

Cognitive impairment in cardiovascular diseases: Preliminary dataMandalà G^{1,2}, Sarullo FM¹, Ficile S¹, Mandalà S¹, Maltese S³, Lupo F⁴, Cataldo P⁵**Correspondence: Mandalà G**Received: 30 Oct 2023; Accepted: 31 Oct 2023; Published: 05 Nov 2023*

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Citation: Mandalà G. Cognitive impairment in cardiovascular diseases: Preliminary data. AJMCRR 2023; 2(11): 1-2.

INTRODUCTION:

Cardiovascular diseases are the main cause of death in the world and their high prevalence also affects our country. Recent studies report the possible correlation between: cardiovascular pathologies and the onset of cognitive deficits (Pressler et. Al. 2010). Neuropsychology is the branch of neuroscience that studies the functioning of cognitive processes using tests and scales calibrated and standardized on the population, in order to examine cognitive functions such as: verbal and visuo-spatial memory, praxic-constructive skills, executive functions, language, attention, logical-deductive reasoning and perception.

STUDY OBJECTIVE:

To favor the early diagnosis of cognitive deficits in patients with cardiovascular pathologies, to promote and encourage cognitive rehabilitation.

MATERIALS AND METHODS:

39 patients (21 males and 18 females), admitted to the Rehabilitation Operative Unit of the Fatebenefratelli “Buccheri la Ferla” Hospital in Palermo from June 2021 to October 2022 were consecutively admitted to the study. All patients enrolled have an average age of 65.4 years and an average education of 7.36 and are affected by: sequelae of valvuloplasty or valve replacement (mitral, aortic, tricuspid), myocardial revascularization with B.A.C. (coronary artery bypass) or angioplasty, after-effects of aortic replacement, after-effects of heart failure. All patients were excluded from the study: age >85 years, with a MMSE value <20 and patients suffering from epilepsy and/or neurological or psychiatric pathologies. In order to estimate the effects of the explanatory variables (age, schooling and gender) on the response variable (score obtained in the tests), the Generalized Estimating Equations (GEE) approach was used,

which takes into account the dependence structure of the observations.

RESULTS:

The GEE Approach allowed us to highlight how patients with cardiovascular pathologies show sub-standard cognitive performance in tests relating to praxico-constructive skills ($P < 0.0001$). Furthermore, taking into account the variables gender and schooling, women with the same schooling as men show greater impairment of praxic/constructive skills.

CONCLUSIONS:

These results, although obtained on the basis of a small sample, seem to highlight the risk of the onset of cognitive deficits in patients with cardiovascular diseases and how age, gender and education influence these deficits. It is believed that an increase in the sample size and the organization of a case-control study could be useful in order to outline a typical cognitive profile of these patients. Early diagnosis of neuropsychological disorders in patients with cardiovascular diseases can only reduce the rate of progression of cognitive disorders.

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