GNG Monthly Round-Up: December 2024

Here's our monthly update for December 2024. We hope you are finding them useful. Please feel free to share this with others who might benefit from it.

We appreciate your involvement in the GNG community and active contributions to personal and collective growth. We trust that your efforts will improve patient care within your community. Please keep sharing knowledge and monitoring this space for mutual learning!

Please join us as a member of the GNG website to access past copies and a variety of resources here: https://globalneuropsychiatry.org/become-member/

Disclaimer: The discussions and guidance provided within this group are informal in nature and should not be interpreted as legally binding. Each individual is responsible for making their clinical decisions independently. No member of this group may be held liable, quoted, or utilize the information exchanged herein as a medicolegal defence for any harm incurred.

Contents

WELCOME NEW MEMBERS

Luciano De Paolo
Tabassum Rahman
Dianne Grocott
Suvi Olkkola
Sandeep Namade
Reeli-Kadri Kullamaa-Sepa
Lura Widenius
Kagiso Bojosi
Abbas Lohawala
Chiranth Bhagavan
Kishore Babu
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Kazuko Yokoi
Weng Tong Wu
Asha Dandapani
Tuomo
Tuuli Anttila
Mariam Kashmiri
Sevde Nur Karabulut

Dinesh Kumar
Toshiya Murai
Tuomo
Sevde Nur Karabulut

We express our sincere gratitude for your presence amongst the 650 individuals gathered from various regions across the globe. We appreciate your participation in the global neuropsychiatry community.

PAPERS SHARED

ADDICTIONS

Emergency Department Visits Involving Hallucinogen Use and Risk of Schizophrenia Spectrum Disorder

https://pubmed.ncbi.nlm.nih.gov/39535804/

The study reveals that individuals with emergency department (ED) visits related to hallucinogen use are at a higher risk of developing schizophrenia spectrum disorders (SSD) compared to the general population and those with ED visits for other substances. These findings hold clinical and policy significance due to the increasing use of hallucinogens and the associated rise in ED visits.

COMPUTATIONAL NEUROPSYCHIATRY

The Algorithmic Agent Perspective and Computational Neuropsychiatry: From Etiology to Advanced Therapy in Major Depressive Disorder

https://pmc.ncbi.nlm.nih.gov/articles/PMC11592617/

Major Depressive Disorder (MDD) affects millions and computational neuropsychiatry offers new insights through mechanistic modeling. Using Kolmogorov theory of consciousness, we developed a model where algorithmic agents optimize an Objective Function for affective valence. Depression, marked by low valence, may arise from cognitive biases, dysfunctional Objective Functions, executive deficits, or adverse environments. By integrating algorithmic, dynamic systems, and neurobiological concepts, the model connects with brain circuits and functional networks, identifying potential causes and depression biotypes. The study also explores how brain stimulation, psychotherapy, and psychedelics can repair neural circuits and improve therapies using personalized models, emphasizing the necessity of personalized, data-driven approaches in treating MDD

EPILEPSY

Effectiveness of antipsychotic drug therapy for treating psychosis in people with epilepsy: A systematic review

https://pmc.ncbi.nlm.nih.gov/articles/PMC11647423/

This systematic review evaluated the effectiveness and adverse effects of antipsychotic drugs (APDs) for treating psychosis in individuals with epilepsy, following PRISMA guidelines. Searches spanned multiple databases up to June 2023, with title screening, abstract screening, full-text review, and data analysis conducted in duplicate. Due to significant heterogeneity, results were synthesized narratively. Thirteen studies with 1180 participants were included. Case series showed partial or complete improvement in psychotic symptoms with APD treatment, while cohort studies yielded mixed outcomes regarding antipsychotic use and seizure frequency. The evidence remains inconclusive, indicating a need for well-controlled studies to determine the role of APDs in managing psychosis in epilepsy.

Neuropsychological Outcomes in 6-Year-Old Children of Women With Epilepsy A Prospective Nonrandomized Clinical Trial

https://jamanetwork.com/journals/jamaneurology/fullarticle/2827125?guestAccessKey=b922a12f-2dc3-40f4-940b-eeb9a8ee2303&utm_source=silverchair&utm_medium=email&utm_campaign=article_alert-jamaneurology&utm_content=mostreadwidget&utm_term=120924&adv=000002330134

The NEAD study highlighted neurodevelopmental risks from valproate exposure during pregnancy, leading to changes in anti-seizure medication (ASM) use among reproductive-aged women. The MONEAD study, conducted at 20 epilepsy centers and involving 456 pregnant women, found no significant differences in Verbal Index Scores between children born to women with epilepsy (WWE) and healthy women (HW). Although many ASMs' teratogenic risks remain unclear, lamotrigine and levetiracetam are considered relatively safe. It's essential to inform women about ASM treatment risks for epilepsy and other conditions, addressing a critical healthcare disparity.

Insular Epilepsies. A pdf shared by Jesus. Available to view on the GNG website.

FUNCTIONAL NEUROLOGICAL DISORDER

Psychogenic nonepileptic seizures and psychogenic movement disorders: two sides of the same coin?

https://pubmed.ncbi.nlm.nih.gov/25337733/

Psychogenic nonepileptic seizures (PNES) and psychogenic movement disorders (PMD) are commonly encountered in Neurology practice and are classified in the DSM-5 as functional neurological disorders/conversion disorders. This review covers historical and epidemiological data, clinical aspects, diagnostic criteria, treatment, and prognosis of these patients. These conditions have been studied by neurologists and psychiatrists for many years, highlighting the vital connection between these specialties.

Variables associated with co-existing epileptic and psychogenic nonepileptic seizures: a systematic review

https://pubmed.ncbi.nlm.nih.gov/26987033/

This study reviews the demographic, epileptological, and psychiatric characteristics of patients with both epileptic seizures (ES) and psychogenic nonepileptic seizures (PNES), based on a systematic review of 48 abstracts from 2000 to 2015. Nine studies were included, revealing more females in PNES groups and that patients with both conditions used more antiepileptic drugs (AEDs). Concurrent ES and PNES were associated with earlier seizure onset, though EEG localization and ES type remained unclear. Somatoform, conversion, or cluster B personality disorders were more common among PNES patients. Differentiating these patients is challenging, with further research needed to distinguish solitary PNES from coexisting ES and PNES.

Improving first responders' psychogenic nonepileptic seizures diagnosis accuracy: Development and validation of a 6-item bedside diagnostic tool

https://www.sciencedirect.com/science/article/abs/pii/S1525505015005855

This study aimed to enhance the diagnosis of psychogenic nonepileptic seizures (PNES) by first responders to prevent misdiagnosing them as epileptic seizures (ES). Training on video assessments and diagnostic tools was provided to 53 nurses, 34 emergency physicians, 33 senior medical students, and 12 neurology residents. Although there were no significant differences among the professional groups, all participants showed improvement in their diagnostic abilities post-training. The research highlighted crucial clinical signs of PNES and validated a new diagnostic tool, demonstrating that educational interventions can significantly improve the diagnosis of PNES by first responders.

MOVEMENT DISORDER

Restless Legs Syndrome: clinical features, diagnosis and a practical approach to management

https://pn.bmj.com/content/17/6/444

Restless legs syndrome (RLS) is a chronic neurological disorder that interferes with rest and sleep. It has a wide range of symptom severity, and treatment is initiated when symptoms become bothersome. Dopamine agonists and calcium channel alpha-2-delta antagonists (gabapentin, gabapentin enacarbil, and pregabalin) are first-line treatments; calcium channel alpha-2-delta agents are preferred over dopamine agonists because they cause less augmentation, a condition characterised by symptom onset earlier in the day and increased intensity of RLS symptoms. While dopamine agonists can still be used as first-line therapy, the dosage should be kept as low as possible. Iron supplements are introduced when the serum ferritin concentration is ≤75 µg/L or if the transferrin saturation is below 20%. For severe or resistant RLS, a combined treatment approach can be effective. Augmentation can be very difficult to manage and lacks evidence-based guidelines.

Recognition and Management of Antipsychotic-Induced Parkinsonism in Older Adults: A Narrative Review

https://www.mdpi.com/2305-6320/8/6/24

Antipsychotic-induced parkinsonism (AIP) is a frequent adverse effect of antipsychotic medications in older adults, often complicating the differentiation from Idiopathic Parkinson's Disease (IPD). This review highlights that AIP is the second most common cause of parkinsonism after IPD and primarily affects the upper limbs symmetrically, frequently accompanied by orofacial dyskinesias and akathisia. Advanced age, female gender, high-potency first-generation antipsychotics, and their dosages are significant risk factors. Diagnostic imaging of striatal dopamine transporters can help distinguish AIP from IPD. Effective management strategies include dose reduction, withdrawal, or switching to second-generation antipsychotics, though further research is needed to understand AIP's pathophysiology and improve treatment approaches.

NEUROSCIENCE

Emotion regulation: From neural circuits to a transdiagnostic perspective

https://www.sciencedirect.com/science/article/pii/S0149763424004299

This meta-analysis suggests that emotion regulation should be considered a new RDoC domain, distinct from existing ones and sharing common pathophysiology across psychiatric disorders. Key brain areas, such as the inferior frontal gyrus, middle frontal gyrus, cingulate gyrus, and superior temporal gyrus, show unique activation patterns. The dorsomedial prefrontal cortex exhibits convergence across disorders, highlighting its therapeutic potential. These findings support recognizing emotion regulation as an

RDoC domain to improve our understanding of mental health and guide future research.

Breaking Down Binary Thinking in Neuropsychiatry

https://pubmed.ncbi.nlm.nih.gov/39628280/

The article "Breaking Down Binary Thinking in Neuropsychiatry," from *The Journal of Neuropsychiatry and Clinical Neurosciences* (December 2024), examines how binary thinking harms the field of neuropsychiatry. Authors Cooper J.J. and Schildkrout B. discuss how reducing complex issues to dualistic categories distorts understanding and perpetuates stigma. They highlight specific diagnostic and classification challenges, advocating for a more nuanced approach to neuropsychiatric conditions.

The Ketogenic Diet as a Transdiagnostic Treatment for Neuropsychiatric Disorders: Mechanisms and Clinical Outcomes

https://link.springer.com/article/10.1007/s40501-024-00339-4#

Many psychiatric disorders have shared metabolic pathways that exacerbate or cause psychopathology. The ketogenic diet is a transdiagnostic treatment that can not only address metabolic dysfunction, but can also ameliorate symptoms like depression, anxiety, mania, psychosis, and cognitive impairment. These effects suggest that the diet has the potential to serve as a non-pharmacological treatment option and ease the global disease burden of neuropsychiatric disorders.

NEURODEVELOPMENTAL

Executive function in children with neurodevelopmental conditions: a systematic review and meta-analysis

https://www.nature.com/articles/s41562-024-02000-9

This systematic review and meta-analysis investigated executive function (EF) delays in pediatric neurodevelopmental conditions, analyzing 180 studies across various NDCs. The results revealed a moderate effect size of EF delays compared to controls, with increased delays when comorbidities were present. Children with tic disorders had smaller EF delays, whereas those with ADHD showed greater delays in attention, response inhibition, planning, and working memory. Autism spectrum disorder children experienced significant set-switching delays compared to ADHD. These findings underscore the importance of EF delays in understanding brain function and symptom profiles, suggesting improved early interventions for better outcomes in children with NDCs.

Child Neurology: Simple Motor Tics Associated With Thalamic Ganglioglioma

https://www.neurology.org/doi/10.1212/WNL.0000000000210101?utm_source=twitter&utm_medium=organic

Tic disorders (TDs) are linked to CSTC circuit dysfunction, as illustrated by a case of a 9-year-old boy with infrequent tics in his right eye and mouth. Brain imaging revealed a mass in his left thalamus, and his symptoms resolved after lesionectomy, which identified ganglioglioma. Literature review found six similar cases of TDs associated with brain tumours showing both motor and vocal tics, often with conditions like OCD and ADHD. This case underscores the thalamus's role in TDs, providing insights into their structural basis.

Catatonia in Patients with Autism Spectrum Disorder

https://pubmed.ncbi.nlm.nih.gov/32471594/

This article examines catatonia in patients with Autism Spectrum Disorder (ASD). Catatonia, initially described in 1874, was erroneously classified as a subtype of schizophrenia until the DSM-5 reclassification in 2013. Although its etiology remains unknown, disruptions in gamma-aminobutyric acid are suggested as a potential cause. Symptoms are categorized into three types: motor, speech, and behavioral. Effective treatments include benzodiazepines and electroconvulsive therapy, highlighting the critical importance of timely diagnosis and intervention, which can sometimes be lifesaving.

Neurofeedback for Attention-Deficit/Hyperactivity Disorder A Systematic Review and Meta-Analysis

https://jamanetwork.com/journals/jamapsychiatry/fullarticle/2827733?guestAccessKey=62f659e6-dbcd-4f4d-8631-8cbaf43ecdd3&utm_source=twitter&utm_medium=social_jamapsyc&utm_term=15479594247&utm_campaign=article_alert&linkId=684897446

A meta-analysis of 38 randomized controlled trials involving 2472 participants aged 5-40 found no significant improvement in ADHD symptoms through neurofeedback, except for a small improvement in studies using standard protocols. Among five neuropsychological outcomes, only processing speed showed a small significant improvement. The heterogeneity was low to moderate, indicating consistent results. Neurofeedback did not show meaningful benefits for ADHD at the group level, suggesting future research should identify specific individuals who might benefit, focus on processing speed, and leverage precision medicine advancements like neuroimaging.

NEUROPHARMACOLOGY

Comparative effects of 18 antipsychotics on metabolic function in patients with schizophrenia, predictors of metabolic dysregulation, and association with psychopathology: a systematic review and network meta-analysis

https://www.thelancet.com/journals/lanpsy/article/PIIS2215-0366(19)30416-X/fulltext

Metabolic side effects vary among antipsychotics, with olanzapine and clozapine showing the most severe effects, while aripiprazole, brexpiprazole, cariprazine, lurasidone, and ziprasidone are milder. Factors like higher baseline weight, male sex, and non-white ethnicity increase the risk of metabolic changes, which may also correlate with mental health improvements. Treatment guidelines should be updated, but medication selection must be personalized based on clinical situations and patient/provider preferences.

β-Blocker Use and Delayed Onset and Progression of Huntington Disease

https://jamanetwork.com/journals/jamaneurology/fullarticle/2827461?guestAccessKey=0210638 6-181b-4a04-a849-463987a322bf&utm_source=silverchair&utm_medium=email&utm_campaign=jama_network&utm_content=network_highlights&utm_term=120824&adv=000002330134

Huntington disease (HD) is a neurodegenerative disorder caused by expanded CAG repeats in the HTT gene, leading to motor, cognitive, and psychiatric declines. A longitudinal study using data from the Enroll-HD database compared HD patients who used β -blockers to non-users and found that β -blockers significantly reduced the annualized risk of motor diagnosis in pre-symptomatic individuals and slowed symptom progression in those with manifest HD. The benefits are thought to stem from β -1 receptor antagonism, potentially inhibiting norepinephrine signaling, while no similar effects were observed with ACE inhibitors or angiotensin II receptor blockers. These findings suggest a role for noradrenergic transmission in HD and indicate that β -blockers may improve patient functionality and quality of life.

Metformin for the Prevention of Antipsychotic-Induced Weight Gain: Guideline Development and Consensus Validation

https://academic.oup.com/schizophreniabulletin/advance-article/doi/10.1093/schbul/sbae205/7919241?searchresult=1&login=false

Metformin is the only proven drug to prevent AIWG. This research presents a clinical practice guideline based on evidence. The algorithm recommends starting metformin with an antipsychotic or when certain criteria are met, and provides essential prescribing information. A shared decision-making package and evaluation of implementation barriers will help in its application.

NEUROINFLAMMATION

A blood test to predict prognosis in multiple sclerosis?

https://academic.oup.com/brain/article/147/12/3969/7915763?login=false

In the early 2000s, researchers identified spinal fluid proteins NfL and GFAP as key markers for disease activity in multiple sclerosis (MS). Advancements have enabled the detection of these proteins in serum, showing strong correlations with spinal fluid levels. Dr. Dhamidhu's team at the University of Melbourne has made significant contributions through the MiND study. Recent studies indicate that serum NfL levels, influenced by age, BMI, and disease activity, can predict worsening disability while GFAP levels may signal progression risk. Future integration of serum NfL testing in clinical practice could identify treatment failures and high-risk groups when combined with clinical and spinal fluid observations.

Autoimmune Encephalitis Misdiagnosis in Adults

https://jamanetwork.com/journals/jamaneurology/fullarticle/2799083?s=09

This study aimed to identify diseases that are often misdiagnosed as autoimmune encephalitis and understand potential reasons for such errors. Conducted across multiple specialized centers from 2014 to 2020, it included 107 patients who were initially diagnosed with autoimmune encephalitis but later found to have alternative conditions such as functional neurologic disorders, neurodegenerative diseases, and primary psychiatric diseases. The findings highlighted that many patients did not meet the diagnostic criteria for autoimmune encephalitis, and misdiagnosis often resulted from overinterpretation of positive serum antibodies and misinterpretation of various cognitive or psychiatric symptoms. The study concluded that misdiagnosis is common even in specialized centers, leading to unnecessary treatments and delayed correct diagnoses, emphasizing the need for a broad differential diagnosis when evaluating for autoimmune encephalitis.

NEURODEGENERATIVE

Cutaneous α-Synuclein Signatures in Patients With Multiple System Atrophy and Parkinson’s Disease

https://pmc.ncbi.nlm.nih.gov/articles/PMC10103107/

Multiple System Atrophy (MSA) is a progressive neurodegenerative disorder characterized by autonomic and motor dysfunction similar to Parkinson's Disease (PD). This study aimed to find biomarkers to differentiate MSA from other synucleinopathies like PD by examining phosphorylated α-synuclein in skin biopsies. The study included

31 MSA patients, 54 PD patients, and 24 controls, with findings showing that MSA patients had significantly higher and more widespread α-synuclein deposition compared to PD patients, leading to over 90% sensitivity and specificity in distinguishing these disorders. None of the controls had phosphorylated α-synuclein, highlighting its diagnostic potential.

Alzheimer's Association clinical practice guideline for the Diagnostic Evaluation, Testing, Counseling, and Disclosure of Suspected Alzheimer's Disease and Related Disorders (DETeCD-ADRD): Executive summary of recommendations for primary care

https://alz-journals.onlinelibrary.wiley.com/doi/10.1002/alz.14333

The outdated US guidelines for diagnosing cognitive impairment due to Alzheimer's disease (AD) or related dementias (ADRD) have been updated to include an evidence-based guideline empowering all clinicians, including primary care providers, to evaluate potential AD/ADRD patients. Experts used a modified-Delphi approach and reviewed 7374 publications to create steps for a patient-centered evaluation process. Key recommendations focus on characterizing, diagnosing, and communicating the patient's cognitive status, syndrome, and underlying brain disease to develop optimal care plans, aiming to improve patient outcomes across various healthcare settings. A companion article provides specialist recommendations.

Neuroinflammation in Alzheimer disease.

https://www.nature.com/articles/s41577-024-01104-7

Emerging evidence highlights the importance of immune processes in Alzheimer's disease, a major cause of dementia. Both innate and adaptive immune responses contribute to its pathology. This review examines the involved cell types, mechanisms, and influencing genetic and lifestyle factors, emphasizing the need to understand these elements to find therapeutic opportunities. Additionally, it discusses recent therapeutic strategies targeting neuroinflammation currently being tested in clinical trials.

Neuroimaging in Dementia: a practical guide

https://pn.bmj.com/content/13/2/92

In the UK, over 800,000 people suffer from various forms of dementia. Neuroimaging is becoming an essential tool in addition to clinical assessments for identifying dementia subtypes, which helps with treatment, prognosis, and care planning. Early imaging changes can also aid in the early detection and intervention of dementia. This review explores the use of neuroimaging tools in evaluating cognitive impairment and dementia.

Proposed research criteria for prodromal behavioural variant frontotemporal dementia

https://pubmed.ncbi.nlm.nih.gov/35349636/

This study developed and validated criteria for diagnosing prodromal behavioural variant frontotemporal dementia (bvFTD), termed 'mild behavioural and/or cognitive impairment in bvFTD' (MBCI-FTD). It involved 72 participants with prodromal bvFTD, assessed core features such as apathy, disinhibition, irritability, reduced empathy, repetitive behaviours, joviality, and appetite changes. Supportive features included neuropsychological deficits and poor social cognition. A diagnosis requires either three core features or two core plus one supportive feature, with probable MBCI-FTD requiring additional imaging or biomarker evidence. The criteria accurately classified most participants, with false positive rates below 10% in controls and 11-16% in prodromal Alzheimer's cases. Future research will refine these criteria using new biomarkers.

Hearing Loss, Incident Parkinson Disease, and Treatment With Hearing Aids

https://jamanetwork.com/journals/jamaneurology/fullarticle/2824569?guestAccessKey=fe8a9b02-dae9-4e69-b6db-c30aad0fa372&utm_source=silverchair&utm_medium=email&utm_campaign=article_alert-jamaneurology&utm_content=etoc&utm_term=120924&utm_adv=000002330134

This study examines the potential link between hearing loss and Parkinson's disease (PD) by analyzing health records from 3,596,365 US veterans who underwent audiograms between 1999 and 2022. The findings suggest that varying levels of hearing loss are associated with an increased risk of developing PD over ten years. However, the use of hearing aids may reduce this risk. The study highlights the importance of screening for hearing loss and promoting hearing aid use to lower PD incidence, though further research is needed to understand the mechanisms behind this association.

Neuromodulation

Revisiting the effects of rTMS over the dorsolateral prefrontal cortex on pain: An updated systematic review and meta-analysis

https://www.sciencedirect.com/science/article/pii/S1935861X24001268

The current study updates the effects of repetitive Transcranial Magnetic Stimulation (rTMS) over the dorsolateral prefrontal cortex (DLPFC) on chronic pain, incorporating 36 studies. It reveals no significant effect on neuropathic pain but identifies a medium-to-large analgesic effect for migraines extending up to six weeks. Additionally, DLPFC-rTMS may improve the emotional aspects of pain. The systematic meta-analysis

supports the use of DLPFC-rTMS for chronic pain management and highlights its potential benefits for migraines and associated emotional pain.

Real-world effectiveness of a single-day regimen for transcranial magnetic stimulation using Optimized, Neuroplastogen-Enhanced techniques in Depression (ONE-D)

https://www.researchsquare.com/article/rs-5679327/v1

A new study presents a one-day transcranial magnetic stimulation (TMS) regimen for treating medication-resistant unipolar depression, involving 20 sessions of iTBS targeting the left DLPFC with neuroplasticity enhanced by d-cycloserine and lisdexamfetamine. Thirty-two adults completed the treatment with no serious adverse events. Results showed significant improvements in depression and anxiety scores over six weeks, with high response and remission rates maintained at week 12. The findings suggest that delivering an entire TMS course in one day is feasible, safe, and effective, potentially offering an alternative to conventional multi-session regimens.

Repetitive transcranial magnetic stimulation focusing on patients with neuropathic pain in the upper limb: A randomised sham-controlled parallel trial

https://www.nature.com/articles/s41598-024-62018-x

There was no significant effect on the interaction between the treatment group and time point. Pain-related disability score improved, but other assessments showed no differences. No serious adverse events were observed. This study did not show significant pain relief; however, active rTMS tended to provide better results than sham.

Application of repetitive transcranial magnetic stimulation in neuropathic pain: A narrative review

https://www.mdpi.com/2075-1729/13/2/258

rTMS is a potentially effective and safe treatment of neuropathic pain. Current evidence supports the use of 10 Hz HF-rTMS of the primary motor cortex to reduce neuropathic pain, especially in patients with SCI, diabetic neuropathy and post-herpetic neuralgia. However, the lack of standardized protocols impedes the universal use of rTMS in neuropathic pain. rTMS is hypothesized to achieve analgesic effects by upregulating the pain threshold, inhibiting pain impulse, modulating the brain cortex, altering imbalanced functional connectivity, regulating neurotrophin and increasing endogenous opioids and anti-inflammatory cytokines. Further studies are warranted to explore the differences in the parameters/settings of rTMS for neuropathic pain caused by different diseases.

A Pilot Trial of Longitudinal Repetitive Transcranial Magnetic Stimulation (rTMS) for Chronic Neuropathic Pain

https://clinicaltrials.ucsf.edu/trial/NCT05593237

rTMS is FDA-approved for major depressive disorder, OCD, and migraine, and can reduce pain scores when applied to the contralateral motor cortex (M1). However, studies on rTMS for chronic neuropathic pain show mixed and short-term results, with optimal treatment parameters still unclear. This study aims to assess the efficacy of high-frequency rTMS at M1 for chronic neuropathic pain and use fMRI to find alternative targets for non-responders. The goal is to evaluate multi-session high-frequency M1 TMS for pain relief and explore patient characteristics that predict responsiveness to M1 rTMS.

Revisiting the effects of rTMS over the dorsolateral prefrontal cortex on pain: An updated systematic review & meta-analysis

https://www.sciencedirect.com/science/article/pii/S1935861X24001268

The study updated the effects of DLPFC-rTMS on chronic pain by including new clinical trials, especially on neuropathic pain and migraine. The updated meta-analysis found no reduction in neuropathic pain but showed a medium effect on migraine in both medium-term and long-term follow-ups. Notably, there was a significant decrease in pain-related negative emotions after DLPFC-rTMS treatment.

The updated meta-analysis indicated no significant analgesic effect of DLPFC-rTMS on neuropathic pain, aligning with recent large clinical trials but contradicting our previous findings. The three largest new studies showed null effects, suggesting our earlier positive results were likely driven by small sample sizes.

TRAUMATIC BRAIN INJURY

The association between female sex and depression following traumatic brain injury: A systematic review and meta-analysis

https://www.sciencedirect.com/science/article/abs/pii/S0149763424004214

A systematic review and meta-analysis of 13 studies with 449,471 participants found that women are significantly more likely to develop depression after traumatic brain injury (TBI) compared to men, with a relative risk of 1.4. This increased risk was consistent even in mild TBI cases and for depression occurring 24 months or more after the injury, suggesting that TBI raises the likelihood of post-TBI depression regardless of its severity.

Multicenter Evaluation of Memory Remediation in Traumatic Brain Injury With Donepezil: A Randomized Controlled Trial

https://psychiatryonline.org/doi/10.1176/appi.neuropsych.20230055

The MEMRI-TBI-D study assessed donepezil's effectiveness in improving verbal memory impairments in TBI patients. Over 10 weeks, 75 participants received either donepezil or a placebo. Donepezil significantly improved verbal learning and processing speed, with 42% of participants responding to treatment compared to 18% for the placebo. Although donepezil had higher rates of adverse events like diarrhea and nausea, the results indicate it is a viable option for treating severe memory impairments post-TBI with an acceptable safety profile.

Relationship Between Posttraumatic Headache and Depression After Mild Traumatic Brain Injury

https://psychiatryonline.org/doi/10.1176/appi.neuropsych.20230143

This study from the HeadSMART project analyzed 265 adult mTBI patients to explore the link between post-traumatic headache (PTH) and depression. Using the Rivermead Post-Concussion Symptoms Questionnaire for PTH within 24 hours of injury and the Patient Health Questionnaire–9 for depression at one, three, and six months post-injury, it found that those with acute PTH (aPTH) were more likely to have ongoing PTH and increased depressive symptoms. This suggests early occurrence of PTH predicts higher risks for persistent headaches and depression, highlighting the need for careful symptom monitoring during recovery.

New framework for the continuum of concussion and functional neurological disorder.

https://bjsm.bmj.com/content/early/2024/12/06/bjsports-2024-108154

The article explores the growing integration of concussion-related research and functional neurological disorder (FND) within medical neuroscience, noting significant progress in understanding and managing concussions over the past two decades. It addresses the challenge of persistent post-concussion symptoms (PPCS) experienced by 15-30% of patients and suggests a connection between PPCS and FND, which involves involuntary neurological symptoms not attributable to structural diseases. The distinction between FND and malingering is highlighted, as well as recent efforts to improve diagnosis based on specific characteristics. FND is prevalent in neurology clinics, mainly affects females, and typically begins in adulthood. The article underscores the importance of applying diagnostic strategies for FND to improve care and research.

CASES

Case 37-2024: A 41-Year-Old Man with Seizures and Agitation

https://www.nejm.org/doi/full/10.1056/NEJMcpc2402500?query=neurology-neurosurgery

A 41-year-old male with a 15-year history of temporolimbic seizures, and episodes indicative of seizures at ages 4 and 19, began exhibiting psychotic symptoms during his evaluation in the epilepsy monitoring unit (EMU). Sixteen hours after experiencing a cluster of five seizures, he developed auditory hallucinations and unusual verbalizations, followed by paranoid and aggressive behavior over the subsequent three days.

Additional reported behaviors included aggression following the second seizure in the EMU, confusion while wandering on the roadside two weeks prior to admission, and atypical seizures characterized by preserved awareness and asymmetric, non-rhythmic movements during his stay. Behavioral changes in individuals with epilepsy taking antiseizure medications can result from various factors. The timing of these changes relative to seizures is crucial. This patient exhibited both immediate and delayed postictal behavioral changes.

The risk of psychosis in individuals with epilepsy is eight times higher than in the general population. This relationship is bidirectional; individuals with chronic psychotic disorders have a risk of developing epilepsy that is two to three times greater than that of the general population. The patient experienced psychosis 16 to 24 hours after regaining normal mental function following focal impaired awareness seizures. Key factors include bilateral independent seizure foci and a seizure history of at least 15 years, supporting a diagnosis of postictal psychosis. The patient may also have had poriomania, and forced normalization of the EEG might have occurred.

According to DSM-5-TR, the diagnosis is a psychotic disorder due to another medical condition (epilepsy) with delusions. Treatment for postictal psychosis involves managing both seizures and psychotic symptoms. Currently, there are no published trials for these treatments, so decisions rely on expert opinion and case reports. Initially, verbal de-escalation should be attempted to manage agitation. If unsuccessful, tranquilizing medications, such as benzodiazepines, may be used, as they also reduce seizure activity. Antipsychotics may be prescribed alongside benzodiazepines. It is essential to distinguish postictal psychosis from interictal psychosis and primary psychotic disorders, as only the latter conditions require long-term antipsychotic treatment.

Wernicke Encephalopathy Presenting With Hearing Loss and Vision Loss in a Nonalcoholic Patient

https://pmc.ncbi.nlm.nih.gov/articles/PMC11583105/

Wernicke encephalopathy, caused by thiamine deficiency, leads to significant morbidity and mortality. A 25-year-old woman presented with abdominal pain, nausea, vomiting, weight loss, and sore throat, along with acute neurological symptoms: binocular diplopia, hearing loss, vision loss, and difficulty walking. Examination revealed bilateral vision loss with light perception, ophthalmoplegia, hearing loss, gait ataxia, and areflexia. Laboratory tests showed multiple vitamin deficiencies. MRI indicated increased T2 signal in the bilateral medial thalami and periaqueductal regions. Intravenous thiamine treatment led to rapid clinical and radiological improvement.

A Neurologist Learned He Had Alzheimer Disease 8 Years Ago—Here's What He Wants People to Know

https://jamanetwork.com/journals/jama/fullarticle/2820539?guestAccessKey=42bef151-7a3d-4514-a698-bbc718baf6b1&utm_source=silverchair&utm_medium=email&utm_campaign=article_alert-jama&utm_content=mostreadwidget&utm_term=121024&adv=000002330134

Daniel Gibbs, MD, PhD, who has been living with Alzheimer's for eight years, continues to educate others despite his diagnosis. His first symptom appeared in 2006 when he lost his sense of smell, initially attributed to aging. A DNA test in 2012 revealed he had two copies of the APOE ε4 allele, increasing his Alzheimer's risk. Now retired from Oregon Health & Science University, Gibbs shares his experiences through writing and speaking, including his book "A Tattoo on My Brain" and recent essays in "Dispatches From the Land of Alzheimer's." Despite slow cognitive decline, Gibbs uses notes for interviews due to memory issues and has delegated financial responsibilities to his wife, Lois Seed. He recently discussed his health, misconceptions about Alzheimer's, and efforts to combat the disease with JAMA Medical News.
20:13

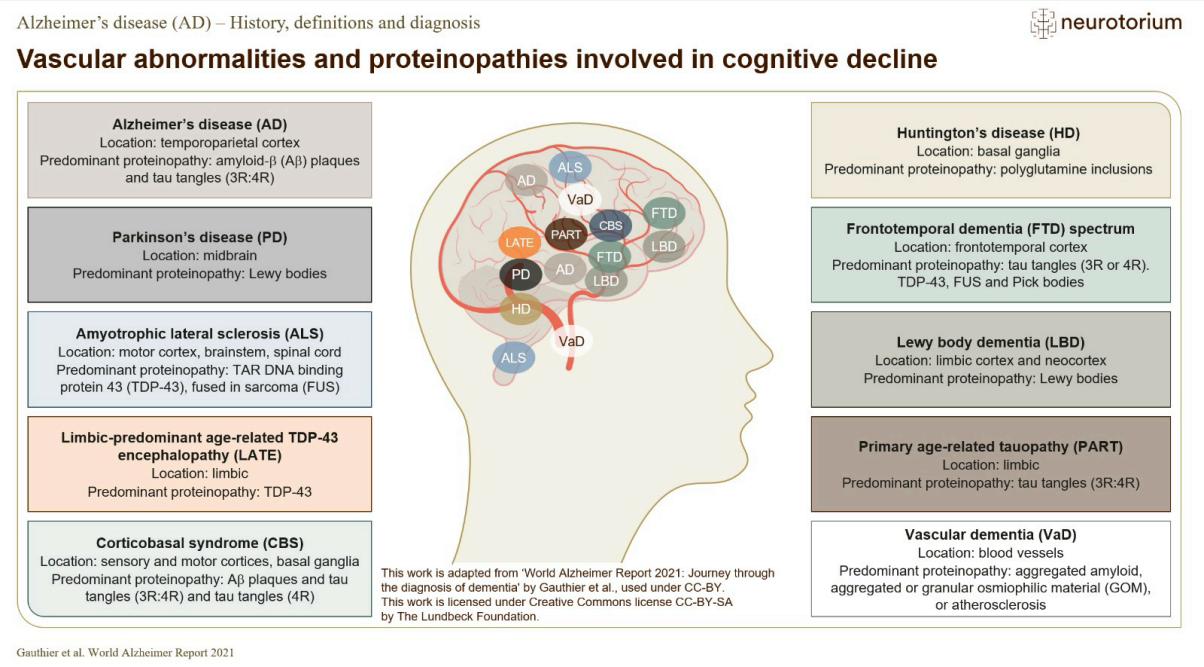
Who manage girls, women of childbearing potential, and men treated with valproate*
https://medicinesauthority.gov.mt/file.aspx?f=6919

FROM TWITTER

Functional Neurological Disorder (FND) involves complex brain mechanisms, where the brain's threat detection system can interfere with movement areas, leading to symptoms like pain and fatigue. Educational resources, such as those by Prof. Lorimer

Moseley and Prof. Jon Stone, explain predictive processing and its relation to FND. Effective management includes combining predictive processing models with a bio-psychosocial approach, addressing attention and fear, retraining movements through neurophysiotherapy, gradual exposure to activities, persistence, and shifting beliefs about pain and spasms. Neuroscientific insights reveal that the brain can generate pain signals even without physical damage.

For more details, follow @TomPlender.



CLINICAL AND NON CLINICAL DISCUSSIONS

Case of Catatonia

A 12-year-old diagnosed with Joubert syndrome and catatonia responded significantly to lorazepam and memantine treatment, but did not fully recover her speech and social interactions. After 18 months, her mother noticed improved spontaneous speech when the neurologist reduced lorazepam from 13 mg to 9 mg. The neurologist is considering weaning her off completely, while the original doctor recommends maintaining a low dose, citing adult cases which often require ongoing low-dose treatment for modest responses.

This case involves high doses of benzodiazepines for catatonia, though no specific cause was identified apart from cerebellar pathology. Concerns about lorazepam's long-term impact on brain development suggest a cautious weaning process. Memantine proved effective after Amantadine failed. The patient has been referred for multidisciplinary assessments and treatments to support rehabilitation. Insights or

experiences regarding similar cases in children are sought due to limited evidence in this population.

Discussion on EEG and Neuroimaging

To improve skills in reading imaging and EEG, suggestions include observing fellows and rotating through the electrophysiology department. Psychiatry residents receive systematic EEG interpretation training, and programs should add rotations in neuroimaging and pediatric genetics. Helpful resources include a YouTube playlist and courses from the International League Against Epilepsy.
For neurologists, focusing more on imaging than EEG is advised. Radiopedia's paid online courses have positive feedback. EEGs are useful in various conditions beyond seizures, though they have specific relevance to epilepsy and encephalopathy. Further learning can be pursued through the Oxford Clinical Neuroimaging Course, which costs around £100 and includes fMRI instruction.

ADHD Medication and Risk of Epilepsy

A recent investigation into ADHD medications and seizure risks found no significant increase in seizure frequency due to these medications. However, some patients experience heightened seizures when short-acting stimulants wear off. While stimulants have potential seizurogenic properties, ADHD medications are not contraindicated for individuals with epilepsy, and many clinics manage such patients using stimulants without issues.

Questions remain about whether psychostimulants lower the seizure threshold enough to impact daily practice, though current data suggests they are generally safe. One study showed no increased risk of acute seizures with ADHD medication among those with epilepsy when epilepsy is well-controlled with antiepileptic drugs (AEDs). Analysis of 21,557 individuals with a history of seizures found no significant difference in seizure rates before and after starting ADHD medication.

The conclusion drawn is that epilepsy should not automatically prevent patients from receiving pharmacologic treatment for ADHD.

Prescribing Valproate in Men

The discussion covers international practices for prescribing valproate (VPA) in men. In the UK, two practitioners must approve VPA prescriptions for patients under 55, involving recommendations like contraception use and treatment adjustments before conception. In the US, there are no such restrictions, but implantable contraceptives and detailed risk documentation are common. New guidelines at a children's hospital suggest getting a second opinion for VPA prescriptions. UK guidelines advise informing male patients about risks, using contraception, and discussing family planning with specialists. RANZCP guidelines are more lenient, while ABN guidelines do not require

specialist reviews. ESA supports EMA guidelines but notes incomplete research on autism/ADHD risk, recommending informing patients about this uncertainty.

Neuropsychiatry Services Set Up – an advice

The newly established specialised neuropsychiatry unit is seeking to delineate diagnostic responsibilities between the neuropsychiatrist and the Consultation-Liaison (CL) service. The services offered include Neuropsychiatry, Old Age Psychiatry, Psychiatric Oncology, and Palliative Care.

The Neuropsychiatry team collaborates extensively with the Neurosciences and Oncology departments, emphasising teamwork and multidisciplinary care. Although academic rounds are not conducted, effective communication is maintained with other specialists and administrative staff to manage complex cases efficiently.

In India, Neuropsychiatry is not officially recognised as an independent specialty. At the hospital, Pediatric Neuropsychiatry is addressed in conjunction with the children's hospital for specialised care. The team adheres to the Mental Health Care Act of 2017 for inpatient admissions and seeks external assistance when necessary.

An unusual case of Multiple Myeloma

A 76-year-old woman with a history of Multiple Myeloma, who is currently receiving chemotherapy, has experienced a rapid decline in cognitive functions, along with behavioural changes such as apathy and paranoia. She also exhibits potential hallucinations and motor impairments. The differential diagnosis includes Frontotemporal Dementia with Parkinsonism (FTDP) versus neurodegenerative causes associated with her myeloma. An MRI Brain Plain and PET CT Brain have been ordered for further assessment. A previous PET CT indicated uptake in the lumbosacral vertebrae but showed no brain involvement. There is a notable family history of dementia and depression. Her ongoing treatment regimen includes Bortezomib. Coordination with oncology is essential as investigations continue into possible paraneoplastic neurological syndrome and involvement of the cerebellum.

Vyvanse and delusional parasitosis

Has anyone seen delusional parasitosis in the context of Vyvanse or medicinal cannabis?

Certainly reported with amphetamine and other stimulant use:
https://onlinelibrary.wiley.com/doi/10.1155/2012/624235

https://www.sciencedirect.com/science/article/pii/S0033318214000516

A nonverbal autistic patient with ADHD started scratching frequently after beginning Ritalin, without showing an allergic reaction. The behavior was suspected to be similar to formication.

FTD and role of investigations

The discussion seeks advice on diagnostic tools for detecting behavioural variant frontotemporal dementia (bvFTD) and guidance on genetic testing availability in Victoria. It recommends referring patients to neurogenetics services for genetic counselling and accessing funding for tests like C9orf72, exome/genome sequencing, despite long wait times. Recent changes have affected single gene/repeat expansion testing in Victoria.
https://www.theaftd.org/wp-content/uploads/2018/03/Table-3-International-consensus-criteria-for-behavioural-variant-FTD.pdf

https://www.gsnv.org.au/find-a-genetics-clinic/

RLS and Tardive Dyskinesia

The discussion differentiates Restless Leg Syndrome (RLS) from tardive akathisia. RLS worsens in the evening, while akathisia persists throughout the day and affects the whole body.

A case involves a patient with depression and anxiety who developed severe anxiety, RLS, and suicidality after a subdural hematoma. Despite multiple admissions and treatment with Cymbalta and Trazodone, only electroconvulsive therapy (ECT) improved their agitation and suicidality, not RLS. The patient also has cognitive issues and could not undergo lumbar puncture or MRI due to agitation.
Traumatic brain injury (TBI) can cause akathisia, which was induced by venlafaxine in one participant. Cymbalta has been observed to cause agitation and akathisia, especially at higher doses. Opiate analgesia post-fall may also contribute to symptoms like panic episodes, depression, aggressive outbursts, suicidality, and cognitive impairment. Symptoms appeared before duloxetine use, though opioid analgesia might have been briefly administered.

A review in Practical Neurology suggests that without orobuccal dyskinesia, tardive movement disorders are less likely if other differentials exist.

Restless legs syndrome (RLS) disrupts rest and sleep. It should be considered when patients report leg or arm discomfort in the evening/night or insomnia.

Treatment starts when symptoms become bothersome. First-line options include dopamine agonists and calcium channel alpha-2-delta antagonists (gabapentin, gabapentin enacarbil, pregabalin), with the latter preferred to avoid augmentation. Iron supplements are recommended if serum ferritin is ≤75µg/L or transferrin saturation is

below 20%. Combined treatments may help severe or resistant RLS, though managing augmentation remains challenging.

An inquiry was made about magnesium supplements, and it was responded that they are ineffective for cramps. Low-dose opioids like codeine were recommended instead.

TMS for chronic neuropathic Pain

The discussion centers around the effectiveness of Transcranial Magnetic Stimulation (TMS) for chronic neuropathic pain.

- One participant confirms TMS is effective for conditions like Fibromyalgia and Complex Regional Pain Syndrome (CRPS), highlighting the use of Functional Magnetic Stimulation for quicker pain relief.
- A study on repetitive transcranial magnetic stimulation (rTMS) for upper limb neuropathic pain shows improvements in pain-related disability scores but no significant overall pain relief. Active rTMS outperforms sham treatments, with no serious adverse events reported.
- A narrative review supports 10 Hz high-frequency rTMS of the primary motor cortex for spinal cord injury (SCI), diabetic neuropathy, and post-herpetic neuralgia. However, the lack of standardized protocols limits its universal application. The review suggests various mechanisms for rTMS's analgesic effects, including increasing pain thresholds, inhibiting pain impulses, modulating brain cortex activity, altering functional connectivity, regulating neurotrophin levels, and boosting endogenous opioids and anti-inflammatory cytokines. Further research is necessary to explore variations in rTMS parameters for different conditions.
- A pilot trial evaluates high-frequency rTMS to the primary motor cortex (M1) for chronic neuropathic pain, aiming to assess pain-relieving efficacy and identify alternative targets using fMRI for non-responders. While rTMS shows pain reduction when applied to the contralateral motor cortex (M1), studies indicate variable and short-lived benefits. There is a need to determine optimal rTMS parameters, treatment duration, and the relationship to pain etiology.
- A systematic review and meta-analysis on the effects of Dorsolateral Prefrontal Cortex-rTMS (DLPFC-rTMS) on pain, incorporating new clinical trials, suggests that DLPFC-rTMS does not significantly reduce neuropathic pain but has a medium effect on migraine and reduces pain-related negative emotions. The null effect on neuropathic pain aligns with recent large clinical trials, indicating earlier positive outcomes were driven by small-sample studies.

Overall, the conversation underscores the varying efficacy of rTMS in treating chronic neuropathic pain and highlights the necessity for further research to standardize protocols and identify effective treatment parameters.

Is it reasonable to prescribe SSRI for anxiety or mood prior to seizure evaluation

One participant inquired about the reasonableness of trying an SSRI before a neurology appointment for potential seizures, believed to be anxiety attacks. Another recommended obtaining a serum prolactin level within one hour of an episode to rule out partial seizures, noting that frontal lobe seizures can present in various forms. They also advised considering the patient's medical history when choosing an antidepressant.

Another expert explained the difference between panic attack-related anxiety, which builds over minutes and peaks around 15 minutes, and seizure-related anxiety, which is brief, lasting only seconds to a few minutes. It was pointed out that there seems to be no downside to treatment with SSRIs, and gratitude was expressed for the responses.

It was noted that SSRIs are commonly used for anxiety or depression in epilepsy patients and are generally safe. Clobazam was suggested as a safe alternative beneficial for both anxiety and seizure protection, though caution was advised as SSRIs like fluoxetine may trigger seizures. There was surprise at the use of clobazam for anxiety, but the connection between anxiety and seizures involving the medial temporal lobe and autonomic nervous system was explained, complicating differentiation.

A warning was given that if the patient suspects they are experiencing seizures, clobazam could obscure the diagnosis and increase health anxiety. Investigating the possibility of seizures prior to treatment was recommended, as symptoms alone are unreliable for differentiation. Other symptoms such as prodrome, triggers, aura, postictal recovery, and risk factors should be considered to justify a neurology referral. It was noted that patients with non-epileptic attack disorder (NEAD) often believe they have seizures even after multiple scans and EEGs, and being told they do not have epilepsy can be distressing; clobazam helps in this transition. The importance of ruling out iatrogenic causes of anxiety first, including akathisia or medication-induced anxiety, was emphasized. Subtle or non-motor events are often not investigated with video EEG or antiepileptic drugs unless there is compelling evidence.

A low-dose clobazam (5-10mg) was recommended as initial treatment for suspected panic attacks because benzodiazepines provide immediate management, unlike SSRIs which require time to take effect. SSRIs were noted to be generally safe for epilepsy patients, and it was proposed to taper off clobazam over 6-12 weeks after initiating an SSRI if no true seizures are detected. While acknowledging concerns about confusion if a true seizure occurs, it was noted that low doses mitigate this risk. The risks of dependence and withdrawal associated with benzodiazepines were mentioned, but clobazam presents a lower risk. It was shared that at one cancer center, they administer 5mg clobazam to prevent claustrophobia during radiation therapy, assessing whether the anxiety is situational or requires comprehensive treatment.

A case of acute behaviour disturbance

Patient Details:

- Age: 83-year-old woman

- Health History: Previously treated for vulva cancer with surgery and chemotherapy a year ago. Long history of rheumatoid managed successfully, leading to recent reduction and cessation of steroids.

Presentation:

- Acute behavioral disturbances starting in October.
- Behavior: Pleasantly psychotic with increased psychomotor activity, hyperorality, compulsive non-purposeful behaviors (e.g., adding soap to water and attempting to drink it), obsessional cleanliness, and picking behaviors.
- Delusions: Beliefs around controlling objects with hand movements.
- Cognitive Status: Oriented with intact memory.

Investigations:

- Chronic frontal and thalamic infarcts observed; other scans unremarkable.
- Inflammatory panel, EEG, and lumbar puncture (LP) negative except for oligoclonal bands in CSF.
- No significant family history.
- Trial of antipsychotics resulted in no symptom change except for extrapyramidal side effects (EPSE).

Differential Diagnosis:

- Autoimmune encephalitis (due to oligoclonal bands in CSF and symptomatology). Suggested antibody testing: anti-NMDA, anti-LGI1, anti-GAD.
- Frontotemporal dementia (FTD) based on behavioral symptoms. Recommended neuroimaging for frontal and temporal lobe atrophy.
- Steroid withdrawal syndrome due to recent cessation of long-term steroid use. Test for adrenal insufficiency: serum cortisol, ACTH stimulation test.
- Possible Kluver-Bucy syndrome considering the clinical presentation.
- Primary oncological malignancy or disease progression.

Management Recommendations:

- Autoimmune, endocrine, and metabolic workup.
- MRI brain with contrast and whole-body PET scan to check for metastasis or subtle lesions.
- Consider re-commencing steroids if adrenal insufficiency is confirmed.
- Immunomodulation therapy (IV methylprednisolone, IVIG, plasmapheresis) if autoimmune encephalitis supported.
- SSRIs recommended for managing obsessive and compulsive behaviors.
- Neuropsychological testing to assess executive function, memory, and personality changes.

POLLS

The last poll before tomorrow's talk. What's your understanding of Neuropsychiatric symptoms of Parkinson's disease?

Select one or more

- Depression is common at disease onset and increases in prevalence throughout the disease course. — 20
- Anxiety presents as generalised anxiety, can also present as panic attack, social and agoraphibia. — 12
- The frequency of psychosis increases with disease progression and is most common in advanced stage. — 16
- Increased risk of impulse control is seen more in patients who have received dopamine agonists. — 23
- Dopamine Dysregulation and punding is more associated with high doses of levodopa drugs. — 7
- Apathy can be an independent symptom unrelated to depression and cognitive impairment. — 21

19:42 ✓

Carrying on from last poll. What are the differentiating features of functional tics from tics of TS?

Select one or more

- FTs are less likely to occur in the head and tend to involve the extremities unlike TS. — 5
- FTs are tend to be complex, severe and insuppressible unlike TS which can be suppressed for few sec. — 14
- FTs tend to occur more often in female and present at a later age, unlike early onset and male in TS — 8
- FTs tend to have an acute onset unlike TS with gradual onset. — 9
- FTs can interfere with normal actions unlike tics of TS. — 1
- Less often have a pre monitory urge. — 3
- Medications are often unhelpful. — 3

22:07 ✓

Based on the case described by Tamara who had a cerebellar lesion. Let's try to refresh our knowledge around neuropsychiatry of cerebellar lesions. Neuropsychiatric symptoms of cerebellar lesion could include?

Select one or more

- Distractibility 10
- Disinhibition 10
- Apathy 7
- Lack of empathy 6
- Irritability 7
- Obsessive behaviours 2
- Dysphoria 1
- Anxiety 1
- Depression 3
- Psychosis 2
- Visuo-spatial deficits 13
- Linguistic deficits 7

Let's refresh our knowledge before our upcoming academic conference. As per DSM 5 criteria, Tourette Syndrome Diagnosis requires the following

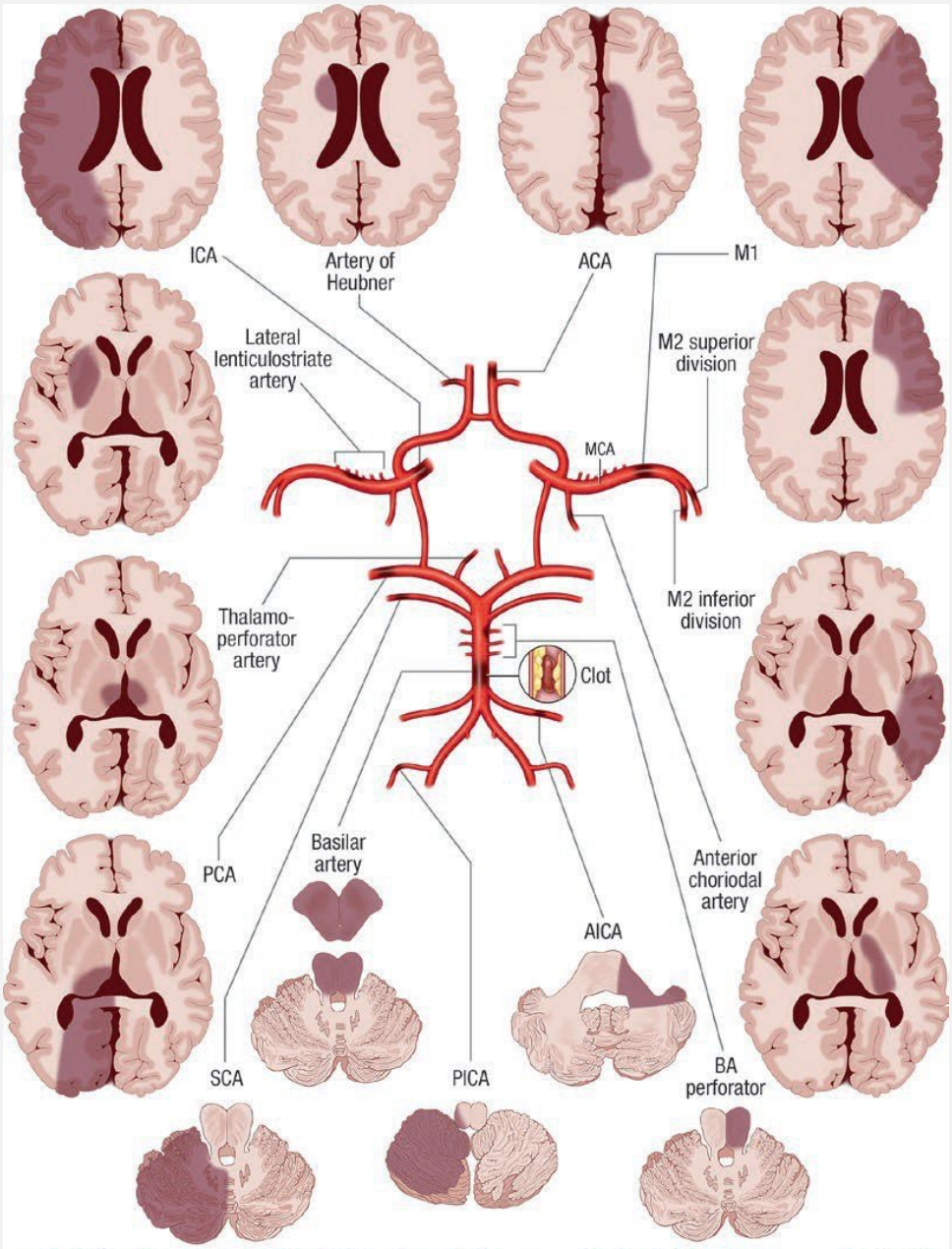
Select one or more

- Have two or more motor tics and at least one vocal tic. 12
- Have had tics for at least a year. 7
- The tics can occur many times a day (usually in bouts) nearly every day or off and on. 4
- Have tics that begin before age 18 years. 7
- Have symptoms that are not due to medicine or other drugs or due to having another medical condition 10

07:27 ✓

Summary of talks from 2nd Annual Conference

This was a very well attended event, with 150 people participating. A lot of discussion took place. We are grateful to the presenters for finding time to help with this event. Videos are available on the INA platform.



ICA: Fluctuating hemiplegia, hemianesthesia, stupor, silent Heubner: Faciobrachial weakness ACA: Hemiparesis (proximal shoulder, distal leg) Lenticulostriate: Abulia or disinhibited Thalamoperforator: Apathy, amnesia, clumsiness PCA: Visual field cut, limb numbness, alexia (left) SCA: Dysmetria, contralateral pain loss, CN IV palsy, Horner's syndrome PICA: Nystagmus, ataxia, dysarthria Basilar: Anisocoria, skew, tetraparesis, coma, locked-in AICA: Dysarthria, ataxia, hemiparesis Basilar perforator: Ataxic hemiparesis, dysarthria, clumsy hand Anterior choroidal: Hemiplegia without aphasia or gaze preference MCA M1: Eye deviation, hemiplegia, global aphasia or neglect MCA M2 superior: Aphasia, hemineglect, hemiparesis MCA M2 inferior: Visual field cut, Wernicke aphasia, fingeragnosia, alexia

TABLE 5 Comparison of selected brief cognitive tests to detect cognitive impairment or dementia.

Name	MoCA	MMSE	Mini-Cog	SLUMS	M-ACE	GPCOG
Time to administer (minutes)	10–15	7–10	2—4	7–10	6–9	2–5 patients 1–3 informant
Cutoff for potential cognitive impairment	< 26/30 (1 point added to raw score if ≤ 12 years of education	< 26/30	≤ 3/5	< 27/30 for ≥ 12 years of education < 25/30 for ≤ 12 years of education	Two suggested: < 26/30 has 92% positive predictive value (PPV); < 22 has 100% PPV for dementia (62% sensitivity, 100% specificity)	< 5 patient Or < 8 patient and < 4 informants
Sensitivity for cognitive impairment	90%	81%	76%	96%	80%–85%	85%
Specificity for cognitive impairment	87%	82%	89%	61%	85%–87%	86%
Cognitive domains assessed						
Complex attention	✓	✓		✓		
Executive function	✓		✓	✓	✓	✓
Learning and memory	✓	✓	✓	✓	✓	✓
Language	✓	✓		✓	✓	
Visual construction	✓	✓	✓	✓	✓	✓
Orientation	✓	✓		✓	✓	✓
Available in multiple languages?	Yes	No	Yes	No	No	Yes
Other considerations	● Index scores can be calculated to better inform domain-specific performance ● Mixed findings in people with low education	● Well-known among clinicians ● Purchase required ● Limited evidence for sensitivity to detect mild changes	● Simple scoring algorithm ● Limited evidence for sensitivity to detect mild changes	● Evidence for sensitivity to detect mild changes ● Largely studied in veteran populations	● Provides broad range for learning and memory performance (14 points) ● Limited direct assessment of language—only verbal fluency for semantic animal category tested	● Validated in primary care settings ● Limited evidence for sensitivity to detect mild changes

Abbreviations: GPCOG, General Practitioner Assessment of Cognition; M-ACE, Mini Addenbrooke's Cognitive Exam; MMSE, Mini-Mental State Examination; MoCA, Montreal Cognitive Assessment; SLUMS, St. Louis University Mental Status.

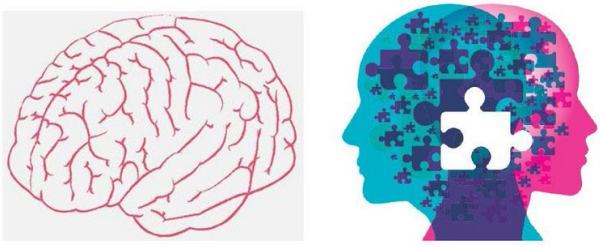
https://www.sydney.edu.au/brain-mind/resources-for-clinicians/dementia-test.html

Research – Call for participants

Hi everyone. Attached is a flyer about a psychedelic-assisted physiotherapy in FND study we're conducting here in Australia. We're looking for patients who still have motor symptoms despite having undergone physiotherapy. The trial is based in Melbourne, so anyone from outside Melbourne will need to organise and fund their own travel and be sufficiently committed and prepared to participate. Thanks for considering, and I'm happy for anyone to message me with any questions!

Other functional symptoms are acceptable, but participants must have at least some motor symptoms that could respond to physiotherapy or our treatment.
https://x.com/davidlewisperez/status/1864678381356257539?s=48
https://cony.comtecmed.com/

Brain Medicine:
Addressing Biopsychosocial Complexity



David L. Perez MD, MMSc, FAAN, FANPA, FANA, FAPA
Chief, Division of Behavioral Neurology & Integrated Brain Medicine
Departments of Neurology & Psychiatry
Massachusetts General Hospital, Harvard Medical School
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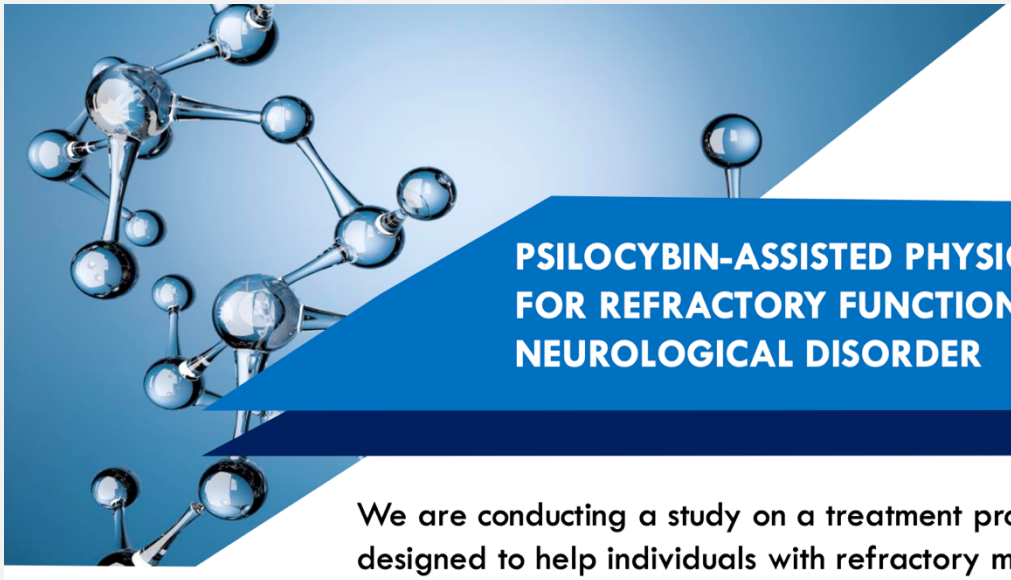


PSILOCYBIN-ASSISTED PHYSIOTHERAPY FOR REFRACTORY FUNCTIONAL NEUROLOGICAL DISORDER

We are conducting a study on a treatment program designed to help individuals with refractory motor Functional Neurological Disorder.

OVERVIEW

This innovative treatment combines psilocybin with intensive outpatient physiotherapy to assess its potential to improve symptoms in individuals who have not responded to conventional treatments.

Eligible participants will receive a single dose of psilocybin and undergo physiotherapy over 1-2 weeks at the Austin Hospital. All treatment, assessments, and travel expenses are covered.

This study is conducted by The University of Melbourne, in collaboration with Austin Health, and is funded by the National Health and Medical Research Council (NHMRC). It has been approved by the Austin Health Human Ethics Review Committee: HREC/57390/Austin-2020

WHO IS ELIGIBLE

We need participants with refractory motor FND who:

- are aged 18 – 65 years
- have had symptoms for at least six months
- have previously received physiotherapy and psychiatric management

They must not have:

- current or previous history of psychotic disorder or mania; first-degree relative with psychotic disorder
- current drug or alcohol dependence

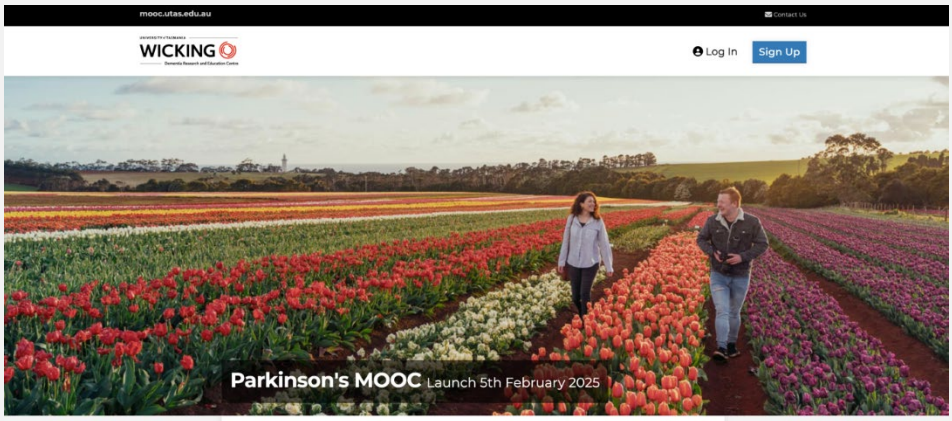
CONTACT US

Please send your referrals to psy.fnd@austin.org.au

UPCOMING CONFERENCES

NREG
Neuropsychiatry Research
& Education Group

Parkinson's MOOC



It's aimed primarily at the public / people with Parkinson's / their families but will also have useful information for medical professionals and researchers. The course is co led by me (Jane Alty - neurologist) and Michele Callisaya (academic Physio living with PD). We have been lucky to get so many experts from around the world including your favourite person Jas !! As well as Dan Weintraub, Ray Chaudhuri, Victor Fung, Bas Bloem, Emily Henderson, Bindu Menon, Christine Klein (and many others!) plus lots of people with Parkinson's and their families. It is a very interactive course with animations and videos , and minimal text. ✅ You can register your interest here via the link

https://mooc.utas.edu.au/course/20278/Parkinson_s_MOOC__2025.html

The ROYAL MARSDEN
NHS Foundation Trust

Neuro-Oncology for Children and Young People Study Day

Thursday 6 February 2025
The Royal Marsden Education and Conference Centre, London SW3 6JJ

Email

This study day will provide an overview of brain and spinal tumours in Children and Young People encompassing their treatment pathways. New and innovative opportunities and the future for treatments including targeted and novel therapies will be explored.

The afternoon will explore survivorship, long term effects and psychological needs, palliative care and listen to the experiences of patients and their families. There will be opportunity for sharing experience and any questions.

This study day would be perfect for medical, nursing and allied health professionals with an interest in caring for Children and Young People with Brain and Spinal Tumours. No previous experience is necessary and would be of interest to healthcare professionals who work with these patients.

BNPA Annual Conference

Thursday and Friday, 13–14 March 2025

We are excited to announce that planning for this year's conference is well underway! After exploring innate differences in people and environmental influences on neuropsychiatric presentations, the 2025 conference will focus on treatments.

Key Topics:

- **Functional Disorders:** Evaluating the evidence for multidisciplinary team involvement and strategies for advocating trust-supported services.
- **Impulsivity:** Understanding its nature, the conditions it manifests in, and the available treatments.
- **Brain Injury:** Exploring its impact on memory and potential interventions.
- **Sleep difficulties:** Investigating their role in neuropsychiatric conditions and approaches to management.

We hope you'll join us.

Book Now

Recent Advances in Young Onset Dementia

Thursday 24 April 2025 (onsite/virtual)
St George's, University of London

The course will provide an update on current diagnostic standards, best practice and new developments in clinical practice relating to the young onset dementias. A case-presentation session at the end of the meeting will give delegates an opportunity to have difficult cases or management dilemmas discussed by an expert panel. CPD will be sought from the Federation of the Royal Colleges of Physicians. From £55

Audience: General practitioners; psychiatrists (consultants and trainees); neurologists (consultants and trainees); dementia specialist nurses; dementia support workers.

Book Now

Management of Acute Dizziness and Vertigo

Friday 25 April 2025 (1 day workshop)
Onsite (for whole day)/Online (for lecture only)
St George's, University of London

This one-day masterclass delivered by faculty experts will equip you with practical, evidence-based knowledge and skills that will allow you to confidently diagnose and treat patients with acute vertigo. By demystifying this common yet often misunderstood presentation, the aim is that you become vertigo 'competent', allowing you to deliver improved patient care in both primary care and emergency settings. From £60.

Audience: The course is designed for healthcare professionals who manage patients with vertigo and dizziness. It is suitable for GPs, emergency practitioners, general practitioners, care of the elderly, stroke physicians, neurologists and allied health professionals.

Delegates will be issued with a certificate of attendance and CPD will be sought from the Federation of the Royal Colleges of Physicians of the United Kingdom.

Register here

RESOURCES

https://www.youtube.com/@kclnreg

https://radiopaedia.org

Radiopaedia is an amazing resource. Here are some links to specific resources and highly recommend Frank Gaillard's courses on neuroimaging in neurodegenerative disorders (discounts may be available): Main playlist for neuropsychiatry neuroimaging lectures at Royal Melbourne Hospital):

https://radiopaedia.org/playlists/21316

An additional playlist:
https://radiopaedia.org/playlists/21923

https://radiopaedia.org/articles/neurodegenerative-mri-brain-an-approach

Prof Frank Gaillard's presentations on MRI in neurodegenerative disorders - on radiopaedia:

https://radiopaedia.org/courses/neurodegenerative-learning-pathway

BIG THANK YOU EVERYONE!

This concludes our updates for the year. We wish to extend our sincere gratitude to each of you for being an integral part of this journey.

We trust that you are deriving significant value from your learning experience within the Global Neuropsychiatry Tribe.

This year, we have welcomed approximately 300 new members to the tribe, culminating in a total of around 600 members across both WhatsApp and Mailchimp platforms.

It appears that we are the fastest-growing Neuropsychiatry community; we extend our heartfelt thanks for your recommendations to others.

Throughout the year, we have exchanged roughly 200 scholarly papers related to Neuropsychiatry, all of which are accessible for viewing on the GNG website.

In addition, we have engaged in discussions concerning over 50 clinical cases.

Our program this year features 26 high-quality presentations, accumulating to a total of 26 hours of Continuing Professional Development (CPD) time exclusively dedicated to Neuropsychiatry.

When factoring in supplementary activities, this equates to a minimum of 50 hours of CPD.

We are profoundly grateful to all presenters and chairpersons for their generosity in sharing their time and clinical expertise with us.

All our presentations can be accessed via the INA website. We would also like to express our appreciation to the INA for their partnership in this shared mission, and we eagerly anticipate future collaborations to enhance our collective outreach.

All published papers shared in our discussions can be found on the GNG website under monthly round-ups or within designated folders.

We appreciate everyone's active participation and are keenly looking forward to our continued collective learning in 2025.

This platform is designated for all of you—please regard it as a means for both individual and communal growth. Should you observe any suspicious activity, kindly remove it if you are an admin or report it to us.

Feel free to disseminate information about this group if you believe it could be beneficial to others; we aspire for it to assist them and their communities.

Should you have any feedback, please do not hesitate to reach out to either myself or Jen directly.

If you are interested in contributing in any other capacity, please inform us.

We wish you joyous holidays with your loved ones.

Happy learning and maintain your inquisitiveness!

Sincerely,
Jen and Jas