

## PSYCHOSOCIAL FACTORS OF COGNITIVE CHANGES IN PATIENTS, UNDERGOING CARDIAC SURGERY

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Cardiac patients frequently experience complications in cognitive functioning as a result of serious cardiac surgeries, including coronary artery bypass grafting (CABG). Recent researches have shown a wide range of cognitive disorders accompanying cardiac surgery. However, psychological factors of beneficial and detrimental consequences of coronary artery bypass surgery for cognitive functioning are less studied than its clinical correlates. For this reason, we aim at analyzing psychosocial factors of the dynamics of cognitive functions of patients with coronary heart disease (CHD) undergoing CABG. The work focuses on studying the main indicators of cognitive functioning (including active attention and concentration, verbal and nonverbal memory, psychomotor speed, and thinking abilities) and on studying the role of psychosocial factors in observed cognitive dynamics. The present study enrolled 120 patients (of average age  $59.71 \pm 7.32$  years) who underwent coronary artery bypass grafting with standard cardiopulmonary bypass technique. The examination using a neuropsychological test battery (including WAIS, TMT-test, Stroop test, TAS, Benton test, etc.) was performed in three stages: two days before CABG, 12-14 days and three months after the surgery. Patients with

CHD experience significant postoperative cognitive decline mostly in verbal memory and attention, while positive dynamics was observed in the visual and logical memory, as well as in spatial and verbal-logical thinking. A significant cognitive improvement three months after the operation occurred in visual memory, logical memory, and spatial thinking. According to the results of the study, the most important psychosocial factors of deterioration of cognitive functioning after surgery are: conflicts in family relationships, low social activity after surgery, a lower level of education, unemployment, and the pessimistic assessment of the prospects of returning to work ( $p < 0,01$ ). The data obtained confirm and extend the hypothesis of cognitive reserve (Stern Y., 2003), according to which environmental factors can reduce the vulnerability of individuals to the age-related cognitive decline and pathological brain processes. The obtained results allow to develop evidence-based recommendations for the rehabilitation of patients undergoing cardiac surgery. These recommendations should be primarily aimed at achieving maximum efficiency of the rehabilitation process, improving indicators of ability to work and quality of life of the patients.

## IMBALANCE BETWEEN EMOTIONALLY NEGATIVE AND POSITIVE LIFE EVENTS RETRIEVAL AND THE ASSOCIATED ASYMMETRY OF BRAIN ACTIVITY

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It is well known that emotions promote memorization and serve as reinforcement of behavioral activity useful for survival, i.e. stimulation of reactions expected to have

positive emotions, and avoidance of negative affects. Sustained focusing on a negative assessment of life events can create negative background and changes in the emotional