MULTI-AGENT ALLERGIES AS PREDICTOR OF FUNCTIONAL NEUROLOGICAL DISORDER

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Objectives/Aims Functional neurological disorders (FND) account for 20% of patients in neurology clinics and can lead to functional impairment, multiple re-attendances and significant cost. However, diagnosing FND remains challenging; identifying associated factors could aid earlier diagnosis. We aimed to determine the value of self-reported multi-allergies as predictor for FND.

Methods We retrospectively reviewed records of consecutive patients from two clinics (General Neurology and FND), St George’s Hospital, January 2015–June 2018. A logistic regression model was used in conditional fashion; statistically significant variables in univariate analysis were included.

Results Of 720 patients with definitive diagnosis, 243 (33.8%) had FND and 477 (66.3%) another neurological disorder. Mean age was 43 years (range 16–93), 63.9% (453) were female. 81 patients with FND (33%) had Non-epileptic attack disorder (NEAD).

In multivariate analysis, factors associated with FND were female sex (Odds Ratio [95% Confidence Intervals], OR=0.49 [0.33, 0.73], p<0.001), psychiatric comorbidity (OR=4.28 [2.89, 6.35], p<0.001), younger age (OR=0.97 [0.96, 0.98], p<0.001), coexisting fibromyalgia/chronic fatigue syndrome (OR=4.85 [1.26, 18.73], p=0.02) and allergies (OR=2.54 [1.79, 3.62], p<0.001). Polypharmacy, medical comorbidities, atopy and hypermobility were not significant.

Increased number of allergies increased the probability of FND: one allergy OR=4.53 [3.08, 6.65, p<0.001], two OR=9.09 [3.92, 21.09, p<0.001], three OR=16.74 [3.82, 73.43, p<0.001] and ≥4 allergies OR=42.94 [2.51, 736.02, p=0.009].

Conclusions Previous studies highlighted the increased prevalence of allergies in NEAD compared to epilepsy. Our study expand this to all FND, as only 1 in 3 FND patients had NEAD. Presence of allergies, particularly to multiple agents, should raise the suspicion of FND.

43 EFFECT OF DOPAMINERGIC MEDICATION ON RISK PREFERENCE IN PARKINSON’S DISEASE

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Introduction Dopaminergic medication being the standard therapeutic treatment improves motor symptoms in Parkinson’s disease (PD) but also implicated in the occurrence of impulse control disorders. Data driven computational models such as drift diffusion model utilise behavioural measures to explain subtle changes that are not sensitive to traditional analysis. Here, we aim to analyse risk preference in PD subjects in OFF and ON medication and the effect of dopamine on risk.

Methods Sixteen patients PD patients during OFF medication and 14 during ON were tested on the 2 step sequential learning task. We calculated the risk associated with each choice (variance of reward probability) and defined the choice with maximum variance as the risky one, for all 134 trials. With behavioural measures (selected choice- risky vs non-risky and response time) as inputs and risk as an independent factor, we extracted threshold (a), drift rate (v) and response bias (c) parameters using a hierarchical drift diffusion model (HDDM) for both groups during ON and OFF drug condition. Statistical analysis on the parameters was analysed using Bayesian factors.

Results Bayesian Independent sample t-test between the 2 groups (ON vs OFF) showed a strong evidence for differences in drift rate (BF10=34.28) and response bias (BF10=1.5×1012). We did not observe any evidence for correlation between RL parameters and z for both ON and OFF condition. Behaviourally, with respect to response time, independent sample t-test showed no significance difference...