LETTERS TO THE EDITOR

Impact of Head-of-Bed Posture on Brain Oxygenation in Patients with Acute Brain Injury: A Prospective Cohort Study

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Keywords: Head-of-bed posture, Brain oxygenation, Acute brain injury

We read with great interest the article by Burnol et al. [1] in which the authors aimed to observe the impact of supine (0°) and semirecumbent (15° and 30°) postures on intracranial pressure (ICP), brain oxygenation, and brain circulation. Therapeutic head positioning plays an important role in acute brain injury. In previous studies, authors found that elevation of the head of the bed resulted in lowering of ICP [2, 3]. The authors of the present study tried to find out effects of head posture on concomitant cerebral blood flow and brain oxygenation. Although they included all possible factors that might affect the ICP and cerebral oxygenation, the mention of mannitol or hyperosmolar therapy appears to have been missed. We know mannitol plays a vital role in lowering ICP and improving oxygen delivery to the brain. Its rheological effect reduces blood viscosity and promotes plasma expansion and cerebral oxygen delivery [4]. It would be interesting to know how many patients received mannitol and how the results were different between the patients who received mannitol and those who did not receive mannitol, if at all. They also discussed in their study protocol that all patients were initially positioned in a 30° head-up posture and stabilized for 10 min. Head elevations were subsequently lowered to 15° and 0° positions in a nonrandomized sequential order, and variables were recorded in a similar timeline. However, the

authors did not mention the initial baseline ICP and brain tissue oxygenation pressure values of patients when they were admitted in the intensive care unit. We believe that baseline information on ICP and brain tissue oxygenation pressure would have provided useful insights.

Funding
None.

Declarations

Conflict of interest
The authors declared that they have no conflict of interest.

Publisher's Note

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Received: 29 August 2021 Accepted: 1 September 2021
Published online: 1 November 2021

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This article is related to the original article available at <https://link.springer.com/article/10.1007/s12028-021-01240-1>. The response to the Letter to the Editor is available at [https://link.springer.com/article/\[DOI\]](https://link.springer.com/article/[DOI]).