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Research Article

Psychotherapy Opportunities in the Treatment of Patients with Chronic Cerebrovascular Diseases

Aleksandr F Bondarenko*, Victoria YU Krylova and Nikita A Bondarenko

Communal Non-Profit Enterprise "Kiev City Clinical Hospital" Department of Neurology, Kiev, Ukraine, Europe

***Corresponding Author:** Aleksandr F Bondarenko, Communal Non-Profit Enterprise "Kiev City Clinical Hospital" Department of Neurology, Kiev, Ukraine, Europe.

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Abstract

Introduction: This study illustrates the specificity of the psychotherapy application to the treatment of psychoemotional problems caused by chronic cerebrovascular diseases.

Objectives Of the study: Was to empirically find out how expedient, desirable, and generally possible it is to provide psychotherapeutic services to patients in the neurological department hospitalized due to exacerbation of chronic cerebrovascular diseases accompanied by a disturbance in the emotional state across the spectrum of depressive disorders.

Methodology: The subjects were selected patients with discirculatory hypertonic, atherosclerotic and dismethabolic encephalopathy in the stage of sub- and decompensation (chronic cerebral ischemia), which correspond to codes 167.2; 167.4; I67.8 in ICD-10. The final sample size was 22 patients, selected from 389 patients according to the diagnose and their informed consent. Of these, 9 (40.90%) were women and 13 (59.09%) men in the age range from 46 to 59 years. Overall, the total psychotherapeutic interventions ranged from 3 to 10 hours. The study group included patients who took, in addition to neurometabolites and cerebroprotectors, psychotropic drugs (anti-anxiety, antidepressants, sedatives). At the stage of formation of the sample of subjects and at discharge, the following diagnostic methods were used: a shortened MMPI questionnaire in combination with the PHQ-9 scales.

Conclusions: There is a significant decrease in the indicators of depression, however, the question remains whether this is a result, including of psychotherapy, or it is caused by the action of pharmacotherapy. Practice shows that patients with this group of disorders are undoubtedly problematic for psychotherapy, since, as a rule, they have a cognitive decline, which, for obvious reasons, narrows the necessary base for psychotherapeutic research and interventions.

Recommendations: Psychotherapeutic care for indicated patients requires certain organizational innovations and qualifications for a medical doctor and/or a clinical psychologist.

Keywords: *Mood Disorders; Psychotherapy; Personality-Oriented Approach; Chronic Cerebrovascular Diseases; Antidepressants*

Introduction

The use of psychotherapy in modern neurology in solving a wide range of problems associated with the provision of the psychotherapeutic aspect of the treatment of patients with specific psychoemotional problems caused by chronic cerebrovascular diseases is still rather uncertain. An analysis of psychotherapeutic research and specific processes of psychotherapy as a whole shows that more and more researchers are trying to set themselves the task of clarifying which models of psychotherapy, traditional and new, and how exactly can constitute the most effective arsenal for dealing with psychological suffering of a person against chronic somatic diseases [1- 16]. In particular, this also applies to neurological diseases, in which a human personality can be deformed not only as a result of organic lesions of the brain and nervous system, but, in addition, as a result of somatogenias, caused, albeit sometimes not so much by the severity of the condition, as by the chronic course a disease that is dangerous with direct damage to both the nervous system and directly to the brain.

In this regard, an attempt was made to implement an observational program, the pilot status of which pursued the task of elucidating the potential and real possibilities of psychotherapeutic assistance to neurologists-clinicians in the provision of auxiliary combined psychopharmaceutical treatment of patients with chronic cerebrovascular diseases, against the background of which the patients showed mood disorders of the depressive spectrum. In other words, we see the significance of this study in that it is an attempt to substantiate the advisability of using psychotherapy in the practice of treating neurological patients with mood disorders of the depressive spectrum in cases of exacerbation of chronic cerebrovascular diseases outside of cases of acute cerebrovascular accident. Additional application of measures of combined psychopharmacological therapy, in our opinion, could expand the potential for improving the quality of life of such patients through a personalized, personality-oriented approach to correcting emotional states accompanying the exacerbation of chronic neurological diseases.

Objectives of the study

The overall aim of the undertaken study was to empirically find out how expedient, desirable, and generally possible it is to provide psychotherapeutic services to patients in the neurological department hospitalized due to exacerbation of chronic cerebrovascular diseases accompanied by a disturbance in the emotional state across the spectrum of depressive disorders. The problem is that the initial task of the doctor in this case is to clarify the actual diagnosis and carry out the urgent medical measures necessary according to the indications. However, in cases when it's not about an acute violation of cerebral circulation, but only about an exacerbation of a chronic disease caused by concomitant causes (gout; osteochondrosis of the cervical spine, overweight, alcohol or tobacco abuse, cardiac pathology, diabetes mellitus, etc.) psychotherapeutic assistance, which also involves the appointment of antidepressant drugs, in our assumption, can play a positive role not only in achieving remission of the underlying disease, but also in the correction of concomitant somatogenic disorders. The questions that arise in this case are as follows: a) how expedient is psychotherapeutic intervention in the management of a neurological patient? b) what psychotherapeutic approaches are most appropriate in terms of place and time? c) what organizational difficulties may arise in this case?

Methodology

The subjects were selected patients with discirculatory hypertonic, atherosclerotic and dismethabolic encephalopathy in the stage of sub- and decompensation (chronic cerebral ischemia), which correspond to codes 167.2; 167.4; I67.8 in ICD-10. The number of subjects selected from the total number of patients admitted to the hospital with the indicated diagnoses for 10 months, starting from January 2019, was 22 people, despite the fact that the total number of hospitalized patients, including patients with acute cerebrovascular accident, during the same time amounted to about 1300 persons while the immediate cohort of patients from which the final sample was composed included 289 persons. It should be noted that patients with severe cognitive impairment due to acute cerebrovascular accident and high age indicators were excluded. Selected patients signed an informed consent form to participate in the observation program. Of these, 9 (40.90%) are women and 13 (59.10%) are men in the age range from 46 to 59 years. All patients from the sample underwent a psychodiagnostic examination according to an abbreviated version of the MMPI method, as well as psychological screening according to the express diagnostics of PHQ-9 after completing the mandatory diagnostic measures, clarifying the current neurological status and starting treatment for the underlying disease. The total duration of psychotherapy for patients varied from 3 to 10 hours, which ranged from 3 to 7 sessions. The psychotherapy was carried out in line with the cognitive-behavioral approach, and included the use of EMDR and relaxation training.

Results and Discussion

Of the total number of hospitalized patients with the indicated diagnoses, as noted above, 22 people were selected, who were offered, along with mandatory examinations, to undergo diagnostics using the proposed MMPI tests (the shortest of the validated versions - Mini-

Mult) and the PHQ-9 questionnaire. At the same time, it was recorded that even the shortest version of the MMPI personality questionnaire caused certain difficulties in patients of the neurological department, since, as our practice has confirmed the well- known data, chronic cerebrovascular disorders, as a rule, are accompanied by cognitive decline of various genesis and varying degrees of severity [see 15]. So, out of 22 patients, 12 people refused to fill out this questionnaire, citing the complexity of the formulations due to insufficient ability to concentrate, distraction and difficulties with the final determination of the answer, and of the remaining 10 cases of consent, only three questionnaires showed reliable results taking into account the reliability scales and the height (drowning) of the profile. Thus, we can make a preliminary hypothetical conclusion that patients with chronic cerebrovascular disorders are subject to examination for the preservation of primarily individual mental processes, rather than the personality as a whole. At the same time, the PHQ-9 questionnaire was quite within the power of this contingent of patients, and the data on their emotional state at the beginning of treatment and after the termination of the recommended course of psychotherapy using the EMDR technique and relaxation training indicate a significant change in mood disorder indicators towards its optimization. Of 22 patients, depressive disorder of moderate severity (15 points or more), suggesting the prescription of antidepressants, was noted in 16 people: 9 women and 7 men. Of this sample, four patients had nystagmus, which made it impossible to use the EMDR technique. Therefore, it can be assumed that the use of psychotherapy in relation to patients with chronic cerebrovascular diseases in an ordinary neurological hospital, in cases where it is recommended and possible in principle in connection with concomitant disorders of the emotional sphere, has a number of limitations. These limitations are due to both the shortness of the standard hospital stay and the neurological status of patients, as a result of which the contingent of patients who are indicated for psychotherapy is limited by the severity of their cognitive deficits. Certain difficulties were imposed by the standards of bed-hours actually allocated in modern hospitals to a patient, including no more than 10 bed-days per patient of the neurological department with a diagnosis of this profile. One can assume that the psychotherapeutic treatment received in a neurological hospital actually corresponds to the capabilities of a resident of a modern metropolis, and according to generally accepted standards it fits into the canons of short-term psychotherapy. In general, the list of prescriptions included, in addition to the main drugs (neurometabolites and cerebroprotectors), antidepressants of the SSRI group (Vortioxetin, Escitalopram etc, when a depressive disorder of at least moderate severity was established), and in case of secondary insomnia - Vita-melatonin or, if indicated, Agomelatine. The difficulty was that, as a rule, these drugs, with a few exceptions, are prescribed for a period much longer than the duration of short-term psychotherapy. In addition, the effect of many of them, the same antidepressants, begins to manifest itself no earlier than 10 - 12 days after the appointment, so that the objective mismatch of psychotherapeutic measures and pharmacodynamics was another important nuance of this research project. In order to ensure complete treatment, patients were advised to keep in touch with the doctor after discharge from the hospital in private for consultation and, if necessary, prescriptions. As a result, in order to alleviate the emotional state of patients, we can mainly talk about delicate concomitant pharmacological therapy along with the treatment of the main diagnosis.

Let us now consider the specific dynamics of changes in the emotional state of patients in the observation program as a result of a combination of antidepressants (Vortioxetin, Escitalopram) at a dose of 10 mg and a series of psychotherapeutic sessions using the EMDR technique and relaxation training. Let's start with the original data table (Table 1).

Table 1: *Diagnostic Data of Changes in the Emotional State of Patients According to the PHQ-9 Questionnaire.*

№ The patients	PHQ-9 indicator		
	Before psychotherapy	After psychotherapy	Difference
	14	11	3
	12	10	2
	15	11	4
	13	10	3
	16	12	4

	20	16	4
	10	8	2
	12	10	2
	18	16	2
	14	12	2
	17	15	2
	18	17	1
	16	13	3
	16	10	6
	18	11	7
	13	10	3
	19	10	9
	20	15	5
	16	12	4
	17	13	4
	15	10	5
	19	16	3

After processing the raw data according to the simplest but obvious methods for determining the significance of differences using the SPSS Statistics 23 program, Student's t-test was determined for connected samples (Table 2).

Table 2: *Descriptive statistics of the studied samples.*

Descriptive Statistics					
	No of patients	**Minimum**	**Maximum**	**Mean**	**Std. Deviation**
pre_psychotherapy	22	10,0	20,0	15,818	2,7540
after_psychotherapy	22	8,0	17,0	12,182	2,5753
Valid N (listwise)	22				

The data obtained show that the distribution of values is normal. The degree of reliability is indicated in Table 3.

Table 3: *Calculation of Student's t-test for two related samples.*

Paired Samples Test									
Mean		Paired Differences					t	df	Sig. (2-tailed)
		Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference					
				Lower	Upper				
Pair 1	before_ psychotherapy - after_ psychotherapy	3,6364	1,8910	,4032	2,7980	4,4748	9,020	21	,000

Table 3 shows that the differences between the values of the studied variables are statistically significant ($p < 0.01$). In other words, there is a significant difference between the emotional state of patients who received antidepressants in addition to the main treatment and received cognitive-behavioral psychotherapy. It is not entirely correct to speak about the completion of the latter. Rather, we can talk about its termination, since the patient was discharged from the hospital for outpatient treatment. The question of the reasons for the change in the emotional state, therefore, remains open both for further discussion and due to the need for additional research data.

Conclusion

There is no doubt about the advisability of providing psychotherapeutic assistance and recommendations for psychotherapeutic treatment to patients with chronic cerebrovascular pathology, since diseases of this profile are directly fraught with somatogenias, including and above all, when they affect the preserved value-semantic orientations of those patients in whom their neurological the disease did not result in cognitive impairment or deficits. In this case, one should take into account the known restrictions imposed by both the age range of patients and the degree of preservation of mental processes. Apparently, during psychological and pathopsychological examination of patients in a neurological hospital, one should first of all focus on the diagnosis of mental processes and, depending on the indications, first of all on their recovery, since with organic disorders of basic cognitions it is not possible to solve psychotherapeutic tasks, since we can only talk about psychocorrectional work directed, together with the efforts of a clinician-neurologist, at rehabilitation measures and solving rehabilitation problems. Talking about psychotherapy in a neurological hospital with patients from among patients suffering from a chronic course of cerebrovascular diseases can only go if the main diagnosis is not burdened by a set of syndromes (asthenic, cephalgic, ataxic) that undermine the patient's independent functioning. Otherwise, the treatment cannot go beyond the standard scope of generally accepted and appropriate treatment protocols for a given diagnosis. The results of the pilot study undertaken do not allow us to come to a definite conclusion about the place and applicability of psychotherapy in the correction of mood disorders in patients of a neurological hospital with a delineated range of diseases. As evidenced by our pilot study, the possibilities of using psychotherapy depend on the degree of the patient's personal safety, and at present they can be considered rather as a privilege and advantage than as an ordinary therapeutic measure.

Recommendations

In cases where psychotherapy can be used, inter alia, as an adjunct procedure to facilitate acceptance of the treatment process, for example, with comorbid mood disorders of the depressive spectrum, additional counseling work in outpatient treatment after discharge from hospital is indicated for such patients. And one of the most important functions of such work is psychoprophylactic. Another thing is that this mission of a medical doctor and/or a clinical psychologist requires organizational innovations and additional educational efforts for its implementation.

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