[1]Essex Partnership University NHS Foundation Trust, Colchester, United Kingdom and [2]Essex Partnership University NHS Foundation Trust, Brentwood, United Kingdom
*Corresponding author.

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Aims. rTMS (Repetitive transcranial magnetic stimulation) as a brain stimulation modality is approved to treat treatment-resistant depression. Its efficacy in depression and anxiety is well supported in several studies. However, its direct effect on suicidality is still unclear, unlike electroconvulsive therapy. This study aims to evaluate the effectiveness of rTMS on pessimistic and suicidal thoughts. We hypothesized that rTMS reduces pessimistic and suicidal thoughts, alongside other symptoms, in patients experiencing depression and anxiety as the therapy progresses over six weeks.
Methods. The study is a retrospective observational study. The study was conducted in the rTMS Clinic, Brentwood. All of the patients undergoing treatment at the rTMS Clinic were assessed with subjective and objective scales for depression. One of the scales was MADRS (Montgomery Asperger's Depression Rating Scale); this was used to study the response of therapy. I looked into the pessimistic and suicidal thoughts component in MADRS, the baseline score was recorded, and its progression on weekly monitoring for six weeks was noted.

63 patients attended the rTMS clinic from January 2019 to October 2022. 21 patients were excluded for reasons that included dropping out before completion of treatment, MADRS weekly scores not being available, and some of them still undergoing treatment. A total of 42 patients, 21 male and 21 female, who successfully finished rTMS therapy at the Neuromodulation clinic were included in the study.
Results. The study showed that rTMS was effective and well-tolerated in reducing pessimistic and suicidal thoughts in the majority of patients. Average baseline scores and their average weekly progressions for pessimistic and suicidal thoughts over six week's period were recorded. The average score of baseline pessimistic thoughts was 3.925, and baseline suicidal thoughts was 3, in the severity scale of 0–6. There was a gradual reduction in scores of pessimistic and suicidal thoughts from baseline to the end of intensive six-week treatment. Scores measured at the end of every week showed a reduction in scores from the previous week of treatment. Average scores at the end of six weeks showed 2.375 and 1.65 in the pessimistic and suicidal thought domains respectively in the MADRS scale.
Conclusion. rTMS is being used for symptoms of depression and anxiety and evidence is encouraging in treating symptoms including pessimistic and suicidal thoughts. rTMS therapy over six weeks showed a gradual reduction in the severity of pessimistic and suicidal thoughts, demonstrated by decreases in average MADRS weekly score.

Associate Hospital Managers' Discharge Powers Under Section 23: Should the Days of the Hospital Managers' Hearings Be Numbered?

Dr Rebecca Nicholls*

Caswell Clinic, Bridgend, United Kingdom
*Corresponding author.

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Aims. Under section 23 of the Mental Health Act, the managers of the hospital have the power to order discharge of a patient detained under certain sections. In the past, the need for this power has been questioned, but the debate reared its head following the 'Modernising the Mental Health Act' government review in 2018, which initially proposed that the managers' hearing should be abolished. The aim of this research was to critically analyse the law to determine whether or not managers' hearings should be removed in legal reform.
Methods. A literature review was performed using the legal databases Lexis Library and Westlaw to identify relevant primary legislation, secondary legislation, case law, articles and other secondary sources. These were critically analysed to discuss the managers' hearing's strengths, weaknesses and potential proposals for reform.
Results. In favour of retaining the managers' hearing in its existing format, it provides an independent power of discharge that is accessible, subject to scrutiny and an important safeguard, particularly for those lacking capacity. In favour of abolishing the managers' hearing, the tribunal system satisfies the Government's requirement under Article 5(4) of the European Convention for Human Rights; the managers' panel could be viewed as a duplication of effort without legal representation and a necessary medical member, with limited powers in comparison to a tribunal and arguably low discharge rates. Its usual procedure was challenged during the COVID-19 pandemic, and the Convention on the Rights of Persons with Disabilities moves away from the traditional medical model, suggesting reforms to the Act may be needed.
Conclusion. Case law has ruled that the managers' panel has equivalent standing to the tribunal and criticism has been largely anecdotal. The absence of evidence surrounding the process is a major weakness in this debate with no nationally held records of outcomes. Whilst the duplication of effort and overlap with the tribunals' powers has been a consistent argument for abolishment, the managers' hearing stands as a robust and accessible safeguard in providing an opportunity for detention under the Act to be reviewed. Any reform must continue to empower and involve patients, supporting them in exercising their rights. On balance, this review concludes that the days of the managers' hearing should not be numbered without further research.

This research was completed as a Masters in Mental Health Law (LLM) dissertation through the University of Northumbria.

Probiotics as Adjunctive Treatment in Major Depressive Disorder: Estimates of Treatment Effect and Underlying Mechanisms From a Double-Blind Placebo-Controlled Randomised Pilot Trial

Dr Viktoriya Nikolova[1,2]*, Professor Anthony Cleare[2,3,4], Professor Allan Young[2,3,4] and Professor James Stone[5,2]

[1]ADM Protexin, London, United Kingdom; [2]Institute of Psychiatry, Psychology & Neuroscience, King's College London, London, United Kingdom; [3]National Institute for Health and Care Biomedical Research Centre, South London and Maudsley NHS Foundation Trust and King's College London, London, United Kingdom; [4]South London and Maudsley NHS Foundation Trust, Bethlem Royal Hospital, London, United Kingdom and [5]Brighton and Sussex Medical School, Brighton, United Kingdom
*Corresponding author.

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Aims. Despite considerable preclinical evidence, clinical trials assessing the effects of probiotics on individuals with major depressive disorder (MDD) are scarce. This study aimed to provide further evidence of the acceptability, tolerability and putative efficacy of probiotics in this patient group and to improve our understanding of the underlying mechanisms of action.
Methods. This double-blind randomised placebo-controlled pilot and mechanistic trial investigated the effects of an 8-week adjunctive multi-strain probiotic intervention in adults with MDD taking antidepressants. Psychiatric data and stool and blood samples were collected at baseline, week 4 and week 8. A computer-based emotion recognition task was also administered. Stool samples from 25 matched healthy controls were also obtained.
Results. 49 participants, randomised to probiotic (n = 24) or placebo (n = 25), were included in intent-to-treat analyses. Standardised effect sizes (SES) from linear mixed models demonstrated that the probiotic group attained greater improvements in depressive (HAMD week 4: SES [95%CI] = 0.70[0.01, 0.98]; IDS week 8: SES [95%CI] = 0.64 [0.03, 0.87]) and anxiety symptoms (HAMA week 4: SES [95%CI] = 0.67 [0.00, 0.95]; week 8: SES [95%CI] = 0.79 [0.06, 1.05]), compared to the placebo group. Attrition was 8% (n = 3 placebo, n = 1 probiotic), adherence was 97.2% and there were no serious adverse reactions. The probiotic modified the composition of the faecal microbiota by normalising richness and diversity towards healthy control levels. The probiotic also increased levels of specific taxa, including Bacillaceae (FDR $p < 0.05$), which correlated with reductions in anxiety scores (FDR $p < 0.05$). There was no impact of treatment on levels of inflammatory cytokines (CRP, TNFα, IL-1β, IL-6, IL-17) or BDNF. However, probiotics showed a tendency to increase positive affective bias and improved the accuracy of recognition of all emotions, except sadness.
Conclusion. Compared to placebo, the probiotic group had greater improvement in depressive and anxiety scores, from as early as 4 weeks. The acceptability, tolerability and estimated effect sizes on key clinical outcomes are promising and encourage further investigation of this probiotic as add-on treatment in MDD. The beneficial effects of probiotics in this patient group may be partially mediated by modification of the composition of the gut microbiota and improvement of affective biases, inherent to depressive disorders.

Monitoring of Inter-Dose Intervals for Long-Acting Injectable Antipsychotics: A Proposed Protocol for the MIDILIA Trial

Dr James O'Neill[1,2*], Dr George J.E. Crowther[1] and Dr Alastair G. Cardno[2]

[1]Leeds and York Partnership NHS Foundation Trust, Leeds, United Kingdom and [2]University of Leeds, Leeds, United Kingdom
*Corresponding author.

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Aims. Service users taking long-acting injectable antipsychotics (LIAs) may experience recurrence of symptoms as they approach trough levels within a steady-state cycle. Limited research exists around symptom variation between peak-to-trough plasma concentrations of LIA inter-dose intervals. Different LIAs have variable rates of change in dopamine receptor occupancy during this peak-to-trough variation due to differing elimination half-lifes. It is unclear what rate of change in D_2 blockade is tolerated by patients at present, which this trial aims to determine through observing symptom severity differences during peak-to-trough variation.
Methods. A real-world observational longitudinal cohort study is proposed. Inclusion criteria would be working-age adults (18–65 years) who have received five consecutive and timely LIA administrations of a consistent drug and dose. The study would exclude anyone with significant hepatic or renal impairment, anyone on concurrent oral antipsychotic medication or anyone deemed not to yet be within steady-state plasma levels of their LIA medication.

Serum assays for drug level will be obtained at both peak and trough concentrations during an LIA cycle. Expected timings for peak levels will be determined by derived tmax values from existing pharmacokinetic literature for individual drugs. Trough levels will be taken within 24 hours of the next LIA administration being due. Plasma drug concentrations will then be used to calculate expected striatal D_2 blockade using EC_{50} values and maximal occupancy for individual drugs derived from existing PET scan data.

Symptom severity will be assessed by completing Positive and Negative Symptom Scores (PANSS) questionnaires with service users at the time of both peak and trough plasma concentrations of LIA. The difference in these scores will then be plotted alongside the difference in expected D_2 blockade derived from plasma drug concentrations.
Results. We hypothesize that the rate of D_2 occupancy change would correlate with symptom severity differences in an exponential manner, in that drugs with shorter elimination half-life would have greater difference in symptom severity between peak and trough. We expect that service users would be able to tolerate such change to a degree without significant emergence of symptoms; the trial aims to determine the threshold for what most service users can tolerate, which may then assist in guiding how to effectively reduce and discontinue medications.
Conclusion. This outlines a research protocol to monitor response to pharmacokinetic variation within inter-dose intervals of LIA medication, which may ultimately aid service users in reducing and discontinuing antipsychotics.

Psychometric Properties of the 7-Item Generalized Anxiety Disorder (Gad-7) in Nigerian Pregnant Women Attending Primary Health Care

Dr Oluwaseun Olaluwoye[1,2*], Dr Lucky Onofa[2] and Dr Oladipo Sowunmi[2]

[1]Kent and Medway Partnership Trust, Kent, United Kingdom and [2]Neuropsychiatric Hospital, Aro, Abeokuta, Nigeria
*Corresponding author.

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Aims. Maternal mental health is an integral component of services that should be rendered to pregnant women in addition to their physical health during their antenatal care. Mental health conditions are screened for during these visits. There is a high prevalence of anxiety disorders among this group of women. A common questionnaire used to screen for anxiety is the 7-item generalized anxiety disorder (GAD-7). However, this instrument has not been validated among pregnant women in Nigeria. We conducted research among pregnant women in Southwest Nigeria to demonstrate the psychometric properties of