Poster Tour: QST

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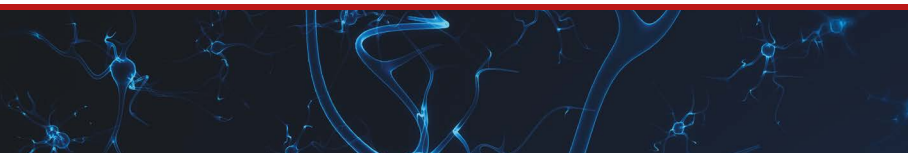

Immunoglobulin G reduction with different plasma exchange regimes in autoimmune neurological conditions

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Therapeutic plasma exchange (TPE) is widely used to treat antibody-mediated neurological disorders, but there is no consensus on optimal TPE regimens in neurological disease.

We aimed to quantify serum IgG reduction in patients undergoing TPE over a 12-month period and evaluate the effects of vascular access type and treatment duration on percentage IgG reduction

Seventy-two patients received their first TPE during the study period. Most (62/72,86%) underwent five exchanges in their initial treatment cycle. The majority (50/72, 69.4%) were treated via peripheral access; the remainder received TPE through central venous lines. Overall, mean IgG reduction from baseline to the final day of TPE was 59.2%.

There was a non-significant trend toward greater IgG reduction with peripheral access compared to central access (64% vs 57%). Patients treated for three days had a similar mean IgG reduction to those treated for five days.

Eighteen patients underwent repeated TPE cycles; mean IgG reduction across cycles ranged from 53.3% to 72.6%, with no significant differences observed between access types.

Peripheral vascular access may be associated with greater IgG reduction. Extending TPE from three to five days may offer no additional benefit. Further research is required to define the optimal TPE approach for neurological disease.

Drop the 'Drop Test' for Lower Limb Tone: Assessing Inaccuracies in Internet Education

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Background: Clinical skills remain fundamental to medical practice, despite advances in artificial intelligence. Accurate assessment of muscle tone is essential, but the technique is often performed incorrectly; when done wrong, the leg appears to be dropped, leading to it being erroneously referred to as the "drop test." Medical students increasingly rely on internet resources to support their learning that may perpetuate these incorrect techniques.

Methods: We reviewed 30 YouTube videos identified under the search term "lower limb neurological examination," reflecting typical search behaviour of medical students. Two consultant neurologists independently reviewed each video, classifying demonstrations as good, acceptable, or unacceptable. A "good" demonstration required tone to be elicited via a rapid, high-amplitude leg lift to produce a clear quadriceps contraction.

Results: Overall, 16 videos were graded unacceptable, 10 acceptable, and 4 good. Despite poor technical quality, unacceptable videos accounted for 15,273,058 views, compared to 7,001,113 views for acceptable and only 2,034,118 for good demonstrations.

Conclusion: Widespread inaccuracies in online tutorials pose significant risk of students learning physiologically incorrect methods. These findings underscore the need for standardised, quality-assured educational resources to ensure students master accurate clinical examination techniques and move away from the "drop test" misnomer.

Efficacy of Botox Injections for Refractory Trigeminal Neuralgia

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Introduction: Trigeminal neuralgia (TN) is one of the most painful conditions known to mankind and is highly disabling. Although it is often treated with sodium channel blockers and neurosurgical intervention, but it can be refractory to these. Therefore, there is a need for new therapeutic options.

Methods: This retrospective study within a tertiary neurological facial pain clinic at Queen Elizabeth Hospital Birmingham evaluated the use of facial OnabotulinumtoxinA (Botox®) for the management of refractory TN in a follow the pain paradigm (usually V2 and V3 dermatomes). This included response rates and complications between April 2024-December 2025.

Results: 11 patients have received at least one cycle of Botox® for trigeminal neuralgia with a mean 5.6 oral medications tried prior and 63% (7/11) had surgical intervention. 63% (7/11) were responders and 36% (4/11) super-responders with ≥75% improvement. Total dose range for the super-responders was 32.5-57.5IU. Commonest side effect was facial weakness. Subsequent injection sites were adjusted according to locations for improved pain control or to reduce side effects. There was maintenance of benefits longer term.

Conclusion: Botox® should be considered in the management of refractory trigeminal neuralgia, with excellent benefits demonstrated. Further research is recommended into optimum timing, dosing and treatment paradigms.

Development of an acute dizziness pathway for management of patients in Southwest London

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Dizziness is a common presentation in acute and community settings. However, dizziness is frequently misdiagnosed, leading to avoidable morbidity and impact on quality of life. Furthermore, GPs may refer patients with dizziness to several different specialties, resulting in unwarranted variation. There were no previous regional recommendations in SW London ICS for primary care. Therefore, a formal pathway outlining primary care treatment and onward referral for common causes of acute dizziness in adults was developed. Input was sought from stakeholders across the ICS including General Practice, Neurology, Audiovestibular, ENT and Cardiology, and adopted by the ICS in November 2025. It comprises a one-page visual flow chart outlining symptoms, diagnosis and recommended treatment of common presentations including BPPV, vestibular migraine, vestibular neuritis and Meniere's disease. Red flags are highlighted, with management advice. We supported implementation with a primary care webinar demonstrating the head impulse test, nystagmus assessment and Dix-Hallpike manoeuvres. The pathway aims to manage patients effectively at initial presentation and streamline outpatient referrals to align with GIRFT principles, ensuring patients are seen by the most appropriate clinician early in their journey leading to improved outcomes. We plan to audit this to evaluate its impact in primary and secondary care.

The challenges of acute neuro-ophthalmology presentations: Standardized pathways, early OCT and SDEC may be the answer

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Imperial College Healthcare NHS Trust

Introduction: Acute neuro-ophthalmological presentations constitute a significant proportion of Neurology referrals. A Same Day Emergency Care (SDEC) service was implemented to enable an optimal diagnostic work-up.

Aim: To evaluate the care pathway for patients referred to Neurology from Eye Casualty

Method: All referrals to St Mary's Hospital SDEC from Western Eye Hospital Emergency Department (WEH-ED) were reviewed for a 6-month period from January 2025.

Results: 22% (82/372) of SDEC cases were referred from WEH-ED, the commonest indications being optic disc swelling (37%), vision loss (28%) and diplopia (23%). 39% waited a mean of 4.3hr for imaging, the majority happening out of hours. One scan reported a significant abnormal finding.

In 23% patients referred for optic disc swelling, this was not confirmed on OCT. The remaining papilloedema patients had Idiopathic Intracranial Hypertension, and unilateral disc swelling patients had non-neurological diagnoses, though all had lumbar punctures (LPs). For diplopia, 28% had microvascular cranial nerve palsies; the remaining had myasthenia gravis or neuroinflammation. For vision loss 76% had optic neuritis (MS/MOG), 14% optic neuropathy and 10% GCA.

Conclusion: There is a need for standardized pathways for common neuro-ophthalmological presentations to prevent unnecessary imaging, and early OCT with experienced review could reduce unnecessary LPs.

Utility of non-mydriatic fundus photography in same day emergency care (SDEC): a pilot study

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Background: Accurate examination of the fundus for signs of raised intracranial pressure is vital in the assessment of acute headache and sight-threatening conditions in the emergency setting. Currently, fundus examination in emergency care relies largely on direct ophthalmoscopy, which can be technically challenging, particularly given limited training in its use for non-specialist clinicians.

Methods: A non-mydriatic fundus camera (Topcon Maestro 2) was installed in the emergency department of University College London Hospital and made available to the acute medical and neurology teams over a three-week trial period. Image interpretation was verified by an independent neuro-ophthalmologist. A further three weeks of control data during which only direct ophthalmoscopy was available was recorded.

Results: Thirty-three patients underwent fundus photography, with the most common indication being for headache (n=22). Papilloedema was excluded in all trial headache presentations. Direct ophthalmoscopy was performed in 66% (20/30) of control headache presentations, of which papilloedema was excluded in 90% (18/20). Neurology SDEC referred 14% fewer patients to (neuro)ophthalmology following fundus photography.

Discussion: This pilot data demonstrates the utility of fundus photography in improving frequency of assessment and augmenting diagnostic certainty in the emergency setting, potentially preventing delays in definitive management and reducing avoidable onwards referral to neuro(ophthalmology).

Improving medical students' knowledge and confidence in diagnosing Functional Neurological Disorders (FND)

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Background: FND is common in neurological practice but remains underrepresented in undergraduate medical curricula, contributing to diagnostic uncertainty, stigma and low confidence among students.

Methods: During the 2024-2025 academic year, a weekly FND teaching session was delivered to Year 3&4 medical students during their Neurology rotations. Teaching focused on positive diagnostic features, communication strategies, and patient-centred explanations. Pre and post-session questionnaires assessed students' self-rated confidence, attitudes and perceived ability to identify FND.

Results: Following the teaching session, 97.8% of students reported confidence in their ability to explain FND to a patient (25.7% pre-session). Concerns that discussing FND would negatively affect the therapeutic relationship decreased from 54.5% to 10.8%.

Self-rated confidence in identifying FND and eliciting positive signs shifted markedly on a 10-point scale, from 88.1% rating their ability between 1-5 pre-session (modal score 1/10, median 3/10), to 92.5% rating between 6-10 post-session (modal score 8/10, median 8/10).

Qualitative feedback highlighted increased awareness of diagnosing FND without over-investigation, reduced stigma, increased empathy and greater interest in further learning about FND.

Conclusion: Targeted teaching significantly improves medical students' confidence, attitudes and perceived diagnostic competence in FND. Embedding structured FND teaching within Neurology rotations may help align undergraduate education with contemporary neurological practice.

Join Parkinson's Research (JPR@Research+Me): A UK-wide registry to support clinical trial recruitment in Parkinson's disease

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Background: Online research registries can accelerate recruitment and broaden access to clinical trials; impact depends on scale and reach.

Aim: To evaluate the feasibility of establishing a Parkinson's disease (PD) registry, with ≥2,000 registrants within six months.

Methods: Join Parkinson's Research (JPR@Research+Me) was co-created with people with Parkinson's. It launched nationally in July 2025, promoted through clinical services, PD charities, social media and a large national platform trial EJS ACT-PD. We monitored mode of access (through bespoke URLs), geographic location, demographics and PD characteristics.

Results: Within six months 2,076 people registered across the UK including devolved nations. Registrants were predominantly White British (88.9% vs 76% of UK population). Median age was 67yrs (IQR 60-73yrs vs 77yrs UK PD population); 66.4% were retired; 25.6% were working; 55.6% completed full-time education at age ≥19yrs (vs approximately 25% in older UK population). 4.1% were PD treatment naive; median disease duration 3.9yrs (IQR 1.9-7.1). Promotion via EJS ACT-PD generated highest enrolment (58.20%), followed by the registry website (20.24%) and charities (12.14%).

Conclusion: We demonstrate feasibility of establishing a national PD registry at scale. However, representativeness is limited with regard to age, ethnicity and education status. Next steps focus on targeted outreach to improve diversity.

Socioeconomic health inequalities in access to shunting for Normal Pressure Hydrocephalus at two regional centres

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Introduction: To assess the impact of health inequality in access to ventriculoperitoneal (VP) shunting for idiopathic Normal Pressure Hydrocephalus (iNPH) we carried out service evaluations of two large regional centres in London.

Methods: We reviewed the electronic patient records (EPR) of all patients undergoing VP shunting for iNPH from October 2022 – October 2025 at St George's and Charing Cross Hospitals (n = 97). We extracted sex, age, ethnicity, postcode and last occupation from EPR. We calculated Index of Multiple Deprivation (IMD) and National Statistics Socio-Economic Classification (NS-SEC) using postcodes and occupation respectively. Results were compared to population data from the respective local areas. Data were analysed with R.

Results: Of patients with available data, 72% were male with median age 76 (IQR 72-81). 73% were White, while both local areas have <50% White residents. Median IMD decile was 8 versus local medians 5-6, showing patients lived in relatively affluent areas. 64% were from the highest NS-SEC class.

Conclusions: Our data shows that patients undergoing VP shunt for iNPH are usually White, from a high socio-economic background and live in affluent areas. Further work is needed to understand reasons for apparent inequality and methods to improve equitable access to care.

Focused Ultrasound Thalamotomy: Post-procedural Side Effect Profile from 4 years of Treatments in Scotland

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Objective: To report the post-procedural side effect profile from Magnetic Resonance-guided Focused Ultrasound(M-RgFUS)performed in Scotland over a 4-year and 7-month time period.

Background: MRgFUS is an incisionless procedure that utilises high-intensity focused ultrasound to ablate the thalamic ventral intermediate nucleus to treat tremor. Post-procedural side effects are often temporary but can be permanent.

Methods: 97 MRgFUS Thalamotomies were performed between June 2021 and January 2026(24 female, 73 male; mean age 70.6 ± 7.5). 88 procedures were for medication-refractory essential tremor(ET), and 9 were for tremor-dominant Parkinson's disease(TDPD). Patients were followed up at day 1, and at 1, 3, 6, and 12 months. Side effect severity was graded using the Common Terminology Criteria for Adverse Events(CTCAE) for MRgFUS Thalamotomy.

Results: Post-procedure, common side effects encountered were balance disturbance(64.9%), speech(34.0%) and sensory(11.3%) changes, and dysgeusia(9.3%). In the 60 patients who completed follow-up at 12 months, 8.3% had persistent balance deficit CTCAE grade 1(mild), 3.3% speech deficit, 3.3% sensory deficit and 3.3% dysgeusia(all CTCAE grade 1).

Conclusion: MRgFUS Thalamotomy demonstrates an excellent side effect profile. Permanent side effects are infrequent and mild(CTCAE grade 1). MRgFUS Thalamotomy is a safe treatment option for medication-refractory tremor.