

# THE EVOLUTIVE MODALITY OF THE PSYCHIC DISORDERS DEVELOPED IN PATIENTS WITH CEREBROVASCULAR DISEASE

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**Keywords:**  
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**Abstract:** Medical research has revealed that the cerebro-vascular disease and the mental disorders coexist. The purpose of this prospective research paper is to determine the incidence of mental disorders among patients suffering from cerebro-vascular diseases, the topographical and temporal correlation between the cerebro-vascular diseases and the psychopathology they develop, as well as the evolution of the psychic manifestations. The group of patients included 110 cases hospitalised in the Neurology Hospital in Sibiu in 2009-2010 and needed examination or long term psychiatric assistance after the beginning of the cerebro-vascular disease. The research showed that 70 -79 years old is the most affected group age (38.16% women and 32.25% men). Although from a numerical point of view paroxysmal and transitory psychic disorders prevail, this is a false conclusion, because a significant percentage of them are nothing but different ways of beginning for the permanent mental disorders.

**Cuvinte cheie:**  
manifestare psihopatologică, topografie cerebrală, boală cerebro-vasculară

**Rezumat:** Studiile medicale au relevat existența simultan a bolii cerebrovasculare (BCV) și a tulburărilor psihice. Scopul acestei lucrări, prospective, este de a determina incidența tulburărilor psihice în rândul pacienților cu BCV, corelația topografică și temporală a BCV și psihopatologia dezvoltată, precum și evoluția manifestărilor psihice. Lotul de pacienți a constat într-un număr de 110 de cazuri selectate din rândul pacienților internați în Clinica Neurologie Sibiu, în perioada 2009-2010, care au necesitat consult sau asistență psihiatrică de durată după debutul BCV. Studiul a relevat că grupa de vârstă cea mai frecvent afectată este 70-79 ani (38.16% femei și 32.25% bărbați). Deși din punct de vedere numeric absolut reiese că tulburările psihice paroxistice și cele tranzitorii predomină, aceasta este o falsă concluzie, pentru că un procent semnificativ dintre ele nu sunt altceva decât modalități de debut ale tulburărilor psihice permanente.

## INTRODUCTION

Medical studies have revealed the coexistence of the cerebrovascular disease (CVD) and the mental disorders. This connection is based on a cause-result relationship and the possibility of randomness is excluded. Associating a neurological diagnosis with a psychiatric one is a very frequent practice, and this was initially proved by the clinical observation and then statistically demonstrated through several epidemiological studies. The research conducted into the topic led to results relatively close to the observation that the incidence of mental disorders associated with CVD is higher with men. A series of research papers tried to emphasise and explain the causes which determined this link between the neurological and the psychiatric pathology, mainly focusing on the topography of the cerebral lesions.

## THE AIM OF THE PAPER

The purpose of this paper is to determine the incidence of psychic disorders among the patients with CVD, the topographic and temporal correlation of CVD and its psychopathology, as well as the evolution of the psychic manifestations. As the gender-based differences regarding the incidence of mental disorders at patients with CVD have already been proved and generally accepted as a fact, this research paper sets out to emphasise some clinical particularities, especially the etiopathogenical ones, of the psychic manifestations in CVD; these particularities are typical to the two sexes and to the topography of the lesion as well.

## MATERIAL AND WORK METHOD

The present research paper belongs to the category of prospective studies. The sample group consisted of a number of 110 cases selected from the inpatients of The Neurology Clinic of Sibiu, in 2009-2010, who needed assessment or long-term psychiatric treatment after the debut of CVD. The selection criteria for the sample group were: 1. diagnosis of ischemic or hemorrhagic stroke; 2. diagnosis of psychic disorder (according to DSM IV TR and ICD 10) which appeared immediately after the stroke or within up to a six month time; 3. the absence of any diagnosis of psychic disorder before the beginning of the stroke; 4. the absence of a psychic disorder caused by a medical condition; 5. the absence of a psychic disorder induced by the use of medical substances.

## RESULTS

The age span of the patients was between 20 and 80 years of age. From the total number of the cases we studied in 2009-2010, there were 48 women and 62 men. It was noticed that the number of men with cerebrovascular disease outruns the number of women with the same pathology (56.3% men, 43.6% women); the ratio of men to women is 1.29, a significantly comparable result to the data presented by the acknowledged studies in the field. This ratio reveals that the risk factors are more numerous with the male patients (physical work, consumption of toxic substances, ignorance of the maladies subjacent to the cerebrovascular disease) (see Table no. 1). The research showed that the age group most frequently affected is

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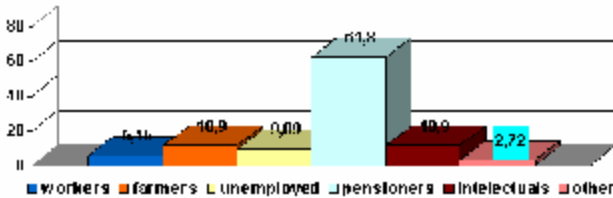
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70-79 years of age (38.16% of the total number of women and 32.25% of the total of men). Also, the number of male patients with cerebrovascular disease is larger than the number of women belonging to the same 60-69 age group. Regarding the group between 20 and 39 years of age, the cases are very rare. There were only two male subjects with this pathology (1.81% of the total number of cases). The evolution of the socio-economic phenomena in the period 2007-2010 seems to be closely connected to the data presented above as the socio-professional environment has changed for this category of patients. We cannot establish that schooling is an independent factor which influences the beginning of the cerebrovascular disease; it is closely correlated with the occupation, and this implies exposing the patients to the same risk factors from the urban or rural environment (see Fig.1).

**Table no. 1. Distribution of the sample group by age and sex groups**

Age groups	Women (n=48)		Men (n=62)		Total	
	No. of cases	%	No. of cases	%	No. of cases	%
20-29	0	0%	0	0%	0	0%
30-39	0	0%	2	3.22%	2	1.81%
40-49	3	6.25%	4	6.45%	7	6.36%
50-59	8	16.66%	10	16.12%	18	16.36%
60-69	10	20.83%	15	24.19%	25	22.72%
70-79	18	38.16%	20	32.25%	38	34.54%
80-89	9	18.77%	11	17.74%	21	19.09%
	48	100%	62	100%	110	100%

**Figure no. 1. The graphical repartition of the sample group according to the socio-professional categories**



An important parameter on which we focused was the etiopathogeny of strokes. From this perspective, we identified 17 patients with hemorrhagic stroke (15.45%) and 93 patients with ischemic stroke (84.54%). Seven out of the total number of patients suffering from a hemorrhagic stroke were women and ten men. The subgroup of the patients suffering from ischemic stroke was represented by 51 male patients and 42 female patients. The topography of the lesions led us to the following observations: 45 patients had lesions at the parietal lobe (40.90%), 38 cases (34.54%) with lesions at a temporal level, 19 patients with lesions at the frontal lobes (17.27%) and 8 patients with occipital lesions (7.27%), (see Fig. 2).

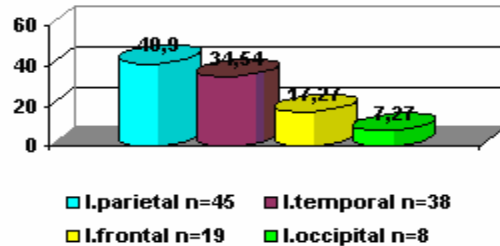
Our results are in accordance with the data offered by the acknowledged studies in the field at a great extent, the parietal lobe being the one that generates the most frequent strokes (40.9% of the group, that is 45 subjects), whilst the least frequent strokes are generated by the occipital lobe (7.27%, that means 8 patients).

The psychic manifestations that could be observed and diagnosed during the research bring together various clinical tableaux, which vary from paroxysmal to permanent disorders, with differentiated expressions according to the cerebral lobes that were affected.

Sixty-eight patients had paroxysmal psychic manifestations (the observation sheets showed that 42 patients did not have any psychiatric symptom during the acute period of

the CVD, that is 72 hours); 50 patients had transitory or short-term psychic disorders (up to 10 days), among which 42 subjects being also diagnosed with paroxysmal psychic disorders in the first 72 hours, and 8 patients received a de novo diagnosis. A number of 46 patients developed permanent psychic disorders, among these 28 were also diagnosed with paroxysmal psychic disorders, 10 patients were diagnosed in the acute period, and 8 of them were diagnosed with psychic manifestations after 30 days (see Table no. 2).

**Figure no. 2. The graphical representation of the topography of the stroke lesions**



**Table no. 2 The distribution of the patients according to the period in which the psychic disorders developed**

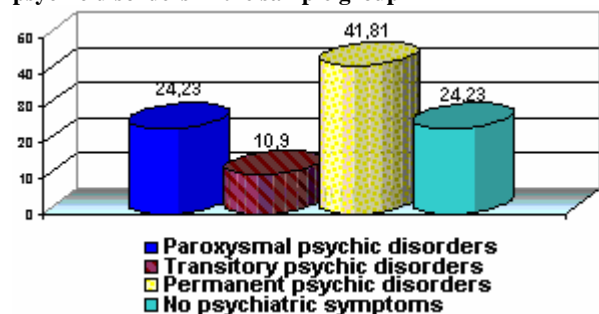
Psychic manifestations	Patients	
	Absolute number	Absolute number
Paroxysmal (72 hours)	28	60.86
Transitory (10 days)	10	21.73
De novo (debut after 30 days)	8	17.39
Permanent (Total)	46	100.00

It can be noticed that the permanent psychic disorders take various forms at the beginning, with manifestations typical to some paroxysmal or acute psychopathological clinical tableaux.

In order to keep the relevance of the research intact, the patients who presented permanent psychic disorders, but were also to be found in the category of the paroxysmal and transitory psychological disorders, were counted only in the category of the permanent psychological disorders. The patients who suffered from both transitory and paroxysmal psychological disorders were taken into account only in the first category, which means a total number of 12. The category of paroxysmal psychological disorders was represented by the patients who did not show any psychiatric symptom after 72 hours.

Therefore, out of the 110 patients, 26 had paroxysmal psychological disorders, 12 patients developed transitory psychological disorders, 46 patients revealed permanent psychological disorders and 26 patients did not show any psychic symptoms according to the observation sheets (Fig. no. 3).

**Figure no. 3. The graphical representation of the general psychic disorders in the sample group**



Although, from a strictly numerical point of view, it

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can be concluded that the paroxysmal and transitory psychic disorders prevail, it is a false conclusion because a significant part of these are nothing else but debut modalities of the permanent psychic disorders; there are only 17.39% cases which begin after 30 days; the remaining cases embody paroxysmal and acute clinical tableaux.

### DISCUSSIONS AND CONCLUSIONS

The paroxysmal psychic disorders assemble various psychiatric signs and symptoms such as: dysmnnesia, perception and thinking disorders, corporal scheme disorders (frequently), confusion, anxiety, sadness, psychomotor agitation. The symptoms were encountered at 68 patients of the group (61.81%), but the variety and the differences in intensity, the polymorphism, the abrupt debut and the short period of time do not allow them to be labeled from a syndromological point of view or to be quantified. The signs and symptoms belonging to this category evolved towards transitory psychic disorders at 42 patients. There were only 8 patients whose psychic manifestations started after 72 hours. The transitory psychic disorders formed clinical tableaux of: light cognitive disorder (2 patients), amnesic syndrome (3 patients), organic hallucinosis (one patient), organic anxious disorder (2 patients) and organic delirium (4 patients). Some paroxysmal and transitory psychic disorders evolve into permanent psychic disorders represented by: organic personality disorder (13 cases), dementia (15 cases), organic depression (10 patients) and organic anxiety (8 cases). The final observation is that the way in which the latter nosological categories begin is varied and they frequently derive from the metamorphosis of the paroxysmal and transitory psychic disorders.

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