

- Oral Presentation 1

TITLE: Dental sealant knowledge, opinion, values and practices of Spanish dental hygienists

AUTHORS: San Martín Galindo L, Galván Martos J, Huertos Marchante A, Rodríguez FJ.

SOURCE: J Clin Exp Dent. 2014 Nov 1;6 (Supplement2):S1.

* doi:10.4317/jced.17643891

<http://dx.doi.org/10.4317/jced.17643891>

Background and objectives: Dental sealants have proved to be an effective approach to prevent pit and fissure caries. This study examined the knowledge, opinions, values, and practices (KOV) concerning sealant use of dental hygienists in Andalusia, the southwest region of Spain.

Subjects and methods: Spanish dental hygienists (n=400) volunteered to complete a 31-item self-administered questionnaire in the month of December 2013. This pretested structured questionnaire was used to assess their knowledge, opinions, values and practices regarding pit and fissure sealants. The Wilcoxon matched-pairs signed ranks test, the Friedman nonparametric repeated measures ANOVA, and Spearman's correlation were used for analyzing the data.

Results: The mean scores for knowledge, opinion, values and practices were 3.57 ± 0.41 ; 2.17 ± 0.42 ; and $2.58 \pm 0.773.56 \pm 0.46$ respectively. Knowledge differed by years of experience ($p=0.00$) and place of work ($p = 0.00$). Opinion differed by years of experience ($p=0.03$) and sector ($p=0.00$). Similarly, practices regarding sealants differed by years of experience ($p=0.00$). Conversely, values concerning sealant placement did not differ statistically by sex, years of experience, sector of practice, or place of work. Statistically significant correlations were found between knowledge, opinions and values, and a negative correlation between practices and the other variables ($p>0.05$).

Conclusions: Most dental hygienists had sufficient knowledge about pit and fissure sealants. They also acknowledged the importance of using dental sealants, and had positive opinions/attitudes about using them. Dental sealant practices in clinics were found to be adequate but were not standardized and specific guidelines were not being followed.

- Oral Presentation 2

TITLE: Association between molar incisor hypomineralization and dental caries

AUTHORS: Negre Barber, A; Montiel Company, JM; Catalá Pizarro, M; Estarlich, ML; Almerich Silla, J M.

SOURCE: J Clin Exp Dent. 2014 Nov 1;6 (Supplement2):S1.

* doi:10.4317/jced.17643865

<http://dx.doi.org/10.4317/jced.17643865>

Justification and objectives: Molar Incisor Hypomineralization (MIH) is an enamel defect that affects the first permanent molars and permanent incisors, diminishing their resistance and promoting tooth sensitivity. The overall objective of the study was to investigate the relationship between dental caries and MIH in 8- and 9-year-old children from Valencia (Spain) belonging to the Childhood and Environment cohort study (INMA). The specific objectives were to determine the MIH prevalence and caries indicators in the sample, and to study the association between the DMF(S) index and caries prevalence in the presence of MIH, the risk of caries and tooth sensitivity.

Subjects and methods: A cross-sectional study was conducted in a sample of 158 children from the INMA project. They were examined for MIH, dental caries, sensitivity and need for treatment. The data were evaluated by statistical analysis.

Results: Out of the 158 children examined, 26.6% (42 children) had MIH, with a mean of 5.97 hypomineralized surfaces. Of these children, 24 (57.1%) were mildly affected, 12 (28.6%) moderately affected and 6 (14.3%) severely affected. The likelihood that a child with MIH would suffer from caries increased in line with the degree of MIH. The relative risk of caries was 4.468 times greater in hypomineralized surfaces than in healthy surfaces. Children with MIH also had greater tooth sensitivity to cold.

Conclusions: Children with MIH and healthy children seem to be equally affected by dental caries. However, the hypomineralized surfaces in a child with MIH are more susceptible to dental caries than the healthy surfaces, which means that hypomineralization is a caries risk factor in the free surfaces of permanent molars and incisors in a child with MIH.

Funding: This study was conducted as part of the PI12/02570 project funded by the 2008-2011 Spanish National R&D&I Plan and the ISCIII Subdirector General for the Assessment and Support of Research, co-funded by FEDER.

- Oral Presentation 3

TITLE: Orthodontic treatment need in 9-year-old Valencian children

AUTHORS: Boronat Catalá M, Bellot Arcís C.; Catalá Pizarro, M.; Estarlich, M.L.; Almerich Silla, J.M.

SOURCE: J Clin Exp Dent. 2014 Nov 1;6 (Supplement2):S2

* doi:10.4317/jced.17643866
<http://dx.doi.org/10.4317/jced.17643866>

Background and objectives: There is a current trend to increase early orthodontic treatment in children but few epidemiological data are available about orthodontic treatment need in mixed dentition. The aim of this study was to determine orthodontic treatment need in 9-year-old Valencian children, using two internationally-accepted and well-recognized indices: the Dental Aesthetic Index and the Index of Orthodontic Treatment Need.

Subjects and methods: A cross-sectional epidemiological study was conducted in a sample of 170 9-year-old children from a cohort study group in Valencia (Spain) called Infancia y Medio Ambiente (INMA) in order to measure their orthodontic treatment need according to the Dental Aesthetic Index and the Index of Orthodontic Treatment Need and the prevalence of malocclusion.

Results: Orthodontic treatment was required by 48.8% of the sample according to the Dental Aesthetic Index: 19.4% had no need of orthodontic treatment, treatment was elective for 31.8%, desirable for 24.7% and necessary for 24.1% of the sample. According to the Dental Health Component and Aesthetic Component of the Index of Orthodontic Treatment Need, orthodontic treatment need was required by 18.8% and 11.2% of the sample respectively. The most common features of malocclusion in the sample were incomplete class II molar relationship, increased overjet and overbite and crowding.

Conclusions: Orthodontic treatment need in 9-year-old children is between 18.8% and 48.8%, according to the indices. The results obtained with the two indices are remarkably different, possibly because the Dental Aesthetic Index overemphasizes some features of malocclusion that are transitory in mixed dentition, such as overjet, overbite and molar relationship. This could result in an overestimation of orthodontic treatment need in mixed dentition.

Funding: the present study is part of the PI12/02570 project supported by the 2008-2011 Spanish National R&D&I Plan and the ISCIII Subdirectorate General for the Assessment and Support of Research, cofinanced by FEDER.

- Oral Presentation 4

TITLE: Validation of the MBI-HSS to estimate burnout in dental students

AUTHORS: Flores Martí P, Subirats Roig C.

SOURCE: J Clin Exp Dent. 2014 Nov 1;6 (Supplement2):S2.

* doi:10.4317/jced.17643867
<http://dx.doi.org/10.4317/jced.17643867>

Background and objectives: The presence of a wide range of predisposing factors highlights the need for an appropriate tool to estimate burnout in dental students. The objective of this study was to validate the Maslach Burnout Inventory (MBI-HSS) and estimate the level of burnout in dental students in Spain.

Subjects and methods: 200 third-, fourth- and fifth-year dental students completed the MBI-HSS online. Reliability (Cronbach's alpha), construct validity (principal component analysis) and criterion validity (ROC curves) were measured. The statistical analysis was performed using IBM SPSS statistics software. Approval was received from the University of Valencia ethics committee. The degree of burnout was calculated and significant differences between sexes and years were sought, using ANOVA, Student's t-test and Chi2.

Results: Cronbach's alpha was 0.89 for emotional exhaustion, 0.92 for personal accomplishment and 0.78 for depersonalization. The principal component analysis obtained four dimensions that explained 67% of the variance. The area under the curve (AUC) values of the ROC curves ranged up to 0.8. The reproducibility obtained an intraclass correlation coefficient of 0.93-0.97 for the different dimensions. The average dimensions for exhaustion, depersonalization and personal accomplishment were 31.5, 29.5 and 10.1 points respectively, with a high level of emotional exhaustion (63%), a low degree of personal accomplishment (47%) and high depersonalization (49.5%). The 4th-year students showed significantly higher levels of burnout compared to other years, but no significant differences were found by gender.

Conclusions: The MBI-HSS is feasible, reliable and valid for diagnosing burnout among third-, fourth- and fifth-year dentistry students. Furthermore, the frequency of burnout in the sample was high.

- Oral Presentation 5

TITLE: Comparison of nutritional habits between a group of pregnant women and a control group

AUTHORS: García-Navas Romero F, Camacho Alonso F, Saorín Falcón P, Serna Muñoz C, Pérez Lajarín L, Martínez Beneyto Y.

SOURCE: J Clin Exp Dent. 2014 Nov 1;6 (Supplement2):S3.

* doi:10.4317/jced.17643868
<http://dx.doi.org/10.4317/jced.17643868>

Background and objectives: The nutritional habits of families are one of the pillars for establishing the risk of dental caries. The aim of this study was to evaluate the feeding habits of pregnant woman and of a control group.

Subjects and methods: 113 pregnant and 113 non-pregnant women (226 women) were selected. Both groups completed the same dietary questionnaire.

Results: The homogeneity of the samples for age ($p = 0.236$) and educational level ($p = 0.479$) were suitable for comparison. 74.30% of the pregnant women ate 4-5 complete meals, against 53.09% of the control group (<0.001). 84.95% of the pregnant women ate fruit or vegetables daily compared to 64.61% in the control group (<0.001). 61.94% of the pregnant women took vitamin supplements (<0.001) and 61.05% of the pregnant women drank more than 5 glasses of water a day, compared to 46.02% of the non-pregnant women ($p <0.05$). No significant differences in the consumption of eggs, vegetables, meat, fish, or dairy products were found.

Conclusions: This study shows that the nutritional habits of women are rather better when they are pregnant than when they are not. Dentists should encourage this healthy habit during dental visits by pregnant women.

- Oral Presentation 6

TITLE: Coffin-Siris Syndrome: a case report

AUTHORS: Roncero Goig M, Molina Escribano A, Roncero Jimenez M, Roncero Jimenez P, Silvestre Donat FJ.

SOURCE: J Clin Exp Dent. 2014 Nov 1;6 (Supplement2):S3.

* doi:10.4317/jced.17643871
<http://dx.doi.org/10.4317/jced.17643871>

Background and objectives: The syndrome was first described in 1970 by Coffin and Siris, based on three female patients, with no family background of the condition, who presented mental retardation and distal pha-

langeal hypoplasia. Since then, fewer than a hundred cases have been published. This syndrome is a quite rare genetic disease that has barely been studied because of its very low incidence. The two objectives of this presentation are to report a case of Coffin-Siris syndrome and to describe the oral treatment performed on a Coffin-Siris patient by the Public Oral Health Service for Handicapped Patients in Albacete, Spain (SESCAM).

Materials and methods: A 28-year-old male Coffin-Siris patient was treated under general anesthesia in the Dental Unit for Handicapped Patients due to the extent of his dental disease and his lack of collaboration in dental treatment with local anesthesia. The bibliography was reviewed and descriptive studies were found in databases such as Medline and Pubmed.

Results: Nine fillings, eight dental extractions (including a lower wisdom tooth) and a dental tartrectomy were performed. Muscular hypotonia, deep mental deficiency, coarse facial features, hirsutism, thin scalp hair, hairy eyebrows, thick lips, macroglossia and atrophy of the fifth toe nail were among the symptoms that this Coffin-Siris patient showed. He also presented molars with anatomical characteristics similar to taurodontism.

Conclusions: Coffin-Siris is a quite unusual syndrome. The relevant bibliography is quite poor and does not describe any special oral characteristics. This case indicates that the signs might include characteristics resembling taurodontism. In spite of his muscular hypotonia (ASA II), this Coffin-Siris patient was treated under general anesthesia without complications.

- Poster 1

TITLE: Primary health care program to desensitize children with autism spectrum disorders to the dentist

AUTHORS: Gómez Santos G, Gómez Santos D, Rodríguez Báez A, Martorell Morales S, Rodríguez García JA.

SOURCE: J Clin Exp Dent. 2014 Nov 1;6 (Supplement2):S4.

* doi:10.4317/jced.17643872
<http://dx.doi.org/10.4317/jced.17643872>

Background and objectives: A desensitization program to facilitate the dental care of children with autistic spectrum disorder was undertaken at La Salle school over three school years, beginning in 2011/12.

Subjects and Methods: The children were divided into two groups, which were cared for by two dental teams at the Dr. Guigou Health Centre. Each child received between 2 and 11 desensitization sessions a year. Each session was attended by two educators, three children, one dentist and one hygienist. Before the dental sessions, the children became familiar with the whole process through pictograms with photos of the equipment, materials and dental staff. They followed the dental teams' instructions concerning hygiene and diet. At each session, one of the educators scored (from 0 to 3) the children's response to various actions: responding to their names, sitting on the dental chair, having a napkin put on, opening their mouths, being examined with a mirror, and being examined with a dental probe. Tooth brushing, scaling and fluoride treatment were attempted.

Results: In 2011/12 the behavior scores steadily increased and reached the maximum for all the actions. In 2012-13, some children left the program and new children started. Most of the children who repeated the program obtained the highest scores from the first visit and the others improved progressively. In 2013/14 the groups were changed round in order to assess their reactions to other dental professionals. Children attending the health center for the second or third time obtained higher scores from the outset and the rest of the children improved over time.

Conclusions: This program is beneficial because it strengthens hygiene at home/school. The children learn to collaborate during dental check-up, cleaning and fluoridation treatments, even when these are carried out by unfamiliar professionals.

- Poster 2

TITLE: Toothache as a primary care and hospital emergency

AUTHORS: Rodríguez Priego ME, Pérez Ortiz D, Mateos Palacios R, Romero García CL.

SOURCE: J Clin Exp Dent. 2014 Nov 1;6 (Supplement2):S4.

* doi:10.4317/jced.17643873
<http://dx.doi.org/10.4317/jced.17643873>

Background and objectives: Toothaches are a frequent reason for consultation, not only for primary care dentists but also for family physicians practicing in both health centers and hospitals. The objectives of this study were to determine the impact of toothache on patients' health and to describe its epidemiology and the extent of this reason for medical consultation in hospitals and in primary care.

Materials and methods: A literature review was conducted and the results were related to the responsibilities and the portfolio of services assigned to primary care dentists and physicians and accident and emergency hospital physicians, attempting to propose mechanisms that could reduce the impact and influence of toothache on public health.

Results: Toothaches are the fifth leading cause of hospital admission. They can lead to work and school absenteeism. Sometimes they can cause death. They are often disabling and occasionally the only possible treatment is mutilating and irreversible. Toothaches have a high impact on health and prevention is becoming an increasingly important aspect of primary care, although it is sometimes not included in the service portfolio. There is a conflict of interests between public health and the multinational food industries, which seem to add sugar to most of their products.

Conclusions: In order to reduce the impact of toothache, professionals must have a vision of long-term population health, emphasizing the prevention of oral diseases.

- Poster 3

TITLE: Diagnosis of incipient caries lesions. A review of the literature

AUTHORS: Iranzo Cortés JE, Bellot Arcís C, Almerich Torres T.

SOURCE: J Clin Exp Dent. 2014 Nov 1;6 (Supplement2):S4.

* doi:10.4317/jced.17643874
<http://dx.doi.org/10.4317/jced.17643874>

Background and objectives: The downwards trend in the caries indices makes it necessary to improve the DMF-T and DMF-S caries indices by including criteria and instruments to diagnose precavitated lesions, which are highly prevalent. The aim of this work was to review published articles on in-vitro studies referring to ICDAS visual criteria and to the DIAGNOdent system for detecting caries through laser fluorescence.

Materials and methods: A bibliographic search in the PubMed and Chochrane databases for the keywords ICDAS and DIAGNOdent together resulted in 17 published articles. On reading the abstracts, 10 were found to be in-vivo studies and were eliminated as falling outside the scope of this review.

Results: For enamel lesions, the sensitivity of ICDAS is around 0.89 in most of the studies, while its specificity is 0.61. For the same kind of lesions, the DIAGNOdent values are around 0.87 and 0.44 respectively. For lesions reaching the dentine, ICDAS gives sensitivity and specificity values of around 0.95 and 0.64 respectively, and the figures are identical for DIAGNOdent. Reproducibility is higher in the case of ICDAS (kappa around 0.91 intra-examiner and 0.84 inter-examiner) than with DIAGNOdent (kappa around 0.77 and 0.84 respectively). All the results are similar, whether in primary or permanent dentition.

Conclusions: ICDAS has demonstrated higher validity and reproducibility in assessing occlusal caries. DIAGNOdent gives accurate information clinically, but only moderate reproducibility in caries assessment.

- Poster 4

TITLE: Effectiveness of fissure sealants in children with high caries risk – a case-control study

AUTHORS: Adam Llopis MI.

SOURCE: J Clin Exp Dent. 2014 Nov 1;6 (Supplement2):S5.

* doi:10.4317/jced.17643875
<http://dx.doi.org/10.4317/jced.17643875>

Background and objectives: Dental caries is the most common chronic disease in childhood. It is very important for healthcare professionals to educate people that caries can be prevented. In the Valencia region of Spain, the percentage of 12-year-old schoolchildren with caries is 40%. Fissure sealants are one of the preventive measures included in the region's Oral Health Program. However, in the last epidemiological survey of Valencia, made in 2010, only 11.6% of 12-year-old pupils had complete sealant treatment. The aim of this study is to check whether sealants are an effective measure to prevent tooth decay in permanent teeth in patients with caries in primary teeth.

Subjects and methods: The patients included in this study were born between 2000 and 2004, visited the CSI II Denia preventive dentistry unit from January to August 2014, and had presented caries in primary teeth diagnosed by the same unit. The patients were divided into two groups: those with sealant on the first four permanent molars and those without any sealants. The number who had caries in permanent teeth was then noted.

Results: Of the 41 patients without sealants, 65% had experienced caries in permanent teeth and 35% had not. Of the 46 patients with sealants, 23% presented caries while 76% did not present this disease.

Conclusions: Patients who have sealants have less caries in permanent teeth than those without sealants. However, sealants are a resource that is undervalued by professionals. It would be desirable to implement this preventive technique in patients at high risk of caries.

- Poster 5

TITLE: Effect of CPP-ACP (Recaldent) and sodium fluoride (5%) varnish on enamel mineralization

AUTHORS: Martínez Beneyto Y, Martínez Ortiz C, Gatón Hernández P, Saorín Falcón P, Ortiz Ruiz A.
SOURCE: J Clin Exp Dent. 2014 Nov 1;6 (Supplement2):S5.

* doi:10.4317/jced.17643876
<http://dx.doi.org/10.4317/jced.17643876>

Background and objectives: Newly-developed remineralizing agents based on casein phosphopeptide-amorphous calcium phosphate (CPP-ACP) in combination with fluoride have been shown to be effective in enamel remineralization and can be used for both enamel defects and incipient carious lesions. The aim of this study was to assess the remineralizing capacity of a varnish composed of casein phosphopeptide-amorphous calcium phosphate (CPP-ACP) (Recaldent 1-5%) and 900 ppm of sodium fluoride.

Materials and methods: A total of 43 bovine lower incisors were used. The base level of enamel mineralization, demineralization produced by an acid solution, and remineralization at 7, 14 and 28 days after a single treatment with MI Varnish® (GC, Tokyo, Japan) were measured. SEM-EDX was used to measure the % weight.

Results: The initial fluoride, calcium and phosphorus values increased throughout the 28 day period. For calcium, the values (% weight) ranged from 28.13 (baseline) to 32.22 (28 days after treatment), with no statistical significance ($p=0.143$), but the phosphorus concentra-

tions increased significantly between demineralization and the 7th day ($p < 0.05$).

Conclusions: The use of a varnish containing the Re-caldent molecule and 900 ppm sodium fluoride increased the concentration by weight of fluorine, calcium and phosphorus at 28 days after treatment.

- Poster 6

TITLE: Impact of fibromyalgia on the oral cavity and related structures

AUTHORS: Carballo Tejada E, Lucerón Díaz-Ropero M, Pérez Lopesino I, Carballo Tejada B, Haroyán E.
SOURCE: J Clin Exp Dent. 2014 Nov 1;6 (Supplement2):S6.

* doi:10.4317/jced.17643877
<http://dx.doi.org/10.4317/jced.17643877>

Background and objectives: Fibromyalgia is a condition where the whole body is affected by generalized and chronic pain and tenderness. People with fibromyalgia usually have other symptoms including poor sleep, stiffness in the muscles and fatigue. This condition is not arthritis because it does not affect the joints, although the joints might hurt. Doctors should make a diagnosis through listening to people's symptoms, a physical examination (which may include checking for some of the 18 trigger points such as neck, shoulders, back, hips and limbs) and performing a test to exclude other causes of persistent pain and fatigue. The present study focuses on reviewing the impact of fibromyalgia on the oral cavity and related structures.

Materials and methods: Bibliographic research in MEDLINE and Pubmed from 2004 to 2014.

Results: Fibromyalgia Syndrome (FMS) involves pain and stiffness in the muscles. It is called a syndrome because it is a group of symptoms rather than a disease with a known cause. FMS affects 3-5% of the world population. Its prevalence increases with age and it is the reason for around 10-20% of all rheumatology consultations and 5-7% of primary health care consultation. The bibliography suggests that patients affected by FMS suffer a series of symptoms in the oral cavity and related structures such as pain and stiffness of the related muscles, trismus, arthralgia, pain in the joints (clicks, crepitus), dysphagia, xerostomia, burning mouth syndrome and dysgeusia.

Conclusions: Dental attention is important when treating fibromyalgia because some of its manifestations are found in the oral cavity and related structures. Treatment should focus on the temporomandibular joints and on easing the symptoms of xerostomia and burning mouth syndrome.

- Poster 7

TITLE: Importance of the buccodental health of the baby

AUTHORS: Bonal Ríos J, Martínez Collado MA, Martínez Collado ML.
SOURCE: J Clin Exp Dent. 2014 Nov 1;6 (Supplement2):S6.

* doi:10.4317/jced.17643878
<http://dx.doi.org/10.4317/jced.17643878>

Background and objectives: The oral health of the child is not limited to the stage of eruption of the permanent teeth. This poster presents a new guide with recommendations to make pregnant women aware of the most common mistakes that are made in relation to the oral health of their babies.

Materials and methods: In the Castile la Mancha region of Spain, women are referred to the dental health center by the midwife in the first three months of their pregnancy. They are given oral health training, a check-up and monitoring according to a schedule. In the last three months of pregnancy they are given this guide with oral advice for the future baby.

When the child is six years old the pediatrician refers him or her to the buccodental health unit for treatment according to the region's protocol.

Results and conclusions: During pregnancy, a woman can be especially open to disease prevention and health promotion initiatives that could improve her own oral health and that of her baby. The aim is to awaken pregnant women that attend the unit to the importance of starting to take care of the oral health of their babies from birth, as this stage of pregnancy is when they are most receptive, and to improve the oral health of the children from birth, since according to the protocol, the first contact that the unit will have with the child is at six years of age.

- Poster 8

TITLE: Oral health of pregnant women in Albacete

AUTHORS: Martínez Collado MA, Bonal Rios J, Sáez Cuesta U, Castejón Navas I, Alfaro Alfaro A.
SOURCE: J Clin Exp Dent. 2014 Nov 1;6 (Supplement2):S6.

* doi:10.4317/jced.17643879
<http://dx.doi.org/10.4317/jced.17643879>

Background and objectives: Pregnant women suffer organic, physical and physiological changes that can

have repercussions in the oral cavity. They also have a receptive attitude to healthy habits for themselves and their babies. Consequently, oral health education is important, since preventive programs for this target group are necessary to detect and/or anticipate possible dental and/or periodontal pathologies during this period.

Materials and methods: Sociodemographic and oral health information on 200 pregnant women attending zone 7 and zone 4 health centers was collected.

Results: The mean age was 30.4 years, with ages ranging from 17 to 45 years. 19.8% of the women were 25 years old or under and 12% were 35 years old or over. 25.6% were smokers. The percentage that brushed their teeth 3 times a day was 74.2%, 23.2% brushed them twice a day and 2.6 % did not brush their teeth.

Conclusions: In general the level of oral health was good, bearing in mind that the study subjects were women in the first three months of gestation. All of them are aware of the importance of oral health and healthy habits.

- Poster 9

TITLE: Estimated cost of a dental care program for elderly dependent persons

AUTHORS: Mateos Palacios R, Rodríguez Priego ME, Romero García CL.

SOURCE: J Clin Exp Dent. 2014 Nov 1;6 (Supplement2):S7.

* doi:10.4317/jced.17643880

<http://dx.doi.org/10.4317/jced.17643880>

Background and objectives: The Spanish population is ageing, leading to a steadily growing number of dependent persons who cannot carry out everyday tasks without assistance. This is a barrier to accessing dental services. Home dental care programs using portable dental equipment may be an alternative way to provide dental care to this population group. The aim of this study was to determine the cost-effectiveness of introducing a home dental care program for dependent older people.

Materials and methods: A cost analysis of the resources used in implementing a dental care program for 100 elderly dependents was conducted. The total number of treatments proposed in the study was 191, of which 12 were simple fillings, 70 basic periodontal treatments, 9 prosthesis repairs, and 100 were topical applications of fluoride for all the patients.

Results: The total cost of these treatments amounted to just over EUR 9127.86 at home and 9956.7 in the dental office, performing each treatment the same number of times in both cases.

Conclusions: Home dental care programs can be considered a viable alternative, although it would be necessary to complete such studies by analyzing their feasibility and viability prior to implementation.

- Poster 10

TITLE: Measuring socio-dental indicators in pregnant women using OHIP-14

AUTHORS: Llamas Ortuño ME, García-Navas Romero F, Pérez Lajarín L, Camacho Alonso F, Martínez Beneyto Y.

SOURCE: J Clin Exp Dent. 2014 Nov 1;6 (Supplement2):S7.

* doi:10.4317/jced.17643881

<http://dx.doi.org/10.4317/jced.17643881>

Background and objectives: Assessment of socio-dental indicators is essential to contextualize patients in dental offices. Few studies have evaluated the oral quality of life of pregnant women. This study was intended to determine which OHIP-14 indicators have most impact on the quality of life of pregnant women.

Subjects and methods: An oral quality of life (OQL) study was conducted in a group of 113 pregnant women. The OHIP-14 questionnaire was administered, scored on a scale graded from 10 to 70, with the higher values representing a lower oral quality of life.

Results: The majority nationality was Spanish (84.07%), the mean age was 32.56 ± 5.43 (with a range of 17-42 years) and 47.79% had a secondary education. The results (mean \pm SD) for each of the questionnaire items were: functional limitation 2.68 ± 1.28 , physical pain 4.35 ± 1.93 , psychological distress 4.26 ± 1.92 , physical disability 2.89 ± 1.43 , psychological disability 3.09 ± 1.49 , social disability 2.89 ± 1.54 and handicap 2.87 ± 1.58 . The average total OHIP-14 score was 23.04 ± 9.39 .

Conclusions: The OHIP-14 subscales that have most negative impact on the quality of life of pregnant women are physical pain and psychological distress, followed by psychological incapacity. In contrast, functional limitation is the least disruptive to the OQL of pregnant women.

- Poster 11

TITLE: The influence of stress on dental carie

AUTHORS: Arias Macías CM, Casado Gómez I, Fernandez Arias J, Casanova Arias JL, Romero Martín M.

SOURCE: J Clin Exp Dent. 2014 Nov 1;6 (Supplement2):S7.

* doi:10.4317/jced.17643882
http://dx.doi.org/10.4317/jced.17643882

Background and objectives: Along with the accepted association between stress and classic oral diseases such as periodontal, mucosal and TMJ conditions, among others, in recent years stress has also been cited as a risk/cause of Dental Caries.

Objective: To assess the association between stress levels and caries in a Community of Madrid (Spain) population sample.

Subjects and methods: Cross-sectional study of 200 people aged 18 to 55, including persons accompanying patients, who came to the health centers of a Madrid health area. Signed informed consent and health habits were obtained and dental status was explored in a dental chair as required by the protocol. To determine the levels of cortisol (a biochemical indicator of stress) and IgA (a protective antibody), unstimulated saliva was collected and the Salimetrics LLC Salivary Cortisol and Salivary Secretory IgA assays were applied.

Results: Salivary cortisol levels in this study were similar to those reported in the general population (0.18 vs. 0.19 $\mu\text{g}/\text{dl}$), while the levels of IgA were significantly lower (132.1 vs. 379.4 $\mu\text{g}/\text{ml}$). The average active caries score was 1.2 and DMFT was 8, which are moderate caries values according to the WHO. Significant direct correlations were found between salivary cortisol levels and active cavities ($r=0.14$, $p=0.04$), and significant inverse correlations between cortisol levels and salivary IgA ($r=-0.15$, $p=0.02$), indicating a decrease in salivary defense capability in the most stressed people. A further significant correlation between cortisol levels and brushing frequency ($r=-0.17$, $p=0.01$) could indicate decreased self-care due to the stress.

Conclusions: Stress appears to be a risk factor for caries, given the significant direct association observed between decay and cortisol, and it also seems to be a risk factor for a decrease in the defensive capacity of saliva and for decreasing hygiene habits.

- Poster 12

TITLE: Etiology of dental fluorosis. A review of the literature

AUTHORS: Avilés Gutiérrez P, Bernal Díez M, Lorenzo Macías C.

SOURCE: J Clin Exp Dent. 2014 Nov 1;6 (Supplement2):S8.

* doi:10.4317/jced.17643883
http://dx.doi.org/10.4317/jced.17643883

Background and objectives: Dental fluorosis is a developmental disorder of tooth enamel caused by ongoing

exposure to high levels of fluoride during tooth development. The severity of dental fluorosis depends on when the fluoride exposure occurs and how long it continues, the individual response, weight, etc. Objectives: To describe the clinical manifestations, perform a differential diagnosis between dental fluorosis, enamel opacities and caries, study possible treatments and inform society of the important role dentists play in the oral health of children.

Materials and methods: A number of studies were reviewed and the results compared. The materials were obtained from the holdings of the Faculty of Dentistry library of the Complutense University of Madrid, the medical search engine Pubmed, and through the Internet, using the same faculty's Swan catalogue. The search terms were dental fluorosis, cosmetic dentistry, air abrasion, and dental caries.

Results and conclusions: Three sources that increase the risk of dental fluorosis have been identified: drinking water, fluoride supplements and topical fluoride. Tooth decay occurs most often in children with fluorosis. It is suspected that the prevalence of decay is greater with the application of excessive fluoride supplement than with food and water for daily consumption. The use of fluoride supplements is effective in preventing caries but it is necessary to be aware of their limitations and to evaluate the risk of cavities.

- Poster 13

TITLE: Oral health and self-care in college students. A pilot study

AUTHORS: Casado Gómez I, Arias Macías CM, Descalzo Casado E, Domínguez Gordillo A, Romero Martín M.

SOURCE: J Clin Exp Dent. 2014 Nov 1;6 (Supplement2):S8.

* doi:10.4317/jced.17643884
http://dx.doi.org/10.4317/jced.17643884

Background and objectives: Some efficient oral hygiene habits and regular dental checkups are two basic self-care measures to maintain oral health that people should know and practice. The aim of this study was to measure self-care behavior, self-rated oral health and prevalence of dental caries in university students.

Subjects and methods: An observational, cross-sectional study was conducted in 63 young people under 25 years, of both sexes, who were students of Health Sciences at UCM. They answered an ad hoc questionnaire on oral health habits and self-perception of oral health, and their oral cavities were examined according to the community dental examination protocol after giving

informed consent and in accordance with the inclusion/exclusion standards. SPSS 17.0 and descriptive statistics were used to perform a chi-square test or Fisher's exact test to assess the association between variables. The significance was set at $p < 0.05$.

Results: The mean age of the group was 18.92 ± 1.29 years. Their mean CAOD index was 2.62 ± 2.9 , which is moderate according to the WHO. A third of the sample was free of caries, more than half did not have caries in first and second molars, but in 25% the CAOD index was high or very high. The plaque index was 15.63 ± 9.47 . 85% of students considered their oral health good and the same percentage were interested in it. Only 3% reported brushing once a day, 40% completed their dental hygiene with floss or interproximal brushes and 54% used mouthwash. 76% had regular dental checkups. None referred smoking and 60% engaged regularly in sports.

Conclusions: Preliminary data show that most of the college students studied have good general and oral health habits but, surprisingly, a quarter of them present high caries indices.

- Poster 14

TITLE: Psychosocial impact of malocclusion using DAI, IOTN and PIDAQ

AUTHORS: Bellot Arcís C, Iranzo Cortés JE.

SOURCE: J Clin Exp Dent. 2014 Nov 1;6 (Supplement2):S9.

* doi:10.4317/jced.17643885

<http://dx.doi.org/10.4317/jced.17643885>

Background and objectives: To determine the psychosocial impact of malocclusion in adolescents and its relation to the severity of the malocclusion, and to assess the influence of gender and social class on this relation. **Subjects and methods:** Intraoral examination of a random sample of 627 adolescents (aged between 12 and 15 years) was conducted at their schools by 3 calibrated examiners (intra- and inter-examiner Kappa > 0.85). Psychosocial impact was measured through a self-completed PIDAQ questionnaire. The severity of the malocclusion was measured by the IOTN.

Results: The total PIDAQ scores and those of its four subscales, Social Impact (SI), Psychological Impact (PI), Aesthetic Concern (AC) and Dental Self Confidence (DSC), presented both significant differences (ANOVA $p \leq 0.05$) and a linear relation with IOTN grades (linear test $p \leq 0.05$). Stepwise linear regression models showed that IOTN DHC was a predictive variable of the PIDAQ total and subscale scores. Neither gender nor social class was an independent predictive variable of this

relation, with the sole exception of the linear model for subscale PI, where gender was a predictive variable.

Conclusions: Malocclusion can cause a psychological impact in adolescents that increases as the severity of the malocclusion increases. Social class appears not to influence this association, but there is some relation to gender, as the psychological impact can be greater among girls.

- Poster 15

TITLE: Oral rehabilitation in pediatric patients with hypohidrotic ectodermal dysplasia. A social reality

AUTHORS: Bernal Díez M, Avilés Gutiérrez P, Recarte Lorente E, de Nova García J.

SOURCE: J Clin Exp Dent. 2014 Nov 1;6 (Supplement2):S9.

* doi:10.4317/jced.17643886

<http://dx.doi.org/10.4317/jced.17643886>

Background and objectives: Hypohidrotic ectodermal dysplasia (HED) is a genetically-based disease that affects ectodermal structures (skin, hair, teeth and sweat glands). It has a prevalence of about 1/15,000. Christ-Siemens-Touraine syndrome is an x-linked subtype, and is the most frequent (80% of cases). It is characterized by a triad of signs: hypotrichosis, hypohidrosis, and hypodontia. Dentists must, on occasion, care for children who suffer from conditions in which their dental characteristics have morphological, functional, aesthetic and psychological repercussions. They need to address this problem early by repairing the anatomy to restore function and improve aesthetics, as these play a critical role in the child's self-esteem and psychological make-up. The objectives of this study were to ascertain the main manifestations of HED and understand the impact it has on the patient's life and environment, to study different therapeutic options in order to plan suitable long-term treatment and to identify the oral rehabilitation needs of patients with this condition within the public health service.

Materials and methods: A review was made of the bibliography on the oral manifestations of HED and the different therapeutic options.

Results: This condition should be diagnosed and treated at an early stage, as these patients present different degrees of hypodontia, oligodontia or anodontia in both dentitions. Prosthetic rehabilitation is essential, restoring or replacing missing teeth with dentures, tooth restorations with composite resins or implant rehabilitation.

Conclusions: It must be borne in mind that these patients are not fully grown and prostheses have to be adapted or replaced over time.

This accentuates the need to develop collaborative agreements or obtain financial grants to cover the costs associated with the treatments, thus ensuring health cover for families with few resources, and to promote centers, services and reference units to provide patients with specialized care.

- Poster 16

TITLE: Relationship between root caries and candida in removable prosthesis wearers

AUTHORS: Fernández Pastor M, Ortolá Siscar JC, Montiel Company JM, Sanchez Acedo M.
SOURCE: J Clin Exp Dent. 2014 Nov 1;6 (Supplement2):S10.

* doi:10.4317/jced.17643887
<http://dx.doi.org/10.4317/jced.17643887>

Background and objectives: The aim of the study was to assess the presence of yeasts in spittle, plaque on the prosthesis closest to the tooth, plaque on the root caries tooth or tooth closest to the prosthesis, and in caries tissue, and relate it to the appearance of root caries in patients over 65 years who wear removable prosthesis.

Materials and methods: 42 patients (24 cases and 18 controls) were selected. ChromID™ Candida bioMérieux® culture plates were divided into three portions for the control group and 4 for the cases. Each sample was taken with a sterilized Microbrush®. Portion A of the plate was seeded with plaque from the prosthesis nearest to the tooth caries or abutment tooth, portion B with plaque from the caries tooth or abutment tooth, portion C with sublingual spittle and portion D with a sample of caries tissue which had been placed in a tube with serum and vibrated for 3 minutes before being grown on the plate. The plates were incubated in an oven at 37 ° C for 48h.

Results: The results showed that more yeast was present on the prosthesis plaque of patients with root caries. An association between the presence of yeast in the caries tissue sample and the type of prosthesis was also found, as yeast levels were higher with skeletal prostheses. Both associations were statistically significant. No significant increase in yeasts was found by age, number of teeth in the mouth or systemic diseases.

Conclusions: In patients with root caries, the locus of the fastest growing yeast is prosthesis plaque. Moreover, by type of prosthesis, greater growth is observed in the caries tissue of skeletal appliance wearers.

- Poster 17

TITLE: Level of oral health knowledge among caregivers for elderly persons

AUTHORS: Saorín Falcón P, Camacho Alonso F, Pérez Lajarín L, García-Navas F, Martínez Beneyto Y.
SOURCE: J Clin Exp Dent. 2014 Nov 1;6 (Supplement2):S10.

* doi:10.4317/jced.17643888
<http://dx.doi.org/10.4317/jced.17643888>

Background and objectives: The study assesses the knowledge of health professionals working in homes for the elderly concerning the main oral problems that elderly patients may present.

Materials and methods: A total of 101 professional caregivers, including university nursing diploma graduates and nursing assistants, were assessed in their respective workplaces. A preliminary questionnaire covering oral health and cancer care in the elderly patient was administered. The initial knowledge of oral health and oral cancer and that obtained from the training were evaluated.

Results: The response rate was 100 % (n=101). Of the participants, 85.1% were women. The mean age was 35.69 (SD 9.46) and they had 4.69 years of professional experience (SD 5.23). Their level of knowledge before the course was 59.71% and increased to 76.38% after the course (p<0.001).

Conclusions: Attending the course led to a considerable improvement but did not always result in a high level of knowledge of dental health care in elderly persons.

- Poster 18

TITLE: Oral hygiene habits and fear of bleeding in anticoagulated patients

AUTHORS: Almiñana Pastor PJ, Boronat Catalá M, Lopez Roldán A, Alpiste Illueca FM.
SOURCE: J Clin Exp Dent. 2014 Nov 1;6 (Supplement2):S10.

* doi:10.4317/jced.17643889
<http://dx.doi.org/10.4317/jced.17643889>

Background and objectives: According to the Spanish Society of Cardiology, 700,000 patients undergo oral anticoagulation therapy, which increases the risk of bleeding. Despite this fact and the importance of this therapy for periodontal diagnosis, there are no studies on any oral hygiene habits of these patients that could be altered due to a fear of bleeding. The aim of this study was to examine the possible relationship between varia-

bles such as the plaque index and fear of bleeding in a sample of patients taking acenocumarol. A further aim was to analyze whether these patients tend to change their oral hygiene habits due to fear of gingival bleeding.

Materials and methods: This observational controlled clinical study was conducted at the University Hospital in La Ribera with a sample of 44 patients undergoing oral anticoagulation therapy with acenocumarol (Sintrom®) and a control group of 44 patients matched by plaque index, age, etc. The patients completed a questionnaire on oral hygiene habits and fear of bleeding, and their plaque indices were recorded during clinical examination. Descriptive and bivariate analyses were performed with all the data.

Results: A low incidence of fear of gingival bleeding was noted, but no changes in hygiene habits for this reason. There was also a lack of information about oral hygiene habits in anticoagulated patients.

Conclusions: Fear of gingival bleeding does not seem to change oral hygiene habits, although there is a tendency to find more plaque in patients with more fear of gingival bleeding. It is necessary to increase the level of oral and periodontal health education in these patients. It would be desirable for patients taking oral anticoagulants to receive information on oral and periodontal health, highlighting that tooth brushing is not an added risk in these situations.