

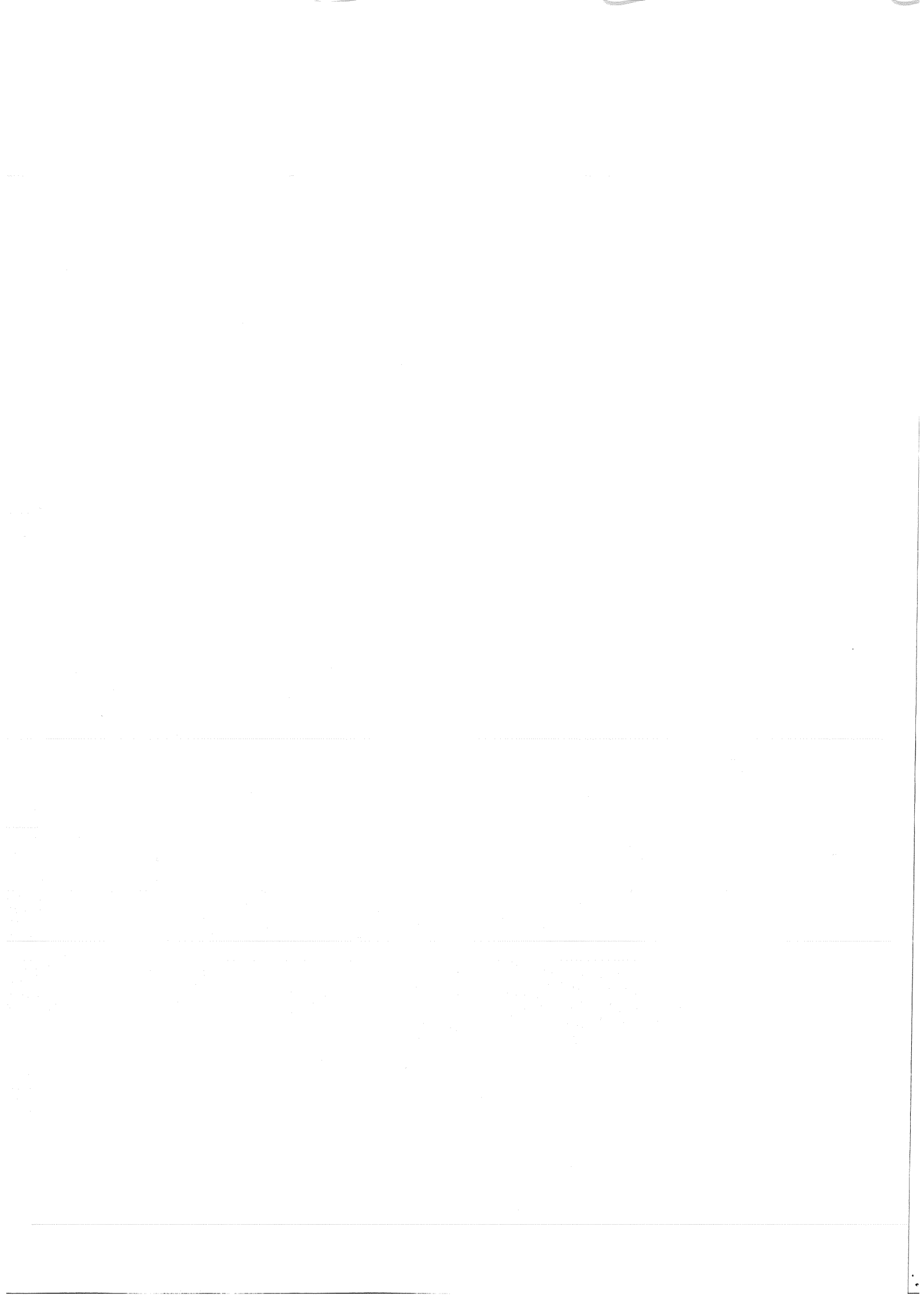
NUTRICON 2016

1-2 December, 2016
Skopje, Macedonia



**Food Quality and Safety,
Health and Nutrition**

Book of Abstracts



1 & 2 December, 2016
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CONTENT

I. FOOD PRODUCTION, ENGINEERING, PROCESSING

HEMATOLOGIC INDICATORS INFLUENCED BY THE DOWNER SYNDROME IN DAIRY COWS <i>Januz Duraj, Vangjel Ceroni</i>	13
THE RELATIONSHIP BETWEEN REPRODUCTION INDICATORS AND THE STRUCTURE OF FOOD RATION, IN THE DAIRY COWS FARMS <i>Ermal Yzeiraj, Vangjel Ceroni</i>	15
OIL PROFILE OF SOME GENOTYPES OF FLAX (<i>LINUM USITATISSIMUM</i> L.) MANUFACTURED IN THE STRUMICA REGION, REPUBLIC OF MACEDONIA <i>Mite Ilievski, Ljupco Mihajlov, Dragica Spasova, Verica Ilieva, Natalija Markova Ruzdic, Pavle Vuckov</i>	17
INFLUENCE OF ARBUSCULAR MYCORRHIZAE TO THE DYNAMICS OF THE GROWTH AND DEVELOPMENT OF ONION <i>Meri Zaja, Elizabeta Angelova</i>	19
PRODUCTION AND CHARACTERIZATION OF PLUM JAMS WITH DIFFERENT SWEETENERS <i>Viktorija Stamatovska, Ljubica Karakasova, Frosina Babanovska-Milenkovska, Gjore Nakov, Namik Durmishi</i>	20

II. FOOD ANALYSIS, FOOD MICROBIOLOGY, CHEMISTRY

DETERMINATION OF ALKALOID CAFFEINE CONTENT IN DIFFERENT TYPES OF DRINKS <i>Valentina Pavlova, Nadica Ilievaska</i>	25
YEAST VITALITY MONITORING DURING THE FERMENTATION PROCESS OF BEER PRODUCTION <i>Linda Luarasi, Rozana Troja, Luljeta Pinguli</i>	27
TOTAL L-ASCORBIC ACID CONTENT IN SEVERAL POTATO VARIETIES BEFORE AND AFTER PVYN INOCULATION <i>Liliana Carmen Bădărău, Băărăscu Nina, Ștefan Maria, Hermeziu Radu</i>	28

III. FOOD QUALITY AND SAFETY

THE INFLUENCE OF FRESH, NO-DRIED BREWER'S SPENT GRAIN ON COOKIE QUALITY <i>Jovana Petrović, Biljana Pajin, Sunčica Kocić-Tanackov, Jelena Pejin, Aleksandar Fišteš, Drago Šubarić, Antun Jozinović</i>	33
--	----

SIMPLE MULTIPLEX PCR ASSAYS FOR FOODBORNE PATHOGENS DESTING USING LIGHTCYCLER <i>Avo Karus, Virge Karus</i>	35
---	----

MONITORING FOOD SAFETY IN THE EURASIAN ECONOMIC UNION (EAEU) <i>Igor Sergeev, Elena Krasilnikova, Svetlana Mukhutdinova</i>	36
---	----

IV. FOOD BIOTECHNOLOGY, NOVEL BIO-PRODUCTS, FUNCTIONAL FOODS

FUNDAMENTALS OF REGULATING CONVERGENCE AREA OF FOOD AND PHARMACEUTICALS <i>Aleksandar Derlis, Maja Simonovska Crcarevska, Marija Glavash Dodov, Renata Slaveska Raichki</i>	39
---	----

CHARACTERIZATION AND ENHANCEMENT OF FUNCTIONAL CHARACTERISTICS OF BLACK CUMIN PROTEIN ISOLATES <i>Özgenur Özdemir, Bilal Çakir, Ibrahim Gülseren</i>	41
--	----

V. EDUCATION, INNOVATION AND KNOWLEDGE TRANSFER

KNOWLEDGE TRANSFER THROUGH KNOWLEDGE SYSTEM IN ORGANIC AGRICULTURE <i>Natasha Daniloska</i>	45
---	----

VI. CLINICAL HEALTH AND NUTRITION

PROTEIN-ENERGY STATUS IN PATIENTS RECEIVING DIALYSIS <i>Natalija Uršulin-Trstenjak, Brankica Vitez, Davor Levanić, Melita Sajko, Marijana Neuberger</i>	49
---	----

PROCEDURAL MODEL OF ACTIONS FOR NEW DIETARY MEALS TECHNOLOGY DESIGNING <i>Rolandas Drejeris</i>	51
---	----

OUR EXPERIENCE IN USE OF PROHERBIS DROPS IN TREATMENT AND PREVENTION OF <i>HELICOBACTER PYLORI</i> <i>Svetlana Jovevska</i>	53
---	----

VII. HEALTH AND NUTRITIONAL EPIDEMIOLOGY

APPLICATION OF MULTIVARIATE TOOLS IN ESTABLISHING RELATIONS BETWEEN CARDIOVASCULAR HEALTH AND PHYSICAL ACTIVITY BASED ON A SURVEY <i>Jasenska Gajdoš Kljusurić, Marija Čačić, Jasna Čačić</i>	57
---	----

DEVELOPMENT OF A FOOD FREQUENCY QUESTIONNAIRE TO ASSESS THE DIETARY INTAKE OF A PHYTATE IN THE URBAN MACEDONIAN POPULATION	
<i>Daniela Nikolovska Nedelkoska, Sasko Martinovski, Aneta Nikolovska</i>	59

NUTRITIONAL APPROACH FOR TREATMENT OF INTESTINAL PERMEABILITY	
<i>Nadica Ilievska, Valentina Pavlova</i>	61

GANODERIC ACID A - A BIOACTIVE COMPONENT IN GANODERMA LUCIDUM^b	
<i>Miodrag Stojanovic, Anka Trajkovska Petkoska, Daniela Nikolovska Nedelkoska, Dragan Damjanovski</i>	62

VIII. PUBLIC HEALTH, NUTRITION, AND CHRONIC DISEASES

AN EXAMPLE OF WHAT MACEDONIAN POPULATION KNOWS ABOUT FOOD ALLERGIES AND FOOD INTOLERANCE	
<i>Zora Uzunoska, Tatjana Kalevska, Viktorija Stamatovska, Dragan Damjanovski</i>	67

WHETHER, WHEN AND WHY THE POPULATION OF THE PELAGONIA REGION USED ARTIFICIAL SWEETENERS AND HOW THEY KNOW THEM?	
<i>Gorica Pavlovska, Violeta Ognevska, Vezirka Jankuloska, Vesna Antoska Knights</i>	69

PHYTOCHEMICALS FOR SKIN CANCER PREVENTION	
<i>Anka Trajkovska-Petkoska, Anita Trajkovska-Broach</i>	70

IX. ORTHODONTICS AND NUTRITION & HEALTH

FOOD AND DIETARY HABITS AS EVOLUTIONARY AND ETIOLOGICAL FACTORS TO ORTHODONTIC MALOCCLUSION	
<i>Igor Kirovski, Tatjana Kirovska</i>	73

X. ORAL DISEASES AND QUALITY OF LIFE

ASSESSMENT OF POSTOPERATIVE OUTCOME AND PATIENT'S LIFE QUALITY AFTER DIFFERENT ORAL SURGERY PROCEDURES	
<i>Cena Dimova, Milka Zdravkovska, Katerina Zlatanovska, Julija Zarkova, Sanja Naskova, Sarita Kadrova</i>	77

ORAL HEALTH RELATED QUALITY OF LIFE IN PATIENTS WITH FIXED AND MOBILE PROSTHODONTIC THERAPY	
<i>Katerina Zlatanovska, Cena Dimova, Julija Zarkova-Atanasova, Sanja Naskova, Darko Kocovski</i>	78

MATRIX METALLOPROTEINASES IN ORAL DISEASES <i>Biljana Evrosimovska</i>	79
--	----

ORAL HYGIENE LEVEL MAINTENANCE OF DENTAL MEDICINE STUDENTS <i>Darko Kocovski, Verica Toneva, Cena Dimova, Katerina Zlatanovska, Sanja Naskova</i>	81
---	----

THE CORRELATION BETWEEN DENTAL CARIES AND SOCIO-ECONOMIC STATUS IN CHILDREN FROM 4-6 YEARS <i>Sanja Naskova, Snezana Iljovska, Cena Dimova, Katerina Zlatanovska, Julija Zarkova-Atanasova</i>	83
--	----

XI. ORAL/DENTAL HEALTH AND NUTRITION

NANO-ANTIOXIDANTS: AN EMERGING STRATEGY FOR PROTECTION OF ORAL LESIONS <i>Jasmin Fidoski, Aleksandar Stamatovski, Alberto Benedetti, Oliver Tusevski, Sonja Gadzovska Simic, Nikola Hadzi-Petrushev</i>	87
---	----

SPECTROPHOTOMETRIC ANALYSIS OF NATURAL TEETH COLOR IN PATIENTS WITH DIFFERENT ORAL HYGIENE HABITS <i>Julija Zarkova Atanasova, Katerina Zlatanovska, Cena Dimova, Sanja Naskova, Lidija Popovska</i>	89
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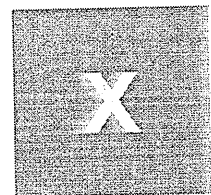
MAINTENANCE OF ORAL HYGIENE OF DENTAL IMPLANTS <i>Sarita Kadrova, Cena Dimova, Milan Dumitraskovik, Elena Mileva</i>	90
--	----

ANTIOXIDANT ACTIVITY OF NANO-BIO FUSION GINGIVAL GEL <i>Jasmin Fidoski, Aleksandar Stamatovski, Oliver Tusevski, Sonja Gadzovska Simic, Nikola Hadzi-Petrushev</i>	92
--	----

XII. NUTRITION FOR COLLECTIVES AND SPECIAL NEEDS

SUPPLEMENTATION IN SPORT NUTRITION <i>Angela Vasileska, Oliver Bojceski</i>	97
---	----

**ORAL DISEASES AND
QUALITY OF LIFE**





ASSESSMENT OF POSTOPERATIVE OUTCOME AND PATIENT'S LIFE QUALITY AFTER DIFFERENT ORAL SURGERY PROCEDURES

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Abstract

The aim of this study was to evaluate patient postoperative outcome and quality of life after different oral surgery procedures in everyday practice.

The study consisted of 60 patients referred for oral surgical treatment cystectomy, operative extraction of impacted tooth and sinus plastic. Two operator were carrying out the treatments. All patients were given a questionnaire with 6 questions to evaluate their quality of life for 10 days after the oral surgery interventions. The clinical outcome was evaluate for 10 days after surgery, too. The average time needed for completion the surgical procedure was approximately 70 minutes.

The results showed that patients with cystectomy reported significantly more pain and took significantly more analgesics, as well as the patients with extracted impacted molars reported significantly more difficulty in mouth opening, mastication, and the ability to speak. High incidence of symptoms were reported by the patients in all groups.

As a conclusion high incidence of symptoms were reported by the patients in all groups. There were no significant differences found in the distribution of patients according to age, gender, diagnosis, and site of operation between the groups. The operative extraction procedure of impacted teeth provided significantly less postoperative pain, but more difficulties in mouth opening, mastication, and the ability to speak immediately postoperatively.

Key words: Oral surgery, Cystectomy, Quality of life, Impacted teeth.

ORAL HEALTH RELATED QUALITY OF LIFE IN PATIENTS WITH FIXED AND MOBILE PROSTHODONTIC THERAPY

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Abstract

The goal of this study was to evaluate the impact of treatment with fixed and mobile dentures on oral health related quality of life in patients attending private dental office in Kumanovo, Macedonia.

A total of 60 subjects were conducted in this study, divided in three identical groups as follows: group 1 - patients treated with fixed dentures, group 2 - patients treated with mobile dentures, and group 3 - patients treated with both fixed and mobile dentures. A specific questionnaire was used to collect information on patient oral health-related quality of life, including anamnestic data, symptoms of ill-functioning, extra oral and intraoral examination, dental abilities and personal satisfaction. The patients were examined before and 6 months after the treatment.

After prosthodontic rehabilitation all subjects showed significant improvements in oral health related quality of life. Furthermore, the patients from group 1 had minimum negative effects from the observed parameters, followed by group 3 and group 2, respectively.

The results indicated very satisfactory impact of prosthodontic treatment on oral health related quality of live.

Key words: *Fixed prosthodontics, Mobile dentures, Oral health, Quality of life, Satisfaction.*

MATRIX METALLOPROTEINASES IN ORAL DISEASES

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Abstract

Matrix metalloproteinases (MMPs) are zinc and calcium dependent enzymes capable of degrading almost all extracellular matrix and basement membrane components. This group of proteolytic enzymes believed to be implicated in the breakdown of extracellular matrix in normal physiological processes, as well as, plays an important role in many destructive pathological oral processes, such as periodontal tissue destruction, root caries, tumor invasion, and chronic periapical inflammation (CPL). The aim of this study was to analyze polymorphism in the gene MMP-1 and their association and influence on clinical manifestation of chronic periapical lesions in order to provide new advances regarding the involvement of MMPs in various oral diseases associated with the inflammatory process.

A total of 240 unrelated Macedonian subjects were included in the present study. Polymorphism -1607 1G/2G in the gene MMP-1 detected with restriction enzymes *AluI*, *XmnI* and polymorphism -519 A/G in the gene MMP-1 detected with restriction enzyme *KpnI* was study in 120 patients with CPL and 120 controls without any signs of chronic or acute inflammatory process in the jaw. The amplification of the region of selected gene was made with polymerase chain reaction-restriction fragment length polymorphism (PCR-RFLP).

Our results showed that there was a differences in the allele and genotype frequencies of the MMP-1 polymorphism between patients with CPL and controls ($p < 0.05$). Also this study suggests that MMP-1 polymorphism -1607 1G/2G detected with restriction enzymes *AluI*, *XmnI* was a risk for expression of CPL (OR = 18.38 < 4.06 < OR < 115.46; OR = 7.73 < 3.1 < OR < 19.55) and MMP-1 polymorphism -519 A/G detected with restriction enzyme *KpnI* was a risk for expression of CPL (OR = 12.11 < 4.64 < OR < 32.30).

Detection of this genetic polymorphism is relevant for obtaining providential treatment of patients who are at high risk of chronic periapical inflammation.

Key words: *Matrix metalloproteinases, Oral diseases, Polymerase chain reaction, Gene mutation.*

ORAL HYGIENE LEVEL MAINTENANCE OF DENTAL MEDICINE STUDENTS

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Abstract

Modern scientific literature shows that enroll in preclinical and clinical subjects at Faculty of Dental Medicine improved oral health manners and level of oral hygiene. The aim of this study was to determinate the maintenance of oral hygiene of the Dental Medicine students, at The Faculty of Medical Science, "Goce Delcev" University - Stip.

Forty students of Dental Medicine were included in the study. The examinations were made twice: before listening the subject Oral Health and after, in third and the same student in fifth semester. Evaluation was made how their attitude has been changed in maintaining oral hygiene after learning about oral health. Dental plaque index (according to Silness and Loe) and Decay, Missing, Filling Teeth index (DMFT) were used to determinate the plaque level and caries teeth.

In the first testing period were processed results with average value of 0.84 of Dental plaque index, in the mean while students were attending courses about oral health. The mean value of DMFT index among students was 9.72. In the second clinical examination, after one year were processed results with average value of 0.69. After one year, mean value of DMFT index among students was 7.8. There's a significant reduction in the unhealed caries shown by the result taken from the decayed teeth which, when first examined was 1.1, and after the second examination was 0.46.

Results showed that Oral Health subject has a major impact in improving the habits and manner of maintaining oral hygiene among students. Students have less plaque in fifth than third semester (after enrolled the subject). Also, students have smaller number of caries (decay), equal number of missing teeth, and higher number of filling teeth in fifth than third semester.

Knowledge about oral health has important role in maintaining oral hygiene and reducingg the level of plaque and decay teeth among students of Dental Medicine

Key words: *Plaque index, Missing tooth, Oral hygiene, DMFT index, Decay.*

THE CORRELATION BETWEEN DENTAL CARIES AND SOCIO-ECONOMIC STATUS IN CHILDREN FROM 4-6 YEARS

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Abstract

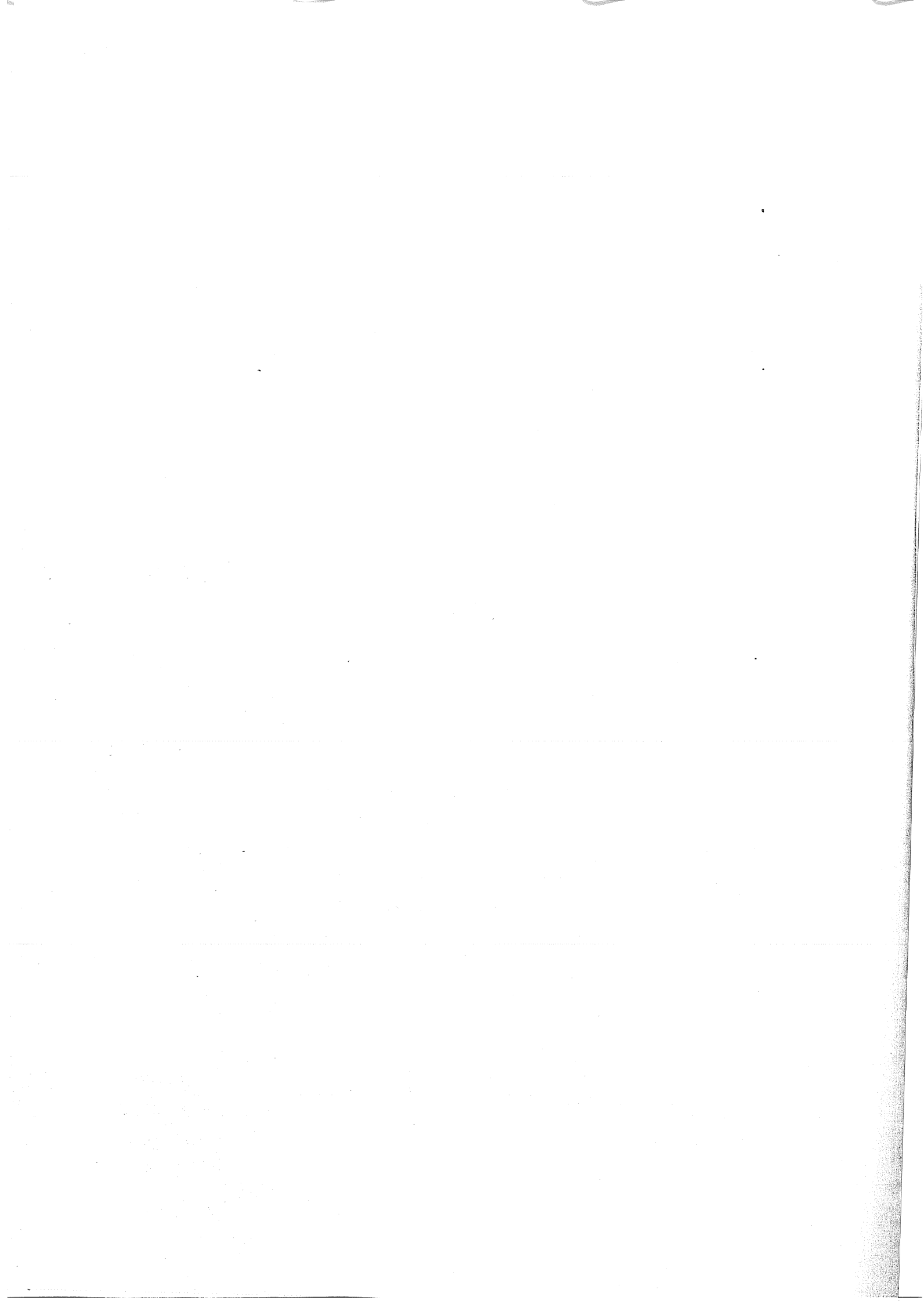
The purpose of our research is to examine the connection of between the presence of dental caries and socio-economic conditions in children aged 4-6 years.

Included in the survey were 74 examinees, aged 4 - 6 years, divided into two groups, or experimental group of 43 examinees, and control group of 31 examinees. For determining the socio-economic status of the examinees we used specially structured questionnaire, which contain questions about the monthly income of the family, where according to the statistics of the State service for the year 2015 the average wage was 22.300 denars. Based on the answers of all questions of socio-economic status among families, evaluation was the following: Score 0 - High, Score 1- Medium, Score 2- Humble. Results were analyzed by arithmetical mean.

The distribution of the data pertaining to the socio-economic status of children with primary dentition from the control group, pointing out that there is no significant difference between the two groups. Information obtained for studied group are pointing out that 15 (20.30%) were children with low 20 (27.00%) are medium, and 8 (10.80%) children had a high socio-economic status.

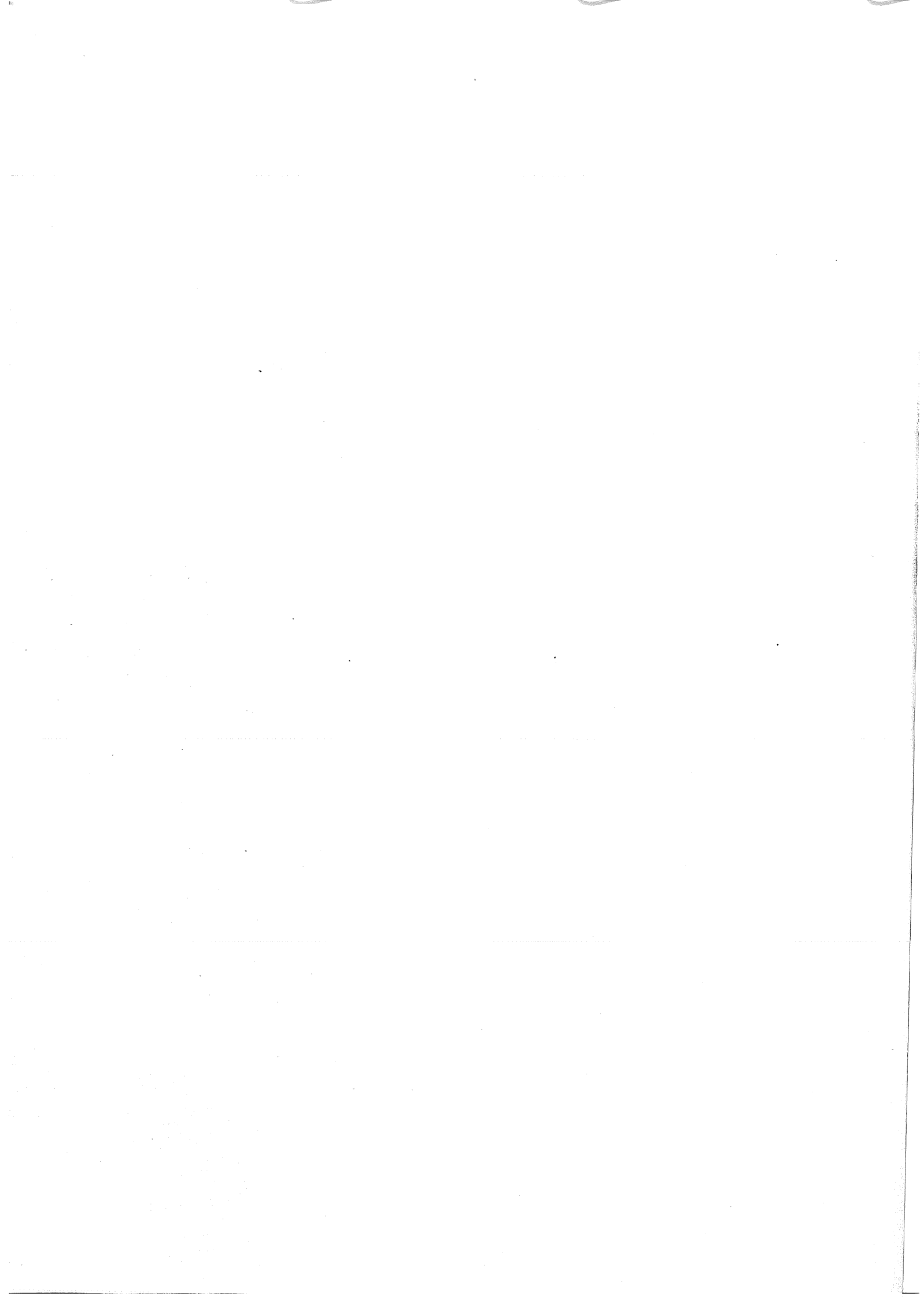
The results which we got for the socio-economic status of the children with primary teeth and intensity of dental caries showed that there is no significant difference between the two examined groups.

Key words: Caries, Primary dentition, Socio-economic status.



**ORAL/DENTAL HEALTH
AND NUTRITION**

XI



NANO-ANTIOXIDANTS: AN EMERGING STRATEGY FOR PROTECTION OF ORAL LESIONS

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Abstract

Oral cells are uniquely susceptible to free radical damage because the mucus membranes allow rapid absorption of substances across their surfaces. The increase in free radicals from oxidative stress leads to further breakdown of cell walls and oral tissue. The antioxidant therapy is the newest approach in optimizing of the oral health. Antioxidants are the first line of defence against free radical damage and are critical for maintaining optimum oral health. Currently the application of nanotechnology is expanding to a wide variety of uses. Novel developed Nano-Vitamin C gel can surpass the moist intraoral environment, enter the cells and support healing of oral lesions. The aim of this pilot study was to compare the efficacy of newly developed Nano-Vitamin C gel with a positive control gel in improving of oral lesion healing.

Using OxMAR program for allocation through minimization 90 patients were instructed to use 2 different types of gels. Outcomes measured was: healing and improvement of oral lesion healing. Reproducibility was assessed by evaluating agreement between two independent operators using the weighted Kappa statistic.

There were statistically significant differences for healing between the groups assessed clinically. Nano Vitamin C gel showed statistically significant higher efficiency compared with the positive study gel.

The new formulated gel does appear that can improve oral wound healing particularly in the first three days after suturing.

Key words: *Nano-Vitamin C, Oral lesions, Healing.*

SPECTROPHOTOMETRIC ANALYSIS OF NATURAL TEETH COLOR IN PATIENTS WITH DIFFERENT ORAL HYGIENE HABITS

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Abstract

The key to keeping a bright, *healthy* smile and good oral health is to practice proper *oral hygiene*. The aim of our study was to see the difference between teeth color in patients who have different habits of oral hygiene.

First a questionnaire was filled by the selected patients (N = 235) consisted of a series of questions for the purpose of gathering information about oral hygiene habits. Then the color of their central incisors, was measured with intraoral spectrophotometer ShadePilotTM (Degu Dent, Germany), in the middle third of the crown and interpreted with shade tabs from three shade guides Vita Classic, Ivoclar Chromascope and Vita 3D Master. For statistical analysis the patients were grouped into three groups according to the answered questions, the first with excellent habits, the second with good and the third group with bad habits in maintaining oral hygiene. Pearson's chi-squared test (χ^2) was used as a statistical method for analyzing the difference between groups.

Results showed that different habits of oral hygiene are an important factor from which the teeth shade depends ($p < 0,001$) ($p = 0,000$). The patients with excellent habits have brightest teeth shades and darkest in patients with bad habits. The reason for darker shades in the patient is the accumulated dental plaque in which pigments are trapped and gives the teeth more yellowish and matte appearance.

We concluded that practicing an excellent and good oral hygiene habit like brushing properly and regularly, using mouthwashes and every day flossing can give a whiter and more healthy looking teeth, than others with bad oral habits. Overall tooth color is very important for good aesthetic and confidence in patients.

Key words: *Tooth color, Shade guides, Spectrophotometer.*

MAINTENANCE OF ORAL HYGIENE OF DENTAL IMPLANTS

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Abstract

Proper medical approach to loss of teeth is by placing dental implants. They allow transmission of chewing pressure in bone tissue and thus stimulate the regeneration of bone after the loss of teeth. Bad oral hygiene is the most common cause of complications after implantation. Aim of our work was to monitor maintaining oral hygiene after the installation of dental implants is of great importance for the success of the implantation.

Materials and methods: In the period from year to year and a half after the burden on the implants as the most common complication of poor oral hygiene is peri-implantitis. Therefore the training of the patient for maintaining oral hygiene is crucial. Check-ups are scheduled for 3 to 6 months and later on, when the patient will develop the technique of maintaining oral hygiene these check-ups can be performed once a year. Regular brushing of the teeth i.e. of the prosthetic construction, flossing and antiseptic solvents for teeth at home is necessary as an imperative. We recommended that patients use tough antiseptics such as chlorhexidine, Listerine and others. Smoking as a risk factor is excluded before placing the implants. The removal of soft deposits, rinsing with antiseptic was done by the therapist at every checkup and the state of the soft tissues around the implants was monitored as well as the osteointegration. The way to maintain oral hygiene is controlled and further instructions are provided.

After the regular check-ups on 3 months, 6 months and a year at these patients with already placed implants we noticed oral hygiene on a very high level according to our instructions and that is one of the main things that the procedure of implanting depends on.

The good side is that the implant cannot be spoiled as natural tooth, but if proper oral hygiene is not maintained there is a risk of developing an infection and loss of the implant.

Key words: *Implants, Peri-implantitis, Osteointegration, Oral hygiene.*

