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EDITORIAL

Neurology and Neurorehabilitation: updates and reflections

The studies compiled in this edition reflect the diversity and relevance of neurology research in Brazil, covering topics ranging from cerebrovascular complications of SARS-CoV-2 infection to therapeutic advances in neuromuscular diseases and methodological reviews in neurorehabilitation.

The study by Evangelista et al., "Ischemic stroke during COVID-19 infection: a retrospective case series," provides a detailed clinical analysis of ischemic stroke in patients infected with SARS-CoV-2. The case series reveals an interplay between traditional cardiovascular risk factors and the inflammatory and endothelial injury mechanisms induced by the virus, reinforcing the need for ongoing vigilance in critically ill patients. With a mortality rate of 30% and a predominance of cardioembolic or indeterminate etiologies, the study highlights the diagnostic and therapeutic challenges of cerebrovascular complications in COVID-19—reminding us that the neurological legacy of the pandemic persists beyond its acute phase.

Hyposmia is a highly prevalent non-motor symptom in Parkinson's disease. However, could factors such as educational level and cognitive profile affect the interpretation of olfactory tests in these patients? Arruda et al. explore the complex relationship between olfactory dysfunction, cognitive performance, and sociocultural factors in their article "Influence of age, schooling and cognition on olfactory test performance in Parkinson's disease patients." By comparing two olfactory tests—the Sniffin' Sticks-12 and the modified Connecticut Chemosensory Clinical Research Center (mCCCRC)—the authors demonstrate that the mCCCRC test is less influenced by educational level, making it a more equitable diagnostic tool for populations with limited formal education. Beyond its methodological contribution, the study highlights the importance of culturally adapted neuropsychological assessments that enhance accessibility and diagnostic precision in Parkinsonian syndromes.

The systematic review done by Cosendey et al., "Melatonin Use in Children and Adolescents: Therapeutic Strategies and Clinical Protocols," addresses the rapid increase in pediatric melatonin use worldwide. The review summarizes evidence supporting melatonin's use in sleep disorders, autism spectrum disorder, and attention-deficit/hyperactivity disorder, while emphasizing the importance of dose titration and formulation choice for safety and efficacy. At a time when self-medication and online therapeutic trends are widespread, the authors' comprehensive analysis provides an essential evidence-based framework for clinicians seeking to balance accessibility with pharmacological responsibility.

Barbosa et al. revisit one of the most debated topics in vascular neurology with their meta-analysis "Endovascular therapy versus medical treatment for symptomatic intracranial artery stenosis." Synthesizing data from five randomized controlled trials, the authors demonstrate that endovascular therapy combined with conventional medical treatment (CMT) significantly increases the short-term risk of stroke and mortality compared to CMT alone. However, submaximal balloon angioplasty, as in the BASIS trial, showed potential long-term benefits. This nuanced analysis reignites discussion about patient selection, procedural refinement, and the balance between early risks and delayed gains in intracranial revascularization.

Marcelino et al. present a retrospective and objective study of juvenile myasthenia gravis in children and adolescents treated in Rio de Janeiro, Brazil. Females predominated, symptoms were early, and ocular presentation was the most common initial manifestation. The clinical profile was similar to that described internationally. This study expands knowledge about the disease in the Brazilian context and reinforces the importance of national multicenter studies on rare neuromuscular diseases.

In another study related to myasthenia gravis, Oliveira et al. conducted an integrative review on the use of immunobiologicals in the treatment of the disease, comparing them to traditional corticosteroids. The results indicate that immunobiologicals have similar efficacy, with a better safety profile and a lower incidence of adverse effects. The study highlights the potential of these therapies as a promising alternative to corticosteroids and the need to expand access and clinical research in this area.

The study by Silva et al. presents the case of a pediatric patient with neuromyelitis optica spectrum disorder and an integrative review of treatments used in this population. The analysis identified recent studies and clinical trials highlighting the use of rituximab and satralizumab. The work reinforces the importance of early diagnosis and expanded access to effective therapies to reduce relapses and sequelae in pediatric patients.

Finally, Santos et al. conducted a scoping review of the efficacy of motor irradiation on muscle activation assessed by surface electromyography. The study highlights methodological gaps in the literature and reinforces the need for further research to elucidate the mechanisms and clinical applications of Proprioceptive Neuromuscular Facilitation.

Together, these contributions reinforce the scientific community's commitment to rigorous research, therapeutic innovation, and the appreciation of the national context in the construction of neurological knowledge.

We invite you to explore this edition. Enjoy reading!

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