

ASSOCIATIONS OF PSYCHOLOGICAL RISK FACTORS AND CHANCES OF DEVELOPING CEREBRAL STROKE

Mishchenko O.M.¹, Mishchenko M.M.², Ponomaryov V.I.¹, Ponomaryova V.V.¹,
Voloshina S.L.¹, Dyedkova A.V.³

¹*Educational and Scientific Medical Institute of the National Technical University
«Kharkiv Polytechnic Institute», Kharkiv, Ukraine*

²*Kharkiv National Medical University, Kharkiv, Ukraine*

³*V.N. Karazin Kharkiv National University, Kharkiv, Ukraine*

Background. The incidence of cerebral strokes (CS) remains a significant medical and social problem today, which requires urgent measures at all levels (regional, national, and population). At the global level, these diseases not only have a negative impact on virtually all health indicators, but also significantly reduce the period of active life and quality of life of these patients.

The purpose of the study is to determine the possible chances of developing CS among the adult population of psychological risk factors using multiple logistic regression analysis.

Materials and methods. The study was conducted at the Clinical Sanatorium Roshcha, a subsidiary of Ukrprofozdorovnytsia, a private joint-stock company, and the Clinical Sanatorium Berezhivski Mineral Water Resort, a subsidiary of Ukrprofozdorovnytsia, a private joint-stock company. 500 people aged 19-91 were examined, among whom 300 respondents of the main group with an anamnesis of CS and 200 people of the control group (practically healthy individuals randomized by age and gender) were identified. The study and analysis of the research objects were conducted by copying the data from the medical records (control card of dispensary observation; medical record of an inpatient, etc.), questionnaires, and surveys.

Results. According to the results of multiple logistic regression analysis, the odds of developing CS were significantly increased only by the univariate analysis in a neutral psychological environment in the team (odds ratio (OR) = 2.175 [95.0 % confidence intervals (CI) 1,307-3.619], $p = 0.003$) and significantly reduced odds for both analyses in choleric (respectively OR = 0.295 [95.0 % CI 0.174-0.499], $p < 0.001$ and OR = 0, 329 [95.0 % CI 0.181-0.599], $p < 0.001$) and phlegmatic (respectively, OR = 0.558 [95.0 % CI 0.325-0.959], $p = 0.035$ and OR = 0.706 [95.0 % CI 0.378-1.318], $p = 0.274$) personality types. In addition, significantly reduced chances of developing CS were found in case of cessation of communication with family and friends in the event of health disorders - according to the univariate analysis OR = 0, 250 [95.0 % CI 0.079-0.795], $p = 0.019$ and multivariate analysis - OR = 0.128 [95.0 % CI 0.034-0.475], $p = 0.002$ (namely, cessation of communication with relatives - OR = 0.174 [95.0 % CI 0.069-0.439], $p < 0.001$ - univariate analysis).

Both analyses significantly ($p < 0.001$) revealed increased chances of developing CS when mutual discussion of common problems in the family (respectively, OR = 3.699 [95.0 % CI 1.914-7.150] and OR = 3.656 [95.0 % CI 0.1886-7, 088]) and communication on various topics (respectively, OR = [95.0 % CI 1.852-4.206] and OR = 2.771 [95.0 % CI 1.768-4.341] and in the presence of stressful situations 1-2 times a week (only in the univariate analysis - OR = 0.478 [95.0 % CI 0.275-0.828], $p = 0.009$).

Conclusions. Thus, the probable influence on the development of CS was determined by a neutral psychological environment in the team, choleric and phlegmatic personality types, cessation of communication with family and friends in case of health disorders, mutual discussion of common problems in the family and communication on various topics, and the presence of stressful situations 1-2 times a week.