

Letter to Editor

Methodological approach to brain derived neurotrophic factor in children with autism spectrum disorder

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Dear Editor,

In a recent issue of *Annals of Neurosciences*, we read with great interest the article by Kasarpalkar and colleagues entitled "Brain-Derived Neurotrophic Factor in children with Autism Spectrum Disorder" in which the investigators reported that the protective effect of brain derived neurotrophic factor (BDNF) due to relatively higher levels in mild phenotypes of autism compared to severe autism and its possible diagnostic role in autism spectrum disorders.¹ However, we think that some points should be discussed.

BDNF is signaling protein that involved in the central regulation of energy homeostasis. Maffioletti and colleagues reported that serum preparation procedure is quite important issue to present robust methodology while measuring serum BDNF.² BDNF level is presumably affected from duration of the clotting procedure due to being stored in thrombocytes. They observed progression on serum BDNF concentrations, which reached 38% of the plateau value after 10 min, 91.8% after 30 min, and 100% after 1 hour. Therefore, they recommended the minimum clotting duration for a correct serum BDNF dosage as 1 hour. However, in this study, the authors stated that serum samples were separated immediately after blood was collected. We think that standardization of clotting process is highly important to prevent misinterpretation of serum BDNF levels.

Previous studies suggested that certain diseases such as epilepsy, allergic rhinitis and atopic dermatitis could likely affect BDNF levels.³ In addition, medications such as aspirin and corticosteroids,

and dietary supplements such as vitamin E, vitamin A, vitamin B12, folic acid, zinc, omega-3 fatty acids, and ginkgo biloba extracts can influence BDNF levels.⁴⁻⁶ In this regard, without defining these contributing factors, interpreting the results is problematic. The authors did not express any of above contributors.

In conclusion, clarifying these concerns will certainly provide a clearer picture when interpreting serum BDNF levels among participants.

References

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