## FC75 *Neurosciences, psychopharmacology and biological psychiatry*

### POLYSOMNOGRAPHIC EFFECT PREDICTION OF MOOD STABILIZERS

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An important role in pathogenesis of bipolar disorder and mechanism of normothymic action seems to be played on the level of interaction between circadian rythms and sleep-awake cycle. Sleep stages were analysed in 23 patients with bipolar affective disorder according to ICD-10 criteria. 7 of them were treated with lithium carbonat (LC), 9 - with carbamazepine (CRB) and 5 - with sodium valproat (SV) Registration was done before the treatment (after 2-week wash-out period). In 3-5 days, in 2 weeks and after 3 months on the treatment. All normothymic compounds after long-term use had resembled effects on sleep characteristics. They inhibited activity of REM-sleep including prolongation of REM-latency, restored SWS and normalized ultradian distribution of sleep cycles during the night, that could be due to resynchronization of circasdian rhythms with nyctohemeral cycle. After short-term use polysomnographic effects of the mood stabilizers differed considerbly. LC from first days inhibited REM-sleep and later activitated SWS, on the contrary anticonvulsants rapidly stimulated SWS and secondary inhibited REM-phase. Chronological model of rapid cycling bipolar disorder and thymoisoleptic action of mood stabilizers was proposed for early effect prediction.

## FC76 *Neurosciences, psychopharmacology and biological psychiatry*

### Effect of Clozapine Treatment associated with Cognitive Behavioral Therapy on schizophrenic patient

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Clozapine, an atypical neuroleptic drug has superior efficacy in:

1. Treatment resistant schizophrenic patients, who have had frequent hospitalizations
2. Severe and persistent positive and disorganization symptoms
3. Persistent negative symptoms and severe social impairment. There are perceptual and cognitive deficits with schizophrenic patients, as an expression of cognitive vulnerability.

We employed clozapine treatment (400-500 mg/day) on 42 resistant patients over one year period. We used the following scales: BPRS, SANS, SAPS, QLS. We observed that the total BPRS score was reduced progressive, by 36.2% per 4 months, 46.3% per 12 months; the SANS score showed an improvement of the negative symptoms; emotional withdrawal, poverty speech, diminishing social engagement. We associated clozapine treatment with cognitive behavior therapy on 30 schizophrenic patients. We employed a therapy program as the Integrated Psychological Therapy Program for Schizophrenic Patients (IPT). This group attended a total of 24 therapy sessions of 45-60 minutes over a period of 12 weeks. We observed that this modality of complex treatment is more efficient than clozapine treatment alone.

## FC77 *Neurosciences, psychopharmacology and biological psychiatry*

### WORKING MEMORY BRAIN PROCESSES ARE IMPAIRED IN SCHIZOPHRENIA

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Delayed verbal reading reactions of words and sentences were applied to 1) 76 normal subjects, 24 with 6 to 26 years of age, 27 with 27 to 45 years and 25 with 45 to 81 years; 2) 76 neurologic patients affected by primary Parkinson's disease (PD) (23), multiple sclerosis (6), post-traumatic neuropsychological sequela (TN) (7), cerebrovascular diseases (15) and degenerative motor-sensory neuropathies (21), 3) 59 psychiatric patients affected by Alzheimer's disease (AD) at an early phase (26), schizophrenia (24), bipolar manic-depressie psychosis (5) and obsessive compulsory disorders (4). Measured variables were: a) mean values and standard deviations of latency time (t) and duration (D.) of the acousticogram (ACG) of 12 choice reactions for each stimulus presented at random in delayed responses (at Fore-periods, FP, 0.1, 0.5, 1.5 and 4 s.) and in immediate (i.e. FP=0) responses, b) the ratio tACG at FP=0.1/tACG at FP=0 as an Index of early programming processes, named the EI; c) the ratios tACG at FP = respectively 0.5, 1.5 and 4 s/tACG at FP=0 as Indices of processes intermediary between programmation and execution (corresponding to working memory) and named the IRs. Results: I) Moderate increase in ER was found in old normals; II) Marked increase in tACG at FP=0 and in ER was found in PD; III) D.ACG was particularly increased in PD while both tACG at FP=0 and tACG at FP>0.4 s showed moderate to marked increases. IV) tACG at FP=0 only was increased in TN, and V) Specific increases in IRs were found only in schizophrenics. In line with the findings in IR obtained by S. Park et al and the hypofrontality shown by neuroimaging in schizophrenics and in some of their relatives we consider the increase in IR in thee subjects as a risk factor for schizophrenia.

## FC78 *Neurosciences, psychopharmacology and biological psychiatry*

### THE STUDY OF THERAPEUTICAL RESISTANCY OF DEPRESSION BY INFRA-RED SPECTROSCOPY TECHNIQUE

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According to recent results about 30-40% of depressive patients are resistant to anti-depressive treatment. Nowadays the processes of peroxide oxidation of lipides being the main mechanisms of membrane modification are leading in pathogenesis of psychic disorders. Intensification of peroxide oxidation results in changes of membrane structure leading to disorders in a number of metabolic processes, particularly, lipide and carbohydrate metabolism. We analysed clinico - biochemical correlations between clinical and pathobiochemical parameters got by infra-red spectroscopy technique, the parameters characterizing conjugate metabolism disorders. Patients suffering from curable and resistant endogenic and organic depressions were studied. We used a system of nine-zone radiometer-spectrometer registering different chemical relations in blood and PC programs for quantitative analysis of biological active substances in blood. The output result of the system is the degree of infra-red consumption in a given channel (in conventional units percentage) 56 patients suffering from endogenic and organic depressions were examined, 19 of them appeared curable (responders) and 37 showed resistancy to anti-depressive therapy (non-responders). The patients were selected according to DSM-IIIR for "major depressive episode". Clinical studies were complemented by psychological method MMPI. The analysis of pathochemical data showed that responders deviate from norm in channels 4,8 and 9 ($p<0.001$) and non-responders deviate from norm in channels 1, 4, 8 and 9 ($p<0.001$). Comparing pathochemical data of responders and non-responders in channels 4, 8 and 9 ($p<0.01$) showed evident differences. The worst disorders are revealed in the following compounds phosphatidiserines, phosphatidicholines, phosphatidiethanolamines and phosphatidinosites. An evident inter relationship between phobiochemical parameters and degree of clinical symptoms expression is stated. Thus, the results received are worth applying as pathobiochemical markers in estimating the patient's state as well as in developing complex therapeutical methods in resistant depressions

https://doi.org/10.1016/S0924-9338(97)80522-6 Published online by Cambridge University Press