

wakefulness to sleep, there may be several minutes when the EEG looks like that of wakefulness, but awareness of the environment is lost.

S82. Personality disorders: basic and clinical aspects

Chairmen: A Dahl, C Pull

ATTACHMENT PATTERNS (APs) AND DEFENSE MECHANISMS (DMs) IN PERSONALITY DISORDERS (PDs): A PRELIMINARY STUDY

L. Barone¹, V. Lingiardi², C. Maffei². ¹ Education Department, University of Trieste, via Tigor 22, Trieste, Italy; ² Istituto Scientifico Ospedale San Raffaele, Department of Neuropsychiatric Sciences, University of Milan School of Medicine, via Prinetti 29, 20127, Milano, Italy

One of the most central hypothesis in the field of attachment theory suggests that adults' mental representation of childhood attachment experiences strongly influences the quality of interpersonal relationships. Further information comes from DMs evaluation, which offers a clinical picture of the subject's way of handling conflicts and stressors. This integrated approach can make easier both diagnostic definition and treatment options.

In the clinical domain, a promising line of research is the application of the Adult Attachment Interview (AAI, [1]) and the Defense Mechanism Rating Scale (DMRS, [2]).

The Authors present a preliminary study on the evaluation of APs and defense styles in a sample of PDs. The data concerning attachment are collected using AAI. The data concerning defenses are collected using DMRS. The evaluators have been trained by Mary Main for the AAI and by Christopher Perry for the DMRS.

The aim of this study is to analyze the occurrence of different APs and DMs profiles in subjects with PDs. The study is part of a more comprehensive research project on clinical assessment.

The Authors discuss the two evaluation systems (AAI and DMRS) for guiding clinical inference in the identification of specific APs and DMs. The discussion of these two instruments is followed by their application. Five patients have been randomly selected and interviewed. The transcriptions of their clinical interview have been rated following AAI and DMRS criteria. Our preliminary data show a relation between insecure patterns of attachment and specific immature defenses clusters. The comparison among PDs (DSM-IV) diagnoses, attachment categories and DMRS total scores are discussed.

[1] Main M, Kaplan N, Cassidy J (1985), Security in infancy, childhood and adulthood: A move to the level of representation. Monographs of the Society for Research in Child Development, 50 (1-2, Serial No. 209).

[2] Perry JC (1991), Defense Mechanisms Rating Scale. Cambridge Hospital-Harvard Medical School, Boston.

PSYCHODYNAMIC CONFLICTS IN DSM-III-R PERSONALITY DISORDERS

C.A. Guldberg, E. Dramsdahl, A.A. Dahl. Institute Group for Psychiatry, University of Oslo, P.O. Box 33, Gaustad, N-0320 Oslo, Norway

Objective: To study the relationship between psychodynamic conflicts and DSM-III-R personality disorders. **Methods:** 171 non-

psychotic subjects between 25 and 45 years of age were interviewed with the Personality Disorder Examination (PDE). Of these, 84 (49%) had a definite DSM-III-R personality disorder. 80 (95%) of these consented to a 50-minute psychodynamic interview, which was audio- and videotaped, and then transcribed in full length. These interviews were then assessed for psychodynamic conflicts with the Psychodynamic Conflict Rating Scales (PCRS). **Results:** Except for Schizoid personality disorder, none of the Cluster A personality disorders correlated with dynamic conflict dimensions. In Cluster B, there was a very strong correlation between Antisocial scores and the Resentment over being thwarted conflict. Borderline, Histrionic and Narcissistic scores correlated with the Object hunger conflict. In Cluster C, Avoidant scores correlated with Counterdependent, Overall gratification inhibition and the Global conflict over expressing emotional needs and anger, as well as negatively with the Object hunger conflict. For Obsessive-compulsive personality disorder scores, there was a trend towards positive correlations with the Dominant goal and Sexual pleasure versus guilt conflicts, as well as a significant correlation with the Object hunger conflict. **Conclusion:** For several of the personality disorders, psychodynamic conflicts seems to play a significant role in the formation of character traits. Our findings may be of importance for targeting psychotherapeutic interventions in personality disorders.

CLINICAL ASSESSMENT OF DEFENSE MECHANISMS USING THE DEFENSE MECHANISM RATING SCALE (DMRS) BY J.C. PERRY

V. Lingiardi, L. Vanzulli, M. Simula, C. Lonati, A. Fossati, C. Maffei. Istituto Scientifico Ospedale San Raffaele, Department of Neuropsychiatric Sciences, University of Milan School of Medicine, via Prinetti 29, 20127, Milan, Italy

This paper touches on the use of the Defense Mechanism Rating Scale (DMRS), an observer-based method, realized by J.C. Perry, which identifies specific defense mechanisms from interview transcripts, video or audio recordings. The DMRS comprehends 28 individual defense mechanisms, hierarchically ordered in 7 clusters from the less mature defenses (Action Defenses) to the most mature ones. A qualitative and quantitative scoring yields a final profile which classes the subject on a scale (range 0 to 7), measuring the Overall Defensive Functioning.

The authors reckon the valuation of the defense style to be very important in the assessment of a Personality Disorder. They present a preliminary study on the interrater reliability (IRR) of a training group learning to use the DMRS from a senior rater directly trained by J.C. Perry. This study is one of the first steps of a multicentric research assessing defenses in patients with Personality Disorders.

Ten patients randomly collected who accepted to participate in the study have been assessed so far by trained clinicians conducting a 50-minute dynamically oriented interview to elicit defenses and conflicts.

Each rater within the training group made independent ratings, based on audio recordings and transcripts, blind to others' ratings. Then five junior raters met in a consensus group conducted by a senior rater, discussing their ratings and forming consensus ratings for each session.

Overall Defensive Functioning	0.85
Total of Defenses	0.79
Mature Defenses	0.81
Obsessional Defenses	0.79
Other Neurotic Defenses	0.88
Minor Image Distortion Defenses	0.94
Disavowal Defenses	0.77
Major Image Distortion Defenses	0.45
Action Defenses	0.79

We present preliminary data on the IRR based on 10 sessions, see table.

The findings seem promising with respect to the achievement of an even better IRR which will result from increasing raters experience.

CATEGORICAL AND DIMENSIONAL ASSESSMENT OF PERSONALITY DISORDERS: AN INTEGRATIVE APPROACH

H. Sass, S. Herpertz, I. Houben, E.M. Steinmeyer. *Dept. of Psychiatry, Technical University Aachen, Pauwelsstr. 30, D-52057 Aachen*

Categorical and dimensional models of personality, personality disorders (PD) and their interrelation will be discussed under the hypothetical perspectives, that higher order personality factors structure the personality of normal persons as well as of the mentally ill, and that no fundamental, but only a gradual difference exists between normal personalities and PDs. The relationship between this categorical conceptualization of the PDs and the dimensional factor model of personality was examined by using the Aachen Inventory for the Assessment of Personality Disorders (AIPD) that provides a typological assessment of 11 abnormal personalities covering all criteria of DSM-III-R and ICD-10, and the self report scale "Sechs Faktoren Test" (SFT) to measure higher order factors of personality as neuroticism, aggressiveness, conscientiousness, openness to experience, extraversion and religious attitude. The following relations were expected: 1) Personality disorders can be suitably assigned to superordinated clusters of personality factors. 2) Personality disorders can be appropriately explained in terms of the "big five" personality disorders. 3) "Neuroticism" will be a common factor closely related to all personality disorders.

Data have been collected from a sample of 168 psychiatric inpatients consecutively admitted to hospital care and included irrespective of their clinical diagnosis, and a general population sample (N = 100). Cluster Analysis was used as a categorical approach and Similarity Structure Analysis (SSA) as a dimensional method. Using SSA, an empirical structure of the interrelations among the different personality disorders and the personality factors can be presented allowing interpretations based on Guttman's Facet Theory. The question of continuity is also analyzed at the opposite pole, i.e. the relationship between axis I mental disorders and axis II personality disorders.

IMPULSIVE BEHAVIOUR AND GENES IMPLICATED IN SEROTONIN NEUROTRANSMISSION: AN ASSOCIATION STUDY

L. Staner, M.C. Pull, I.M. Cloos, G. Stefanos, C.B. Pull. *Department of Psychiatry, Centre Hospitalier, 4 rue Barblé, L-1210, Luxembourg, Luxembourg*

A preliminary but growing body of evidence supports the existence of genetic and biological substrates of impulsive behaviour. In particular, there is an extensive literature suggesting that impulsive behaviour in animals as well as in humans may be influenced by a dysfunction of the central serotonergic system. Genes coding for enzymes, transporters or receptors playing a key role in serotonin neurotransmission are likely to be involved in impulse control regulation. We hypothesize that genotypes of these key proteins could be different in individuals exhibiting impulsive behaviours. We report preliminary results of an ongoing association study on genotypes of tryptophan hydroxylase, monoamine oxidase A, monoamine oxidase B, serotonin receptor 1a and serotonin receptor 2c. In this study, inpatients are screened for the presence of impulsive behavioural

tendencies using a questionnaire adapted from Silverman et al. (1991). Subjects with such tendencies are then assessed with the IPDE and 100 subjects meeting at least one criterion for impulsive personality disorder according to ICD-10 are compared to 100 non impulsive, control subjects. In addition, all subjects will be assessed with the CIDI and those meeting criteria for organic mental disorder, psychotic disorder, a current episode of mood disorder, or mental retardation are excluded. Controls are subjects without any impulsive behavioural tendencies nor personal history of psychiatric illness, including personality disorder.

S83. 20 years of functional neuroimaging: cerebral blood flow/metabolism

Chairmen: L Pilowsky, A Lishman

STUDYING THE EFFECTS OF DOPAMINE NEUROTRANSMISSION WITH FUNCTIONAL IMAGING

R.J. Dolan. *Wellcome Department of Cognitive Neurology, Institute of Neurology, Queen Square, London WC1 3BG*

An abnormality in dopaminergic neurotransmission has been the cornerstone of theories as to the causation of schizophrenia. How do the findings of regional dysfunction and disturbances in cortical integration relate to proposed dopamine disturbances? One mechanism is via the modulatory effects of dopamine on regional, and inter regional, brain function. Novel applications of functional imaging techniques can be used to provide links between modulatory neurotransmitters and psychological function using combined pharmacological and neurocognitive challenges. Experiments in which manipulation of dopaminergic neurotransmission and cognitive activation are combined will be described. These show that it is possible to link neurotransmission to neuropsychological functioning and, more importantly, specify the neuroanatomical sites of interaction.

These experiments provide the background to a study of schizophrenic patients in which we examined the effect of a dopaminergic manipulation, with apomorphine, on the neural response to a cognitive task. In the schizophrenic patients, relative to controls, an impaired cognitive activation of the anterior cingulate cortex was significantly modulated by a manipulation of dopaminergic neurotransmission. Following apomorphine the schizophrenic subjects, relative to the controls, displayed a significantly enhanced activation of the anterior cingulate cortex. Furthermore, abnormal patterns of interaction between prefrontal and temporal cortices in the non drug condition were modulated by dopamine perturbation.

[1] Dolan RJ, Fletcher P, Frith CD, Friston KJ, Frackowiak RSJ and Grasby PM (1995) Dopaminergic modulation of impaired cognitive activation in the anterior cingulate cortex in schizophrenia. *Nature*, 378, 180-182.

THE FUTURE OF FUNCTIONAL IMAGING IN PSYCHIATRY

P.M. Grasby. *MRC Cyclotron Unit, Hammersmith Hospital, DuCane Road, London, W12 0HS*

Until recently most functional imaging in psychiatry centered around positron emission tomography (PET) and single photon emission tomography (SPET); deriving measures of either cerebral blood flow (as an index of neural activation) or central receptor populations (as in dopamine D₂ receptor number). The development of non-invasive