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Comment on the article from Baníková Š et al.

Virtual reality in rehabilitation of patients after stroke

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Assoc. Prof. Petr Konečný, MD, PhD
Department of Clinical Rehabilitation
Faculty of Health Sciences
Palacký University, Olomouc

The article "Virtual reality in rehabilitation of patients after stroke" presents a comprehensive and insightful overview of the application of virtual reality (VR) in neuro-rehabilitation, with particular emphasis on its use in stroke recovery. The exploration of VR's role in enhancing neuroplasticity, motor learning, and patient engagement is well-grounded in evidence-based research, contributing valuable knowledge to the growing field of technology-assisted rehabilitation.

One of the key strengths of this article is its balanced evaluation of both immersive and non-immersive VR approaches, providing readers with a clear understanding of the various levels of engagement that VR can offer. The findings, particularly on the benefits of immersive VR in promoting interhemispheric balance and motor recovery, highlight the significant potential of this technology in post-stroke rehabilitation. Additionally, the article's discussion on how VR facilitates tele-rehabilitation is particularly relevant, as it addresses the need for accessible, cost-effective solutions in patient care.

Moreover, the article appropriately emphasizes the importance of patient compliance and motivation, crucial factors that VR seems to enhance. By simulating real-world tasks in a safe environment, VR not only improves functional outcomes, but also provides patients with a sense of accomplishment, thereby fostering their long-term engagement in the rehabilitation process.

However, it would be valuable to include further discussion on the limitations associated with the application of VR in rehabilitation, such as the need for more standardized protocols and the potential variability in patient outcomes based on individual differences. A deeper exploration of cost-effectiveness and accessibility of VR technologies in diverse healthcare settings would also contribute to a more holistic understanding of its practical implementation.

In conclusion, this article makes a significant contribution to the literature on stroke rehabilitation, underscoring the transformative impact that VR technologies can have on patient recovery. The collaboration between clinical experts and technology developers, as showcased in this review, sets a promising precedent for future advancements in the field. The ongoing development of Medical Device Regulation-certified VR tools signals an exciting frontier for neuro-rehabilitation, with the potential to revolutionize therapeutic practices and improve patient quality of life.