

S02.04**EPSILON STUDY OF SCHIZOPHRENIA: EVALUATION OF QUALITY OF LIFE IN EUROPEAN SETTINGS**

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Since the beginning of psychiatric deinstitutionalisation, quality of life (QOL) assessment in schizophrenic patients has been acquiring greater importance as a measure of outcome of the disease, and nowadays is used in numerous pharmaco-economic studies to evaluate new treatment modalities. In the literature, the studies evaluating QOL in schizophrenia differ considerably in both the type of patients evaluated and assessment instruments applied. Therefore, one of the main EPSILON study aims was to prepare standardised instruments to be used in European settings and administer those instruments to a representative sample of 404 schizophrenic patients in five centres: Amsterdam, Copenhagen, London, Santander and Verona. QOL was evaluated with the EU Lancashire Quality of Life Profile. The reliability and internal consistency of the instruments was tested and found to be good in a previous phase of the study. Results indicate that 98.5% of the patients interviewed were either satisfied or very satisfied with their QOL. The mean score on the Life Satisfaction Scale (LSS) was 4.67 (SD 0.76), i.e. close to medium rating. Areas with higher satisfaction scores were: religion (96.6%), leisure activities (95.5%), living situation (94.0%), health (92.0%) and safety (91.5%).

S03. Emergent addictive behaviours

Chairs: D. Marazziti (I), L. Pulvirenti (USA)

S03.01**NEURAL SUBSTRATES OF DEPENDENCE**

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A critical issue for the understanding of drug dependence is what neurochemical changes occur during the various phases of the natural history of drug addiction. A number of abused drugs are readily self-administered by various species of animals and their acute reinforcing properties critically depend upon dopamine neurotransmission within areas of the limbic forebrain. Dependence is however a chronic relapsing disorder and understanding the neurochemical determinants underlying the acute reinforcing properties of drugs still leaves several unanswered questions regarding the intimate mechanisms leading to the development of the full dependence syndrome. Specific long-lasting adaptive changes occurring in response to drug exposure are critical for later phases of the dependence cycle and may represent the basis for clinically relevant phenomena including drug craving and conditioned reinforcement. A yet poorly investigated issue within the context of dependence is the gradual narrowing of behavioral repertoires to reflect the progressive exclusion of other activities that prevents the individual to stop compulsive drug-taking behavior. This is conceptually and phenomenologically similar to the emergence of the perseverative, repetitive and compulsive behaviors that develop in other forms of non-pharmacological addiction. From this perspective common neurobiological substrates and similar neuroadaptive phenomena may underlie repetitive/perseverative behavior and the narrowing of behavioral repertoires that progressively lead to drug-seeking

behavior. Initial neurobiological evidence supports this possibility thus proposing a common neural denominator responsible for the development and expression of perseverative and drug-seeking behavior.

S03.02**PERSEVERATIVE BEHAVIOR: AN EMERGING CONCEPT IN PSYCHIATRIC DISORDERS**

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In many psychiatric disorders like schizophrenia, obsessive compulsions, pathologic gambling, drug- and internet addiction and in patients with frontal lobe damage perseverative behavior is one major symptom. This behavior is characterized by an uncontrolled response to a subsequent stimulus and by repetition and prolongation of a current activity. Dysfunctions can be found in the prefrontal cortex and other nuclei of the frontal-striatal circuitries. An impaired dopamine-glutamate interaction is discussed as the main underlying problem that generates an inappropriate adjustment of emotional/motivational drives to rational- or goal-directed behavior. So far only minor information about this failed adjustment is available and due to modest amount of theoretical and research attention. In this study the adaptive effects of the limbic input on dopaminergic functions in different areas of the frontal-striatal circuitries are therefore studied. We suggested that glutamatergic input that may originate from different limbic structures and that terminate on NMDA and AMPA receptors, respectively, have distinct effects in adaptation. After repeated drug treatment we revealed modified adaptive functions of the glutamatergic input. The results are discussed in terms of perseverative behavior and plasticity induced by the limbic system in the behavioral adaptation. It is speculated that maladaptation through the different limbic inputs are responsible for the specific symptoms found in the respective psychiatric disorders.

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S03.03**UPDATE IN PATHOLOGICAL GAMBLING**

E. Hollander

No abstract was available at the time of printing.

S03.04**IS OCD A FORM OF ADDICTION?**

J. Zohar

No abstract was available at the time of printing.

S03.05**KLEPTOMANIA AND COMPULSIVE BUYING: CLINICAL FEATURES OF AN ITALIAN SAMPLE**

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Kleptomania and compulsive buying are currently listed in DSM IV as impulse disorders not elsewhere classified. The aim of this study was to evaluate clinical features and comorbidity in an Italian sample of patients with a DSM IV diagnosis of kleptomania and

compulsive buying. Twenty outpatients with a lifetime diagnosis of kleptomania and ten suffering from compulsive buying were evaluated by means of the Structured Clinical Interview for DSM-IV, of a specially-designed semi-structured interview and of a modified version of the Family History Research Diagnostic Criteria. The majority of patients reported an early and abrupt onset, with an episodic course of the disorder with no gender prevalence. Lifetime comorbidity for other Axis I disorders was relevant, in particular for mood disorders, obsessive-disorder (OCD), separation anxiety, panic disorder and OCD-related disorders such as pathological gambling and tricotillomania. Family history showed a high prevalence of mood disorders, alcohol abuse and OCD. Our study indicated a clear connection between kleptomania, mood disorders and OCD, the exact nature of which has yet to be clarified.

S04. Behaviour and motor control in psychiatric disorders

Chairs: M.R. Lemke (D), B.G.C. Sabbe (NL)

S04.01

IMPULSIVITY, BEHAVIORAL DYSCONTROL, AND CONSCIOUS AWARENESS

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Impulsivity has emerged as one of the leading risk factors for behavioral disorders including, for example, substance abuse, ADHD, borderline and conduct/antisocial personality disorders. Impulsive acts have been defined clinically as "occurring suddenly, quickly, without much forethought, and without consideration of consequences" (Grani). Theoretical causal models of impulsivity emphasize arousal, varying forms of information processing, attention, and sensitivity to reinforcement in learning paradigms. Barratt and colleagues have proposed that impulsivity is related to temporal information processing which is related to performance on timing and rhythm tasks. In construct validity studies they have demonstrated that self-report measures of motor impulsivity, performance on a wide range of behaviors involving timing and rhythm requirements (verbal tasks [e.g., reading], pursuit rotor and finger tapping) and selected cognitive psychophysiological measures related to behavioral inhibition (N_{200}) and information processing (P_{300}), converge to define impulsivity. In predictive validity studies they have demonstrated that these measures are significantly related to ADHD, conduct disorder and impulsive aggression. This paper will discuss proposed neural circuits (e.g., basal ganglia, thalamus, and frontal lobes) which may be related to the behavioral measures of impulsivity and will include a discussion of a scale of conscious awareness which has impulsivity and premeditated behaviors at opposite extremes. Current research relating the lateralized readiness potential to impulsivity will also be broached.

S04.02

A NEW MODEL TO ASSESS STIMULUS PROCESSING AND BEHAVIOR CONTROL IN HUMANS FOLLOWING EXPERIMENTAL INDUCTION OF EMOTIONS

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Objective: Many psychiatric disturbances including borderline and antisocial personality disorders, substance abuse, eating disorders and suicidal behavior present with dysfunction of processing stimuli into adequate actions. Perceptive and executive components of this process may be modulated by affective stimuli. It was hypothesized that stimuli processing and generation of movements are affected by induction of positive and negative emotions.

Methods: Healthy subjects were subjected to visual stimuli which they could turn off by releasing and pressing two buttons. Neurophysiological methods including EEG, startle reflex, EMG and kinematic measures of hand movements by infrared detection (Proflex) were used to analyze the neuronal process from stimulus perception to movement execution with a specific software program for continuous chronological assessment of the signals with high precision.

Results: Stimuli (International Affective Picture System) induced different affective valence ratings (neutral/positive/negative) and startle response amplitudes (neutral 48.85 ± 3.28 , positive 49.95 ± 4.14 , negative 52.04 ± 8.95) Movement analysis revealed differences in onset of movement (neutral 4.86 ± 1.56 , positive 5.65 ± 2.12 , negative 4.73 ± 1.32 sec), movement duration (neutral 1.48 ± 0.59 , positive 1.49 ± 0.42 , negative 1.36 ± 0.44 sec), max. velocity (vmax) (neutral 0.45 ± 0.13 , positive 0.46 ± 0.15 , negative 0.46 ± 0.13 m/s), vmax latency (neutral 37.88 ± 17.18 , positive 39.87 ± 14.35 , negative 36.11 ± 12.7 sec).

Discussion: We showed for the first time that not only perceptive, but also executive components of CNS behavior control can be experimentally modulated by affective stimuli. The efficacy of psychotherapeutic and psychopharmacological interventions on behavioral control can be evaluated using our model. Future studies will include experimental variation of serotonergic CNS activity and its effects on behavior control.

S04.03

ANXIETY/AGGRESSION-DRIVEN DEPRESSION: A MANIFESTATION OF SEROTONERGIC PATHOLOGY?

H.M. van Praag

No abstract was available at the time of printing.

S04.04

FACIAL EXPRESSIONS AND PERSONALITY

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Facial expressions are often disturbed in psychiatric patients. Subjects with personality styles such as sensation seeking, extraversion or impulsivity are thought to have a risk to develop psychiatric disorders. To identify those subjects, kinematic analysis of facial expressions could be helpful. An active measurement device was used, allowing kinematic analysis of facial movements in detail. Markers which are fixed in distinct points of the face and send light or ultrasonics in high frequency give a direct measure of facial movements with high spatial-temporal resolution. Healthy