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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.

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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.

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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. რენტგენოგრაფიების ფოტოასლები წარმოადგინეთ პოზიტიური გამოსახულებით **tiff** ფორმატში. მიკროფოტოსურათების წარწერებში საჭიროა მიუთითოთ ოკულარის ან ობიექტივის საშუალებით გადიდების ხარისხი, ანათალების შედეგის 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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EFFECT OF XIAOYAO PILLS COMBINED WITH ALENDRONATE ON BONE DENSITY IN POSTMENOPAUSAL PATIENTS WITH OSTEOPOROSIS

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Abstract.

Objective: The aim of the study was to explore the effect of Xiaoyao Pills combined with alendronate on bone density in postmenopausal patients with osteoporosis.

Methods: The data of postmenopausal osteoporosis patients admitted to Taizhou Hospital of Traditional Chinese Medicine from January 2022 to January 2023 were retrospectively collected. According to the treatment method, patients were randomly divided into study group and control group. Finally, 54 cases were selected for each group. The study group was treated with Xiaoyao Pills combined with alendronate sodium, while the control group was treated with alendronate sodium alone. The femoral neck bone density of the two groups of patients was observed.

Results: Compared with before treatment, the bone mineral density of both groups of patients increased significantly 6 months and 12 months after treatment ($P < 0.05$). Comparing the bone density of the two groups of patients before treatment, the difference was not statistically significant [(0.58±0.06) g/cm² vs. (0.60±0.08) g/cm², $P=0.486$]. Compared with the control group, the bone density of the study group increased significantly after 6 months of treatment [(0.69±0.08)g/cm² vs. (0.60±0.08)g/cm²].

Conclusion: Xiaoyao Pills combined with alendronate can improve bone density in postmenopausal patients with osteoporosis.

Key words. Xiaoyao Pill, menopause, osteoporosis.

Introduction.

Postmenopausal osteoporosis is not only a bone metabolism disease, but also a physical and mental disease [1]. Postmenopausal osteoporosis often accompanied by psychological problems such as depression and anxiety [2]. Modern medicine believes that after menopause, women's ovarian function declines, especially the decline in estrogen levels, which accelerates bone loss and leads to osteoporosis. Estrogen replacement therapy is currently considered an effective clinical treatment, but it also has many side effects. After menopause, the reduced ovarian synthesis of estrogen in women results in bone loss, thereby causing osteoporosis [3]. Estrogen replacement therapy is currently considered an effective clinical treatment, but it also has many side effects [4]. Traditional Chinese medicine (TCM) has rich experience in preventing and treating osteoporosis and has the advantage of comprehensive regulation [5]. TCM also has certain advantages in clinical efficacy. The efficacy of TCM is clear and the side effects are low. TCM can simultaneously treat multiple concurrent diseases in postmenopausal women. This study aimed to explore the changes in bone mineral density in the treatment of postmenopausal osteoporosis patients with Xiaoyao Pills combined with alendronate sodium. The results reported below.

Subjects and Methods.

108 postmenopausal osteoporosis patients diagnosed and treated in the outpatient clinic of Taizhou Traditional Chinese Medicine Hospital from January 2022 to January 2023 were selected. According to the principle of complete randomization, the patients were divided into the study group and the control group, with 54 cases in each group. The age of the study group was 48 to 74 years old, with an average of (60.37±6.38) years, the average age of menopause was (50.29±2.52) years, and the BMI was (22.38±3.99) kg/m². The duration of osteoporosis was 6 to 68 months, with an average of (33.58±11.48) months; the age of the control group was 49 to 73 years old, with an average age of (62.08±6.82) years, the average age of menopause was (50.81±5.14) years, the BMI was (21.92±3.99) kg/m², and the course of osteoporosis was 7-69 months, with an average of (32.91±12.01) months; when comparing the age, menopausal age, BMI and disease duration of the two groups, there was no statistically significant difference ($P < 0.05$) and they were comparable. Inclusion criteria: menopause; osteoporosis; age ≤75 years old. Exclusion criteria: patients with liver, kidney and other organ dysfunction, failure to cooperate with treatment or interruption of treatment, loss of follow-up during follow-up, and other major medical diseases. All patients gave informed consent and signed informed consent forms, and this study was approved by the hospital-level ethics committee.

Treatment method.

The treatment time of the study group was 3 months. During each treatment cycle, patients take 70 mg alendronate sodium tablets (Savia Industrial Sr., published in Italy, specification: 70 mg×1 tablet), 1 tablet per week. Orally take Xiaoyao Pills (Zhongjing Wanxi Pharmaceutical Co., Ltd., specifications: 240 pills/bottle), 8 pills each time, 3 times a day. Take vitamin D and calcium tablets by mouth at the same time. The total treatment period is 1 year. The control group did not take Xiaoyao Pills orally, and other treatment methods were the same as those of the study group.

Observation indicators.

The diagnostic criteria for osteoporosis: bone density is lower than -2.5. The femoral neck bone density of the two groups of patients before and after treatment was collected.

Statistical analysis.

Data were processed using SPSS 22.0 statistical software, and all tests used two-tailed tests. The measurement data (bone density) used in this article were statistically analyzed using student t-test and expressed as mean±standard deviation. $P < 0.05$ was considered a statistically significant difference.

Results.

Compared with before treatment, the bone density of the two groups of patients increased significantly 6 months and 12

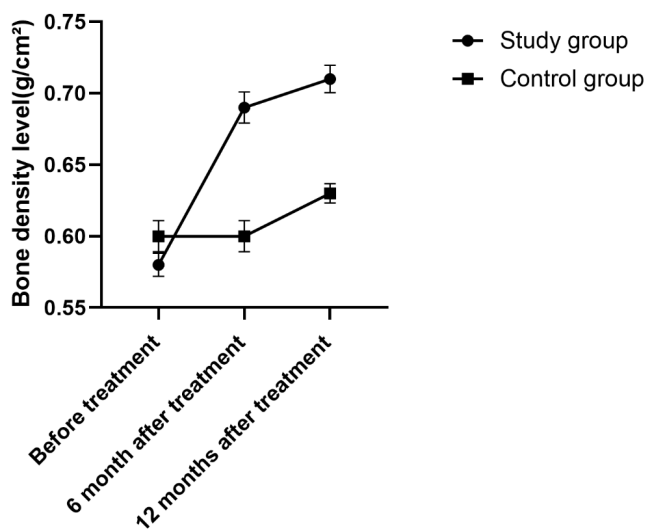


Figure 1. Comparison of bone density levels between the two groups of patients.

months after treatment ($P \leq 0.05$). Comparing the bone density of the two groups of patients before treatment (Figure 1), the difference was not statistically significant [(0.58±0.06) g/cm² vs. (0.60±0.08) g/cm² $P=0.486$]. Compared with the control group, the bone density of the study group increased significantly 6 months after treatment [(0.69±0.08) g/cm² vs. (0.60±0.08) g/cm²], and the bone density increased significantly 12 months after treatment [(0.71±0.07) g/cm² vs. (0.63±0.05) g/cm²]. The results of the study suggest that treatment with Xiaoyao Pills combined with alendronate can help improve bone density in postmenopausal patients with osteoporosis.

Discussion.

The estrogen level in postmenopausal women decreases significantly, resulting in reduced bone proliferation and enhanced osteoclast activity, which in turn leads to a significant increase in the incidence of osteoporosis in women. Estrogen-based treatment can inhibit osteoclast activity to a certain extent and promote bone cell proliferation and has good application value in the prevention and treatment of osteoporosis in postmenopausal women. The results showed that the patients' bone density improved 6 months and 12 months after taking Xiaoyao Pill compared with before treatment. This also shows that alendronate sodium is effective in treating postmenopausal women. Postmenopausal osteoporosis is not only a bone metabolism disease, but also a physical and mental disease. Postmenopausal osteoporosis is often accompanied by psychological problems such as depression and anxiety. It seriously affects the quality of life of middle-aged and elderly people and increases the economic burden on families and society. Modern medicine believes that after menopause, women's ovarian function declines, especially the decline in estrogen levels, which accelerates bone loss and leads to osteoporosis. Estrogen replacement therapy is currently recognized as an effective clinical treatment, but it also has many side effects. Traditional Chinese medicine has accumulated rich experience in preventing and treating osteoporosis with the

advantage of overall regulation. It also has certain advantages in clinical efficacy. Its effect is clear, and the adverse reactions are small. It can treat many concurrent diseases of postmenopausal women at the same time. At present, most traditional Chinese medicine treatments for PMOP follow the theory of "kidney governs bones" and mainly use tonifying kidneys and essence, strengthening bones and regenerating marrow, supplemented by activating blood circulation and removing blood stasis. Women are born with the liver. For middle-aged and elderly women, osteoporosis is a manifestation of the "disharmony of yin and yang" after menopause. Long-term "disharmony" becomes pathological. In order for postmenopausal women to achieve a state of "yin and yang in harmony" again, it is necessary to "make up for the excess and make up for the deficiency" and carefully check the location of yin and yang and adjust them. If traditional Chinese medicines that nourish the kidneys and strengthen bones are blindly used to treat postmenopausal osteoporosis, they will only act on the yin and yang of the kidneys and cannot reflect the characteristics of yin and yang secret in the holistic view of traditional Chinese medicine. Xiaoyao Pill has the function of soothing the liver, relieving stagnation, and relieving Shaoyang. Many modern pharmacological studies and clinical practices have shown that Xiaoyao Pill has a positive effect on regulating postmenopausal hormone levels. The clinical efficacy of Xiaoyao Pill is definite.

Conflict of interest statement

The authors declare that this research was conducted in the absence of any business or financial relationships that could be construed as potential conflicts of interest.

Data Availability

The datasets generated and analyzed during the current study are available from the corresponding author on reasonable request.

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