## PW01-164 - NEUROPSYCHOLOGICAL ASSESSMENT OF CARDIAC REHABILITATION FOLLOWING CARDIAC SURGERY - PRELIMINARY RESULTS

K. Szwed<sup>1,2</sup>, M. Bieliński<sup>1,3</sup>, A. Kaszewska<sup>2</sup>, A. Hoffmann<sup>2</sup>, A. Borkowska<sup>1</sup>

<sup>1</sup>Neuropsychology Unit, Nicolaus Copernicus University, Collegium Medicum, <sup>2</sup>Department of Cardiology and Cardiac Rehabilitation, City of Bydgoszcz Hospital, <sup>3</sup>Department of Vascular Disaeses and Internal Medicine, dr Jan Biziel University Hospital No 2, Bydgoszcz, Poland

**Background:** Cognitive functioning involves all aspects of perception, thinking, reasoning, and remembering. Cardiac surgery is associated with a decline in cognitive functions. The incidence of this complication ranges from 3% to 80%. Cardiac rehabilitation is a treatment programme designed to help heart patients manage their condition, improve their health and recover their quality of life after a cardiac event.

**Objectives:** To evaluate the influence of cardiac rehabilitation on neuropsychological parameters of patients undergoing cardiac surgery.

**Methods:** Neuropsychological data were gathered from 20 patients (M=11 ,F= 9; mean age  $66,5 \pm 11,7$  years) who underwent a four week cardiac rehabilitation program. To examine patients cognitive functioning following tests were utilized: Trail Making Test A and B, Stroop test A and B, FAS test and Digit Span Test (DST). Patients were qualified into two groups: Group - I after heart valve surgery. Group II - after coronary artery bypass grafting (CABG)

**Results:** In TMT A and B both groups demonstrated similar improvement, though the results were below appropriate age norms. In part A of the Stroop test both groups improved their results, yet the improvement of the I group was greater. In part B of the Stroop test and in DST the results of group I improved, while the results of group II worsened. In the FAS test both groups improved their results, yet the improvement of group II was greater.

**Conclusions:** The group of patients who underwent heart valve surgery demonstrates greater improvement in processes associated with prefrontal cortex.