

not disease-oriented but phenomenology-, pathogenesis- and process-oriented, the patient and the therapist plan in dialogue accessible treatment goals according to the patient's deficiencies and resources; in this perspective abstinence is not the final aim but offers the patient a chance for transformation.

S17.02

Antagonists in the treatment of alcoholism: An update

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Naltrexone (NTX), an opioid antagonist, blocks intrinsic properties of substances that act on the mu, kappa and delta opioid receptor sites by competitive occupation. It is ascertained that alcohol acts on the opioid receptor sites. By blocking these sites, NTX prevents the reinforcing effects of alcohol consumption. Recent reviews of the effectiveness of NTX in the treatment of alcohol dependence agree that: a) NTX is effective in the treatment of alcohol dependence, especially with regard to the primary outcome parameter, i.e. relapse into heavy or uncontrolled drinking; b) NTX compliance probably is pivotal for successful alcohol treatment; c) There is some evidence that the combination of NTX and CBT (cognitive-behavioural oriented program) is somewhat more effective than NTX combined with supportive therapy; d) Also, there is some evidence that NTX can be of benefit to subgroups of alcoholics characterized by dual diagnosis, Type-II alcoholism or subjects with low level of clinical depression and alcohol dependence severity. Several strategies and hypothesis have been brought up in the literature, in which NTX compliance is subject of debate. Results of a current research about strategies to improve the effectiveness of NTX suggest that interventions aimed at enhancing medication adherence were more efficacy than strategies to increase the likelihood of taking NTX ("pill-count").

S17.03

Towards an individual treatment in alcoholism: Project predict

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Previous attempts to identify predictors for the treatment response in alcoholism have mainly concentrated on social and personality variables. Project MATCH was such an attempt which finally failed. The same holds true for similar attempts in pharmacotherapy. Therefore, we set out for a large oligocentre trial "Project PREDICT". 432 patients are randomly assigned to treatment with acamprostate, naltrexone or placebo. At baseline patients are assessed with a battery of interviews, questionnaires and biological examinations (e.g. genetics). Specific emphasis is put on patients' individual pathways into relapse. It is determined whether relapse drinking represented a positive reinforcer ("reward craving") or a negative reinforcer ("relief craving"). This is assessed with questionnaires, the startle reflex and fMRI. We hypothesize, that patients who are a priori identified as "positive reinforcers" better respond to naltrexone. Negative reinforcers should benefit most from acamprostate.

All patients have been included by now. Preliminary analyses suggest that it seems indeed possible to distinguish between the two

craving types. The equivalent of positive reinforcement in the startle reflex correlates with fMRI responses to cues with a positive valence of about 0.7. These methods might offer a platform for a targeted pharmacotherapy in alcoholism.

S17.04

Prenatal famine exposure is an important risk factor for developing addiction in later life

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Prenatal exposure to severe famine has been associated with an increased risk of schizophrenia and affective disorders. We studied the morbidity risk for addiction in persons being exposed to famine during gestation in the Dutch hunger winter of 1944-45 in a case control study. For each trimester of gestation the birth ratio of patients and inhabitants prenatal exposed to the famine was compared to the ratio of patients and inhabitants born in the same period in the subsequent year. Our findings indicate that the first trimester gestational exposure to the famine period significantly increased the probability of developing addiction in later life in male individuals (OR=1.62; 1.18 - 2.74; p<0.01). In addition to the time and gender specific effects on the vulnerability for schizophrenia and affective spectrum disorder during gestation a similar effect seems to exist for addiction disorders as another indication for the disastrous influence of severe malnutrition on brain development and maturation.

S17.05

The role of impulsivity, response inhibition and delay discounting in addictive behaviors

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Background: Addiction is now generally regarded to be a brain disease with a chronic course and a high probability of relapse even after long periods of abstinence. Recently, attention in the pathogenesis of addictive behaviors has shifted from abnormalities in the reward and motivational systems towards co-occurring abnormalities in decision making such as conflict monitoring and impulsivity. In this presentation, new data on abnormal decision making in substance use disorders and pathological gambling are presented.

Method: A selected review of the recent literature including data from patients with substance use disorders and pathological gambling.

Results: The data currently available show that smokers, alcoholics, drug dependent patients and pathological gamblers all suffer from abnormalities in motor impulsivity and delay discounting problems and that these abnormalities are associated with hypoactivity of the prefrontal cortex (PFC). Data further show that these abnormalities can not be fully attributed to the presence of comorbid axis I or axis II disorders. Recent data also show that activation of the PFC is dependent on adequate error and conflict monitoring by the anterior cingulate cortex (ACC). However, currently no data are available regarding ACC functioning in addicted patients, but it can not be excluded that at least part of the decision making abnormalities are due to deficits in error/conflict monitoring.

Conclusion: Substance dependent patients and pathological gamblers are characterized by serious deficits in decision making and these deficits should be addressed in future treatments for example through medication, EEG- or fMRI-feedback or transcranial magnetic stimulation.