rather than general disease progression, at least for pre-manifest and early diagnosed individuals. Clinicians should consider the impact that cognitive impairment and anxiety have on patients' awareness of their own neuropsychiatric symptoms.

G2 HUNTINGTON'S DISEASE PATIENTS ARE 'STUCK IN A RUT': OBJECTIVE TESTING OF APATHY IN HUNTINGTON'S DISEASE

¹Duncan McLauchlan*, ²David Craufurd, ¹David Linden, ¹Anne Rosser. ¹*Institute of Psychological Medicine and Clinical Neurosciences, Cardiff University, Hadyr Ellis Building, Maindy Rd, Cardiff, UK;* ²*Institute of Human Development, University of Manchester, St Mary's Hospital, Oxford Road, Manchester, UK*

10.1136/jnp-2016-314597.153

Background Apathy is a reduction in goal directed behaviour. It is one of the commonest neuropsychiatric features of Huntington's disease (HD), causing impairments in quality of life and function. Our understanding of the neuropsychological basis of apathy in HD is very limited; developing a battery of objective tests would overcome the limitations of current questionnaire-based tests (limited translational potential and distortion by social context) and allow us to determine the underlying deficits of the apathy syndrome in HD.

Aims To develop a battery of tests assessing different aspects of apathy, in order to probe the specific deficits underlying apathy in Huntington's disease.

Methods A cohort of participants carrying the gene expansion for HD, at various stages of the illness, from asymptomatic to moderate stages of the motor symptomatic phase of HD was recruited. We used the current gold standard assessments (PBA Apathy Score and Apathy Evaluation Scale) and compared them with tests of reward (a novel reaction time task, reward responsiveness subscale of the BISBAS), effort (Progressive Ratio), sensitivity to negative stimuli (a novel persistence task), decision-making (a novel decision-making task) and learning (Iowa Gambling Task and Probabilistic Selection Learning Task).

Results Fifty-three gene positive individuals were recruited. Using linear regression analyses corrected for age, disease and drug effects we found that both apathy measures were related to impaired sensitivity to negative stimuli and deficits in decision making, but not to measures of effort, reward or learning.

Conclusions Patients' apathy is not related to reward or effort, but inertia due to impaired ability to formulate and enact a plan to change current behaviour. Prompting may be the most effective behavioural intervention.

G3 HEDONIC OLFACTION IN HUNTINGTON'S DISEASE

¹Franz Marxreiter*, ^{1,2}Anne Mrochen, ¹Christina Kozay, ¹Martin Regensburger, ¹Jochen Klucken, ¹Jürgen Winkler, ¹Zacharias Kohl. ¹*Department of Molecular Neurology, University Hospital Erlangen, Friedrich-Alexander Universität Erlangen-Nürnberg (FAU), Erlangen, Germany;* ²*Department of Neurology, University Hospital Erlangen, FAU, Erlangen, Germany*

10.1136/jnp-2016-314597.154

Background Huntington's disease (HD) features a broad range of neuropsychiatric symptoms. In particular depression, apathy, and anhedonia are frequently present in HD. Anhedonia and apathy are observed as core symptoms of depression in HD but also as distinct features of HD independent from major depression. Therefore, methods helping to dissociate these symptoms are an

important need for a precise diagnostic workup. Assessing anhedonia by focusing on hedonic perception of a sensory stimulus may be particularly helpful in HD.

Aims In this study, we examine anhedonia by measuring the perception of pleasantness of odours in HD patients compared to controls.

Methods By using the "Sniffin' Sticks®" odour identification test we assess hyposmia. In order to dissociate hedonia and olfaction we use additional olfactory sticks with 22 odours assessing intensity and pleasantness of odours. Pleasantness of odours is measured on a visual 9-point scale. For the assessment of hedonia and apathy the Snaith-Hamilton-Pleasure-Scale (SHAPS) and the Starkstein scale are applied respectively. Depression is measured using the Zung Self-Rating Depression Scale and the Beck Depression Inventory II.

Perspective The hypothesis of this study is that the assessment of hedonic olfaction in HD allows discriminating anhedonia and apathy from depression. To test our hypothesis we will compare the hedonic perception of odours between HD patients and age and gender matched controls. Furthermore, we will correlate hedonic olfaction with the questionnaire-based assessment of depression, apathy and anhedonia. These data will be compared to our previously published findings that have shown reduced hedonic olfaction in Parkinson's disease.

G4 LIMITED INSIGHT? OBJECTIVE TESTING OF IRRITABILITY IN HUNTINGTON'S DISEASE

¹Duncan McLauchlan*, ²David Craufurd, ¹David Linden, ¹Anne Rosser. ¹*Institute of Psychological Medicine and Clinical Neurosciences, Cardiff University, Hadyr Ellis Building, Cardiff, UK;* ²*Institute of Human Development, University of Manchester, St Mary's Hospital, Manchester, UK*

10.1136/jnp-2016-314597.155

Background Irritability (reduced control of temper resulting in behavioural outbursts) often occurs before motor onset of Huntington's disease (HD) and is responsible for significant impairments in quality of life and function, yet understanding of the pathophysiology is limited. Current assessments are based on diagnostic interview and self-report, but these are influenced by social context, and are unworkable in animal models. Objective tests of irritability would allow us to explore the underlying neuropsychological basis and neurobiology.

Aims Established objective protocols measuring irritable, impulsive and aggressive behaviour were selected to compare with best, current assessments in order to delineate the neuropsychological basis of irritability in HD.

Methods Participants carrying the gene expansion causing HD, from pre-symptomatic to moderately advanced stages were recruited. We compared scores on the Snaith Irritability scale and Problem Behaviours Assessment irritability sub-score with our battery. Subjects were tested on impulsivity measures (e.g. monetary temptation questionnaire) and provocation protocols (e.g. point subtraction aggression protocol).

Results Fifty-three gene positive individuals were recruited. We recorded visual analogue scales (VAS) of irritability, anger and frustration in addition to repetitive and pre-emptive button presses (motor measures). Neither the VAS scores, motor measures or impulsivity scores correlated with standard irritability assessments.

Conclusions The lack of correlation with self-report or clinician measures of irritability may reflect ineffective provocation or suggest that impulsive and irritable behaviour in HD are separate