

Neuroscience, neurology and neurorahabilitation: contribution to the scientific dissemination of research carried out in the Brazilian scenario

This issue of the Revista Brasileira de Neurologia features a series of articles from several national centers, covering topics from different areas of neurology.

The works presented here bring relevant scientific contributions from research conducted in the Brazilian scenario.

In our controversy section, Leão and Calil critically discuss the transition of the diagnosis of Alzheimer's Disease (AD) to biological criteria, as proposed by the Alzheimer's Association. This is a highly relevant and controversial topic, particularly considering the recent approval by the Brazilian National Health Surveillance Agency (Agência Nacional de Vigilância Sanitária – ANVISA) of the monoclonal antibody donanemab and the recommendation for documentation using positron emission tomography or cerebrospinal fluid biomarkers for AD, as well as its non-use in cases of homozygosity for apolipoprotein E (APOE ε4) mutations. The authors also discuss the challenges of diagnosis based on biological criteria for patients who depend on the Brazilian Unified Health System (Sistema Único de Saúde – SUS), which would be unfeasible due to the high cost.

Still in cognition, Cechi et al. investigated the effects of transcranial direct current stimulation (tDCS) in patients with normal pressure hydrocephalus who had previously undergone treatment with cerebrospinal fluid diversion. The results indicate measurable cognitive gains in global assessments, such as the mini-mental state exam, although more specific tests have not revealed statistically significant differences.

The use of ultrasound to apply botulinum toxin brings significant benefits in certain situations, such as cervical dystonia. Santos et al. reviewed the topic and confirmed greater benefits, especially in cases involving deep muscles, providing better clinical results with increased safety for patients diagnosed with cervical dystonia. In ultrasound applications, Rouanet et al. conducted a comprehensive literature review on the most recent evidence in transcranial Doppler principles, techniques, and applications, as well as their main advantages and limitations.

We were gifted with two manuscripts in the area of vascular neurology. Through a systematic review and meta-analysis on the use of low-dose intraarterial prourokinase in the treatment of acute ischemic stroke, Fernandes et al. found results indicating that, although its use may increase recanalization rates in patients with acute ischemic stroke, it does not appear to significantly improve functional recovery or mortality rates, highlighting the need to seek treatment alternatives to enhance better clinical outcomes with therapies such as thrombolytics and thrombectomy. Coelho et al. address a significant increase in thrombolysis use in public hospitals, associated with a progressive decline in ischemic stroke mortality.

In a clinical case report, Rech et al. draw attention to the early diagnosis and appropriate management of sleep-disordered breathing, particularly obstructive sleep apnea (OSA), in individuals with risk factors for cerebrovascular events. The authors draw attention to the potential occurrence of wake-up stroke or awakening stroke in these patients and to the reduction of the overall impact. Conti et al. present a relevant case report on rapidly progressive dementia, accompanied by a brief and concise literature review.

Rehabilitation is one of the few therapeutic tools that bring benefits to patients with spinocerebellar ataxia. The study conducted by Moreira et al. provides an objective and original analysis of functionality in individuals with spinocerebellar ataxia type 3 (SCA3), utilizing classic functional tests in conjunction with accelerometry. The study reveals apparent differences between severity subgroups and healthy individuals, highlighting the usefulness of objective assessment of gait, functional strength, and balance as markers of disease progression.

Finally, Silva et al. raise a critical warning about the need for regular screening for depressive symptoms in people with epilepsy, using validated instruments.

So, enjoy your reading!

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