

43 alcoholic patients, who had been undergoing anti-alcohol treatment at the Mental Health Research Institute, Russian Academy of Medical Sciences, Tomsk for one month, were subjects in the research. 32 alcoholic patients in the rehabilitation period took a 1.2 g daily dose of Sevitin (basic group) for 30 days, and the other 14 alcoholic patients were not given any medication treatment during the rehabilitation period (comparison group). Clinical dynamic of basic signs of the alcoholic patients pathological addiction to alcohol (affective, neurovegetative, ideator, dissonic and behavioral) was rated in scores. The scores were self-reported by patients twice: first – before the rehabilitative period and second – after 30 days of rehabilitation.

The reduction of affective, neurovegetative and dissonic symptoms after 30 days of rehabilitation was observed in the basic group, while the reduction of these symptoms in the comparison group was not reliable.

It was concluded that the use of Sevitin during the rehabilitation period contributes to reducing of the intensity of the pathological addiction to alcohol.

## P0051

Modulation of impulsivity by topiramate: Implications for the treatment of alcohol dependence

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Two laboratory paradigms identifying two behavioral processes have been used to measure impulsivity. The first relates to behavioral inhibition, i.e., the ability to inhibit thoughts or actions appropriately. The second pertains to the degree to which immediate rewarding consequences have more control over behavior than delayed consequences. Behavioral impulsivity disorders have been associated with alcohol dependence. Topiramate has been used to treat many disorders characterized by impulsivity symptoms. Reports also suggest that topiramate has utility in treating a variety of addictive disorders. Little is known, however, about whether its anticraving effects are related to its impulsivity-reducing actions. The aim of this preliminary study was to investigate which type/dimension of behavioral impulsivity was associated with topiramate's anticraving effects. A 12-week, double-blind, placebo-controlled pilot study of topiramate for treating alcohol dependence was conducted. Subjects were men recruited from alcoholism treatment units (topiramate=21; placebo=20). The continuous performance test and stop-signal task assessed behavioural inhibition. Differential reinforcement for low-rate responding was used to evaluate the delay discounting dimension. Alcohol craving and the amount of alcohol consumed during the study also were assessed. Topiramate-treated patients had lower rates of alcohol consumption and significantly lower alcohol craving scale scores than controls, and exhibited greater improvements in the behavioural inhibition and delay discounting paradigms. Improvement in alcohol craving was associated with better performance on the behavioural inhibition paradigm. Our findings suggest that topiramate's anticraving actions could be related to its effects on behavioural inhibition. More studies are needed to confirm and understand this link.

## P0052

Psychophysiological correlation between alcohol craving scale (ACS-3F) and startle reflex modulation

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**Introduction:** Alcohol Craving Scale-3Factors (ACS-3F) retrospectively assesses the period during which the subject consumed alcohol. It includes 33 descriptions grouped in three scales: positive reinforcement, negative reinforcement and impaired control. Tiffany emphasized the poor correlation between self-reported drug urges and the physiological effects of drug-associated stimuli. Our main objective in this project was to investigate the psychophysiological relationship between ACS-3F and the startle reflex modulation.

**Objective:** We hypothesized that the assessment of self-reported craving with ACS-3F would correlate with the non-conscious emotional response to these cues represented by the modulation of the acoustic startle response.

**Sample and Methods:** 55 alcoholic patients (29 abstainers and 26 relapsers) were exposed to acoustic startle test after three weeks of detoxification treatment. In this study, the difference between the amplitude of the startle reflex associated to images related to alcohol and the one associated to neutral images was used as dependent variable (motivational value of alcohol cues [MVAC]=startle amplitude in the presence of alcohol images-startle amplitude of neutral images).

**Results:** The abstainer group showed a significant inverse correlation ( $r=-0.475$ ,  $p<0.05$ ) between craving total score in ACS-3F and the motivational value of alcohol cues [MVAC]. With regards to craving, the group of relapsers did not correlate with startle modulation.

**Conclusion:** ACS-3F has adequate properties of concurrent validity. Results in abstainers showed a good correlation between retrospective craving self-reported and non-conscious emotional response to alcohol cues.

## P0053

Differences in the modulation of the startle reflex in abstainers and relapsers alcoholics

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**Introduction:** The study of the acoustic startle reflex modulation in alcoholics subjects in the presence of positive, aversive, neutral images and images related to alcohol consumption will allow us to measure the implicit affective valence of these cues.

**Objective:** To compare the emotional valence of the stimuli related to alcohol consumption between two groups of alcoholic patients (abstainers vs relapsers).

**Methods:** 55 alcoholic patients (29 abstainers and 26 relapsers) were exposed to acoustic startle test after three weeks of detoxification treatment. Difference between the amplitude of the startle reflex associated to images related to alcohol and the one associated to neutral images was used as dependent variable (motivational value of alcohol cues=startle amplitude in the presence of alcohol images-startle amplitude of neutral images).

**Results:** Abstainers patients showed a decrease of the startle reflex in the presence of visualization of alcohol associated stimuli compared to the registered ones in the presence of neutral stimuli ( $\mu=-0.041$ ). For the group of relapsers an increase ( $\mu=0.034$ ) of the amplitude of the startle reflex when they were exposed to alcohol related images was registered in contrast with the amplitude registered in the presence of neutral images. Differences between groups were significant ( $p<0.01$ ).

**Conclusion:** Abstainers process alcohol-related images as positive stimuli. Conversely, relapsers will stop processing alcohol-related images as appetizing or positive stimuli.

**P0054**

The role of behavioural measures of impulsivity in the development of alcohol dependence

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**Background:** The link between impulsivity and alcohol use disorders has been established in longitudinal and cross-sectional studies, but little is known about the role of behavioural impulsivity in the development of substance use disorders.

**Objectives:** Determine the role of behavioural measures of impulsivity in the development of alcohol use disorders.

**Design and measurements:** A prospective cohort study was conducted to identify the risk factors associated with alcohol dependence. Non-dependent heavy drinkers (N=471) and healthy controls (N=149) were recruited from primary care centres. They were assessed at the end of the 4-year follow-up period. Diagnoses were rendered using the Structured Interview for DSM-IV. The continuous performance test (CPT) and stop-signal task (SST) assessed behavioural inhibition. Differential reinforcement for low-rate responding (DRLR) was used to evaluate the delay discounting dimension.

**Results:** HD participants have significant impairments on all laboratory measures of impulsivity. In the logistic regression model, impairment on DRLR (delay discounting dimension) was the only measure that classified accurately HD. Baseline behavioural measures of impulsivity correlated positively with amount of alcohol consumption during the follow-up period. Logistic regression analysis indicated that performance on inhibitory control (SST) (behavioural inhibition dimension) was a significant predictor (odds=1.52[1.08–2.31]) for developing alcohol dependence.

**Conclusions:** Our data support the link between behavioural measures of impulsivity and alcohol use disorders. Delay discounting dimension may be a risk factor for begin alcohol use heavily and behavioural inhibition impairment is more involved in the development of dependence.

**P0055**

Cocaine use provokes chronic impulsivity in heavy drinkers

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**Background:** Different types of behavioural impulsivity have been associated with the development of substance use disorders but little is known about what type of impulsivity is provoked by the effect of chronic use of substances.

**Objectives:** Determine what type of behavioural impulsivity was associated with the use of alcohol and cocaine.

**Design and measurements:** A prospective cohort study was conducted to identify changes on behavioural impulsivity. Non-dependent heavy drinkers (N=471) were recruited from primary care centres. The following assessments were used at baseline and at the end of the 4-year follow-up period: The continuous performance

test (CPT) and stop-signal task (SST) assessed behavioural inhibition. Differential reinforcement for low-rate responding (DRLR) was used to evaluate the delay discounting dimension. Diagnoses were rendered using the Structured Interview for DSM-IV.

**Results:** Amounts on alcohol and cocaine consumption during follow-up correlated positively with changes on all impulsivity measures. Logistic regression analysis indicated that cocaine used was associated specifically with poor performance on CPT and SST and amount of alcohol used during follow-up was related to changes on DRLR.

**Conclusions:** Substances provoke different pattern of behavioural impulsivity: chronic cocaine use provokes changes mainly on behavioural inhibition dimension and alcohol use induces changes on delay discounting paradigm.

**P0056**

Moods and expectations relating to a typical drinking occasion for women with alcohol dependence in Sweden

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**Background and Aims:** The presentation focuses on women's drinking problems, early relations, their mood states and expectancies as important factors influencing individual patterns of drinking. The objective is twofold: (1) to investigate states of mood and expectancies preceding a typical drinking occasion; and (2) to study possible connections between mood state, expectancies, and relation to parents versus drinking patterns.

**Methods:** The population consists of 50 female alcohol patients from a Swedish clinic for women with alcohol dependence problems. Semi-structured interviews were conducted. A mixed method design was used to treat qualitative interview-data and quantitative data from questionnaires and medical journals.

**Results:** Four out of five patients were children of parents with dependence problems. Moods were described by patients as mostly negative states, and expectancies showed a preference for escaping from a stressful situation or for enhancing one's own experience. About 60 % of the patients reported negative family relations, pointing to deficient parental modeling.

**Conclusions:** Sweden represents a non-traditional culture with multiple role demands. Thus, it is proposed that coping characterized by the urge to escape from overwhelming pressures may be a risk factor for drinking problems in the present patient population. Combined analyses of quantitative and qualitative data will be presented and the discussion will focus on the need to develop treatment designs that include gender and cultural analyses.

**P0057**

Alcoholism and major affective disorder

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