

International Journal

EURO-AMERICAN SCIENTIFIC COOPERATION

www.escj.eu

Volume #13

June 2016

Research articles

Hamilton 2016

Mytchenok M. P. ,Palis S.Y. Ukraine. COMPLEX APPROACH IN CONDUCTING DENTAL TREATMENT AND PREVENTIVE MEASURES IN PATIENTS WITH THE DIABETES MELLITUS OF THE SECOND TYPE.....	50
Palis S.Y. , M. P. Mytchenok . Ukraine. SURGICAL ASPECTS IN THE GLANDULAR ODONTOGENIC CYSTS TREATMENT.....	54

Section VI. Philology and Linguistics

Isaienko O.V. Ukraine. PROFESSIONAL FILM COMMUNICATION AS A TYPE OF INSTITUTIONAL DISCOURSE.....	58
---	-----------

children is only effective with proper and coherent cooperation from dentists, teachers, parents and children themselves.

In carrying out preventive measures in orphans and children living in disadvantaged socio-economic condition individual approach takes priority during education events by dentists or university students, in choice of products and methods of oral hygiene, timely dental help, and of course, control the precision and efficiency of the above factors.

Thus, despite the rapid development of modern dentistry, including pediatric dentistry and search for new effective treatment methods of oral diseases, their prevalence still remains high. Therefore, the priority in the modern dental practice remains studying and implementing aspects of prophylaxis and prevention of oral cavity diseases.

Bibliography:

1. T.I. Zayats *Prophylaxis of Dental Diseases*. Lviv – 2008.
2. L.F. Kaskova *Prophylaxis of Dental Diseases*. – 2001.
3. Evaluation of dental status of children living in areas contaminated by heavy metal salts. V.V. Avakov, M.M. Rozhko. *Environmental and Medical Genetics Issues and Clinical Immunology*. 2014. #3 – p.184-192.
4. Materials of the annual professor and faculty reporting conference “International Humanitarian University.” T.B. Mandziuk. The problem of juvenile maxilla-facial disability in children in Ukraine. #21 – p.192-196.
5. Dental Health Lessons as a Part of Hygiene Education and Upbringing in School Age Children. M.M. Yakymets. *Journal of Biological and Medical Issues*. 2015. #2(119). – p.267-270.

**Mytchenok M. P. Candidate of Medical Science
State higher education institution of Ukraine
“Bukovinian State Medical University”, Ukraine**

*Митченко М. П. кандидат медичних наук
Вищий державний навчальний заклад України
«Буковинський державний медичний університет», Україна*

**Palis S.Y. Assistant of surgical and pediatric dentistry department
State higher education institution of Ukraine
"Bukovyna State Medical University", Ukraine**

*Палис С.Ю. Асистент кафедри хірургічної та дитячої стоматології
Вищий державний навчальний заклад України
"Буковинський державний медичний університет", Україна*

**COMPLEX APPROACH IN CONDUCTING DENTAL TREATMENT AND
PREVENTIVE MEASURES IN PATIENTS WITH THE DIABETES MELLITUS OF
THE SECOND TYPE**

***КОМПЛЕКСНИЙ ПІДХІД В ПРОВЕДЕННІ СТОМАТОЛОГІЧНИХ ЛІКУВАЛЬНО-
ПРОФІЛАКТИЧНИХ ЗАХОДІВ У ХВОРИХ НА ЦУКРОВИЙ ДІАБЕТ 2-ГО ТИПУ***

Abstract. The stomatology treatment of patients with the diabetes mellitus of the second type is represented in this article. It is proved, that consecutive conduction of therapeutic, surgical and

orthopedic measures improves to some extent hygienic condition of a mouth cavity, periodontal tissues, physic-chemical and immunological properties of a mouth cavity. And rational prosthesis provides the improvement of the quality of patients life.

Key words: complex dental approach, the diabetes mellitus of the second type.

Резюме. У роботі представлено результати комплексного стоматологічного лікування хворих на цукровий діабет 2-го типу. Доведено, що послідовне проведення терапевтичних, хірургічних і ортопедичних заходів в значній мірі поліпшує гігієнічний стан порожнини рота, тканин пародонта, фізико-хімічні та імунологічні властивості ротової рідини, а раціональне протезування забезпечує покращення якості життя пацієнтів.

Ключові слова: комплексний стоматологічний підхід, цукровий діабет 2-го типу.

Introduction. The diabetes mellitus of the second type – is one of the most widespread diseases that is a global medical problem and it is a real danger for health [1, p.79]. According to 2000 year, the amount of diabetics had been 171 millions of people (2, 8%), while in 2014 – it was 386 million, and the experts from the International Diabetes Federation predict the magnification of the amount of patients in the world to 55% – to 592 millions of people by 2035 [2]. The same tendency is typical in Ukraine, with more than 1, 3 millions of diabetics of the second type [1, p.79].

The leading path-physiology factors of organs and systems affection first of all are infraction of microcirculation; rheological qualities of blood; carbohydrate, lipid and protein metabolism [3, p.31, 4, p.17, 5, p.583].

Most diabetics have features of secondary immunodeficiency, the growth of aggression and resistance of antibiotics strains of microorganisms are observed, which are vegetating in a mouth cavity, so the treatment of their infective inflammatory process is entangled, and all the acknowledged, generally accepted, classical methods are ineffective [6, p.30].

The goal of the research – the study of efficiency of the complex approach in conduction of dental treatment and prophylactic measures in diabetics of the second type.

Materials and methods of the research. We have formed two groups of patients. In one group there are 41 diabetics of the second type, their teeth were removed according to prescriptions, 2-3 days after hospitalization. The second group consists of 44 diabetics of the second type. Their teeth had been removed after preliminary 3-days applying of complex of preventing measures and mouth bathtubs with “Lizomukoid”, which were applied during the whole period of sanitation with further prosthesis [7, p.17]. The control group consisted of 25 somatically healthy patients of the same age.

The examinations of patients were conducted on the basis of application of general and additional methods of investigation which had been received during the primary examination in all the patients; after surgery sanitation in the first group; after the conduction of treatment and prophylactic measures (the 3^d day) and on the final period of removing teeth in patients of the second group.

The state of mouth cavity organs were investigated with the help of generally accepted measures. The hygienic condition was defined with the help of hygienic index Green-Vermillion. In order to define the state of periodontal tissues there were used papillary-marginally-alveolar index (PMA), complex periodontal index (CPI), Schiller-Pisarev sample, sulcus bleeding index (SBI) by Myhleman and Son [7, p.8, 8, p.224].

Results of the research and discussion. In patients from the first group the intensity of teeth caries considerably exceeded the index of the control group (21,4±1,82 against 7,7±0,4).

The comparison of hygienic index indicator of both diabetics and people from the control group has shown its deterioration in patients; the percent of patients with bad condition of mouth cavity hygiene exceeded the amount with unsatisfactory condition in 2,1 times; the Green-Vermillion index was higher than the index of control group in 4,8 times.

So, diabetics have high intensity of caries and hygienic condition of mouth is bad, which is one of unfavorable factors of caries situation occurrence, the speed of solid teeth tissues destruction, occurrence of complicated forms of caries [7, p.18].

During mouth cavity examination the existence of chronic generalized periodontitis of I-II-III levels of severity was found. The average value of PMA index was $59,72 \pm 2,61\%$, CPI - $3,45 \pm 0,12$ – points.

During the opinion poll it was revealed that bleeding gums had been in all patients and bleeding index was $3,32 \pm 0,21$.

The speed of salivation in patients of unstimulated oral liquid was $0,31 \pm 0,01$ ml/min and $0,48 \pm 0,02$ ml/min after stimulation being conducted, against $0,66 \pm 0,02$ and $0,84 \pm 0,04$ ml/min in people from the control group.

The concentration of hydrogen ions was in average $4,61 \pm 0,22$ relative units in unstimulated oral liquid and $5,82 \pm 0,24$ relative units in stimulated one that was in 1,5 and 1,3 times less than the index in the control group.

The viscosity of mouth cavity which was taken without stimulation in 2,4 times exceeded the index in control group, while with stimulation – in 1,9 times. The specific weight was slightly increased in both samples.

During this period of investigation it was observed the immune suppression capacity on mouth cavity level because of reduction in bactericidal activity of mouth cavity lysozyme in 2 times; the level of secretory immunoglobulin A (SIgA) in 2,7 times against people from the control group.

After surgical sanitation of mouth cavity with the help of traditional method it was revealed that the condition of mouth cavity hygiene almost hasn't changed and the Green-Vermillion index was $2,95 \pm 0,12$ points; the soft dental raid was saved in the same quantity as well as under- and overgingival odontolith which was remained. Schiller-Pisarev sample remained positive in all patients and PMA was $59,93 \pm 3,11\%$. The complex periodontal index was $3,42 \pm 0,17$ points and the bleeding index – $3,34 \pm 0,28$.

At the moment of sanitation completing in patients of this group there weren't observed certain changes relatively to the start of its conduction in fast salivation indicators, specific weight, pH and the viscosity of unstimulated and stimulated oral liquid, quantative changes of bactericidal activity of mouth cavity index of lysozyme, the level of SIgA in mouth cavity.

This induced us to develop the complex of prophylactic agents, aimed to remove violations, which had been revealed before the beginning of planned surgical sanitation of mouth cavity in patients, taking to account the latest scientific achievements of modern dentistry [9, p.179] and treatment-preventive complex developed by us [7, p.18].

We have found that in patients from the second group the condition of mouth cavity hygiene has been improved in 4,6 times in comparison with numbers from the earlier examinations, with permanency of intensity caries rate and Schiller-Pisarev sample during the three days of preparation period. But PMA, CPI and blooding indexes were only slightly improved. Moderate disappearance of gums inflammation was found.

The analysis of the results that characterize physic-chemical features of oral liquid has found slightly growth of salivation speed both with stimulation and after it.

The specific weight of oral liquid almost didn't change, concentration of hydrogen ions increased and was $5,24 \pm 0,24$ relative units before the stimulation and $6,21 \pm 0,29$ relative units after, in comparison with the period of initial examination ($4,71 \pm 0,21$ relative units. and $5,83 \pm 0,27$ relative units), and the viscosity was decreasing – $4,42 \pm 0,21$ sP i $3,24 \pm 0,21$ sP after stimulation against $5,71 \pm 0,23$ sP and $3,62 \pm 0,28$ sP before the beginning of prophylactic measures. Bactericidal activity of lysozyme has increased in 1,5 times, and the level of SIgA has increased in 1,2 times.

After the surgery sanitation of mouth cavity being completed in this group of patients it was found that the condition of mouth cavity hygiene has been improved and was $0,65 \pm 0,11$ points; Schiller-Pisarev sample varied between weak-positive and positive state; PMA was $48,12 \pm 2,93\%$; CPI was decreasing to $3,04 \pm 0,15$ points; the bleeding index decreased in 1,2 times. So, all the indexes which had been under examination were better in comparison with this period of investigation in the first group of patients.

The speed of salivation and physic-chemical features of oral liquid in this group of patients at present period of investigation have shown the acceleration of the unstimulated salivation in 1,5 times while the stimulated one – in 1,2 times in comparison with the initial period of surgery sanitation. While the specific weight of mouth cavity in both cases almost hasn't changed; concentration of hydrogen ions in unstimulated oral liquid has increased in 1,2 times. Reduction of viscosity in unstimulated fraction of mixed saliva was found, while in 1,2 times in stimulated one. The application of "Lizomukoyid" let us to improve these indexes at the time of finishing sanitation concerning data in the group of patients who received traditional treatment.

After the surgery sanitation had been completed, bactericidal activity of lysozyme slightly increased in comparison with pre-sanitation index, while the level of SIgA increased in 1,4 times in comparison with the same period. These indexes were also considerably better in relation to the results which had been received in the first group of patients at the time of sanitation completing.

After surgery and therapeutic sanitations had been completed and prosthesis of different types of orthopedic constructions in 29 patients of the second group had been made, it pointed on the high efficiency of complex dental rehabilitation of diabetics of the second type.

Conclusion. So, the application of complex approach in carrying out dental treatment and preventive measures in diabetics of the second type causes the improvement of hygienic state of mouth cavity and periodontal tissues, improves rheological qualities of oral liquid, physic-chemical and immunological indexes. The prosthesis which was conducted after finishing surgical and therapeutic sanitations has considerably improved the quality of life of patients from this category.

Sources and literature

1. Pankiv V. I. Diabetes type 2: how to avoid mistakes and improve treatment / V. I. Pankiv // International Journal of Endocrinology. – 2013. - №4. - P. 79-84.
2. International Diabetes Federation, Diabetes Atlas/ - 5th ed. - International Diabetes Federation; 2014.
3. Zvyagynceva T. D. Metabolic syndrome and its correction / T. D. Zvyagynceva, I. M. Plutenko // *Clinical endocrinology and endocrine surgery*. – 2009. - № 3 (28). - P. 31-36.
4. Sergiyenko V. O. Cardiomyopathy for type 2 diabetes: the value of hyperinsulinemia, hyper-C peptydemiya, hiperleptynemiya factors and inflammation / V. O. Sergiyenko // *Clinical endocrinology and endocrine surgery*. - № 3 (28). - P. 17-22.

5. Hildrum B. Metabolik ayndrome and risk of mortality in middle-aged versus elderly individuals: the Nord-Trondelag Health Study (HUNT) / B. Hildrum, A. Mykletun, A. A. Dachl // Diabetologia. – 2009. – Vol. 52, № 1. – P. 583-590.
6. Taylor G.W. Glycemic control and alveolar bone loss progression in type 2 diabetes / G.W. Taylor, B.A. Burt // J. Am. Periodontol. – 1998. – Vol. 3, №1. – P. 30-39.
7. Mytchenok M. P. The prevention and treatment of alveolitis in patients with 2nd type of diabetes: the abstract dissertation for the degree of Candidate of Medical Sciences: specialty 14.01.22 «Stomatologiya» / M. P. Mytchenok. – Poltava, 2011. – 20 p.
8. Borovskiy E. V. Terapevtychna stomatologiya: [therapeutic dentistry] / E. V. Borovskiy. – M.: Medical informative agency, 2004. – 840 p.
9. Gorbacheva E. A. Rationale for the use of antimicrobials for the treatment of periodontal disease in patients with 2nd type diabetes / E. A. Gorbacheva, S. N. Parunova, Y. V. Spyrande // Education, science and practice of dentistry: the forth Russian Scientific conference, February 6-7, 2007 y.: collection of papers. – M., 2007. - P. 179-181.

**Palis S.Y. Assistant of surgical and pediatric dentistry department
State higher education institution of Ukraine
"Bukovyna State Medical University", Ukraine**
*Палис С.Ю. Асистент кафедри хірургічної та дитячої стоматології
Вищий державний навчальний заклад України
"Буковинський державний медичний університет", Україна*

**M. P. Mytchenok Candidate of Medical Science
State higher education institution of Ukraine
"Bukovinian State Medical University", Ukraine**
*Митченко М. П. кандидат медичних наук
Вищий державний навчальний заклад України
«Буковинський державний медичний університет», Україна*

SURGICAL ASPECTS IN THE GLANDULAR ODONTOGENIC CYSTS TREATMENT *ХІРУРГІЧНІ АСПЕКТИ ЛІКУВАННЯ ЗАЛОЗИСТО-ОДОНТОГЕННИХ КІСТ ЩЕЛЕП*

Summary. The article deals with a clinical case of a glandular odontogenic cyst in maxilla. The research deals with the effectiveness of deep cystectomy which presupposes additional treatment of the bone cavity sides by a dental cutter. The aim of this intrusion was prevention of the possible GOC recurrence.

Key words: glandular odontogenic cyst, cystectomy, residual glandular epithelium.

Резюме. В статті описано клінічний випадок залозисто-одонтогенної кісти бічного відділу верхньої щелепи. Розглянута ефективність розширеної (поглибленої) цистектомії», суть якої полягає у додатковому обробленню всіх стінок сформованої кісткової порожнини фрезою кулястої форми. Метою цього втручання було попередження можливого рецидиву ЗОК.

Ключові слова: залозисто-одонтогенна кіста, цистектомія, залишковий залозистий епітелій.