



## In response to: “A new noninvasive method can effectively assess intracranial compliance. Letter to the Editor”

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Dear Dr. Brasil and Dr. Godoy:

Thank you for your letter to the Editor regarding the new noninvasive method for assessing intracranial compliance. We appreciate your interest in this field of study and welcome the opportunity to respond to your points.

Firstly, we agree with your observation that the COVID-19 pandemic has caused significant challenges in obtaining data for many research projects. Nevertheless, we believe that this new technology provides a promising solution for noninvasive monitoring in cases of severe traumatic brain injury (TBI).

We acknowledge that this is a relatively new method, and further research is required to obtain more results. We agree with your concerns about the limitations of noninvasive monitoring for severe TBI due to the inability to remove cerebrospinal fluid (CSF). Moreover, several questions about the impact of bone fractures or a decompressive craniectomy still need to be studied to determine the method's accuracy and reliability.

The limitations of the study and the device itself were acknowledged in the article, including the learning curve, and the ability to apply the device. Nevertheless, the application of the device becomes more critical in our work because it was not performed in a short period as in other articles, but continuously. It should be noted that Dr. Matheus Ballestero has experience applying the method as highlighted in the references mentioned.

We would like to emphasize that a method to be used on a large scale must be less operator dependent, and we trust that the model applied today is already much better and less operator dependent than the one used in the project discussed in the article. However, we must emphasize that no analysis showed a sensitivity of 100% and specificity of 0% for both invasive and noninvasive monitoring (as mentioned in your letter). Also, demographics and severity data can be accessed in the supplemental material provided.

It is also essential to note that not even the “gold standard” invasive techniques can be used alone to define conduct and prognosis. In the same way, noninvasive monitoring cannot be used in this way. We must continue to conduct further studies to fill the limitations of our work and bring our data and perspectives to support the noninvasive PIC monitoring that is the dream of everyone working in this field of knowledge.

In conclusion, we appreciate your interest and feedback on this new noninvasive method for assessing intracranial compliance. We acknowledge the limitations of the study and the device itself, and we look forward to conducting further research to address these limitations. The new technology has enormous potential to improve the care of TBI patients, and we are committed to furthering our understanding of its applications and limitations.

We appreciate your thoughtful comments, and we hope that our response has addressed your concerns. We encourage further dialogue and collaboration within the scientific community to continue to advance the field.

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Sincerely,

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