with a functional polymorphism in the regulatory region of the serotonin transporter (5-HTT) gene. 5-HTT function may also be affected by a recently detected A/G exchange in the long allele (insertion)of the 5-HTT regulatory region. In individuals with more COMT met158 alleles and with more s or lG alleles of the 5-HTT regulatory region, aversive stimuli elicited greater neuronal activity in the bilateral amygdalae and hippocampi. These genotype effects were additional to amygdala and hippocampus activation by aversive versus neutral stimuli, indicating that COMT val158-met and 5-HTT genotype were additionally associated with increased processing of aversive stimuli in the amygdalae. Functional brain imaging may be used to assess the interaction of multiple genotypes with anxiety and impulsive aggressiveness in alcohol-dependent patients.

S29.03

Uncovering decision making strategies in drug misusers

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Decision making research continues to generate new approaches to understanding addiction, in relation to developing interconnected concepts of myopia, hypersensitivity to reward and hyposensitivity to punishment. Despite high levels of inter-subject variance in former studies, little progress has been made in describing how individuals differ in terms of their decision-making strategies and behaviours within these decision-making tasks. A study was undertaken to develop methods for analysing and describing adapting response behaviours within a decision-making task. In addition, the effect of task manipulations such as feedback, penalties and practice were examined. Substitute medication maintained adult males were recruited for this study.

Interesting behavioural traits appear to reflect the performance differences between individuals, perhaps offering an additional approach to understanding the idiosyncratic nature of response behaviour during these tasks. Some insight was also gained in how task design may relate to decision-making strategies / response behaviours.

S29.04

Psychopathology of impulse control

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Impulse-control disorders are characterized by the presence of irresistible urges or impulses. With regard to phenomenology and pathogenesis of these disorders two yet unsolved questions attracted researchers: do Impulse-Control Disorders represent disorders of impulses (are the urges so penetrating that the individuum is no longer able to control them) or are they primary disorders to control ubiquitary impulses, or both of them. An answer to these questions is essential for pharmacological and psychotherapeutic treatment planning. In ICD-10 and DSM-IV, however, these questions remain untouched. There, the diagnosis impulse (control) disorders should be used for kinds of persistently repeated maladaptive behaviour that are not secondary to a recognized psychiatric syndrome, and in which it appears that there is repeated failure to resist impulses to carry out the behaviour and the patients report a prodromal period of tension with a feeling of release at the time of the act. Pathological gambling, pyromania, kleptomania, and trichotillomania must be attributed to the rest-category named ''Impulse Control Disorders'' in DSM-IV or named ''Habit and Impulse Disorders'' in ICD-10. As we know from clinical praxis, patients suffering from pathological gambling show a much more complex psychopathology quite similar to substance-related disorders. Therefore we propose for DSM-V that pathological gambling should be attributed as gambling addiction (or gambling dependence syndrome) together with other substance-related and non-substance related addictions (e.g. internet addiction, buying addiction, working addiction) to a new group of dependence disorders.

Symposium: Characterization of second generation antipsychotic drugs: The role of electrophysiology

S44.01

EEG abnormalities under first and second generation antipsychotics

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Antipsychotic treatment is frequently associated with unspecific EEG abnormalities; however, in a minority of subjects under antipsychotics severe alterations of brain electric activity including epileptiform activity might occur. Consequently, the risk of seizures is increased under psychopharmacology; however, differences between classes of antipsychotics (e.g. first or second generation drugs) have not been studied extensively and risk profiles regarding changes in brain electric activity remain to be established yet. We investigated psychiatric patients under antipsychotic medication using routine clinical neurophysiological assessments and compared first and second generation drugs. Aim of the study was to estimate the risk of EEG abnormalities under either class of medication by using both visual (standard) and quantified electroencephalography (qEEG) and to analyse the clinical relevance of such findings. In addition the association of brain electric activity under antipsychotics as assessed by novel electromagnetic imaging techniques with clinical parameters such as symptomatology or drug response was investigated.

There were significant differences in the prevalence of EEG abnormalities between first and second generation antipsychotics, with severe abnormalities being more pronounced under some of the second generation drugs. The use of either class was safe in general, but the differences might be of relevance in subjects with a history of seizures. The use of qEEG techniques in the clinical setting in terms of characterising the patients and the respective responses to medication will further be discussed.

S44.02

Topographic and tomographic QEEG changes induced by antipsychotic drugs

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QEEG almost consistently reports an abnormal excess of delta/theta activity, reduced alpha activity and posterior excess of beta activities in schizophrenics. LORETA allows more precise localization of these findings (excess of delta in bilateral anterior cingulate, increase of beta in parietal gyrus).All antipsychotic drugs induce significant changes in QEEG reflecting differential effects on inhibitory and

excitatory activities. Two QEEG profiles of first-generation antipsychotics may be differentiated: a)chlorpromazine-type profile, characterized by an increase in delta/theta and a decrease in alpha and beta power spectra, and b)haloperidol-type profile, which exhibits no significant change in delta/theta frequency band but increase of alpha and alfa adjacent beta activity. The second generation antipsychotics have different QEEG and LORETA profiles probably reflecting their different mechanism of action. Clozapine produces an increase of delta, theta and alpha1 and decrease of alpha2 and fast beta activities. Comparing to antipsychotic-naïve schizophrenics, clozapine-treated patients showed an excess of delta and theta activities in anterior cingulate and medial frontal cortex. QEEG profile of olanzapine is similar to clozapine, whereas tomography show slightly different pattern (decrease of alpha1-beta activities in the occipital cortex and posterior limbic structures and decrease of beta3 sources in the fronto-temporal cortex and anterior cingulum). Risperidone increased current density in frontal regions for delta, theta and alpha1 in healthy subjects, whereas we found no changes in LORETA between risperidone-treated and antipsychotic-naïve patients. According to'key–lock principle'the pharmaco-EEG topography and tomography could be helpful in the optimization of antipsychotic therapy.

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S44.03

ERP changes induced by antipsychotic drugs

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Background and Aims: Second-generation antipsychotics (SGA) are thought to have a more favorable impact on neurocognitive functions with respect to first-generation antipsychotics (FGAs). Event-related potentials (ERPs) represent valuable tools in the assessment of cognitive effects of psychotropic drugs; however, few ERP studies investigated antipsychotic drug effects on neurocognition in human subjects.

The present ERP, double-blind, cross-over study was carried out in 12 male healthy subjects to investigate the effects of a single oral dose of haloperidol, placebo or risperidone on effortful and automatic allocation of attentional resources to auditory stimuli.

Methods: ERPs were recorded from 30 unipolar leads (0.5-70 Hz bandpass, 256 Hz sampling rate), during a three-tone oddball task in which target, standard and rare-nontarget tones were randomly presented. Subjects had to press a button when hearing a target tone, while ignoring both standard and rare-nontarget stimuli.

P3 for target (P3b) and rare-nontarget stimuli (P3a) were identified at Cz and Pz leads. Amplitude maps at peak latency were then compared across conditions. If a significant drug effect was obtained, changes in the cortical sources of P3 were analyzed using Low-Resolution Electromagnetic Tomography (LORETA).

Results: No change was observed for P3b. P3a amplitude was increased by risperidone, at midline and right centro-parietal regions, but not by haloperidol. No change was observed in P3a cortical generators.

Conclusions: P3a, an index of the automatic allocation of attentional resources, is increased only by risperidone, suggesting a favorable effect of this SGA on orienting processes.

S44.04

Sleep EEG changes induced by antipsychotics

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Our standpoint for characterization of any drugs on sleep is based on three issues: 1) Assessment of drug induced effects on sleep in healthy young volunteers leads to unbiased conclusions about the pharmacological effects of a compound per se. 2) Working hypothesis underlying the scenario states that electrophysiological changes are directly related to the biochemical changes each compound induces in the brain. 3) Only changes on sleep macrostructure do not provide enough information for documenting pharmacological effects on sleep EEG. From a pharmacological perspective, second generation antipsychotic, as a class, may be defined in part as agents with simultaneously serotonin 2A and dopamine 2 antagonist properties. However, no two agents have exactly identical properties, including multiple pharmacologic actions at serotonin and dopamine receptor subtypes and multiple pharmacologic actions at other neurotransmitter receptors. Current knowledge about the parts played by the different transmitters on the control of the sleep-wake continuum, although important, is far for being clearly established. Availability of EEG sleep data on the effects of antipsychotic drugs is more than sparse. No attempts have been made to determine short-term, intermediate-term, or long-term effects. Questions of rebound following withdrawal or of tolerance have not been addressed. Up to date the most robust finding dealing with sleep EEG changes and second generation of antipsychotics is the increase of slow wave sleep (SWS) after drugs, as olanzapine, which show potent 5HT2A/2C antagonism activity. Further adequately designed, justified and analysed studies are certainly needed to advance in the field.

Symposium: Novel perspectives in prevention of suicidal behaviours

S35.01

Suicide prevention ''for the person'' - A subjectivistic approach outgoing from an European perspective

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The World Psychiatric Asociation has rcently launched its institutional program "Psychiatry for the Person", with the aim to indroduce a more subjectivistic and individ centred approach in diagnosing, treating and monitoring psychiatric disorders as human conditions.

Suicide prevention "for the person" seems here to be one of the most important fields in applying these principles. The suicididal person is influenced by his/her genetic predisposition and personality traits, his/her specific psychiatric disorder or dysfunction in biological and social framework, his/her individual psychosocial and existential