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ЕЖЕМЕСЯЧНЫЙ НАУЧНЫЙ ЖУРНАЛ

Медицинские новости Грузии
საქართველოს სამედიცინო სიახლენი

GEORGIAN MEDICAL NEWS

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GMN: Georgian Medical News is peer-reviewed, published monthly journal committed to promoting the science and art of medicine and the betterment of public health, published by the GMN Editorial Board since 1994. GMN carries original scientific articles on medicine, biology and pharmacy, which are of experimental, theoretical and practical character; publishes original research, reviews, commentaries, editorials, essays, medical news, and correspondence in English and Russian.

GMN is indexed in MEDLINE, SCOPUS, PubMed and VINITI Russian Academy of Sciences. The full text content is available through EBSCO databases.

GMN: Медицинские новости Грузии - ежемесячный рецензируемый научный журнал, издаётся Редакционной коллегией с 1994 года на русском и английском языках в целях поддержки медицинской науки и улучшения здравоохранения. В журнале публикуются оригинальные научные статьи в области медицины, биологии и фармации, статьи обзорного характера, научные сообщения, новости медицины и здравоохранения. Журнал индексируется в MEDLINE, отражён в базе данных SCOPUS, PubMed и ВИНТИ РАН. Полнотекстовые статьи журнала доступны через БД EBSCO.

GMN: Georgian Medical News – საქართველოს სამედიცინო სიახლენი – არის ყოველთვიური სამეცნიერო სამედიცინო რეცენზირებადი ჟურნალი, გამოიცემა 1994 წლიდან, წარმოადგენს სარედაქციო კოლეგიისა და აშშ-ის მეცნიერების, განათლების, ინდუსტრიის, ხელოვნებისა და ბუნებისმეტყველების საერთაშორისო აკადემიის ერთობლივ გამოცემას. GMN-ში რუსულ და ინგლისურ ენებზე ქვეყნდება ექსპერიმენტული, თეორიული და პრაქტიკული ხასიათის ორიგინალური სამეცნიერო სტატიები მედიცინის, ბიოლოგიისა და ფარმაციის სფეროში, მიმოხილვითი ხასიათის სტატიები.

ჟურნალი ინდექსირებულია MEDLINE-ის საერთაშორისო სისტემაში, ასახულია SCOPUS-ის, PubMed-ის და ВИНТИ РАН-ის მონაცემთა ბაზებში. სტატიების სრული ტექსტი ხელმისაწვდომია EBSCO-ს მონაცემთა ბაზებიდან.

WEBSITE

www.geomednews.com

К СВЕДЕНИЮ АВТОРОВ!

При направлении статьи в редакцию необходимо соблюдать следующие правила:

1. Статья должна быть представлена в двух экземплярах, на русском или английском языках, напечатанная через **полтора интервала на одной стороне стандартного листа с шириной левого поля в три сантиметра**. Используемый компьютерный шрифт для текста на русском и английском языках - **Times New Roman (Кириллица)**, для текста на грузинском языке следует использовать **AcadNusx**. Размер шрифта - **12**. К рукописи, напечатанной на компьютере, должен быть приложен CD со статьей.

2. Размер статьи должен быть не менее десяти и не более двадцати страниц машинописи, включая указатель литературы и резюме на английском, русском и грузинском языках.

3. В статье должны быть освещены актуальность данного материала, методы и результаты исследования и их обсуждение.

При представлении в печать научных экспериментальных работ авторы должны указывать вид и количество экспериментальных животных, применявшиеся методы обезболивания и усыпления (в ходе острых опытов).

4. К статье должны быть приложены краткое (на полстраницы) резюме на английском, русском и грузинском языках (включающее следующие разделы: цель исследования, материал и методы, результаты и заключение) и список ключевых слов (key words).

5. Таблицы необходимо представлять в печатной форме. Фотокопии не принимаются. **Все цифровые, итоговые и процентные данные в таблицах должны соответствовать таковым в тексте статьи**. Таблицы и графики должны быть озаглавлены.

6. Фотографии должны быть контрастными, фотокопии с рентгенограмм - в позитивном изображении. Рисунки, чертежи и диаграммы следует озаглавить, пронумеровать и вставить в соответствующее место текста **в tiff формате**.

В подписях к микрофотографиям следует указывать степень увеличения через окуляр или объектив и метод окраски или импрегнации срезов.

7. Фамилии отечественных авторов приводятся в оригинальной транскрипции.

8. При оформлении и направлении статей в журнал МНГ просим авторов соблюдать правила, изложенные в «Единых требованиях к рукописям, представляемым в биомедицинские журналы», принятых Международным комитетом редакторов медицинских журналов - <http://www.spinesurgery.ru/files/publish.pdf> и http://www.nlm.nih.gov/bsd/uniform_requirements.html В конце каждой оригинальной статьи приводится библиографический список. В список литературы включаются все материалы, на которые имеются ссылки в тексте. Список составляется в алфавитном порядке и нумеруется. Литературный источник приводится на языке оригинала. В списке литературы сначала приводятся работы, написанные знаками грузинского алфавита, затем кириллицей и латиницей. Ссылки на цитируемые работы в тексте статьи даются в квадратных скобках в виде номера, соответствующего номеру данной работы в списке литературы. Большинство цитированных источников должны быть за последние 5-7 лет.

9. Для получения права на публикацию статья должна иметь от руководителя работы или учреждения визу и сопроводительное отношение, написанные или напечатанные на бланке и заверенные подписью и печатью.

10. В конце статьи должны быть подписи всех авторов, полностью приведены их фамилии, имена и отчества, указаны служебный и домашний номера телефонов и адреса или иные координаты. Количество авторов (соавторов) не должно превышать пяти человек.

11. Редакция оставляет за собой право сокращать и исправлять статьи. Корректур авторам не высылаются, вся работа и сверка проводится по авторскому оригиналу.

12. Недопустимо направление в редакцию работ, представленных к печати в иных издательствах или опубликованных в других изданиях.

При нарушении указанных правил статьи не рассматриваются.

REQUIREMENTS

Please note, materials submitted to the Editorial Office Staff are supposed to meet the following requirements:

1. Articles must be provided with a double copy, in English or Russian languages and typed or computer-printed on a single side of standard typing paper, with the left margin of 3 centimeters width, and 1.5 spacing between the lines, typeface - **Times New Roman (Cyrillic)**, print size - 12 (referring to Georgian and Russian materials). With computer-printed texts please enclose a CD carrying the same file titled with Latin symbols.

2. Size of the article, including index and resume in English, Russian and Georgian languages must be at least 10 pages and not exceed the limit of 20 pages of typed or computer-printed text.

3. Submitted material must include a coverage of a topical subject, research methods, results, and review.

Authors of the scientific-research works must indicate the number of experimental biological species drawn in, list the employed methods of anesthetization and soporific means used during acute tests.

4. Articles must have a short (half page) abstract in English, Russian and Georgian (including the following sections: aim of study, material and methods, results and conclusions) and a list of key words.

5. Tables must be presented in an original typed or computer-printed form, instead of a photocopied version. **Numbers, totals, percentile data on the tables must coincide with those in the texts of the articles.** Tables and graphs must be headed.

6. Photographs are required to be contrasted and must be submitted with doubles. Please number each photograph with a pencil on its back, indicate author's name, title of the article (short version), and mark out its top and bottom parts. Drawings must be accurate, drafts and diagrams drawn in Indian ink (or black ink). Photocopies of the X-ray photographs must be presented in a positive image in **tiff format**.

Accurately numbered subtitles for each illustration must be listed on a separate sheet of paper. In the subtitles for the microphotographs please indicate the ocular and objective lens magnification power, method of coloring or impregnation of the microscopic sections (preparations).

7. Please indicate last names, first and middle initials of the native authors, present names and initials of the foreign authors in the transcription of the original language, enclose in parenthesis corresponding number under which the author is listed in the reference materials.

8. Please follow guidance offered to authors by The International Committee of Medical Journal Editors guidance in its Uniform Requirements for Manuscripts Submitted to Biomedical Journals publication available online at: http://www.nlm.nih.gov/bsd/uniform_requirements.html
http://www.icmje.org/urm_full.pdf

In GMN style for each work cited in the text, a bibliographic reference is given, and this is located at the end of the article under the title "References". All references cited in the text must be listed. The list of references should be arranged alphabetically and then numbered. References are numbered in the text [numbers in square brackets] and in the reference list and numbers are repeated throughout the text as needed. The bibliographic description is given in the language of publication (citations in Georgian script are followed by Cyrillic and Latin).

9. To obtain the rights of publication articles must be accompanied by a visa from the project instructor or the establishment, where the work has been performed, and a reference letter, both written or typed on a special signed form, certified by a stamp or a seal.

10. Articles must be signed by all of the authors at the end, and they must be provided with a list of full names, office and home phone numbers and addresses or other non-office locations where the authors could be reached. The number of the authors (co-authors) must not exceed the limit of 5 people.

11. Editorial Staff reserves the rights to cut down in size and correct the articles. Proof-sheets are not sent out to the authors. The entire editorial and collation work is performed according to the author's original text.

12. Sending in the works that have already been assigned to the press by other Editorial Staffs or have been printed by other publishers is not permissible.

**Articles that Fail to Meet the Aforementioned
Requirements are not Assigned to be Reviewed.**

ავტორთა საქურაღებოლ!

რედაქციაში სტატიის წარმოდგენისას საჭიროა დაიცვათ შემდეგი წესები:

1. სტატია უნდა წარმოადგინოთ 2 ცალად, რუსულ ან ინგლისურ ენებზე დაბეჭდილი სტანდარტული ფურცლის 1 გვერდზე, 3 სმ სიგანის მარცხენა ველისა და სტრიქონებს შორის 1,5 ინტერვალის დაცვით. გამოყენებული კომპიუტერული შრიფტი რუსულ და ინგლისურენოვან ტექსტებში - **Times New Roman (Кириллица)**, ხოლო ქართულენოვან ტექსტში საჭიროა გამოვიყენოთ **AcadNusx**. შრიფტის ზომა – 12. სტატიას თან უნდა ახლდეს CD სტატიით.

2. სტატიის მოცულობა არ უნდა შეადგენდეს 10 გვერდზე ნაკლებს და 20 გვერდზე მეტს ლიტერატურის სიის და რეზიუმეების (ინგლისურ, რუსულ და ქართულ ენებზე) ჩათვლით.

3. სტატიაში საჭიროა გაშუქდეს: საკითხის აქტუალობა; კვლევის მიზანი; საკვლევი მასალა და გამოყენებული მეთოდები; მიღებული შედეგები და მათი განსჯა. ექსპერიმენტული ხასიათის სტატიების წარმოდგენისას ავტორებმა უნდა მიუთითონ საექსპერიმენტო ცხოველების სახეობა და რაოდენობა; გაუტკივარებისა და დაძინების მეთოდები (მწვავე ცდების პირობებში).

4. სტატიას თან უნდა ახლდეს რეზიუმე ინგლისურ, რუსულ და ქართულ ენებზე არანაკლებ ნახევარი გვერდის მოცულობისა (სათაურის, ავტორების, დაწესებულების მითითებით და უნდა შეიცავდეს შემდეგ განყოფილებებს: მიზანი, მასალა და მეთოდები, შედეგები და დასკვნები; ტექსტუალური ნაწილი არ უნდა იყოს 15 სტრიქონზე ნაკლები) და საკვანძო სიტყვების ჩამონათვალი (key words).

5. ცხრილები საჭიროა წარმოადგინოთ ნაბეჭდი სახით. ყველა ციფრული, შემაჯამებელი და პროცენტული მონაცემები უნდა შეესაბამებოდეს ტექსტში მოყვანილს.

6. ფოტოსურათები უნდა იყოს კონტრასტული; სურათები, ნახაზები, დიაგრამები - დასათაურებული, დანომრილი და სათანადო ადგილას ჩასმული. რენტგენოგრამების ფოტოასლები წარმოადგინეთ პოზიტიური გამოსახულებით **tiff** ფორმატში. მიკროფოტოსურათების წარწერებში საჭიროა მიუთითოთ ოკულარის ან ობიექტივის საშუალებით გადიდების ხარისხი, ანათალებების შედეგების ან იმპრეგნაციის მეთოდი და აღნიშნოთ სურათის ზედა და ქვედა ნაწილები.

7. სამამულო ავტორების გვარები სტატიაში აღინიშნება ინიციალების თანდართვით, უცხოურისა – უცხოური ტრანსკრიპციით.

8. სტატიას თან უნდა ახლდეს ავტორის მიერ გამოყენებული სამამულო და უცხოური შრომების ბიბლიოგრაფიული სია (ბოლო 5-8 წლის სიღრმით). ანბანური წყობით წარმოდგენილ ბიბლიოგრაფიულ სიაში მიუთითეთ ჯერ სამამულო, შემდეგ უცხოელი ავტორები (გვარი, ინიციალები, სტატიის სათაური, ჟურნალის დასახელება, გამოცემის ადგილი, წელი, ჟურნალის №, პირველი და ბოლო გვერდები). მონოგრაფიის შემთხვევაში მიუთითეთ გამოცემის წელი, ადგილი და გვერდების საერთო რაოდენობა. ტექსტში კვადრატულ ფხიხლებში უნდა მიუთითოთ ავტორის შესაბამისი N ლიტერატურის სიის მიხედვით. მიზანშეწონილია, რომ ციტირებული წყაროების უმეტესი ნაწილი იყოს 5-6 წლის სიღრმის.

9. სტატიას თან უნდა ახლდეს: ა) დაწესებულების ან სამეცნიერო ხელმძღვანელის წარდგინება, დამოწმებული ხელმოწერითა და ბეჭდით; ბ) დარგის სპეციალისტის დამოწმებული რეცენზია, რომელშიც მითითებული იქნება საკითხის აქტუალობა, მასალის საკმაობა, მეთოდის სანდოობა, შედეგების სამეცნიერო-პრაქტიკული მნიშვნელობა.

10. სტატიის ბოლოს საჭიროა ყველა ავტორის ხელმოწერა, რომელთა რაოდენობა არ უნდა აღემატებოდეს 5-ს.

11. რედაქცია იტოვებს უფლებას შეასწოროს სტატია. ტექსტზე მუშაობა და შეჯერება ხდება საავტორო ორიგინალის მიხედვით.

12. დაუშვებელია რედაქციაში ისეთი სტატიის წარდგენა, რომელიც დასაბეჭდად წარდგენილი იყო სხვა რედაქციაში ან გამოქვეყნებული იყო სხვა გამოცემებში.

აღნიშნული წესების დარღვევის შემთხვევაში სტატიები არ განიხილება.

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COMPARISON OF THE IMPACT OF ANTISEPTIC AGENTS ON GARDNERELLA VAGINALIS AND ATOPOBIUM VAGINAE DETECTED IN THE ORAL CAVITY OF WOMEN WITH BACTERIAL VAGINOSIS

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Abstract.

When women with comorbid bacterial vaginosis visit periodontologist, it is essential to understand the presence of cross-infection processes between the oral cavity and vagina in this particular category of subjects. Conducting detection of *Gardnerella vaginalis* and *Atopobium vaginae*, which are provocative microbial factors for bacterial vaginosis, is a mandatory step in the laboratory examination of subjects.

When choosing an antiseptic for oral cavity disinfection, the use of 0.25% dequalinium chloride is more advisable. Both subjective and objective examination methods thoroughly demonstrate the higher clinical effectiveness of 0.25% dequalinium chloride: patients report a 20% more frequent improvement in subjective indicators, the index assessment of periodontal status improves by 1.2-1.6 times, and the detection rate of *Gardnerella vaginalis* and *Atopobium vaginae* is by 20% lower compared to 0.2% chlorhexidine. The specific composition of oral microbiota in this group of subjects necessitates adjustments to treatment protocols and consideration of the specific impact on *Gardnerella vaginalis* and *Atopobium vaginae*.

Key words. Antiseptic, *Gardnerella vaginalis*, *Atopobium vaginae*, oral cavity disinfection, bacterial vaginosis.

Introduction.

The human oral microbiota consists of more than 400 representatives with varying degrees of pathogenicity [1-3]. Cross-infection within the open cavities of the human body leads to the appearance of atypical oral flora bacteria, such as *Gardnerella vaginalis* and *Atopobium vaginae*. It has been proven that the above microorganisms act as causative agents of bacterial vaginosis and are detected in the oral cavity of subjects with this pathology [4,5]. *Gardnerella vaginalis* and *Atopobium vaginae* are known for their high ability to form biofilms and their resistance to medications [6,7], including antiseptics commonly used in periodontal practice [8].

Purpose.

To compare the clinical impact of antiseptic treatment of the oral cavity in women using 0.2% chlorhexidine and 0.25% dequalinium chloride, taking into account the presence of a concomitant condition, namely bacterial vaginosis, as well as the presence of atypical representatives of oral microbiota, namely *Gardnerella vaginalis* and *Atopobium vaginae*, in subjects with the mentioned pathology.

Materials and Methods.

The study involved 40 women aged 18-45, who were diagnosed with bacterial vaginosis by an obstetrician-gynecologist based on the clinical and laboratory studies. Selection for the groups was made out under the condition of the absence of harmful

habits and severe forms of general somatic diseases in the subjects. The participants were divided into 2 groups of 20 subjects each. Women in Group I used 0.2% chlorhexidine for antiseptic treatment of the oral cavity, while subjects in Group II used 0.25% dequalinium chloride.

The subjects were examined prior the treatment and following 28 days after its completion. The examination included assessment based on the Greene-Vermillion Hygiene Index, PMA index (in the Parma modification), comprehensive periodontal index by Leus (CPI), Pisarev-Schiller tests and the Svrakov's number. The diagnosis was formulated according to MF Danylevsky's classification (1994) [9].

The next step involved the series of professional oral hygiene procedures performed using a combination of mechanical and manual techniques, depending on the indications. After the professional oral hygiene procedure, the subjects of Group I were prescribed antiseptic treatment of the oral cavity using dissolving tablets containing 0.2% chlorhexidine, while the subjects of Group II were prescribed oral cavity treatment with 0.25% dequalinium chloride in a similar pharmaceutical form. The regimen and method of use were the same for both groups: 1 tablet every 12 hours, after individual oral hygiene in the morning and evening, with a duration of use of 7 days.

Gardnerella vaginalis and *Atopobium vaginae* were detected in the oral cavity using the polymerase chain reaction method.

Results and Discussion.

Periodontal examination showed the presence of clinically intact periodontium in all examined subjects from both groups. In Group I, chronic generalized catarrhal gingivitis was detected in 10% of the subjects; initial stage of chronic generalized periodontitis was detected in 75% of the subjects, and chronic generalized periodontitis of the first degree was detected in 15% of the subjects. In the subjects of Group II, the indices were 15%, 70% and 15%, respectively.

The follow-up examination made 28 days after the end of treatment revealed positive changes, namely: subjectively, no complaints of halitosis, disappearance of pain, discomfort and itching in the gums, as well as a decrease in bleeding during brushing and flossing in 60% of the examined subjects in Group I and in 95% of subjects in Group II were revealed.

The analysis of the hygiene index assessment showed improvement of individual oral hygiene. The initial examination before treatment showed that the Green-Vermillion index in the group using 0.2% chlorhexidine as an oral antiseptic was 1.329 ± 0.035 , and in the group using 0.25% dequalinium chloride, it was 1.334 ± 0.036 . Following 28 days of treatment completion, the values dropped to score of 1.02 ± 0.017 and 1.018 ± 0.011 , respectively. The analysis of changes in the hygiene index revealed that thorough selection of the subject for the study

Table 1. Dynamics of gingival and periodontal indices values in the examined subjects ($M \pm m$).

Indices	Group I (n=20)		Group II (n=20)	
	Before treatment	Following 28 days after treatment	Before treatment	Following 28 days after treatment
PMA index, %	62,66±6,48	25,01± 2,49*	64,67±6,68	11,64± 2,02*#
CPI index by Leus, score	2,38±0,54	1,612±0,17*	2,43±0,57	1,16±0,116*#
Svrakov's number	3,56±0,67	1,02±0,053*	3,64±0,66	0,67±0,042*

Note: in parentheses – the number of examined women, * - significant difference ($p < 0.05$) compared to the value in the group before treatment, # - significant difference ($p < 0.05$) compared to the value in Group I following 28 days after treatment, $p < 0.05$ – significant difference compared to the value in Group I before treatment.

Table 2. *Gardnerella vaginalis* and *Atopobium vaginae* in the oral cavity of women with bacterial vaginosis before treatment and following 28 days after treatment, %.

Causative agents for bacterial vaginosis	Group I (n=20)		Group II (n=20)	
	Before treatment	Following 28 days after treatment	Before treatment	Following 28 days after treatment
<i>Gardnerella vaginalis</i>	95±9,24	20±1,51*	90±9,11	0*#
<i>Atopobium vaginae</i>	80±7,93	25±1,97*	85±8,01	5±0,047*#

Note: in parentheses – the number of examined women, * - significant difference ($p < 0.05$) compared to the value in the group before treatment, # - significant difference ($p < 0.05$) compared to the value in Group I after 28 days of treatment, $p < 0.05$ – significant difference compared to the value in Group I before treatment.

groups (confirmed by the absence of a significant difference in group indices before treatment) provides equal conditions for further study. The statistically insignificant difference in the results following 28 days of treatment completion can be justified by the choice of the gender group of subjects (according to statistics, women perform individual oral hygiene more qualitatively than men), high motivation and an increase in the level of oral hygiene skills to the proper level.

The absence of a significant statistical difference in the values of gingival and periodontal indices prior the start of treatment confirms the relatively equal initial examination conditions. The indices of periodontal diagnosis before treatment and after its completion are presented in Table 1.

Prior treatment, the PMA index in Group I subjects was by 2.01% lower compared to Group II, without registering a statistically significant difference. Following 28 days after the completion of medical intervention and drug therapy, the value of PMA index in Group I and Group II decreased by 37.65% and 53.03%, respectively. The significant difference between the values accounted for 13.37%, indicating a more pronounced effect of 0.25% dequalinium chloride on the pathogenic agents of the oral microbiota in women with bacterial vaginosis.

Before treatment, no statistically significant difference in the values of the CPI index by Leus was established in subjects of Group I and II. After completing the course of antiseptic therapy, the score of the CPI index by Leus decreased by 0.768 and 1.27 points in the subjects of Group I and Group II, respectively. After completion of treatment the significant difference between the score in the groups was 0.452 points, indicating the more pronounced effect of 0.25% dequalinium chloride on provoking microbial factors in the periodontal tissues of women with a diagnosed bacterial vaginosis.

Prior the treatment, the values of the Svrakov's number also did not show a significant difference in the subjects of both groups. Following 28 days after completion of the treatment regimen, the Svrakov's number in Group I and Group II decreased by

2.54 and 2.97 points, respectively. Upon examination, the difference between the values in the subjects of Groups I and II accounted for 0.35 points and was not statistically significant.

The presence of bacterial vaginosis pathogens in the oral cavity of women with a reliably established diagnosis was determined using the polymerase chain reaction method. *Gardnerella vaginalis* and *Atopobium vaginae*, which are causative agents of bacterial vaginosis and are atypical bacteria of oral microbiota, were detected. The results before treatment and following 28 days after treatment are provided in Table 2.

Prior to start of treatment, a 5%-difference in the levels of *Gardnerella vaginalis* and *Atopobium vaginae* presence in both groups (with respect to both microorganisms) was recorded, which was not statistically significant. The findings allowed for the diagnosis of cross-infection in both open cavities, namely the vagina and oral cavity, and the presence of absolutely atypical bacteria of *Gardnerella vaginalis* and *Atopobium vaginae* in the latter. After the completion of the dental procedures in the subjects of Group I, the detection of *Gardnerella vaginalis* and *Atopobium vaginae* decreased by 75% and 55%, respectively. In women of Group II, the detection rate of *Gardnerella vaginalis* in the oral microbiota decreased by 90%, and *Atopobium vaginae* decreased by 80%. The significant difference between the values of Group I and Group II accounted for 20% and applied to both microorganisms that caused bacterial vaginosis.

Conclusion.

When women with comorbid bacterial vaginosis visit periodontologist, it is essential to understand the presence of cross-infection processes between the oral cavity and vagina in this particular category of subjects. Conducting detection of *Gardnerella vaginalis* and *Atopobium vaginae*, which are provocative microbial factors for bacterial vaginosis, is a mandatory step in the laboratory examination of subjects.

When choosing an antiseptic for oral cavity disinfection, the use of 0.25% dequalinium chloride is more advisable. Both

subjective and objective examination methods thoroughly demonstrate the higher clinical effectiveness of 0.25% dequalinium chloride: patients report a 20% more frequent improvement in subjective indicators, the index assessment of periodontal status improves by 1.2-1.6 times, and the detection rate of *Gardnerella vaginalis* and *Atopobium vaginae* is by 20% lower compared to 0.2% chlorhexidine. The specific composition of oral microbiota in this group of subjects necessitates adjustments to treatment protocols and consideration of the specific impact on *Gardnerella vaginalis* and *Atopobium vaginae*.

REFERENCES

1. Ananieva MM, Faustova MO, Basarab IO, et al. *Kocuria rosea*, *kocuria kristinae*, *leuconostoc mesenteroides* as caries-causing representatives of oral microflora *Wiadomosci lekarskie*. 2017;70:296-298.
2. Demkovich AV. Porushennya imynologichnoi reaktivnosni organizmy v patogenezi zapalnih zahvoruvan parodonta [Violation of immunological reactivity in the pathogenesis of inflammatory periodontal diseases]. *Clinical Dentistry*. 2015;2:30-37.
3. Grishin GP, Pereshivailova ES, Holodnaya EV. Immynologicheskie aspekti bolezni parodonta i vnutrennih organov [Immunological aspects of periodontal disease and internal organs: pathogenesis, prevention, treatment]. *Imunologia i allergologiya: nauka i praktika*.
4. Petrushanko TO, Krutikova EI, Shulzhenko AD. Higher State Educational Institution "Ukrainian Medical Stomatological Academy", assignee. Method for rapid diagnosis of oral fluids for the presence of volatile amines in women with bacterial vaginosis. Ukraine patent 99694. 2012.
5. Petrushanko TO, Krutikova EI, Shulzhenko AD. Sostoyanie tkanei parodonta u genschin s bakterialnim vaginozom [Status of periodontal tissues in women with bacterial vaginosis]. *Georgian Medical News*. 2014;12:24-28.
6. Lipova EF, Radzinskii VP. Bakterialnii vaginoz: zavgdi v diskusii [Bacterial vaginosis: always debate]. *Status Praesens*. 2012;2:27-60.
7. Pizzo G, Guiglia R, Lo Russo L, et al. Dentistry and internal medicine: from the focal infection theory to the periodontal medicine concept. *Eur J Intern Med*. 2010;21:496-502.
8. Prodanchuk AV, Kiyun IO, Kroytor MM. Zahvoryuvannya parodonta I somatichna patologiya [Periodontal disease and somatic pathology]. *Bukovinskii medichnii visnik*. 2012;16:164-168.
9. Danilevskii NF, Borisenko AB. Zabolevaniya parodonta [Periodontal disease]. Kiev. 2000:428.