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Poster Session P08 – Prevention 1

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INTERNATIONAL JOURNAL OF PAEDIATRIC DENTISTRY

Poster Session P08/Prevention 1

P08–106

Microleakage of fissure sealant: beveling of fissures on buccal surfaces of teeth

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Introduction: The purpose of this study was to assess the effect of beveling the margins of fissures on buccal surfaces in permanent molars on marginal microleakage of fissure sealants.
Materials and methods: This *in vitro* study was performed on buccal surfaces of 20 extracted permanent third molars. The teeth were randomly divided into two groups of ten teeth. Group I: performing enameloplasty [opening the fissures using Fissurotomy bur (SS White, Lakewood, NJ USA)], conditioning with phosphoric acid (37% phosphoric acid for 20 s), placing bonding [enamel bonding agent (Margin Bond, Coltène Whaledent)], and then fissure sealant (Seal Rite, Pulp Dent, USA). Group II: all stages were similar to group I except for beveling the margins of buccal fissures (0.5-mm bevel) after enameloplasty. Teeth were then thermocycled, stained with 0.5% basic fuchsin, sectioned and examined for marginal microleakage. Mann–Whitney test was used for statistical analysis.
Results: No dye penetration was seen in the group II (with bevel), but there was a 60% microleakage in group I (without bevel) ($P < 0.001$).
Conclusion: In permanent molar teeth, beveling the margins of fissures on the buccal surfaces appears to reduce the marginal microleakage of fissure sealants.

P08–107

The effect of sealant viscosity and different bonding agents on sealant microleakage *in vitro*

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Introduction: The aim of this study was to evaluate the effect of sealant viscosity and applying bonding agent on the marginal integrity of sealants.
Materials and methods: Sixty extracted sound pre-molars were divided in two groups ($n = 30$). In one group a high viscosity sealant (seal Rite with 34%filler, Pulp Dent) and in the second group a low viscosity sealant (seal Rite with 7% filler, Pulp Dent) was used. Each group was divided into three subgroups ($n = 10$) – without any bonding system, with enamel bonding (Margin Bond, Colton) and with dentin bonding (Excite, Vivadent). After sealant placement, the teeth were thermocycled (1000 cycles, 5°C and 55°C) and immersed in 0.5% basic fuchsin solution for 24 h. Specimens were sectioned and dye penetration was scored using a stereomicroscope. Data analysis was done by using Mann–Whitney-*U*-Test, Kruskal–Wallis-Test and ordinal regression tests.
Results: Ordinal regression tests showed that fissure sealants and bonding agents had a reciprocal effect on the microleakage degree ($P = 0.037$). Bonding agent and type of bonding had no significant effect on microleakage in low and high viscosity groups ($P = 0.114$, $P = 0.648$). Without using bonding agent high viscosity sealant showed more microleakage than low viscosity sealant (20% *vs* 80% without microleakage) ($P = 0.041$). With applying dentin bonding agent low viscosity sealant had less microleakage than high viscosity sealant (100% *vs* 30% without microleakage) ($P = 0.007$). There was no significant difference between high and low viscosity sealants in the enamel bonding groups (40% *vs* 60% without microleakage) ($P = 0.218$).
Conclusion: The findings of this study demonstrate that viscosity of sealants had a significant effect on the degree of microleakage.

P08–107

Retention and caries prevention of a resin-based sealant and a glass-ionomer used as a fissure sealant: a clinical study

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Introduction: The purpose of this study was to compare the retention and the caries preventive effect of a glass- ionomer used as fissure sealant (Fuji VII, GC Corporation, Japan) and a light-cured, fluoride-releasing sealant (Fissurit F, Voco, Germany).
Materials and methods: The study was conducted according to a split mouth randomized clinical trial. The children with at least one pair of caries free permanent first molars with deep pit and fissures were included in the study. The children were selected from a population with a high risk of dental caries. Informed consent was obtained from the parents. Sealant materials were applied by fifth-year undergraduate dental students on 242 fissures of first molars in 121 children, 6–15 (mean 9.8) years of age. Two researchers at the clinics supervised all the procedures. At 6 and 12 months follow-up examinations for sealant retention were performed by two other researchers. Data were statistically analysed with chi-square tests.
Results: After 6 and 12 months, the total retention of Fuji VII was 52.1% and 42.1% and those of Fissurit F was 51.2% and 43.8%, respectively. No caries was detected at 6 months in all sealant-treated teeth. The incidence of caries in Fuji VII treated molars at 12 months was 0.8% and that of 2.5% in Fissurit F.
Conclusion: The glass-ionomer sealant tested in the present study had better retention and caries protective effect than the resin-based sealant used.

P08–109

Comparison of new and 3-month-old tooth brushes in the removal of plaque in children

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Introduction: There is inconclusive evidence about the relationship between toothbrush wear and plaque removal. This clinical trial aimed to validate or invalidate noninferiority in the plaque removal efficacy of old *versus* new toothbrushes in the hands of 7–9-year-old children.

Methods and material: Single examiner blinded, randomized, crossover study was conducted in 93 students aged between 7–9-year-old children.at baselines each of students was given a new toothbrush which they used for 3 months. The students attended on two occasions following 48-h periods of no oral hygiene. Following plaque scoring, students brushed with a new tooth brush at one visit and with a brush that they had used previously for 3 months at the other visit. Brushing time was 60 s. Plaque was then re-scored and the percentage reduction in plaque score calculated. The amount of wear of the 3-month-old brushes was determined by measurement of brushing surface areas.
Results: Plaque scores after each 48-h period of no oral hygiene were not significantly different. The percentage reduction in plaque scores achieved with the new brushes was not significantly different from those achieved with the 3-month-old brushes. Both the new and 3-month-old tooth brushes reduced plaque score by approximately 56–57%. Compared with new brushes in the same subjects, no significant differences were found for plaque score reduction for 3-month-old brushes with minor, moderate or marked wear.
Conclusion: The 3-month-old tooth brushes were as effective as new brushes in plaque removal.

P08–110

Professionally applied toothbrushing study to evaluate plaque removal in children

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Introduction: Compare the plaque removal efficacy of Philips Sonicare for Kids (SFK) at high and low power level settings and Oral B Stages'3' Manual (MTB) toothbrushes in a professionally applied brushing session in children aged 4–7 years.
Materials and methods: 68 healthy children (38 girls, 30 boys; mean age 5.3 years) participated in an IRB approved single-blind, randomized, split mouth design study. Informed consent/assent (with parent) was obtained. Subjects were screened for eligibility (Turesky modified Quigley-Hein Plaque Index (TPI) > 1.8). Eligible subjects were randomized to SFK high, low, MTB by quadrant and were brushed accordingly by a clinical hygienist. TPI was scored at 1 and 2 minute interval equivalents by quadrant by a blinded examiner. Safety was assessed in oral soft tissue examinations. For statistical analysis, MANOVA for a split-mouth design was applied and *P*-values were adjusted using the Dunnett-Hsu adjustment.
Results: The mean (SD) overall for baseline TPI was 3.06 (0.41), 2.84 (0.41) and 2.90 (0.46) for SFK high, low and MTB respectively. Adjusted mean post-brushing overall percent reduction for SFK high, low and MTB was 41, 42 and 29%, respectively at 1-min, and 67, 65 and 49%, respectively at 2-min. SFK high and low *versus* MTB comparisons are statistically significant at both time intervals. No adverse events were reported.
Conclusions: SFK removed significantly more plaque than children's MTB at 1 and 2 min intervals in 4–7-year-old subjects with professional applied brushing. Both toothbrushes were safe on oral tissues. Research was supported by Philips Oral Healthcare.

P08–111

Comparative plaque removal efficacy of two power toothbrushes in children

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Introduction: The aim of the study was to compare the plaque removal efficacy and safety of Philips Sonicare For Kids (SFK) at 'high' setting and Colgate children Battery (CBT) toothbrushes in children aged 7–10 years.
Materials and methods: 69 healthy children (mean age 8.4 years) participated in an EC approved single-blind, randomized, parallel design study. Informed consent/assent (with parent) was obtained. Subjects abstained from brushing for 26 ± 6 h prior to examination visits. At V2 subjects were screened for eligibility (Turesky modified Quigley-Hein Plaque Index (TPI) > 1.8). Eligible subjects were instructed on use of both devices (SFK and CBT) in alternating manner at home (twice daily for 2 min) for a one-week familiarization period. At V3, baseline TPI was scored followed by randomization and a supervised 2-min brushing session with the assigned device. Post brushing scores were obtained by scoring TPI. Safety was assessed in oral soft tissue examinations at V3. ANOVA was used for the primary statistical analysis.
Results: 62 children (32 females, 30 males) completed the study. The mean (SD) overall TPI for the pre-brushing scores at V2 was 3.21 (0.49) and 3.29 (0.37), for SFK and CB respectively. Post-brushing mean percent reductions for SFK and CBT were 66% and 53% overall ($P = 0.0003$), 62% and 51% for posterior ($P = 0.0037$) and 65% and 53% for interproximal ($P = 0.0002$) respectively. No adverse events were reported.
Conclusions: SFK removed significantly more plaque than children's CBT in 7–10-year-old subjects. Both toothbrushes were safe on oral tissues. Research was supported by Philips Oral Healthcare.

P08–112

Brushing-duration and use-interaction patterns of manual *versus* sonic toothbrushes in children

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Introduction: The aim of the study was to compare the brushing duration and use interaction patterns in Children age 7–10 years using a Philips Sonicare For Kids power toothbrush (SFK) *versus* Oral-B stages '4' Manual toothbrush (MTB).
Patients and methods: Sixty healthy subjects (31-F, 29-M) were enrolled in an IRB-approved randomized, parallel design 2-week study. Informed consent/assent was obtained. At V1 eligible subjects were randomized and provided brushing instructions. They performed an on-site brushing session immediately thereafter. It was timed and video-recorded for duration and use interaction data collection. A home use period of 2-weeks commenced with the assigned product in order for subjects to familiarize to the device. At V2 the brushing and recording procedure was repeated and subjects were dismissed. Longitudinal and between-group comparisons were assessed for duration and ergonomic use interaction events. Statistical analysis was performed using the Wilcoxon Test.
Results: Thirty-one subjects were randomized to SFK and twenty-nine to MTB. A longer median brushing duration was observed for SFK users at both time-points. SFK (122 s) as compared to MTB

(83 s) at V1 ($P = 0.012$) and SFK (120 s) as compared to MTB (73 s) at V2 ($P = 0.0001$). In video analysis review by an ergonomic expert, use interaction brush artifacts occurred more frequently with MTB than SFK, 1.56 as compared to 0.80.
Conclusion: Children age 7–10 years brushed significantly longer with SFK than MTB following immediate product introduction and after a period of home use. Use interaction comparison suggests that form factor may influence the frequency of artifact occurrence. Supported by Philips Oral Healthcare.

P08–113

Plaque removal efficacy of two power toothbrushes in children

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Introduction: The aim of the study was to compare the plaque removal efficacy and safety of Philips Sonicare For Kids (SFK) at 'high' setting and Crest Spin Battery powered (CSB) toothbrushes in children aged 7–10 years.
Materials and methods: 59 healthy children (mean age 8.5 years) participated in an IRB approved single-blind, randomized, parallel design study. Informed consent/assent (with parent) was obtained. Subjects abstained from brushing for 26 ± 6 h prior to examination visits. At V1 subjects were screened for eligibility (Turesky modified Quigley-Hein Plaque Index (TPI) >1.8). They were instructed on use of both devices (SFK and CSB) in alternating manner at home (twice daily for 2 min) for a 1-week familiarization period. At V2, baseline TPI was scored followed by randomization and a supervised 2-minute brushing session with the assigned device. Post brushing TPI scores were then obtained. Safety was assessed in oral soft tissue examinations at V2. ANOVA was used for the primary statistical analysis.
Results: 57 children (35 females, 22 males) completed the study. The mean (SD) overall baseline TPI at V2 was 3.34 (0.54) and 3.33 (0.55), for SFK and CSB respectively. Post-brushing mean percent reductions for SFK and CSB were 46% and 24% overall, 46% and 25% for posterior teeth and 45% and 22% for interproximal sites respectively ($P < 0.0001$). No adverse events were reported.
Conclusions: SFK removed significantly more plaque than children's CSB in 7–10 year-old subjects. Both toothbrushes were safe on oral tissues. This research was supported by Philips Oral Healthcare.

P08–114

Plaque removal efficacy of sonic *versus* manual toothbrushes in children

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Introduction: Compare plaque removal efficacy of Philips Sonicare For Kids (SFK) at 'high' setting and Oral B Stages'4' Manual (MTB) toothbrushes in children, 7–10 years.
Materials and methods: 58 healthy children enrolled and 4 withdrawn (32 females, 22 males; mean age 8.3 years) in an IRB approved single-blind, randomized, parallel design study. Informed consent/assent (with parent) was obtained. All subjects abstained from brushing for 26 ± 6 h prior to examination visits. At V1 subjects were screened for eligibility (Turesky modified Quigley-Hein Plaque Index (TPI) >1.8). Eligible subjects were enrolled and instructed on use of both devices (SFK and MTB) in alternating manner at home (twice daily for 2 min) for a 1-week familiarization period. At V2, baseline TPI was performed followed by randomization and a supervised 2-min brushing session with the assigned device. Post brushing TPI scores were then obtained. Safety was assessed in oral soft tissue examinations at V2. ANOVA was used for the primary statistical analysis.
Results: The mean (SD) overall TPI for the baseline scores at V2 was 3.25 (0.69) and 3.22 (0.59), for SFK and MTB respectively. The randomization was balanced for gender. Post-brushing mean percent reductions for SFK and MTB were 45% and 27% overall, 43% and 25% for posterior teeth and 44% and 24% for interproximal sites respectively ($P < 0.001$). No adverse events were reported.
Conclusions: SFK removed significantly more plaque than children's MTB in 7–10 year-old subjects. Both toothbrushes were safe on oral tissues. Research was supported by Philips Oral Healthcare.

P08–115

Number, length and end-rounding quality of bristles in manual child toothbrushes

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Introduction: The number, length and end-rounding quality of bristles play an important role in the overall effectiveness of manual toothbrushes. The aim of the study was to evaluate those properties in manual child toothbrushes available in Turkey.
Materials and methods: 11 different brands of manual child toothbrushes were obtained. The bristles were digitally photographed under a stereomicroscope from the longitudinal and cross-sectional aspects at standard magnification. The length and number of bristles were calculated on digital micrographs using open-source image analysis software (ImageJ). Bristle end-rounding was evaluated using image analysis based on the Silverstone and Featherstone scale. The data were evaluated statistically with ANOVA and chi-square tests (both $P = 0.05$).
Results: The minimum and maximum length of bristles were 6.63 mm (Stages 1, Oral-B) and 9.26 mm (Yombi Timba, Vepa), respectively. The mean number of tufts per toothbrush was 27.27. The mean number of bristles packed into a tuft hole varied from 41.8 (Dr. Difas, Difas) to 68.4 (Stages 1, Oral-B). The ratio of acceptable *versus* nonacceptable end-rounding varied both within different regions of each toothbrush and between those of different brands ($P < 0.05$).
Conclusion: The child toothbrushes displayed a great a variety in number, length and end-rounding quality of bristles. Overall, Colgate Smiles 2–6 (Colgate) and Stages 1 (Oral-B) displayed the best acceptable end-rounding morphology.

P08–116

Impact of different recommendations on the amount of toothpaste used for infants

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Introduction: Supervised toothbrushing with an appropriate amount of fluoride toothpaste is important to control caries and minimise the risk of fluorosis in young children. We used data gained in the first two months of our ongoing study to find out

which recommendation on amount of toothpaste leads to the most appropriate use.

Materials and methods: The study population consisted of participants of parenting classes organized by the University Medical Centre Ljubljana, Division of Gynaecology, which approved the protocol. Expectant parents were asked to apply the amount of toothpaste, which they considered appropriate for an infant, to a toothbrush. During one-hour lecture on various aspects of oral health they were recommended to apply a pea sized amount (group A), an amount comparable with the size of a child's fingernail (group B) or to use transverse technique (group C). The applied quantity was measured by two examiners, blinded for the given recommendation, before and 3 to 7 days after the lecture. Paired *t*-test and one-way ANOVA with Tukey *post hoc* comparisons were used.

Results: All three recommendations significantly ($P < 0.05$) reduced the amount of toothpaste. Before the lecture, the average amount in groups A ($n = 41$), B ($n = 28$) and C ($n = 40$) was 0.39 ± 0.19 g, 0.32 ± 0.14 g and 0.33 ± 0.16 g, respectively. After the lecture, it decreased to 0.31 ± 0.11 g, 0.26 ± 0.11 g and 0.25 ± 0.07 g, respectively; groups A and C differed significantly ($P < 0.05$).

Conclusion: The amount of toothpaste was reduced after any kind of given recommendation; however, the impact of the three recommendations seems to differ.

O08–117

Oral hygiene management of pediatric transplantation patients

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Introduction: Organ transplantation patients and patients receiving chemotherapy and/or radiation during cancer treatment need specialized dental care. The purpose of this study was to judge oral care protocols used in German bone marrow transplantation (BMT) centers.

Materials and methods: A telephone interview was made with all 21 BMT centers, asked for oral hygiene regimens used. The responses were analyzed using descriptive statistics and compared with a variety of guidelines.

Results: There is no uniform oral care regimen in German BMT centers. 14.3% of the BMT centers used neutrophil count as a base for changing oral hygiene regimen and 47.6% used platelet count, respectively. Five of them decide individually or prohibit toothbrushing with beginning of the high-dose chemotherapy (14.3%). When toothbrushing is discontinued the centers recommend mouthrinses with chlorhexidine, mixtures of plant extracts containing topical anesthetics and iodine solution for oral care. Several BMT centers believe that toothbrushing increases the risk of infection although the AAPD guideline (2008) recommends that thrombocytopenia is no exclusion criterion. Special recommendations for using fluoride preparations for caries risk prevention or dietary counseling regarding the cariogenic potential of carbohydrate rich dietary supplements were not given.

Conclusion: To minimize the risk of oral and associated systemic complications in pediatric transplantation patients the child and the parents should be advised about the importance of an optimal oral care. There is a need for close collaboration between the pediatricians and the dental specialists to reduce the long-term sequelae of cancer therapies and to improve the child́s quality of life.

P08–118

The influence of foods and tooth brushing on Streptococcus mutans

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Introduction: Recently it is often reported that dental caries in children has decreased. However there are many children with severe dental caries. Decreasing the number of streptococcus mutans in children is important for caries prevention. We researched the influence of tooth brushing, diet habits and troches containing the antibodies from egg yolks on the number of streptococcus mutans.

Patients and methods: We collected saliva of 57 children in the kindergarten of Kurume city, Japan and counted the number of streptococcus mutans in their saliva. The collective comprised 29 boys and 28 girls ranging from 3.2 to 6.4 years of age with an average of 5.1 years. Parents were asked to fill out a questionnaire about nutritional habits and oral hygiene including 50 items about their children's eating habits. The data of the number of streptococcus mutans (dependent variable) and 50 variables of eating habits and tooth brushing (independent variable) were analyzed with multiple regression analysis (SPSS 12.0J for Windows).

Results: 1. R-square showed 0.76 in this multiple regression analysis. So we could clarify some factors influencing on the number of streptococcus mutans in children. 2. The variable of troches made from egg yolks showed significant standard partial regression coefficient (= -0.203, $P < 0.05$).

Conclusion: In this multiple regression analysis, it was also suggested that the number of streptococcus mutans might be decreased by the troches made from egg yolks.

P08–119

Caries preventive effect of Bifluorid12® on first permanent molars

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Introduction: Research has shown that dental caries can be prevented effectively through establishment of fluoride programmes. The aim of a three-year follow-up was to evaluate the caries preventive effect of Bifluorid12® (VOCO GmbH, Cuxhaven, Germany) on permanent molars.

Patients and methods: After a baseline (DMFT/DMFS) 451 first graders (mean age: 6.24 years) of primary schools (Minsk, Belorussia) with high caries risk were randomised and divided into a test group (group A) and a control group (group B). Subjects of group A were treated with Bifluorid12® two times a year, whereas subjects of group B were educated only. Statistical significances were calculated using the *t*-test at a significant level of 5%. Permission to conduct the study was obtained from the institutional ethical committee. Parents gave written informed consent.

Results: At baseline 96 % of all subjects were free of caries (DMFT = 0) in their permanent molars, 2% showed an actual treatment need (DMFT > 0, DT > 0). The caries prevalence in group A amounted to 0.01 DMFT/DMFS. The corresponding data for group B showed a DMFT/S of 0.04. After 3 years the caries prevalence in group A increased up to 0.5 DMFT/S, in group B up to 0.9 DMFT (DMFS = 1.0) The caries incidence was significantly higher in Gr. B than in group A ($P_{DMFT} = 0.03$; $P_{DMFS} = 0.01$).

Conclusion: It could be concluded that Bifluorid12® showed a caries preventive effect and can be used in preventive programmes. The study was supported by VOCO GmbH, Cuxhaven, Germany.

P08–120

Urinary fluoride excretion in pre-school children exposed to fluoridated salt (150 ppmF) in Belarus

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Introduction: Belarusian Caries Prevention Programme recommends use of F-salt (250 ± 100 ppmF, actually 150ppmF^-) both at household and daycare institutions. The Objective of the study was to measure 24 h urinary F-excretion for pre-school children who did or did not consume F-salt.

Patients and methods: 24-h urine samples were collected in 2 cities ([F] in water is 0.1–0.3 ppm) from 5 groups of 1.5–3.0 year-old children:1) children not eating F-salt ($n = 20$); 2) children eating F^--salt at home and F^--free salt at the 10h day-care ($n = 20$); 3) children eating F-free salt at home and F-salt at day-care ($n = 21$); 4) children in an orphanage eating all daily meals cooked with F-salt ($n = 23$); 5) children eating F-salt with all meals as their 24-h home diet ($n = 11$). The volumes of the samples, [F] and 24h F^--excretion were measured; the data were tested using *t*-test.
Results: The mean 24-h F^--excretion for children in group 1, 2, 3, 4, and 5 were 0.07 ± 0.02 mg F^-, 0.08 ± 0.01 mg F^-, 0.30 ± 0.10 mg F^-, 0.44 ± 0.17 mg F^-, and 0.18 ± 0.15 mg F^-, respectively ($P_{1,2} > 0{,}5$, $P_{1,3} < 0.0–01$, $P_{1,4} < 0.001$, $P_{1,5} < 0.001$).
Conclusions: Natural 24-h F^--excretion and, hence, F^-intake for pre-school children in Belarus is low. F^- intake for children eating F-salt varies significantly depending on a child's life style: the intake remains low for children ingesting salt only as a part of their home ration; it reaches the lower limits of the optimum for children day-care; and comes to the upper limits of the optimum for children living at orphanage.

P08–121

Effect of fluoride varnish on the enamel demineralization

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Introduction: The aim of this study was to evaluate the effect of fluoride varnish application on enamel decalcification.
Materials and methods: Eighty bovine enamel blocks were divided randomly into 4 groups. Group I is the control group. Group II was treated with the APF gel and washed after 4 min. Group III and Group IV were treated with Fluor Protector? and CavityShield TM and washed after 1 min. Decalcification was created by placing all specimens into artificial acidic solution (pH 4.0). Then the optical density of the lesions was measured by visible light fluorescence and the lesion depths were measured.
Results: 1. The optical density of Group II was higher than Group I but lower than Group III and IV ($P < 0.05$) and there was no difference between Group III and IV ($P < 0.05$) at 48 h. 2. The optical density of Group IV was highest at 72 h ($P < 0.05$). 3. Mean lesion depths were 205.36 ± 42.85 μm and 210 ± 44.60 μm in Group I and II but the difference was not statistically significant ($P > 0.05$). 4. Mean lesion depths were 80.03 ± 21.66 μm and 77.46 ± 27.72 μm in Group III and IV but no significant difference could be shown between the two groups ($P > 0.05$)
Conclusion: Fluoride varnish treatment resulted in a significant reduction of lesion depth *s* compared with APF gel. Fluor Protector? and CavityShield TM provided a similar effect.

P08–122

Fluoride concentrations of tap waters in Greece for up to 6 months

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Introduction: The aim of the study was to evaluate the fluoride concentration and its fluctuations in tap water over a period of up to 6 months from different regions of Greece.
Materials and methods: 5 mL of tap water were collected each month from residencies or public services and analyzed in triplicate using Ion Chromatography. Tap water samples were collected between 10–20th of each month (between February-July 08) and the cities included were: Athens prefecture (4 areas): (Cholargos, Kamatero, Keratsini, Piraeus), Thessaloniki prefecture (3 areas): (Polichni, Ano Touba, Kalamaria), Veroia prefecture (2 areas): (East, Central), Argos prefecture (1 area), Thiva prefecture (1 area), (Thiva), Heraklio prefecture (1 area): (Heraklio).
Results: The fluoride level varied for each area and was: 0.023–0.034 ppmF (Cholargos), 0.016–0.029 ppmF (Kamatero), 0.032–0.075 ppmF (Keratsini), 0.028–0.038 ppm F (Piraeus). For Thessaloniki region the fluoride levels ranged from: 0.02–0.11 ppm F (Kalamaria), 0.031–0.14 ppm F (Ano Touba), 0.028–0.12 ppm F (Polichni). For the rest of the cities, the Fluoride fluctuations were: 0.03–0.034 ppm F (Central Veroia), 0.025–0.032 ppm F (East Veroia), 0.055–0.23 ppm F (Argos), 0.045–0.085 ppmF (Thiva), 0.016–0.083 ppm F (Heraklio).
Conclusions: Considerable variations in tap water were observed over a period of 6 months, even if the areas were supplied from the same natural source.

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Dental erosions in young adults and lifestyle factors during young ages

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Introduction: Few studies are performed on dental erosions in young adults. Most of these studies are cross-sectional and give limited information on presumptive etiological factors which can occur during childhood and adolescence. The present study aims to analyse lifestyle factors which can explain dental erosions found in young adults.
Material and methods: In the present study a cohort of five hundred individuals have been longitudinally followed from one year to twenty years of age concerning oral health and lifestyle factors, including consumption pattern and oral hygiene measures. At twenty years of age the individuals were exposed to a clinical and radiographic oral examination. During the twenty-year-period, clinical examinations and questionnaires have been repeatedly performed including registration of life style factors. The study is ethically approved and informed consent has been achieved.
Results: The presentation will report data on dental erosions correlated to lifestyle factors over time.