910) IN THE TREATMENT OF MILLER TYPE II GINGIVAL RECESION.**

Gupta Rajan

Himachal Institute of Dental Sciences, Himachal Pradesh, India.

Objectives: The purpose of the present study was to evaluate the use of bioresorbable membrane (Polyglactin 910) in the treatment of Miller type II gingival recession. **Material & Methods:** Fifteen subjects with a chief complaint of denuded roots with the presence of 4 mm or more of buccal recession were selected. Clinical parameters like recession, probing depth (PD), clinical attachment level (CAL) and width of keratinized gingiva were measured before and after surgery. Surgical procedure involved two oblique releasing incisions so that trapezoidal full and split thickness flaps were raised. The exposed root surfaces were cleaned and debrided and a Polyglactin 910 membrane was trimmed and placed to cover the recession. GTR membrane extended from cemento enamel junction (CEJ) to cover the adjacent bone mesially, distally and apically. It was secured with vicryl sutures and the flap was coronal positioned to cover the membrane and retained there with the help of silk sutures. **Results:** Post operatively significant root coverage (mean coverage = 2.466), reduction in probing depth, gain in clinical attachment level (mean gain = 2.933) and highly significant increase in the width of keratinized gingiva was observed (mean 1.333). **Conclusion:** Polyglactin 910 resorbable GTR membrane is a suitable alternative to patients own palatal masticatory mucosa to cover denuded root surfaces as regards final aesthetics and colour match which is acceptable both to the clinicians and patients.

Keywords: Gingival recession, Polyglactin 910, Root Coverage

**ORAL 3**

**A PILOT ASSESSMENT ON MICROBIAL LOAD OF OUTPUT WATER FROM DENTAL UNIT WATERLINE SYSTEM (DUWS).**

CHUA C.S.*, A.R. FATHMI AH, W.H. HIMMATUL AZNITA

Department of Oral Biology, Faculty of Dentistry, University of Malaya, Kuala Lumpur, Malaysia.

Objective: To examine the sanitary level of output water from dental unit waterline system (DUWS). **Methods:** A total of 13 dental units (A-dec) in the General Dental Practice Clinic, University of Malaya were included in this present study. These dental units utilise distilled water as the input water and deliver output water through air-water syringe and handpieces to the patients during dental treatment. Four types of water sources, namely air-water syringe, low speed handpiece, high speed handpiece and distilled water reservoir from each dental unit were tested. Water samples were collected in early morning before daily treatment session. Each water sample was examined for both physical parameters (temperature and pH) and biological parameters (total aerobic bacterial count, total coliform count, faecal coliform count, Escherichia coli count, faecal streptococci count and Pseudomonas aeruginosa count). The counts obtained were compared with recommendation made by American Dental Association (ADA). **Results:** The mean temperature of all water samples tested were found to be quite stable with a mean of 23.41 ± 0.86°C and the pH was found to be slightly acidic with a mean of 5.46 ± 0.17. The total aerobic bacterial count of all water samples exceeded the range recommended by ADA. There were also absence of total coliform,
faecal coliform, E. coli, faecal streptococci and P. aeruginosa in all the samples tested. Conclusion: An effective approach need to be designed to ensure the output water from DUWS meet the recommendation proposed by ADA and eliminate potential cross-infection among dental personnel and patients.

Keywords: Dental unit waterline system, bacterial count, cross-infection

ORAL 4
THE RELATIONSHIP OF FACIAL AND DENTAL ARCH MORPHOLOGY IN MALAY ADULTS: 3D ASSESSMENT USING STEREOPHOTOGRAFMETRY
Al-Khatib A.R, Rajon Z.A, Masudi S.M, Hassan R.
School of Dental Sciences, Health Campus, Universiti Sains Malaysia, Kelantan, Malaysia

Objectives: The purpose of the study is to investigate the relationship between facial and dental arch dimensions in sample of Malaysian Malay. Methods: A cross sectional study was conducted on 50 volunteers (18-35 years) selected from Healthy Campus, Universiti Sains Malaysia. The participants had class I occlusion and minimal amount of dental crowding. Data was captured using stereophotogrammetry technique which consist of two Sony digital cameras, synchronize switch and a calibration control frame. The landmarks were digitized using Australis photogrammetric software and nineteen facial and six dental cast distances were measured and analyzed. The association between facial and dental arch measurements was calculated by multiple regression analysis. The level of significance was established at P<0.05 and statistical tests were performed with SPSS version 12 software. Results: The results showed significant positive association of the lateral facial measurements included orbital (ex-t), nasal (p-t, n-t), maxillary (sn-t), mandibular (gn-t, pog-t, go-gn) with most of the upper and lower dental arch dimensions. Although, there is no significant association of the frontal vertical and horizontal facial measurements with the dental arch dimensions, but, there was a trend that as the facial measurements increased the dental arch dimensions increased. Conclusions: The study concluded that there is possible association between the facial and dental arch dimensions. These relations may be helpful in prediction of the change in the soft tissue profile when orthodontic treatment of dental arch would be taken. Further investigations with bigger sample size are needed to evaluate the probable relations in depth.

Key words: stereophotogrammetry, Malay face, dental arch dimensions.

ORAL 5
CHOICE OF TOOTHPASTE AND TOOTHPUSH- STUDENTS’ PREFERENCES
Dhalwal RS*, Shency R
Manipal College of Dental Sciences, Mangalore, Manipal University, India.

Objective: Aim of this study is to access factors affecting selection of toothpaste and toothbrush of medical, dental, engineering and law students. Materials and Methods: A semi-structured questionnaire was used to assess the various factors related to selection of toothpaste and toothbrush. A total of 180 students studying in dental, medical, law and engineering colleges were included in this study. Results: Results showed that majority of dental (88.2%) and engineering (56.3%) students preferred to have fluoride content in the toothpaste, but medical students (85%) favored taste over fluoride content. A greater part of dental, medical and law students were using soft toothbrush but preponderance of engineering students used hard toothbrush (62.2%).

Keywords: Oral health, toothpaste, toothbrush, questionnaire survey

ORAL 6
RADIOGRAPHIC EVALUATION OF TWO DIFFERENT TYPES OF ATTACHMENTS OF IMPLANT SUPPORTED OBTURATOR
Abd El Aziz A N.
Advanced Medical and Dental Institute, University Sains Malaysia, Kelantan, Malaysia.

Objectives: This study is designed to evaluate radiographically maxillary obturator supported by osseointegrated implants retained by either a magnetic or ball and socket type of attachments. Methods: Ten male patients were selected. All the cases were completely edentulous and had maxillary defects not crossing the midline of the palate. The patients were randomly divided into two equal groups. Group one has maxillary obturator prosthesis retained to the implants by ball and socket attachment. Group two retained to the Implants by magnet attachment. Results: Comparison of the increase of bone density around the implants of the two groups with different types of attachments found that the changes around the implants of the ball and socket group were significantly increase than that of magnetic group (P<0.05). Conclusion: The difference between the two groups is related to the difference of the attachments which influence force transmission to the implants and the movements of the maxillary obturator under load. The selection of suitable type of attachment is important to increase the survival rate of the implants.

Keywords: obturator, implant, attachment.