Behavioural Neurology

Special Issue on
Behavioural and Cognitive Changes in Neurodegenerative Diseases and Brain Injury

CALL FOR PAPERS

Neurodegenerative diseases (NDs) comprise a wide range of neurological disorders with heterogeneous clinical and pathological manifestations, affecting/targeting distinct subsets of neurons in specific anatomic systems, thereby resulting in variable disease phenotypes. However, there is a considerable clinical and pathological overlap across NDs which has allowed for identifying some spectra of neurodegeneration, such as in case of tauopathies, synucleinopathies, Alzheimer's disease (AD) pathology, and Tar-DNA binding protein (TDP) 43-proteinopathies. In this regard, (i) frontotemporal lobar degeneration (FTLD) may coexist with amyotrophic lateral sclerosis (ALS); (ii) Parkinson's disease and Parkinsonian plus syndromes, such as corticobasal degeneration (CBD) and progressive supranuclear palsy (PSP) phenotypes, may present early cognitive and behavioural changes; (iii) FTLD may develop concomitant extrapyramidal symptoms; (iv) AD pathology can coexist with Lewy Body Disorders (LBD). On the other hand, patients with identical pathology can present with distinct clinical phenotypes. AD pathology is usually associated with progressive amnestic syndrome in elderly subjects. However, younger patients can show an atypical, focal, and clinical syndrome in which a single cognitive domain, not related to memory, is predominantly affected. Examples of such syndromes are the logopenic variant of primary progressive aphasia (lvPPA) and posterior cortical atrophy (PCA).

From the clinical point of view, behavioral changes are pervasive among a large array of neurodegenerative conditions, including AD and its atypical presentations, FTLD, ALS, PPA, DLB, PD, PSP, and CBD. However, behavioural changes are the clinical core of the behavioural variant of frontotemporal dementia (bvFTD), ranging from apathy to disinhibition, but are also frequently reported in ALS and Parkinsonian plus syndromes (DLB, CBD, and PD dementia). Furthermore, in favor of the emerging evidence of the disease continuum involving these neurodegenerative syndromes, it has been revealed that they show several overlapping genetic, neuropathologic, and neuroimaging signatures. Conversely, among the distinctive phenotypic characteristics within neurodegenerative proteinopathies, while loss of primary motor and executive functions is more commonly reported in both ALS and FTLD, an increasing detection of both extrapyramidal symptoms and cognitive changes, including executive and language dysfunctions, limb apraxia, and visuoconstructive deficits, has been described within the Parkinsonian plus syndromes. To note, behavioral and cognitive changes due to ischemic/hemorrhagic stroke or traumatic brain injury (TBI) may resemble the symptoms described in NDs, with transient or long-term effects. On the other hand, there are recent emerging evidences in favor of influence of AD-related proteins, such as β-amyloid peptide, hyperphosphorylated tau protein, presenilins, apolipoproteins, and secretases, on poststroke dementia and neuroinflammatory response to TBI. Finally, from the prognostic point of view, behavioral and cognitive impairment may have crucial implications on the quality of life of the patients and their caregivers during the whole course of the disease, significantly impacting the patients' ability to engage competently in therapeutic and end-of-life decisions.

On this background, this special issue aims to bring a multidisciplinary perspective and updated insight into the most recent advances in the field of neuropsychology of neurodegenerative disorders, emphasizing the most appropriate and disease-specific psychometric tools for evaluating behavioral and cognitive impairments in the wide range of NDs, as well as in poststroke or TBI patients. Moreover, the impact of behavioral and cognitive abnormalities on the quality of life and prognosis of patients could also be addressed, giving some insights into the potential application of the early psychological interventions for reducing patients' and caregivers' distress. Neuroscientists from all over the world are invited to submit original research papers, clinical studies, and review articles.

Potential topics include but are not limited to the following:

- Common or distinctive genetic, physiopathological, and neuroimaging correlates of behavioral and cognitive changes in NDs, poststroke, or TBI
- Synaptic function and neural networks underlying behavioral and cognitive changes in NDs, poststroke, or TBI
- Disease-specific psychometric tools for measuring behavioral and cognitive changes in NDs, poststroke, or TBI
- Impact of behavioral and cognitive abnormalities on quality of life and prognosis of patients with NDs, poststroke, or TBI
- Potential psychological interventions focused on behavioral and cognitive abnormalities of patients with NDs, poststroke, or TBI

Authors can submit their manuscripts through the Manuscript Tracking System at https://mts.hindawi.com/submit/journals/bn/bccnd/.

Papers are published upon acceptance, regardless of the Special Issue publication date.

Lead Guest Editor
Francesca Trojsi, University of Campania "Luigi Vanvitelli", Naples, Italy
francesca.trojsi@unicampania.it

Guest Editors
Foteini Christidi, National and Kapodistrian University of Athens, Athens, Greece
christidi.f.a@gmail.com

Raffaella Migliaccio, Brain and Spine institut, Paris, France
lara.migliaccio@gmail.com

Hernando Santamaría-García, Pontificia Universidad Javeriana, Bogotá, Colombia
hernando.santamaria@javeriana.edu.com

Gabriella Santangelo, University of Campania "Luigi Vanvitelli", Caserta, Italy
gabriella.santangelo@unicampania.it

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