PROCESSING SPEED IMPAIRMENT IN PATIENTS WITH SCHIZOPHRENIA: RELATIONSHIP WITH POSITIVE AND NEGATIVE SYMPTOMS

Zulay Lugo^{1,2,3,4}, Elisabet Vilella^{1,2,3,4}

¹ Hospital Universitari Institut Pere Mata. Reus, Catalonia, Spain. ² CIBERSAM. ³ Universitat Rovira i Virgili.

⁴ Institut d'Investigació Sanitària Pere Virgili.

UNIVERSITAT ROVIRA I VIRGILI

This project has received funding from the European Union's Horizon 2020 research and innovation programme under the Marie Skłodowska-Curie grant agreement No 712949

Generalitat de Catalunya
Government of Catalonia

Objective: to describe the association between processing speed (PS) impairment and clinical symptoms in a sample of patients with schizophrenia (SCZ).

Background and goals: PS slowing down is one of the most frequently reported cognitive alterations in SCZ and has been associated with multiple aspects of the disease, including functional capacity, the presence of other cognitive alterations and quality of life. However, the relationship between PS impairment and the classic positive and negative symptoms remains still unclear. This work aims to further explore this association.

Methods: 24 SCZ patients (17 males, mean age 31.12 ± 7.47 years) and 16 healthy controls (HC) (4 males, mean age 21.6 ± 2.1 years) participated. Severity of symptoms was assessed with the Positive and Negative Syndrome Scale (PANSS). PS was measured through the part A of the Trail-Making Test (TMT-A). Pearson correlation coefficient was used to measure the association among the variables.

Results: patients showed significantly longer execution times than HC at the TMT-A ($p < 0.001$). It was found a statistically significant negative correlation between positive symptoms severity and the TMT-A ($r = -0.44$, $p = 0.02$) (graphic 1) and a statistically significant positive correlation between negative symptoms severity and the TMT-A ($r = 0.62$, $p = .001$) (graphic 2). Interestingly, no significant correlation was found between the presence of delusions and the deterioration in the execution of the TMT-A. No significant correlation was found either between the score of the general psychopathology scale and the TMT-A performance.

Conclusion: although influenced by the positive and negative symptoms, the slowing down of PS in SCZ seems to correspond to another dimension of symptoms of the disease, with a different underlying pathophysiology which must be approached differently.

Graphic 1. Correlation TMT-A performance and PANSS positive scores

Graphic 2. Correlation TMT-A performance and PANSS negative scores

This research was funded by the European Union's Horizon 2020 research and innovation programme under the Marie Skłodowska-Curie grant agreement (No 712949; TECNIOspring PLUS) and the Agency for Business Competitiveness of the Government of Catalonia.

Zulay Lugo; lugoz@peremata.com