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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 საქმრალდებოლ!

რედაქციაში სტატიის წარმოდგენისას საჭიროა დავიცვათ 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 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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EVALUATION OF THE QUALITY OF LIFE AFTER REVASCULARIZATION AND RECONSTRUCTIVE OPERATIONS ON MITRAL VALVE IN PATIENTS WITH CORONARY HEART DISEASE

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Abstract.

Background: Studies of recent years confirm the importance of assessing the health status and quality of life of patients suffering from coronary heart disease. The aim of the study was to determine the quality of life in patients who underwent isolated coronary artery bypass grafting and coronary artery bypass grafting in combination with reconstructive operations on the mitral valve in the long-term postoperative period.

Materials and methods: During the period from 2015 to 2018, 132 patients with ischemic heart disease with low left ventricular ejection fraction was evaluated in our center. In 30 (22.7±3.65%) patients, isolated CABG was performed according to the generally accepted methods; in 77 (58.3±4.29%) patients, concomitant reconstructive operations along with CABG were performed according to various indications. 70 out of 102 survived patients completed information included in the SF-36 questionnaire. Patients were divided into 2 groups according to the surgical procedure: group I - 20 patients who underwent isolated CABG, group II - 50 patients who underwent CABG + reconstructive operations on the mitral valve and its elements. In the late postoperative period (5 years of follow-up), the questionnaire the SF-36 Health Status Survey (SF-36) were used to determine QOL.

Results: In patients who underwent isolated CABG, the functional class improved by 100%; and after CABG + reconstructive operations - by 88.4%. In the long-term postoperative period after isolated CABG, vital signs improved by 3.2 points in comparison with the preoperative level and by 9.3 points after CABG + reconstructive operations. After surgery, in patients who have undergone isolated CABG, disability of the II group was reduced by 35% and after CABG + reconstructive operations by 3%.

Conclusions: Evaluation of the quality of life after revascularization for coronary heart disease using the SF-36 questionnaire allows to obtain adequate results. In the late postoperative period in patients undergoing CABG the quality of life improves both in physical and psychological aspects.

Key words. Ischemic heart disease, surgical treatment, quality of life.

Introduction.

According to the World Health Organization statistics reports, cardiovascular diseases are still the leading cause of death [1,2]. Among these, ischemic heart disease is the leading cause of death, and related problems are among the most concerning issues in health and medicine [3,4]. Inadequate revascularization increases mortality in the long term and has a significant negative impact on the quality of life of patients [5].

Several studies suggested that quality of life should be defined as an indicator of the effectiveness of surgical intervention and any treatment in general [6,7]. Based on this point, debate continues among the clinicians stating that the task of medical science should not only prolong the life of the patient, but also maintain an adequate quality of life. Quality of life is a very important and integral indicator of a patient's health and should be evaluated together with other clinical indicators [8]. The physical, emotional, psychological, and social status of human life is described as the concept of "quality of life" [9].

Coronary artery bypass grafting (CABG) is a standard surgical procedure for patients with coronary artery disease (CAD). Studies shows that it has a positive effect on both the mental and social state of the patient, can lead to the relief of symptoms, reduces mortality from other causes, reduces the number of hospitalizations and reduces mortality related to cardiovascular diseases [10,11]. Thus, although the operation is still associated with possibility of late complications, however, results in most cases are positive with acceptable risk. These risks and complications are reduced if the operation is performed not emergently and if the patient does not have other pathologies complicating the clinical course of CAD [12,13].

The definition of quality of life is a concept that characterizes the patient's well-being based on the results of objective, clinical and instrumental examinations. In other words, the quality of life is characterized by how a person acts in accordance with his physical, psychological, and social level in society and how he enjoys life [14].

Various methods have been proposed to quantify various aspects of health and determine the level of quality of life (QL). Determining the quality of life in the long-term period of surgical interventions in patients with coronary heart disease allows retrospectively evaluate the results of treatment and taking into account these results, will improve the surgical methods and positively change the outcome of treatment. Therefore, the definition of QL in coronary heart disease (CHD) is of particular importance.

Aim.

The aim of the study was to determine the quality of life in patients who underwent isolated coronary artery bypass grafting and isolated coronary artery bypass grafting in combination with reconstructive operations on the mitral valve and its elements in the late postoperative period.

Materials and methods.

During the period from 2015 to 2018, 132 patients with ischemic heart disease with low left ventricular (LV) ejection fraction were operated in our center. There were 119 men

(90.2±2.59%), 13 women (9.8±2.59%). The average age was 35-65 years old (mean age was 51.8±7.01): 79% were patients aged 51-60 years.

The inclusion criteria for patients in the study were: age over 35 years old; the presence of coronary artery disease with objective evidence of coronary lesions detected by selective angiography and requiring surgical revascularization; left ventricular ejection function ≤ 35%, presence of sinus rhythm.

The exclusion criteria were: patients who had had myocardial infarction 6 months before; the presence of 75% or more stenosis of the left coronary artery or proximal stenosis of the anterior descending artery; the presence of ostial stenosis of 75% or more of 2 or more coronary arteries; patients who have a left ventricular end-systolic index of more than 60 ml/m²; the presence of rheumatic or infectious heart disease; acute myocardial infarction; the presence of acute cerebrovascular accidents; right ventricular failure; severe pulmonary hypertension not associated with the mitral valve; mitral valve dysplasia and pathology of rheumatoid origin.

Isolated CABGs were performed in 30 (22.7±3.65%) patients; in 77 (58.3±4.29%) patients, reconstructive surgeries were performed along with CABG.

The SF-36 (Health Status Survey) questionnaire was used to determine the quality of life (QL). The SF-36 Interrogation Scale is widely used by clinicians in the US and Europe. The SF-36 survey scale consisted of 36 questions and was divided into 8 groups. The scores for each scale are compiled in such a way that the higher the score (from 0 to 100), the better the score.

As a result, the scales are grouped into 2 groups: 1) the physical component of health (Physical Health-PH); 2) the psychological component of health (Mental Health-MH). Physical health (PH) included: physical activity; daily activity related to physical condition; pain intensity and general health. The Mental health (MH) included: mental activity, activity associated with an emotional state; social activity and life activity.

To study the quality of life, the patient filled out a questionnaire before surgery and after 24 months and 5 years. We used the questionnaires on the website [www.wiborto.net / st-36 / surgery](http://www.wiborto.net/st-36/surgery). Of the 102 healthy patients operated on for coronary artery disease, 70 (61 men, 9 women) completely filled out all the items included in the SF-36 questionnaire.

All patients signed informed consent to participate in the study. The work was carried out in accordance with the standards of clinical practice and the principles of the Declaration of Helsinki. The study was approved by the local ethics committee of the SCS named after Academician M.A. Topchubashov (protocol No. 01-9 of 01/22/2021).

For statistical processing of the obtained results, version 21 (IBM Corp., Armonk, USA) of the IBM SPSS > Statistic for Windows software package was used. The values were assigned as the mean value and standard deviation (M ± SD), with a non-normal distribution as a median of 25-75 % (Me [Q1-Q3]).

The methods of variation statistics, the Shapiro-Wilk test (determining the correspondence to the normal distribution), the student's t-test (comparison of numerical data), the Mann-Whitney test (comparison of non-parametric data), the Friedman

test and the paired Whittle Kinson test (determining differences in indicators during treatment). Using the Kolmogorov-Smirnov test (adjusted by Lilliefors), we checked all indicators of asymmetry, including quantitative variables for the type of distribution. At the same time, variables were considered, the statistical significance for which did not exceed 0.1 in univariate analysis. The relationship between the studied parameters was studied using correlation analysis with the calculation of the Pearson coefficient (r) and Spearman coefficient (R). The Kaplan-Meier method was used to assess survival. Multivariate logistic regression analysis was used to identify predictors of adverse cardiovascular events. Significant values were taken at p < 0.05.

Results.

Total survival for 5 years of the postoperative period among 132 patients was 77.3% (102 patients). Of the 102 healthy patients operated on for coronary artery disease, 70 (61 men, 9 women) provided complete information on the items included in the SF-36 questionnaire. Patients were divided into 2 groups according to the nature of the surgery: group I - 20 patients who underwent isolated CABG, group II - 50 patients who underwent CABG + reconstructive operations on the mitral valve and its elements. The survival data are shown in Table 1.

As can be seen from Table 1, in the preoperative period, functional class I of circulatory failure according to NYHA classification was not detected among both groups of patients. Functional class 2 of circulatory failure among the 1st group occurred in 5 (25±9.68%) patients and in 7 (14±4.91%) patients among the 2nd group. Functional class 3 of circulatory disorders among the 1st group were noted in 15 (75±9.68%) patients and in 28 (56±7.02%) among the 2nd group. 24 months after the operation, the functional class 1 in group I was observed in 5 (25±9.68%) patients, the functional class 2 - in 15 (75±9.68%) patients.

In the late postoperative period in group, I patients, the functional class of III and IV degree were not observed. At the same time, among the 2nd group of patients the functional class of degree I was detected in 8 (16±5.18%) patients, the second-degree functional class - in 37 (74±6.2%) patients; and III-degree functional class was found only in 4 (8±3.84%) patients. Among the patients of the 1st group, the functional class of III degree before surgery was noted in 15 (75±9.68%) patients, but in the long-term period, no patient in this group was found to have the III-degree functional class.

In the preoperative period in group II of patients, the functional class of IV degree was found among 15 (30 ± 6.48%) patients, and in the late postoperative period, only 1 (2 ± 1.98%) patient had the IV degree of functional class.

Circulatory disorders of the 1st degree were diagnosed in 1 (5±4.87%) patient in the group I and in 2 (4±2.77%) patients in group II before surgery. II-degree circulatory disorders were registered in 19 (95±4.87%) patients in group I and in 35 (70±6.48%) patients in group II. 3rd degree circulatory disturbance was not observed in group I before the operation; in the group II, it was detected in 13 (26±6.2%) patients.

In the long-term period among 20 patients, due to complications after isolated CABG, circulatory disorders of the first degree

Table 1. The functional class and the degrees of circulatory disorders in the pre- and postoperative period of patients undergoing CABG and CABG + reconstructive operations on the mitral valve and its elements according to the SF 36 questionnaire.

Indicators	Before surgery			5 years after the surgery		t, p
	Group I N=20	Group I N=50		Group I N=20	Group II N=50	
I degree	-	-		5 (25±9.68%)	8 (16±5.18%)	t=0.82 p=0.0236 p<0,05
II degree	5 (25±9.68%)	7 (14±4.91%)	t=1.01 p=0.337316 p>0,05	15 (75±9.68%)	37 (74±6.2%)	t=0.49 p=0.0178 p<0,05
III degree n=43	15 (75±9.68%)	28 (56±7.02%)	t=1.59 p=0.119944 p>0,05	-	4 (8±3.84%)	
IV degree n=15		15 (30±6.48%)		-	1 (2±1.98%)	
Degrees of circulatory disorders (CD)						
I degree	1 (5±4.87%)	2 (4±2.77%)	t=0.18	3 (15±7.98%)	13 (26±6.2%)	t=0.28 p=0.0335 p<0,05
II degree	19 (95±4.87%)	35 (70±6.48%)	t=3.08 p=0.003292 p<0,05	12 (60±10.95%)	35 (70±6.48%)	t=0.05 p=0.0236 p<0,05
III degree	-	13 (26±6.2%)		-	2 (4±2.77%)	
CD was absent	-	-		5 (25±9.68%)	-	

Table 2. The dynamics of the revealed scores by groups of patients who underwent surgery due to the complications of ischemic heart disease according to the SF-36 scale.

Indicators	Before surgery (score)		In the long-term period (score) after 5 years		p
	group I	group II	group I	group II	
Mental health	58,4	55,5	62,5	63,7	t=0.95 p=0.0498 p<0,05
Emotional condition	31,1	29,6	42	48	t=1.26 p=0.3289 p>0.05
Social function	48,6	47,7	44,7	48,8	t=1.26 p=0.4536 p>0.05
Vitality	55,5	59,8	58,8	69,1.	t=0.78 p=0.0446 p<0.05
General state	55,7	53,8	45,9	48,2	t=0.88 p=0.04632 p<0,05
Pain intensity	44,8	47,2	44	52	t=0.993 p=0.04628 p<0,05
Functional role	15,3	16,1	33,6	35,4	t=0.69 p=0.04836 p<0,05
Physical function	44,6	45,8	56	59,7	t=0.75 p=0.036874 p<0,05

were detected in 3 (15±7.98%) patients, circulatory disorders of the II degree - in 12 (60±10.95%), and 5 (25±9.68%) patients had no circulatory disorders.

We also used the SF-36 questionnaire to determine the ability to work in the late postoperative period. 24 months after the operation, the 3rd disability group among patients of group I was 60.8% (14 patients), the 2nd disability group - 26% (6 patients); among group II patients, disability of group I occurred in 23%, and disability of group II - in 56% of patients.

The SF-36 questionnaire also included the determination of the general and emotional state, levels of physical and social functions, vital activity and functional level, as well as the intensity of pain in the operated area of patients. The results of determining these parameters are shown in Table 2.

Table 2 shows that the indicators of mental health in the preoperative period in patients of the group I was 58.4 points, and in the long-term period - 62.5 points; in the group II, these indicators were 55.5 and 63.7 points, respectively. The emotional state among the group I of patients before surgery reached 31.1 points, in the long-term period - 42 points; in the group II they were 42 and 48 points, respectively. Social function among the group I of patients before surgery was at the level of 48.6 points, and in the late postoperative period was within 44.7 points; in the group II, these indicators were 47.7 and 48.8 points, respectively. Among the group I of patients, the vital signs before surgery were 55.5 points, in the long-term period - 58.8 points; in the group II, these indicators reached 59.8 and 69.1 points, respectively. The general condition in the group I before the operation was estimated at 55.7 points; in the remote period 45.9 points; in the group II 53.8 and 48.2 points, respectively. The intensity of pain in the region of the heart in the group I before surgery was estimated at 44.8 points and in the postoperative long-term period at 44 points; in the group II by 47.2 and 52 points, respectively. The functional role before surgery in the group I was at the level of 15.3 points and in the long-term period reached up to 33.6 points; in the group II, these indicators were 16.1 and 35.4 points. Physical function in the group I before the operation did not exceed 44.6 points, in the group II 45.8 points; in the late postoperative period, the physical function of patients in the group I reached 56 points, and in patients of the group II - 59.7 points.

Discussion.

Quality of life is a concept that characterizes the patient's well-being based on the results of objective, clinical and instrumental examinations. To determine the quality of life, we used a questionnaire, SF-36 (Health Status Survey) and compared the results of the survey before and after the operation.

The study of the state of the NYHA (functional class) according to the SF-36 questionnaire showed that in patients who underwent isolated CABG (Group I) before surgery, the II degree of functional class was found in 25%, the III degree of functional class - in 75 %; in the late postoperative period in this group, the III degree of functional class was not detected, the functional class of 1st degree occurred in 25% and II degree - in 75% of cases.

In the group II, if in the preoperative period II degree of functional class was detected in 14% of patients, III degree

in 56% and IV degree of in 30% of patients, then in the postoperative period these indicators were - II degree in 74%, degree III - in 8% and degree IV in 2% of patients, respectively. 16% of patients in group II had the I degree of the functional class, and the IV degree of the functional class among the group II of patients in the postoperative period was absent. Therefore, in the late postoperative period in patients who underwent CABG, the severity of the functional class of blood circulation decreased by 100% compared with preoperative indicators; and after CABG + reconstructive operations on the mitral valve and its elements - by 88.4%.

In the preoperative period among patients of group I, circulatory disorders of degree I was 5%, of degree II - 95%; among patients of group II, the degree I of circulatory disorders was 4%, of degree II - 70% and of degree III - in 26% of patients. In the late postoperative period, circulatory disorders of degree I among patients of group I were detected in 15%, circulatory disorders of degree II - in 60%; in 25% of patients in group I there was no circulatory disorder. Thus, after CABG in the long-term period, the severity of circulatory disorders improved by 40%.

In 50 patients who underwent CABG + reconstructive surgery in the late postoperative period, circulatory dysfunction of the third degree decreased from 26% to 4% compared with preoperative indicators, which proves the adequacy of surgical treatment. Mental health indicators in the late postoperative period among patients in group I improved by 4.1 (7.02%) points, among group II by 8.2 (14.8%) points. The emotional state among patients of group I improved by 10.9 (35%) points, among group II by 18.4 (62.2%) points. Social function among patients of group I worsened by 3.9 (8%) points, while among group II it improved by 1.1 (2.3%) points. The improvement in vital signs in patients of the group I in the late postoperative period was 3.3 (5.95%) points; in the group II - 9.3 (15.6%) points.

In terms of the general condition of patients, deterioration was revealed compared to preoperative indicators - by 9.8 (17.6%) points in the group I and by 5.6 (10.4%) points in the group II. In terms of the intensity of pain in the region of the heart in the postoperative period, group I patients had a decrease by 0.8 (1.19%) points, while in group II it increased by 4.8 (10.2%) points. When calculating the functional role of patients according to the examination scale, it turned out that in group I this indicator in the late postoperative period increased by 119.6%, in group II - by 119.8% ($p > 0.05$). The above results prove that after isolated CABG and CABG + reconstructive operations on the mitral valve and its elements, the functionality of patients increased significantly.

After the operation, the number of patients who received a disability of any group decreased by 35% in group I; in group II, this value was 3%. Physical function in the group I in the long-term period increased by 11.4 (25.6%) points and by 13.9 (30.4%) points in the group II.

Our results are consistent with those of other clinicians who indicate that CABG appears to be a good choice to improve the quality of life of people with coronary heart disease after assessing the possible existing risks. The quality-of-life analysis using the SF questionnaire showed improvement in the quality

of physical and mental appearance. We also used the SF-36 questionnaire to determine the ability of patients to work for an extended period of time [15].

Summing up, our study showed that CABG and CABG + reconstructive surgery significantly improved the physical and psychological condition of patients, increased social status and vitality, and also significantly reduced the intensity and duration of pain in the heart area.

In the long-term period, determining the quality of life based on the SF-36 questionnaire showed that, compared with preoperative indicators, the physical, emotional and mental functions of patients increased significantly, their social status improved, and they began to lead a more active lifestyle.

Conclusions.

1. Determining the quality of life of patients after revascularization for coronary heart disease, reconstructive surgery on the mitral valve and its elements using the SF-36 questionnaire allows obtaining adequate results.

2. In patients with ischemic heart disease, isolated coronary artery bypass grafting and coronary artery bypass grafting in combination with reconstructive surgery on the mitral valve and its elements improves the patient's quality of life both in physical and psychological aspects, although this improvement is more significant in regarding physical factors.

3. In patients who underwent CABG for coronary heart disease in the late postoperative period, the severity of the functional class decreased by 100% compared with preoperative indicators; and after CABG + reconstructive surgery on the mitral valve and its elements - by 88.4%. In the late postoperative period after isolated CABG, vital signs improved by 3.3 points compared with the preoperative level, and after CABG + reconstructive surgery by 9.3 points; physical function improved by 15.4 and 13.9 points, respectively.

4. In the late postoperative period of isolated CABG surgeries, the SF-36 study performed for ischemic heart disease confirmed that the physical, emotional and mental activity of patients increased, their social status increased, and active life increased compared to preoperative indicators. After surgery, in patients of group I who underwent isolated CABG, the number of disabilities of any group decreased by 35% and after CABG + reconstructive surgery by 3%.

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