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LETTER

Serum Levels of Tumor Necrosis Factor-α and Vascular Endothelial Growth Factor in the Subtypes of Clinical High Risk Individuals: A Prospective Cohort Study [Letter]

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Dear editor

First of all, we want to congratulate Ye et al,[1] for publishing the manuscript entitled "Serum Levels of Tumor Necrosis Factor-α and Vascular Endothelial Growth Factor in the Subtypes of Clinical High Risk Individuals: A Prospective Cohort Study". We consider that this scientific work is important and providing facts that inflammation processes are also involved in mental illness pathophysiology.

Their work highlighted the role of TNF-α and VEGF in the pathophysiology of psychiatric disorders, especially in schizophrenia. Subclinical inflammation has been associated with psychosis, and the elevation of microglial activity as a sign of neuroinflammation was confirmed in patients with schizophrenia and in persons with subclinical symptoms who had psychosis high-risk.[2]

TNF-α is one of the well-studied proinflammatory cytokines, which actually has a wide and multifunctional role in immunological and physiological processes. TNF-α is mainly produced by immune cells such as Th1 cells and macrophages. In recent years, TNF has also been known as adipokine because of the increase of production in adipose tissues in obesity.[3,4] Because there is a link between obesity and TNF-α, it would be better if the subject or patients' body mass index (BMI) data were also analyzed. In addition, schizophrenia is often accompanied by metabolic syndrome or obesity, due to lifestyle, or effect of the therapy.[5]

For the following discussion, we also want to clarify the aim of this study. It was written that the aim of the study was to compare the serum levels of TNF-α and VEGF in patients at clinical high risk (CHR) for psychosis or schizophrenia at baseline and one year after treatment, therefore the study design was determined as a prospective cohort study. Unfortunately, in the results and discussion section, the shown results were emphasizing the gained inflammation and angioneurin profiles among the CHR groups and different subtypes that were categorized based on positive and negative symptoms. We did not recognize any comparisons between the baseline and one-year follow-up of TNF-α and VEGF measurements. Repeated measure ANOVA and GEE (Generalized Estimating Equation) method can be applied for time-series data analysis.

Another part needs clarification is the assay method to asses the TNF-α and VEGF serum level. In this study, the instrument used to measure TNF-α and VEGF level was Luminex 200 System. Luminex incorporates the principle of sandwich ELISA and flowcytometri. This method applies multiplex bead immunoassay instead of 96-well plate assay. The reagents used here were MILLIPLEX MAP Human Complement Magnetic Bead Panel 2 that was actually designed to measure the level of human complement instead of cytokines, and the analyte mentioned in the product information

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website are Complement C1q, Complement C3, Complement C3b, Complement C4, Complement Factor B, and Complement Factor H.[6] It could be easier for readers to understand the methods used if there was brief explanation regarding the principle used by Luminex system and the used reagents.

In conclusion, we really appreciate this publication as a very useful article. There is novelty in their work; however, suggestion and further discussion mentioned above could be used in reaching better results and clearer research approaches in the future study of this field.

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Disclosure

The authors report no conflicts of interest in this communication.

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