



Response to “MRI Morphometry of the Spinal Cord Depends on Several Factors That Must Be Taken Into Account When Selecting Healthy Volunteers”

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As Dr. Finsterer has mentioned, we acknowledge the importance of considering various physiological and pathological factors when interpreting morphometric data from healthy subjects [1]. Here, we address these concerns and provide additional details regarding our study participants to strengthen our conclusions [2].

First, according to the health questionnaires for 28 healthy subjects, none had a history of diabetes mellitus, hypertension, hyperlipidemia, stroke, or significant trauma, which would suggest chronic hypoxic conditions affecting the spinal cord. Furthermore, none of the participants

reported symptoms indicative of neurological or psychiatric disease. MRI scans did not show any signs of spinocerebellar ataxia, Chiari malformations, or Hirayama disease, making a genetic influence on our results unlikely [3-5].

Second, we carefully reviewed the spinal MRI scans for signs of dural arteriovenous fistulas or spinal cord edema, which would indicate venous congestion. None of our participants exhibited MR findings such as engorged paraspinous veins or myelopathy, which ensured the integrity of our morphometric measurements.

Third, regarding the spinal structure, only 7% of our subjects (2 out of 28) exhibited mild scoliosis, with a Cobb angle of 25°–40° measured on 3D reformatted coronal MR images [6]. The remaining 92% (26 of 28) presented with normal spinal curvature, well within a Cobb angle of <10°, suggesting a minimal impact on spinal cord morphometry.

Fourth, only one participant was taking a proton pump inhibitor, which is unlikely to affect spinal cord volume or morphology. We ensured that no other medications known to influence the central nervous system structure or function were taken by any participant.

In conclusion, we believe that neither chronic hypoxic conditions, genetic disorders, spinal cord edema, spinal curvature, nor medication use compromised the reliability of our results. This detailed analysis reinforces the validity of our findings and their contribution to our understanding of spinal cord morphometry in a healthy population.

Conflicts of Interest

The authors have no potential conflicts of interest to disclose.

Author Contributions

Conceptualization: Sung Jun Ahn. Data Curation: Hyung Jun Park, Mina Park, Sang Hyun Suh. Writing—original draft: Bio Joo. Writing—review & editing: Sung Jun Ahn.

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