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PSYCHOLOGICAL ASSISTANCE TO PATIENTS WITH VASCULAR DISEASES AFTER SURGERY

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Currently, in the situation of coronavirus infection, diseases of the vascular system still occupy one of the leading positions among the causes of mortality. At this moment, an important task is providing psychological assistance to patients after surgery in a hospital setting.

Purpose. *The research of the possibilities of psychological assistance after surgery for patients with chronic obliterating diseases of the arteries of the lower limbs.*

Materials and methods of research. *The Hospital Anxiety and Depression Scale (HADS) (A.S. Sigmondi R.P. Snaith) was used for diagnosis. The analysis of the results of psychological examination of patients with chronic obliterating diseases of the arteries of the lower limbs was carried out in the period from 2020 to 2021 in Krasnoyarsk.*

Results. *The conducted research demonstrates the availability of depression as one of the clinical manifestations in the emotional sphere of patients with obliterating diseases of the arteries of the lower limbs. The information of the effectiveness of psychological assistance to patients in a vascular hospital are presented. Methods of autogenic training, short-term positive psychotherapy and one of the methods of a standardized program of complex non-medicated therapy were used.*

Conclusions. *The obtained information allows us to talk about the positive impact of psychological care on patients after reconstructive operations in vascular surgery departments. With the activation of internal psychological resources, patients pay less attention to the issue of possible disability and strive to adapt to the conditions of the disease.*

Practical implications. *The results can be used in the psychotherapeutic practice of clinical psychologists.*

Keywords: *obliterating atherosclerosis; patients with obliterating diseases of lower limb arteries; vascular profile hospital; depression; anxiety; internal resources; psychological help*

ПСИХОЛОГИЧЕСКАЯ ПОМОЩЬ ПАЦИЕНТАМ С СОСУДИСТЫМИ ЗАБОЛЕВАНИЯМИ ПОСЛЕ ОПЕРАТИВНОГО ВМЕШАТЕЛЬСТВА

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В настоящее время в ситуации коронавирусной инфекции заболевания сосудистой системы по-прежнему занимают одно из лидирующих положений среди причин летальности. На современном этапе важной задачей является оказание психологической помощи пациентам после оперативного вмешательства в условиях стационара.

Цель. *Изучение возможностей психологической помощи после оперативного вмешательства пациентам с хроническими облитерирующими заболеваниями артерий нижних конечностей.*

Материалы и методы исследования. *Для диагностики использовалась больничная шкала тревоги и депрессии (HADS) (А.С. Зигмонд и Р.П. Снайт). Проведен анализ результатов психологического обследования пациентов с хроническими облитерирующими заболеваниями артерий нижних конечностей в период с 2020 по 2021 гг. в г. Красноярск.*

Результаты. *Проведенное исследование демонстрируют наличие депрессии как одного из клинических проявлений в эмоциональной сфере пациентов с облитерирующими заболеваниями артерий нижних конечностей. Представлены данные об эффективности оказания психологической помощи пациентам в условиях стационара сосудистого профиля. Использовались методы аутогенной тренировки, краткосрочной позитивной психотерапии и один из методов стандартизированной программы комплексной немедикаментозной терапии.*

Выводы. Полученные данные позволяют говорить о положительном влиянии психологической помощи на пациентов после реконструктивных операций в отделениях сосудистой хирургии. При активизации внутренних психологических ресурсов пациенты в меньшей степени уделяют вопросу возможной инвалидизации и стремятся адаптироваться в условиях протекания болезни.

Область применения результатов. Результаты могут быть использованы в психотерапевтической практике клинических психологов.

Ключевые слова: облитерирующий атеросклероз; пациенты с облитерирующими заболеваниями артерий нижних конечностей; больница сосудистого профиля; депрессия; тревога; внутренние ресурсы; психологическая помощь

Introduction

During the pandemic, according to available data, the incidence of cardiovascular diseases in patients remains quite high. In the structure of cardiovascular diseases, lesions of the arteries of the lower limbs occupy the second place. About 10% of patients suffer from atherosclerosis of the vessels of the lower limbs [4].

Nowadays the obliterating diseases of vessels come out on the top on the frequency of implications and clinical value. The obliterating atherosclerosis of the arteries of the lower extremities (OAAL) occurs in 2-3% of population that makes 20% of all patients with cardiovascular diseases. Within 3-5 years gangrene develops at 10-40% of patients that leads to ablation of an extremity (WHO) [12].

Results of numerous research studies demonstrate that obliterating atherosclerosis of the arteries of the lower extremities tends to manifest in the younger generation. This disease is taped even more often at patients of working-age. In Russia the peak of this disease is the boundary of elderly and old age (60-70 y.o.) [2].

A difficult life situation such as illness influences the mental activity of a patient and triggers changes under the influence of illness severity. The operation executed brilliantly from the technical side cannot give

to the patient relief and convalescence if the mentality has undergone changes [10]. At the present stage an important task is to render psychological assistance to patients who underwent surgical interventions in the conditions of a hospital. The long-term goal such as awareness of illness in the context of whole life cannot be set, but it is possible to allocate achievement of the adequate purpose, according to this period of time - improvement of an emotional state by means of internal psychological resources of the patient [7].

Materials and methods

The first stage of the research was conducted in 2011-2012 [13], the results being the development and testing a program of psychological support for patients with chronic obliterated diseases of the arteries of the lower limbs. Those conclusions became the basis for current research. The hospital, where the research was conducted, did the request about rendering of the psychological assistance to patients of this nosological group. For us the purpose was the check of the effectiveness of the above-mentioned program in modern conditions.

This research was conducted from 2020 till 2021 in Krasnoyarsk. Fifteen patients took part in this program for the accuracy of the experiment. The psychological assistance was provided individually during hospital treatment with the autogenic training method, the short-term positive psychotherapy and the methods of the standardized program of the complex non-medical therapy.

Patients who had undergone the reconstructive surgery (aorto-femoral bypass) were receiving the treatment over the period of 18 days. They had seven sessions with a psychologist. At the end of the program, patients passed the next phase of the diagnostic procedures.

Hospital Anxiety and Depression Scale (HADS) (A.S. Zigmond and R.P. Snaith), which is aimed at identification of emotional disorders, was used for the diagnostic. HADS was developed to provide doctors with the acceptable and easy in use practical tool for identification and quantitative assessment of depression and anxiety [14]. The use of this questionnaire does not serve for the statement of the psychiatric diag-

nosis, but it does for identification of depression and anxiety symptoms for the purpose of their further psychological correction.

Considering the person as a united system, such methods as the autogenic training method, techniques of short-term positive psychotherapy, one of methods of the standardized complex non-drug therapy program were used in the course of the implemented program [6].

This stage of investigation was directed to determination of changes in indices of depression and anxiety.

Statistical processing of the received data was executed by means of the SPSS program, version 22.0. For evaluation of significant changes in quality of life, the statistical analysis was performed before and after psychological rehabilitation.

The assessment of the variable distinction significance in the connected sample groups for the quantitative signs was made with the use of the Student T-test. The Wilcoxon signed-rank test was used in case of the distributions differing from normal ones. In comparison of ordinal signs in the connected groups, for binary variables and criterion of marginal homogeneity with more than two categories the Mac-Nemara's criterion was used. Distinctions were evaluated as statistically significant in case of $p < 0.05$.

Results and their discussion

Level of anxiety and depression. By results of the research the most noticeable changes happened (Fig. 1) towards augmentation of number of patients with lack of authentically expressed symptoms ($p \leq 0.05$).

Before holding psychological assistance patients demonstrated the following signs: the lowered mood, negative judgment concerning the events, pessimistic view on the future. Patients noted such disturbances as sadness, sleeplessness, loss of appetite [3]. After psychological assistance according to the program patients showed improvement in the emotional sphere, many of them noticed that their sleep was normalized.

We can note minor changes on «Anxiety» indicator with subclinical symptoms during the comparative analysis (Fig. 2) before and after the psychological assistance for the patients after reconstructive opera-

tions. The increase in the number of patients with these symptoms was revealed during the research.

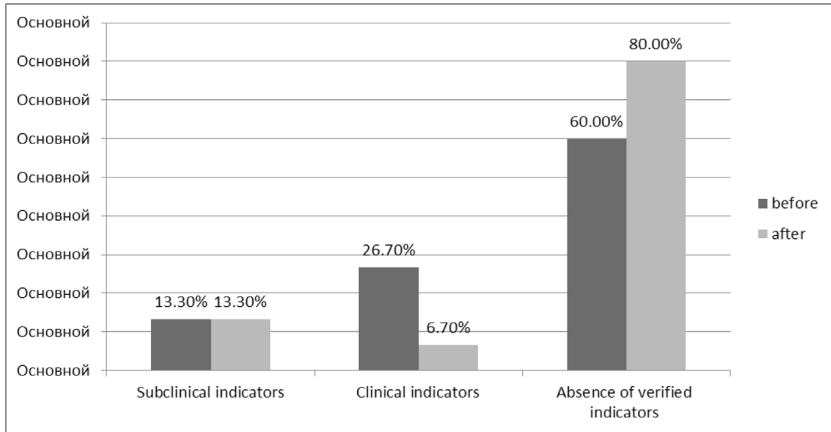


Fig. 1. Depression indicators in patients before and after implementing the program of psychological assistance

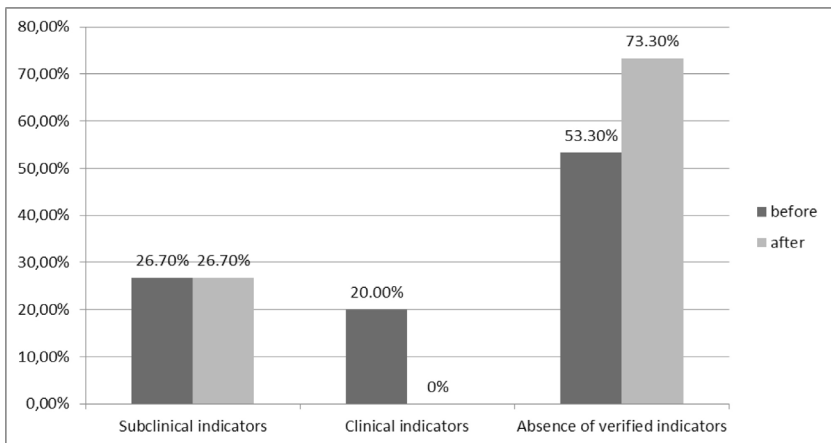


Fig. 2. Anxiety indicators in patients before and after implementation of the program of psychological assistance

No patients with clinical manifestations of anxiety were identified. The number of patients with the absence of reliably expressed symptoms of anxiety is believed to have increased.

Before participation in the program of psychological assistance, patients demonstrated the following features: negative consequences of illness situations, feeling of uncertainty [5]. Patients often transferred negative thoughts from the experience of the past diseases and bound them to the future. Such clinical implications as heartbeat, sleeplessness, loss of appetite were also registered. After rendering the program of psychological assistance, the tendency to decrease anxiety clinical symptoms was observed. Patients adapted to new living conditions and ceased to project “anxious” thoughts on the future [8].

In given cases decrease of “Anxiety” indicator with implications of clinical symptoms is bound to the fact that patients ceased to consider illness as “crash of life” [11].

The conducted research was referred on studying the decrease of depression and anxiety level after implementation of the program of psychological assistance in the postoperative period in the patients with an ischaemia of the III-IV degree according to A.V. Pokrovsky. A total of 15 patients were examined on Day 5 after surgery and the repeated psychological diagnostics was carried out after rendering the organized psychological assistance. As atherosclerosis is a multifocal disease, the obliterating atherosclerosis of the arteries of the lower extremities is usually diagnosed much later. The main clinical implication is a pain syndrome. It is necessary to consider that this disease has the progressing character, and this research gives the ground to assume that the nature of this depression and anxiety is somatogenic [9]. If after the performed reconstructive operation the painful symptoms either decrease or are absent, it is logical to consider that the level of anxiety and depression will decrease to norm limits. However, rather high percentage of patients with clinical and subclinical implications of depression and anxiety was revealed [1].

Therefore, the pain syndrome is not the main cause of high rates of depression and anxiety. The data of this study allow assuming that the serious illness, which may lead to disability and death, puts a person in special life conditions. After psychological assistance the percentage of patients with clinical and subclinical manifestations of depression and anxiety decreased. This proves the benefits of the offered psychological assistance in case of impairments in the emotional sphere.

Conclusion

In that way, we confirm the relevance and the effectiveness of the program that was developed and implemented in 2012. Patients with the high level of the depression and the anxiety on the scale HADS during the postoperative period demonstrate the positive dynamic after the implementation of the specially organized psychological assistance. The conducted research allows us to state the relevance of the program of the psychological assistance to patients after reconstructive operations in the vascular surgery departments in modern conditions.

Conflicts of interest. The authors declare no conflicts of interest.

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References

1. Ageykin A.V., Kolesova E.V., Tychkov A.Yu., Alimuradov A.K., Kalistratov V.B., Kosova S.N., Makarova N.A. Vliyanie trevozhno-depressivnykh rasstroystv na patsientov s zabolevaniyami serdechno-sosudistoy sistemy [The effect of anxiety and depressive disorders on patients with diseases of the cardiovascular system]. *Psikhicheskoe zdorov'e* [Mental health], 2019, no. 5, pp. 36-41.
2. Berezina T.N. Psikhologicheskie faktory razvitiya serdechno-sosudistyx zabolevaniy na raznykh etapakh zhiznennogo puti [Psychological factors in the development of cardiovascular diseases at different stages of life]. *Psikhiatriya, psikhoterapiya i klinicheskaya psikhologiya* [Psychiatry, psychotherapy and clinical psychology], 2020, vol. 11, no. 1, pp. 75-84.
3. Esina E.Yu., Bokova M.N. Analiz vyrazhennosti trevogi i depressii u bol'nykh serdechno-sosudistymi zabolevaniyami zhenshchin v period snizheniya sotsial'noy aktivnosti [Analysis of the severity of anxiety and depression in women with cardiovascular diseases during a period of reduced social activity]. *Profilakticheskaya meditsina* [Preventive medicine], 2020, vol. 23, no. 5-2, pp. 15.
4. Koryagina N.A., Spasenkov G.N., Avdeev A.V., Shul'kina S.G., Koryagin V.S., Melekhova O.B., Prokhorov K.V. Monitoring patsientov, str-

- adayushchikh serdechno-sosudistymi zabolevaniyami [Monitoring of patients suffering from cardiovascular diseases]. *Sovremennaya nauka: aktual'nye problemy teorii i praktiki. Seriya: Estestvennye i tekhnicheskie nauki* [Modern science: actual problems of theory and practice. Series: Natural and Technical Sciences], 2021, no. 3, pp. 273-283.
5. Medvedev V.E., Korovyakova E.A., Frolova V.I., Gushanskaya E.V. Antidepressivnaya terapiya u patsientov s serdechno-sosudistymi zabolevaniyami [Antidepressant therapy in patients with cardiovascular diseases.]. *Nevrologiya, neyropsikhiatriya, psikhosomatika* [Neurology, neuropsychiatry, psychosomatics], 2019, vol. 11, no. 1, pp. 131-140.
 6. Nikolaev E.L., Lazareva E.Yu. Psikhoterapiya i psikhologicheskaya pomoshch' bol'nym serdechno-sosudistymi zabolevaniyami [Psychotherapy and psychological assistance to patients with cardiovascular diseases]. *Vestnik psikiatrii i psikhologii Chuvashii* [Bulletin of Psychiatry and Psychology of Chuvashia], 2015, vol. 11, no. 1, pp. 57-76.
 7. Romasenko L.V. Depressiya i serdechno-sosudistye zabolevaniya [Depression and cardiovascular diseases]. *Nevrologiya, neyropsikhiatriya, psikhosomatika* [Neurology, neuropsychiatry, psychosomatics], 2009, no. 3-4, pp. 8-10.
 8. Ushkalova E.A., Ushkalova A.V. Terapiya depressivnykh rasstroystv u patsientov s serdechno-sosudistymi zabolevaniyami [Therapy of depressive disorders in patients with cardiovascular diseases]. *Obozrenie psikiatrii i meditsinskoy psikhologii imeni V.M. Bekhtereva* [Review of psychiatry and medical psychology named after V.M. Bekhterev], 2015, no. 4, pp. 153-158.
 9. Collopy C.M., Cosh S.M., Tully P.J. Screening and referral is not enough: a qualitative exploration of barriers to access and uptake of mental health services in patients with cardiovascular diseases. *BMC health services research*, 2021, vol. 21, no. 1, pp. 49. <https://doi.org/10.1186/s12913-020-06030-7>
 10. Dar T., Radfar A., Abohashem S., Pitman R.K., Tawakol A., Osborne M.T. Psychosocial Stress and Cardiovascular Disease. *Current Treatment Options in Cardiovascular Medicine*, 2019, vol. 21(5), no. 23. <https://doi.org/10.1007/s11936-019-0724-5>
 11. Kubzansky L.D., Kawachi I., Weiss S.T., Sparrow D. Anxiety and coronary heart disease: a synthesis of epidemiological, psychological, and

- experimental evidence. *Annals of behavioral medicine: a publication of the Society of Behavioral Medicine*, 1998, vol. 20, no. 2, pp. 47-58. <https://doi.org/10.1007/BF02884448>
12. Nahrendorf M, Swirski FK. Lifestyle effects on hematopoiesis and atherosclerosis. *Circulation Research*, 2015. vol. 116, no. 5, pp. 884-894. <https://doi.org/10.1161/circresaha.116.303550>
13. Popenko N.V., Chupina V.B., Gavrilenko L.S. The efficiency of rendering psychological assistance to patients with obliterating diseases of lower limb arteries after reconstructive operations. *Educational bulletin Conscientiousness*, 2020. vol. 22, no. 11, pp. 65-69. <https://dx/doi.org/10.26787/nydha-2686-6846-2020-22-11-65-69>
14. Zigmond A.S., Snaith, R.P. The hospital anxiety and depression scale. *Acta psychiatrica Scandinavica*, 1983, vol. 67, no. 6, pp. 361-370. <https://doi.org/10.1111/j.1600-0447.1983.tb09716.x>

Список литературы

1. Агейкин А.В., Колесова Е.В., Тычков А.Ю., Алимуратов А.К., Калистратов В.Б., Косова С.Н., Макарова Н.А. Влияние тревожно-депрессивных расстройств на пациентов с заболеваниями сердечно-сосудистой системы // Психическое здоровье. 2019. № 5. С. 36-41.
2. Березина Т.Н. Психологические факторы развития сердечно-сосудистых заболеваний на разных этапах жизненного пути // Психиатрия, психотерапия и клиническая психология. 2020. Т. 11. № 1. С. 75-84.
3. Есина Е.Ю., Бокова М.Н. Анализ выраженности тревоги и депрессии у больных сердечно-сосудистыми заболеваниями женщин в период снижения социальной активности // Профилактическая медицина. 2020. Т. 23. № 5-2. С. 15.
4. Корягина Н.А., Спасенков Г.Н., Авдеев А.В., Шулькина С.Г., Корягин В.С., Мелехова О.Б., Прохоров К.В. Мониторинг пациентов, страдающих сердечно-сосудистыми заболеваниями // Современная наука: актуальные проблемы теории и практики. Серия: Естественные и технические науки. 2021. № 3. С. 273-283.

5. Медведев В.Э., Коровякова Э.А., Фролова В.И., Гушанская Е.В. Антидепрессивная терапия у пациентов с сердечно-сосудистыми заболеваниями. *Неврология, нейропсихиатрия, психосоматика*. 2019. Т. 11. № 1. С. 131-140.
6. Николаев Е.Л., Лазарева Е.Ю. Психотерапия и психологическая помощь больным сердечно-сосудистыми заболеваниями // *Вестник психиатрии и психологии Чувашии*. 2015. Т. 11. № 1. С. 57-76.
7. Ромасенко Л.В. Депрессия и сердечно-сосудистые заболевания // *Неврология, нейропсихиатрия, психосоматика*. 2009. № 3-4. С. 8-10.
8. Ушкалова Е.А., Ушкалова А.В. Терапия депрессивных расстройств у пациентов с сердечно-сосудистыми заболеваниями // *Обзор психиатрии и медицинской психологии имени В.М. Бехтерева*. 2015. № 4. С. 153-158.
9. Collopy C.M., Cosh S.M., Tully P.J. Screening and referral is not enough: a qualitative exploration of barriers to access and uptake of mental health services in patients with cardiovascular diseases // *BMC health services research*, 2021, vol. 21, no. 1, pp. 49. <https://doi.org/10.1186/s12913-020-06030-7>
10. Dar T., Radfar A., Abohashem S., Pitman R.K., Tawakol A., Osborne M.T. Psychosocial Stress and Cardiovascular Disease // *Current Treatment Options in Cardiovascular Medicine*, 2019, vol. 21(5), no. 23. <https://doi.org/10.1007/s11936-019-0724-5>
11. Kubzansky L.D., Kawachi I., Weiss S.T., Sparrow D. Anxiety and coronary heart disease: a synthesis of epidemiological, psychological, and experimental evidence // *Annals of behavioral medicine: a publication of the Society of Behavioral Medicine*, 1998, vol. 20, no. 2. pp. 47-58. <https://doi.org/10.1007/BF02884448>
12. Nahrendorf M, Swirski F.K. Lifestyle effects on hematopoiesis and atherosclerosis // *Circulation Research*, 2015. vol. 116, no. 5, pp. 884-894. <https://doi.org/10.1161/circresaha.116.303550>
13. Popenko N.V., Chupina V.B., Gavrilenko L.S. The efficiency of rendering psychological assistance to patients with obliterating diseases of lower limb arteries after reconstructive operations // *Educational bulletin Consciousness*, 2020. vol. 22, no. 11. pp. 65-69. <https://dx.doi.org/10.26787/nydha-2686-6846-2020-22-11-65-69>

14. Zigmond A.S., Snaith, R.P. The hospital anxiety and depression scale // Acta psychiatrica Scandinavica, 1983, vol. 67, no. 6, pp. 361-370. <https://doi.org/10.1111/j.1600-0447.1983.tb09716.x>

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