

**DEPRESSION VS. CRAVING IN ALCOHOLIC RELAPSE**

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Treating withdrawal and post-abstinence craving have had mixed success in eliminating drug use, improving outcomes and reducing relapse. To assess the role of craving and withdrawal in continued drug use we analyzed data at 6 and 12 month follow-up contacts from 1,626 patients voluntarily admitted to a primary rehabilitation center. 42% were diagnosed as alcohol dependent (AD) alone. The AD group had the best outcomes and the least slippage. In all groups craving was not a major self-reported cause of relapse. In the AD group, the most common reason was depression. In fact, 300% more patients cited depression, compared to craving, as the reason for their relapse. These data agree with other reports in the literature suggesting that relapse is not commonly related to craving. Subtle chemical changes in the abstinent brain associated with withdrawal may support the continuation of alcohol use but may not be consciously recognized. Markers for withdrawal-related dysphoria vs. depression may be needed to target improve treatment outcome.

**Familial Aggregation of Early Onset ( $\leq 20$  Years) Panic Disorder**

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The familial risk of panic disorder (PD) was examined in 143 adult first-degree relatives (AFDRs) of 25 probands with early ( $\leq 20$  years) onset and 449 AFDRs of 82 probands with late ( $> 20$  years) onset of PD. Rates of PD in these groups were compared to those in 255 AFDRs of 45 screened normal controls. AFDRs of probands with onset  $\leq 20$  years carried an 18-fold increased risk, AFDRs of probands with onset between 21 and 30 years of age carried a fivefold increased risk, and AFDRs of probands with onset after age 30 carried a sevenfold increased risk of PD compared to AFDRs of normal controls. These relative risks were adjusted for ascertainment source of proband (treatment clinic vs. community sample) and gender, age, and interview status of relative using proportional hazard models. However, age at onset of PD was not specifically transmitted within families. While PD is highly familial irrespective of age at onset, as with many other disorders, the earliest onsets in probands confer particularly high familial risk.

**A PROSPECTIVE STUDY OF THE RABBIT SYNDROME**

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Rabbit Syndrome (RS) was described in 1972 as a peri-oral hyperkinetic disorder of 5–5.5 Hz frequency in association with long term neuroleptic drug therapy. It was differentiated from Tardive Dyskinesia (TD) with the help of two important features: persistence in Stage I NREM sleep and sparing of tongue. This paper presents data on 19 cases of RS identified during the last 13 years with descriptive criteria by Villeneuve (1972). The patients with RS were subjected to reduction of their neuroleptic dose if discontinuation was not feasible, introduction of anticholinergic agents following challenge with intravenous promethazine and spontaneous one night sleep EEG. They were followed up for a period of one to three years. The results indicate that RS disappeared with intravenous promethazine which is a good differentiating strategy. The rabbit tremors did not persist in sleep and at least one-third of the patients had a lingual component. Follow up of these patients revealed that it can be effectively treated with anticholinergic drugs and development of RS did not predict future development of TD in the cohort. It therefore appears that some features of this disorder needs to be re-examined.

**ALPHA-2 AND BETA-2 ADRENORECEPTOR COUPLING TO ADENYLATE CYCLASE IN PANIC DISORDER: EFFECT OF IMIPRAMINE TREATMENT**

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Adrenergic receptor (AR) coupling to adenylyl cyclase (AC) and the effect of imipramine on AR coupling have not been examined in panic disorder (PD). Platelets alpha-2 AR were measured (Garcia-Sevilla et al., 1981), in 21 normal controls (NC) and 20 PD patients. Neutrophils beta-2 AR were measured (Davis & Leftowitz, 1980), in 34 NC and 27 PD patients. Assays were repeated in 10 patients on imipramine. Saturation and agonist-displacement experiments were conducted and receptor density in the high- and low-conformational states, ( $R_H$  &  $R_L$ ) and agonist affinity ( $K_H$  &  $K_L$ ) were measured. The  $\%R_H$  and the  $K_L/K_H$  ratio were used as indices of AR coupling to AC. PD patient had higher alpha-2  $R_H$  (NC:  $188.1 \pm 73.2$  vs PD  $349.9 \pm 176.6$  fmol/mg protein,  $p < .0004$ ) and  $R_L$  (NC  $121.0 \pm 47.4$  vs PD  $180.7 \pm 85.3$  fmol/mg protein,  $p < .008$ ). Beta-2  $R_H$  (NC:  $29.8 \pm 34.6$  vs PD:  $54.9 \pm 28.3$  fmol/mg protein,  $p < .003$ ) and  $R_L$  (NC:  $11.3 \pm 9.11$  vs PD  $30.1 \pm 36.1$  fmol/mg protein,  $p < .005$ ) were higher in PD. No differences were observed in  $K_H$  or  $K_L$  for either alpha-2 or beta-2 AR. Alpha-2  $\%R_H$  (NC:  $60.3 \pm 9.5$  vs PD  $65.7 \pm 5.9$ ,  $p < .03$ ) and beta-2  $K_L/K_H$  ratio (NC  $187.2 \pm 256.1$  vs  $688.5 \pm 838.6$ ,  $p < .001$ ) were higher in PD. Imipramine normalized a pretreatment trend for lower alpha-2  $K_L/K_H$  ratio (Pre:  $74.8 \pm 17.6$  vs Post:  $117.9 \pm 83.6$ ,  $p < .03$ ), lowered beta-2  $R_H$  (Pre:  $55.28 \pm 28.3$  vs Post:  $29.0 \pm 13.0$  fmol/mg protein,  $p < .009$ ) and decreased its  $K_L/K_H$  ratio by 50%. These results show that imipramine enhances alpha-2 coupling to AC and uncouples beta-2 AR with a net effect of decreasing noradrenergic function.