Chronic peripheral inflammation is associated with cognitive impairment in schizophrenia. Results from the multicentric FACE-SZ dataset.

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Objectives. Inflammation, measured by abnormal blood C-reactive protein (CRP) level, has been described in schizophrenia (SZ), being inconsistently related to impaired cognitive functions. The aim of the present study is to investigate cognitive impairment associated with abnormal CRP levels in a large multicentric sample of community-dwelling SZ patients, using a comprehensive neuropsychological battery.

Method. Three hundred and sixty nine community-dwelling stable SZ subjects (76.2\% men, mean age 32.7 years) were included and tested with a comprehensive battery of neuropsychological tests. Abnormal CRP level was defined as >3 mg/L.

Results. Multiple factor analysis revealed that abnormal CRP levels, found in 104 patients (28.2\%), were associated with impaired General Intellectual Ability and Abstract Reasoning (aOR=0.56, 95\%IC 0.35-0.90, p=0.014), independently of age, sex, education level, psychotic symptomatology, treatments and addiction comorbidities. Abnormal CRP levels were also associated with the decline of all components of working memory (respectively effect size (ES)=0.25, p=0.033, ES=0.27, p=0.04, ES=0.33 p=0.006 and ES=0.38 p=0.004) and a wide range of other impaired cognitive functions, including memory (ES=0.26, p=0.026), learning abilities (ES=0.28, p=0.035), semantic memory (ES=0.26, p=0.026), mental flexibility (ES=0.26, p=0.044), visual attention (ES=0.23, p=0.004) and speed of processing (ES=0.23, p=0.043).

Conclusion. Our results suggest that abnormal CRP level is associated with cognitive impairment in SZ. Evaluating the effectiveness of neuroprotective anti-inflammatory strategies is needed in order to prevent cognitive impairment in schizophrenia.

Figure 1. Cognitive impairment associated with chronic peripheral inflammation in schizophrenia (measured by C-Reactive protein (CRP) blood levels≥3mg/L)

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