

Methods: The number of neuroglia and neurons was estimated in motor cortex of Wistar rats predisposed to convulsive audiogenic epilepsy and in motor neocortex of Wag/Rij rats predisposed to non-convulsive absence-epilepsy. The adult animals were placed into the box and treated by standard complex (“multiplex”) sound with a frequency range of 13–85 kHz and mean intensity 50–60 dB for 90 sec. After two months of treating the rats with the intensity convulsive activity were decapitated, brain was fixed and frontal slices of forebrain were stained by Nissle method. A total 16 animals were studied.

Results: There was no statistically significant variation in the number of neurons and satellite glia in brain of Wistar rats in either predisposed or resistant to convulsive audiogenic epilepsy (the treated group or untreated group). However the density of diffuse glia cells or “free” glia in audiogenic rats was greater (11%) than in untreated group. There was no difference in density of glia in corpus callosum. The density of neurons in brain of WAG/Rij rats was higher (24 %) than in brain of Wistar rats (untreated group). There was no difference between the groups in density of glia in motor cortex, whereas the number of glia in corpus callosum of WAG/Rij rats was higher (26,9 %) than in Wistar rats.

Conclusion: The predisposition to epilepsy is correlated with increase in density of neuroglia in motor cortex (Wistar rats) and in corpus callosum (WAG/Rij rats). We propose that gliosis in motor cortex precedes the epilepsy status and provides increased excitability for neurons, their readiness for synchronization of electrical activity due to increased axon myelination.

Wednesday, April 6, 2005

P-17. Poster session: Dementia and child psychiatry

Chairperson(s): Sam Tyano (Petah-Tiqvah, Israel), Michael Rapp (New York, USA)
11.15 - 12.15, Gasteig - Foyers

P-17-01

Developmental outcomes of long-term atomoxetine treatment in ADHD

D. Michelson, T. Spencer, M. Bangs, S. Zhang, D. Ruff, H. Gao, P. Feldman. *Lilly Research Laboratories, Indianapolis, USA*

Objective: The objective is to review development and safety data from patients with attention-deficit/hyperactivity disorder (ADHD) during long-term treatment with atomoxetine.

Methods: Safety is assessed by analysis of adverse events (including discontinuations), vital signs, laboratory data, and electrocardiography. Developmental landmarks are obtained from an integrated database containing information from all company-sponsored ADHD trials lasting 1 year or longer.

Results: Safety results are available for 3262 children and adolescents (6–17 years) exposed to atomoxetine; 425 for more than 2 years. Mean modal dose is 1.4 mg/kg/day. Six percent of patients discontinued due to an adverse event. Commonly-reported adverse events tend to resolve during ongoing treatment. Modest initial elevations in blood pressure and pulse rate are stable during long-term treatment. No clinically meaningful drug effects on cardiac repolarization (QT) are observed. There is a small decrease

in weight gain at 1 year relative to normative expectations, with a return towards predicted rates by 18 months. Neither sexual development nor Wechsler Intelligence Scale-III scores are adversely affected.

Conclusion: During long-term treatment, atomoxetine is safe and well tolerated.

P-17-02

Atomoxetine’s efficacy over time in children and adolescents with ADHD

V. Sutton, D. Milton, D. Ruff, A. J. Allen. *Lilly Research Laboratories, Indianapolis, USA*

Objective: Atomoxetine has been shown to be efficacious for treating attention-deficit/hyperactivity disorder (ADHD) in children and adolescents. Onset of action is demonstrated in 1 to 2 weeks, and greater efficacy is evident beginning at 4 to 5 weeks. The pattern of treatment effect size for the ADHD Rating Scale (ADHD RS) total score over time is presented for 5 trials.

Methods: Study design, except for dose administration, was similar across trials. Children and adolescents with ADHD were randomized into 6- to 9- week, double-blind, placebo-controlled acute treatment. Symptoms were assessed by the ADHD RS. Cohen’s d effect size for the ADHD RS total score was used to describe efficacy in core symptoms.

Results: Nine hundred eighteen (918) children and adolescents were randomized (atomoxetine n=560, placebo n=358). Mean ADHD RS total score reductions were superior for patients randomized to atomoxetine compared to placebo (p<.001 in each study). Effect sizes from baseline to endpoint (LOCF) ranged from 0.6 to 0.8. For by-visit assessments, effect sizes at Week 1 ranged from 0.1 to 0.7 and at the final acute treatment visit ranged from 0.6 to 1.0.

Conclusion: Response to atomoxetine is a function of exposure to treatment, increasing with both time and dose.

P-17-03

An analysis of baseline functional disability in a cohort of employed adult patients with attention-deficit/hyperactivity disorder

L. Levine, R. Tamura, A. Rogers, H. Detke, A. J. Allen. *Lilly Research Laboratories, Indianapolis, USA*

Objective: Baseline data are presented on work productivity in a sample of employed adults with attention-deficit/hyperactivity disorder (ADHD) entering a long-term pharmacotherapy study.

Methods: Subjects were 18–49 years of age, employed for pay ≥20 hours/week, and meeting DSM-IV-TR criteria for both adult ADHD and a historical diagnosis of childhood ADHD, with a current CGI-Severity-ADHD score ≥4. Measures included the Endicott Work Productivity Scale (EWPS), Global Assessment of Functioning (GAF), Conners’ Adult ADHD Rating Scales (CAARS), as well as additional measures of functioning.

Results: Mean weekly working hours were 38.5 (SD 13.8, n=263). Mean EWPS total score was 49.7 (SD 16.6, n=262), higher than both that of a general community sample (22.3, SD 12.9, n=66) and a depressed sample (39.4, SD 17.6, n=35). Patients were moderately symptomatic (mean CGI-S=4.6, SD 0.7; mean CAARS-Investigator-rated=35.2, SD 7.7), with moderate to severe

functional impairment (mean GAF=56.5, SD 6.4), similar to levels seen in 2 large ADHD clinical trials.

Conclusion: Results indicate a high degree of work impairment in adults with ADHD, as severe as, if not more severe, than that seen in a sample of patients with major depression. These data add validity to the occupational impairments associated with ADHD in adults.

P-17-04

Sleep of children with ADHD compared with healthy control subjects

J. Owens, R. B. Sangal, V. Sutton, R. Bakken, W. Feng, A. J. Allen, D. Kelsey. *Rhode Island Hospital Department of Pediatrics, Providence, USA*

Objective: There is evidence that attention-deficit/hyperactivity disorder (ADHD) is associated with sleep problems in children. This study used actigraphy and diaries to compare the sleep of children with ADHD and healthy control subjects.

Methods: Participants were 107 children with ADHD and 46 healthy control subjects aged 6-14 years. All subjects were screened for comorbid mood disorders and none of the ADHD subjects were on medication. All subjects wore actigraphs for a 7-10 day period in the home setting to monitor sleep-wake patterns. Subjects and their parents answered sleep-related questions using electronic diaries.

Results: Semi-parametric analyses of actigraphy data showed the following statistically significant results: sleep onset latency, assumed sleep time, and total sleep interval were shorter for children with ADHD than for healthy control subjects, although variability was generally greater for ADHD subjects. Children with ADHD had fewer sleep interruptions; however, the total duration of all sleep interruptions was longer. Child diaries showed children with ADHD had a significantly harder time getting up, were sleepier during the day, and slept less well. Parent diaries indicated children with ADHD were significantly more difficult to get up and ready in the mornings, argued more, had more difficulty completing tasks, were less attentive, and had more difficulty transitioning activities and getting ready for bed in the evenings, and had more difficulty falling asleep compared with healthy control subjects.

Conclusion: Compared with healthy control subjects, children with ADHD had more sleep-related problems detected through actigraphy and sleep diaries.

P-17-05

A modelled economic evaluation comparing atomoxetine with stimulant therapy in the treatment of children with Attention-Deficit/Hyperactivity Disorder in the United Kingdom

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Objective: To estimate the cost-effectiveness of atomoxetine for the treatment of children and adolescent with Attention Deficit/Hyperactivity Disorder (ADHD) in the UK NHS.

Methods: A modelled economic evaluation calculated the incremental cost per quality-adjusted life years (QALYs) gained of atomoxetine compared to three stimulant therapies and "no medication". Treatment algorithms with and without atomoxetine

were compared in patient subgroups stratified by prior treatment history and whether stimulant medication was appropriate. A Markov process incorporated eighteen health states representing hypothetical treatment outcomes for which utility values were sought from parents of patients through survey. Aspects of effectiveness and safety of each medication were based on a review of controlled clinical trials and other clinical literature. Monte-Carlo simulation was run over a one-year duration from the perspective of the National Health Service.

Results: In stimulant-naïve patients, atomoxetine's incremental cost effectiveness ratio (ICER) was £15,224 and £13,241 compared to immediate-release (IR) and extended-release (XR) methylphenidate respectively. In methylphenidate-failed patients, the atomoxetine's ICER over dexamphetamine was £14,945. In stimulant-exposed, but currently untreated patients, atomoxetine's ICER over IR and XR methylphenidate was £15,877 and £14,156 respectively. In patients contra-indicated for stimulants, atomoxetine's ICER was £11,523 and £12,370 compared to no medication for stimulant-naïve and -exposed populations, respectively. Sensitivity analysis showed the model results to be robust. Utility values for each treatment were important determinants of the cost-effectiveness of atomoxetine.

Conclusion: Results of the modelled economic evaluation suggest atomoxetine offers a value-for-money alternative in the treatment of children with ADHD in the UK National Health Service.

P-17-06

A polymorphism at 3' untranslated region of the human CLOCK gene is possibly associated with adult attention-deficit hyperactivity disorder

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Attention-Deficit Hyperactivity Disorder (ADHD) is commonly found in subjects with antisocial personality disorders and predicts criminal activity in adulthood. Several studies demonstrate a relationship between ADHD and sleep problems indicating sleep fragmentation and objective daytime somnolence in unmedicated ADHD patients. Daytime somnolence is the primary cause of the inattention problems seen in ADHD. Since ADHD is a very complex disease with a high genetic load involving multiple genes of moderate effect we hypothesized a link of adult ADHD to genes involved in the circadian timekeeping system. Recently, a preferred time for activity in Caucasian and Japanese populations was described, which is biased towards morning and evening, related to a C/T polymorphism in the 3'-UTR of human CLOCK homolog gene, with a tendency towards eveningness in subjects carrying at least one copy of the C-allele. We performed an association study of this polymorphism with ADHD traits in 238 male adult detainees with German background suffering of ADHD. ADHD symptoms were measured using a new instrument designed according to DSM-IV and ICD-10 Hyperkinetic Syndrome research criteria and Youth Self-Report/Young Adult Self-Report. Our results reveal a strong association of the self-rating for attention deficit, with a genotype of the SNP rs1801260. This finding suggests that the hCLOCK gene represents another potential candidate gene and susceptibility factor for disturbed circadian rhythmicity and sleep disorders, both of which are frequently observed in patients with ADHD. To our knowledge, this is the first study to link adult

ADHD to polymorphisms of a biological clock gene and, consequently, further independent replications are necessary.

P-17-07

The Zurich-Study: ADHD-Subscale derived from SCL and psychopathological associations

D. Eich-Höchli, A. Bosca. *Psychiatric University Hospital, Zurich, Switzerland*

Objective: The Zurich Study is a long term epidemiological study with 591 participants that provides representative data on the longitudinal outcome of traditional psychiatric syndromes. Since 1979, six waves of interviews were conducted that comprised the administration of a multitude of instruments, including SCL-90-R. We examined psychopathological associations of ADHD-Subscale with different psychiatric disorders.

Methods: Based on the SCL-90-R, a scale for the assessment of ADHD was built using 8 items of the SCL-90-R best reflecting specific symptoms of ADHD. Methods included were cluster analysis and discriminant analysis. According to this scale, a group of individuals with possible ADHD was identified. Logistic regression models were used to determine associations with other psychiatric syndromes.

Results: Results show the existence of a distinct and time-stable group of 66 individuals (34 men, 32 women) affected by a high degree of specific symptoms of ADHD. Significant associations with depression, anxiety, panic, agoraphobia, social phobia, simple phobia, obsessive-compulsive disorder, neurasthenia, and suicide were found.

Conclusion: Participants identified with possible ADHD show significantly higher manifestations of symptoms of ADHD over 20 years according to ADHD-Subscale. A distinct pattern of associations with other psychiatric syndromes was found for this group. These findings may provide information regarding differential diagnosis of ADHD. Prospective investigation of the validity of the proposed scale is needed.

P-17-08

Communication impairments in mental retardation: Autism?

S. Tuinier, B. Hamel, W. Verhoeven. *Vincent van Gogh Institute Dept. of Psychiatry, Venray, Netherlands*

Objective: Impairments in reciprocal social interactions and communication skills are frequently observed in patients with mental retardation, irrespective its etiology, and other brain disorders. With respect to mental retardation, in patients with lower IQ-levels in up to 80% etiologies can be identified of which about half comprise chromosomal abnormalities and monogenic disorders. In addition, this group is frequently provided with the psychiatric diagnostic label 'autistic disorder' which deviates from the original descriptive criteria as formulated by Kanner in 1952. This has resulted in a large increase of the prevalence of autism in general from 6/10.000 in the mid eighties to 40/10.000 at present. Consequently, the search for the genetic and neurobiological etiologies of autism has become severely hampered. These misunderstandings are caused by the reification of the etiologically neutral DSM-descriptions. Comparable problems arise with the application of the DSM-vignette schizophrenia in a large variety of patients with genetic syndromes.

Results: This diagnostic conundrum is best illustrated at the 22q11 deletion syndrome that is thought to be associated with schizophrenia, bipolar affective disorder and autism as well as their respective spectrum disorders. Depending on the applied item list one or more psychiatric vignettes can be allocated.

Conclusion: Since this syndrome is associated with a very specific profile of cognition, temperament and affect, the application of a categorical diagnosis should be replaced by a detailed description of the psychopathological phenotype including the restricted communication abilities.

P-17-09

Differential diagnosis of autism: Comparison of autism-spectrum disorder and schizotypal personality disorder

J. I. Egger, S. Tuinier, T. Klaassen, H. De Mey, W. Verhoeven, *Vincent van Gogh Institute for Psychiatry, Venray, Netherlands*

Objective: Clinical psychiatric examination according to DSM-IV criteria is not adequate in differentiating subtypes of complex disorders or in disentangling overlapping syndromes. Two examples of both "within- and between-confusion" are the autism-spectrum-disorders (ASD, e.g., autism, Asperger's syndrome, Pervasive Developmental Disorder NOS) and the schizotypal personality disorder (SPD) for which subtypes are suggested according to the focus on negative or positive symptoms. There is growing evidence in support of a functional psychopathological approach in which both diagnostic predicates are comprised, and in which the method of assessment is a multidimensional one.

Methods: The present study's address is twofold. In the hereforementioned groups (adult male psychiatric patients), we will first examine the similarities and differences in executive functioning, social interaction and social cognition. Second, we investigate diagnostic efficacy by measuring the incremental validity of a neuropsychological assessment procedure when included in the differential diagnostic process of autism.

Results: Preliminary results will be presented.

P-17-10

Creativity and psychiatric disorder: Historical review and new associations

M. Fitzgerald. *Trinity College Dept. of Psychiatry, Dublin, Ireland*

This lecture aims to show that the relationship between creativity and psychiatric disorder is not a myth. While there are no epidemiological studies of creativity and psychiatric disorder there is nevertheless compelling biographical evidence to support such an association. Psychiatry has always moved from the discussion of individual persons with psychiatric disorder to the study of them in general population samples. Creativity studies and psychiatric disorder have not reached the final point yet. Nevertheless from time immemorial people have been fascinated by the link between creativity and psychiatric disorder. It is a very common topic in discussions among psychiatrists. There has recently been quite an intense debate in the letter section of the British Journal of Psychiatry on the topic. I will discuss persons (no longer living) who have clear evidence of creativity of genius proportions and a documented history of psychiatric disorder. While the literature documenting the relationship between bipolar disorder and creativity is very great, and this will be reviewed, the relationship between autism, and Attention Deficit Hyperactivity Disorder and creativity is much less discussed. For

example persons with autism have very narrow focus in their work, are very persistent, often use a weak central coherence method of central processing which gives major advantage to certain forms of creativity particularly in mathematics, engineering, and physics. The 'case history' approach will be used to illustrate this from biographies of Isaac Newton, Albert Einstein, and Cavendish. There will in addition be a discussion of Kurt Cobain who was diagnosed with Attention Deficit Hyperactivity Disorder and treated in childhood and his later creativity. The factors leading up to his completed suicide will also be discussed. The most important point is that when we are working with patients with psychiatric disorder we pay attention to positive features of various conditions. Psychiatry unfortunately tends to focus almost exclusively on deficit states which if this is the only thing that is discussed with patients can lead to further demoralisation. This lecture sets out to show that certain psychiatric disorders can also have positive dimensions.

P-17-11

18q deletion syndrome: A case report and review of the literature

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Objective: Patients with deletions of the long arm of chromosome 18 (18q- syndrome) present with a great variety of somatic anomalies of which hearing loss, endocrine dysfunction, hypotonia and dysmyelination are the most frequent findings. In addition facial dysmorphism, short stature and a variable degree of mental retardation are found. The neuropsychiatric phenotype is not well documented and includes impulsivity, temper tantrums, lack of social reciprocity sometimes called autism, obsessive compulsive behaviour, language difficulties and psychotic symptoms.

Methods: We present a 17 years old severely mentally retarded male who was referred for neuropsychiatric examination because of behavioural difficulties such as hyperactivity and disorganised conduct. He was known with an interstitial deletion of 18q: deletion(18)(q21.2q22.1). Somatic examination revealed a height of 1.61m and a bodyweight of 54kg. His somatic history includes recurrent upper airway infections, correction of a palatoschizis and subluxation of the right hip with a mild scoliosis. From the age of 10, the patient showed hyperactive and chaotic behaviour, distractibility and stereotypic behavioural sequences. A psychiatric diagnosis of attention deficit hyperactivity disorder and autism was considered and the patient was over the subsequent years treated with carbamazepine, methylphenidate, clomipramine and valproic acid, all without any effect.

Results: Neuropsychiatric examination did not confirm the previous psychiatric diagnoses. Symptomatic treatment with a low dose of risperidone resulted in some improvement.

Conclusion: An attempt will be made to delineate specific elements of the behavioural phenotype.

P-17-12

Serotonin uptake inhibitors in patients with intellectual disabilities

W. Verhoeven, S. Tuinier. *Vincent van Gogh Institute for Psychiatry, Venray, Netherlands*

Objective: Although the use of SSRI's for various indications is widespread in patients with intellectual disabilities, good randomized clinical trial are quite rare in this field. The reason for

this is obvious. Registration of a compound in this particular population that is, with respect to aetiology very heterogeneous and that will show all kinds of somatic and psychiatric symptoms during treatment, is hardly achievable. Every published open study or case study, however, ends with the phrase that more controlled studies are needed.

Methods: Since the nineties, 30 clinical reports have been published including a total of 246 patients. The indications comprised depressive and obsessive-compulsive disorders, maladaptive behaviours and syndrome-related disorders. Generally, positive results are reported, although the interpretation is difficult due to publication bias. Some studies showed deterioration of behaviour during treatment with SSRI's.

Results: Apart from the heterogeneity of patients, major factors of confusion are the inadequacy of the classical diagnostic categories in intellectual disability, the atypical presentation of mood, anxiety and obsessive-compulsive disorders and the existence of syndromes that are specific for a genetic disorder or for mental retardation per se.

Conclusion: Interestingly, most of the clinical indications for a treatment with SSRI's concern behavioural dimensions such as aggressiveness, impulsivity, self-injurious behaviour, food related behaviour, stereotyped behaviour and obsessions or the behavioural manifestations of an assumed psychiatric syndrome. This renders the pharmacological treatment of patients with intellectual disabilities a dimensional psychopharmacology.

P-17-13

Psychological and clinical peculiarities of cognitive impairments at delayed pupils

G. Butorin. *Chelyabinsk, Russia*

Objective: The aim of the study was a group of boarder-line mental states of residual-organic genesis, causing impairments of school skills development.

Methods: There were supervised 112 children of 6–8 years, that disposed difficulties in mastering the educational program and school maladaptation, caused by decompensation of residual-organic cerebral insufficiency. The Wechsler Intelligence Scales was applied to estimate the intellectual development. The experimental psychological assesment was carried out twice: at the time of developed clinical manifestations of decompensation process and after coping it. Primary psychological study was conducted on background of developed psychopathological disorders with the main organic-asthenic syndrome (F06.6), decreased of cognitive efficiency (F06.7), affective and somato-vegetative dysfunction (F45.3).

Results: The psychological diagnosis has shown that the verbal, not verbal and general parameters were in an intermediate zone between low norm and boarder-line level. Such results of psychological diagnostics at initial study have shown 54.9 % of surveyed. It was possible to find out a mental retardation of a various degree after such parameters. This approach has resulted in erroneous impression of the teachers and school psychologists. However at repeated study that was undertook after remediation and complete reparation of psychoorganic disorders, the basic results of IQ settled down in zone of average level and good norm that testified to convertibility of decompensation process and about absence of intellectual defect.

Conclusion: Thus, the psychological study of children on a peak of decompensation of residual-organic cerebral insufficiency cannot

reflect a true level of intellectual development. The estimation should be conducted only after realization of physiological and psychological care and restoration of the broken mental functions.

P-17-14

Review of ritalin (methylphenidate) medication use in children, in British Columbia, Canada

P. Lydon. *Victoria Professional Building, Victoria, BC, Canada*

This Poster presentation is based on a review of all Ritalin Prescriptions for Children over a six Months period by the College of Physicians and Surgeons of British Columbia. This study was prompted by major concerns from the public and the Media regarding the perception that this Medication was being over prescribed to Children! The College was aided by experts in the field and their findings were published in August 2000. The conclusions indicate that Methylphenidate was not being prescribed in excess and that the number of children receiving this medication was well below the expected prevalence for Attention Defecit Disorder. As a result of this study, Methylphenidate has recently been removed from the Triplicate Prescription Program and can now be prescribed by physicians on the usual prescription form. The Poster will outline initial concerns regarding this Medication, give a description of the methods involved in the survey and an outline of the findings and recommendations.

P-17-15

Psychological aspects of Roland's epilepsy

B. Burba, I. Laukiene, K. Dambrauskiene, B. Burba. *Kaunas Medical University Psychiatry, Kaunas, Lithuania*

Objective: Roland's epilepsy (RE) is benign form of epilepsy. Of late years, in neurological works, which analyze electroencephalographic and clinical RE aspects, there are some notices about some disorder of cognitive and speech functions. Rare works indicates behavior and emotional problems when having RE. Goal: 1. To find out if children with RE will have more problems with behavior than other healthy children of the same age. 2. To evaluate possibilities of concentration of attention of children with RE and to compare it with peculiarities of attention of healthy children. 3. To compare swaddling of speech functions of healthy children and children with RE. Research group consists of 62 children with RE, which are under-going a treatment in neurology department in KMUK. Control group consists of 31 children learning in Kaunas schools.

Methods: 2 questionnaires were used for parents: ADS (hyperactivity and deficiency of attention were evaluated) and CONNERS (problems of behavior, hyperactivity and learning, indicators of anxiety were evaluated). There were applied tests of neuropsychological research battery for investigation of verbal flexibility, apprehension of instructions, fast naming and hearing attention.

Conclusion: Functions of speech of children with RE were developed more weak than other healthy children of the same age. They had difficulties of concentration of attention and they were more anxiety than healthy children. Statistical significant difference between problems of activity, behavior and learning, indicated by parents, among healthy and children with RE, was not noticed.

P-17-16

Differentiated approach to treatment of psychovegetative disorders at cerebral asthenia of residual-organic genesis in children

L. Benko, *Ural State Medical Academy for Advanced Education, Chelyabinsk, Russia*

Objectives: The aim of the study was to develop methods of psychopharmacotherapy of clinical-pathogenetic features of psychovegetative disorders in the structure of cerebral-asthenic syndrome of residual-organic genesis at children. Methods. There were surveyed 110 children of 6-11 years with cerebral asthenia of residual-organic genesis by clinical-psychopathological, anamnestic, vegetometrical, neurological, neuropsychological and neurophysiological methods.

Results: On the basis of the received data were allocated the following types of psychosomatic relations: "somatopathic" (the expressed type), precise connected with somatization of mental disorders at residual encephalopathy, "somatolaten" - moderately expressed type, "somatosteady" - easy type. The analysis of neuropsychological data has shown, that psychovegetative symptoms at somatopathic type is basically connected with a deficit of trunk and diencephalic structures of brain (52,4 %), at somatolaten - with functional insufficiency of front share (62,9 %).

Conclusions: The complex of measures directed on elimination of psychovegetative disorders, should be carried out with the account of psychosomatic type of disease. At somatopathic type a complex pathogenetic psychopharmacotherapy should be carried out as basic. At somatolaten current of illness the monotherapy with preference non-drug ways of correction is recommended. At somatosteady type the recommendation consist in a healthy way of life.

P-17-17

Child psychiatry in Ukraine

L. Butenko, I. Martsenkovsky, Y. Bikshaeva. *Ukrainian Research Institute of Social and Forensic Psych., Kyiv, Ukraine*

Ukraine is a sovereign country of 48 million inhabitants located in the center of Europe. It has most recently risen from the ruins of the Soviet empire, following a 350 yearlong struggle for independence. Ukraine has a large population of minors: 10.2 million children and adolescents, or almost one in 5 inhabitants. With 2.6% of children and 3.4% of adolescents requiring consultative or active psychiatric intervention, the needs of our country are enormous. Even though Ukraine has 514 official child psychiatric positions, 100 of these remain vacant. Among 414 practicing child psychiatrists, there are only 47 clinicians specifically trained to provide psychiatric help for adolescents. Because of this shortage, adolescents often remain under the supervision of general psychiatrists, especially outside of Kyiv in cities like Cherson or Tcherkask and so on. In addition, preschoolers who require psychiatric care are frequently treated by pediatric neurologists given the greater prominence of the specialty in Ukraine. Children's psychiatric care in Ukraine is archaic. There are practically no well-trained child and adolescent psychotherapists, neurophysiologists, and there are only a few clinical psychologists. Education and certification for child and adolescent psychotherapy is absent in today's Ukraine, with the few available practitioners trained elsewhere, typically in Russia or other countries of the former Soviet block. There are also no properly trained social workers in the Ukrainian child psychiatric service structure. Clinical psychiatric practice unfortunately continues to be mired in the old Soviet authoritarian traditions. It is not surprising then that during the past ten years, not a single monograph or handbook appeared that was devoted to child psychiatric practice. At medical schools, child psychiatry is simply absent. Faculty members in child psychiatry

who taught in Ukraine before the Soviet disintegration have gradually shifted to also cover forensic psychiatry and drug abuse, in addition to the child psychiatric needs. As inheritance from the former Soviet Union, Ukraine has got a unique faculty of child psychiatry. For years, it was headed by a well-known child psychiatrist, professor Lydia Bulahova. Now, the preparation of child psychiatrists has moved from Kyiv to the periphery, where it is carried out by psychiatrists who do not have operational experience in child work. Training of forensic psychiatrists, experts in drug abuse, and child psychiatrists in the same program and by the same experts illustrates the government's careless attitude to child psychiatric care. As a case in point, the faculty chairman believes that Ukraine has insufficient child psychiatric needs to justify the existence of a separate and independent specialty. According to official medical statistics, Ukraine still practices widely the commitment of mentally retarded children to long-term evaluation and treatment (i.e. to institutionalization and education outside of the mainstream). Prevalence of autism in Ukraine is low relative to the rest of the world; instead of pervasive developmental disorders, these children are frequently diagnosed with mental retardation or schizophrenia. This practice skews statistics and provides a practical reason to formally refuse proper rehabilitation and education services, and to provide at times unjustified neuroleptic therapy. Thus, there is no government-supported system for the medical and social rehabilitation of children with disorders in the autistic spectrum. There are some non-governmental organizations and one private medical center in Kyiv that do provide such care for these children and their families, but it is one not available for the majority of patients. Child psychiatrists educated abroad according to current specialization programs are still not part of the governmental health care system. Children with ADHD in Ukraine are also practically deprived of specialized medical and psychological care. In general, psychiatrists in Ukraine do not diagnose ADHD. Children with ADHD are usually diagnosed with behavioral disorders and are treated with neuroleptics and sedatives. Teachers do not have special education and work skills to offer to children with ADHD. These children are usually transferred to individual training sites and excluded from comprehensive schooling. At the same time, in Ukraine there is a wide network of special and boarding schools for children with mental retardation and special needs. 239 subsidiary schools are now functioning (214 of them boarding schools) for children with mental retardation. 34 of these schools are for children with 'psychological development retardation' that provide intensive remedial classes. There are 14 schools for children with severe speech and language disorders; 6 for children with organic brain disorders; 20 for children with movement disorders; 11 schools and 3 technical training colleges for teenagers 14 – 18 years of age with behavior or conduct disorders; 29 schools for visually impaired children; 27 for children with reduced hearing; 32 for deaf children; and 6 for blind children. In this way, a relatively advanced boarding school system absorbs a significant part of the budgetary resources available for child psychiatric care. This further promotes the isolation of mentally retarded children and those with special needs from the rest of society. The level of social functioning and adaptation among students of these schools is typically much lower than that of children with similar problems in other countries throughout Europe. In spite of these limitations, or especially because of them, Ukrainian psychiatrists aspire to become an integral part of an international community of colleagues. We aspire to gain new knowledge and hope to overcome our country's severe backlog of psychiatric services and training. Let us finish with our wishes for

a free, peaceful, productive, and integrative collaboration on behalf of children's welfare throughout the World!

P-17-18

Peculiarities of clinic and treatment ecology-induced mental disorders of children

N. Govorin. *Chita State Medikal Academy Psychiatry, Chita, Russia*

Objective: Mental health status of children residing in a Transbaikalian district with unfavourable ecology has been investigated. This area has been for many years contaminated with industrial discharge of mercury, cyanides, lead, arsenic and other toxic metals.

Results: Epidemiological study shows incidence of nervous and mental disorders in the area to significantly exceed analogous parameters in a neighbouring district without the above exposure. In the structure of disorders the leading place belongs to mental retardation and mental deficiency. Direct causal relationship has been found between the severity of cerebral organic impairments and evidence of patients' residence in an area with unfavourable ecology, where as social factors and alcoholization of the population have been stated of less significance. Study of pathogenic mechanisms of mental disorders in children of the given area shows their predominant residual organic origin. The origin of the mental disorders stated was confirmed by neurophysiological, biochemical and immunologic investigations. Severity of the objective parameters was found to significantly correlate with the degree of psychopathologic and mental impairments: mental deficiency was associated with greater occurrence of disseminated neurologic symptoms and signs, severe shifts in neurophysiologic processes were registered, greater membrane destruction, including antibody to cerebral antigen titer parameters was noted.

Conclusion: The study made has resulted in developing principles of medical rehabilitation of children with neuropsychic disorders due to unfavourable ecology. Medical measures held simultaneously with purification of the contaminated area include administration of up-to-date neurometabolic preparations of peptide origin (cortexin), antioxidants, immune correction therapy, as well as psychological and corrective measures.

P-17-19

Discognitive type of school disadaptation of children with benign mental handicap

L. Rytchkova. *Chelyabinsk, Russia*

Objective: To lay down the variants of discognitive type of school disadaptation

Methods: clinicopathologic methods with the set of medico-pscho-pedagogical school disadaptation estimation

Results: The number of children with discognitive type of school disadaptation (SD) is one-fifth (18.6%) of the whole patient census with benign mental handicap (BMH) who were hospitalized into children's service of the Chelyabinsk Region clinical specialized psychoneurological hospital because of school academic failure. The children with the discognitive type of SD have the same syndrome of alteration in the cognitive sphere with the uneven structure of mind. In some cases there are low findings of verbal characteristics (disverbal variant), in others - predominant lowering in non-verbal structure (aconstructive variant). Disverbal variant (34.9%) was characterized by predominant diminish of

verbal findings. The emotional-and-conative processes were marked with nervousness, etc. 59.4% of the disadapted children have the sthenic form of BMH. Failing compensation in the form of reading, writing, speaking difficulties is observed. This destroys communicative function of children. Aconstructive Variant(51%). The children with asthenic and atonic forms of BMH (60%)are of the second type. They have the same clinical-and-psychopathologic radicals, characterized by predominant abnormality of non-verbal mind structure: low level of motor activity, etc. It leads to school disadaptation in the form of aconstructive variant. When the esthenic form, satisfactory perceptual abilities and visual-motor coordination are observed. No aconstructive variant of SD in sthenic form of BMH was observed.

Conclusion: Phenomenological features of clinical-and-physiological forms of mental handicap influence greatly the type and variant of school disadaptation.

P-17-20

Training Classifiers to predict brain states and to find discriminative regions

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Objective: In the present study we applied Machine Learning methods to perform multivariate classification of brain states from single functional Magnetic Resonance Imaging (fMRI) volumes.

Methods: During the learning phase, the algorithm finds the most discriminative regions between two brain states, i.e., the set of regions by which the two brain states can be best distinguished from each other. In the next phase, the application phase, given an fMRI volume from a new subject the classifier predicts the subject's instantaneous brain state. We tested the performance of two different classifiers for the ability to distinguish different brain states from single fMRI volumes: the Fisher Linear Discriminant (FLD) and the Support Vector Machine (SVM). We applied the method to two multisubject attention experiments: a face matching and a location matching.

Results: For the face matching task vs. control task the FLD classified correctly, summed over the 5 leave-one-subject-out tests, 84 (of 105 = 21 volumes x 5 tested subjects) volumes of the face matching task (True Positive - TP) and 92 (of 105) volumes of the control task (True Negative - TN). The SVM classified correctly 87 (of 105) volumes of the face matching (TP) task and 84 (of 105) volumes of the control task (TN). For the location matching task vs. control task the FLD classified correctly, summed over all 5 leave-one-subject-out tests, 59 (of 105 = 21 volumes x 5 tested subjects) volumes of the location matching task (TP) and 95 (of 105) volumes of the control task (TN). The SVM classified correctly 76 (of 105) volumes of the location matching task (TP) and 85 (of 105) volumes of the control task (TN).

Conclusion: We showed that both classifiers can find across-subject regularities enabling them to find in a reliable way the most discriminative regions and to successfully predict an instantaneous brain state.

P-17-21

Neuropsychological differences in late-onset versus recurrent geriatric depression

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Objective: Executive dysfunction, possibly related to vascular pathology, has been well-documented in patients with a first episode of major depressive disorder in later life (late-onset geriatric major depression). However, it is unclear whether the neuropsychological presentation differs in patients with a lifetime history of major depressive disorder (recurrent geriatric major depressive disorder). The purpose of this study was to explore differences between late-onset and recurrent geriatric major depression in neuropsychological function, symptomatology, and cardiovascular co-morbidity.

Methods: The study used a two-by-two factorial design in which one factor was current major depressive disorder (present versus absent) and the second factor was lifetime history of depression (present versus absent). Neuropsychological measures of executive functioning and episodic memory, as well as psychopathological symptoms and co-morbid medical illness, were examined in a total of 117 older adults.

Results: Patients with late-onset major depression showed specific deficits in attention and executive function, whereas patients with recurrent major depression exhibited deficits in episodic memory. The rates of anhedonia and co-morbid cardiovascular illness were higher in late-onset geriatric major depression.

Conclusion: In contrast to recurrent geriatric major depression, late-onset major depressive disorder is characterized by specific deficits in tasks of attention and executive function, consistent with increased anhedonia and cardiovascular co-morbidity. These findings, if confirmed, suggest that recurrent and late-onset geriatric major depressive disorder may represent distinct phenomenological entities. Such phenomenological differences as a function of lifetime history of major depression can guide research in the neurophysiology, prevention, and treatment of geriatric major depressive disorder.

P-17-22

A telerehabilitation program in a group of patients with alzheimer disease

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Objective: The Rehabilitation Orientation Therapy (R.O.T.) is the only method of Cognitive Stimulation that has shown scientific evidences in slowing down the progression of the Alzheimer disease. The purpose of our study is to verify the effectiveness of a Telerehabilitation Program that utilizes the R.O.T. technique, applied to a group of individuals with Alzheimer disease, using a Medical Televideoconference System.

Methods: The study has been conducted in a group of 12 Patients with mild Alzheimer disease for three months. Every subject was submitted to a session of around 45 minutes, 3 times a week. A neuropsychological battery was administered to each subject for the evaluation of the Cognitive Functions, the Neuropsychiatric Inventory and the Geriatric Depression Scale for the evaluation of the presence of Behavioral Disorders and Depression, before the beginning and at the end of the training. The Audio-Video contact, based on an ADSL connection and a normal windows-based PC with a 15 inches screen provided with an average volumetric intensity-regulated speakers, allows a

continuous relationship with the patient for prolonged periods with the condition that, at regular times, the psychological hook is repeated calling the patient to the image of the therapist back on the PC screen.

Results: The individuals have shown a stabilization of the cognitive presentation, comparable to that obtained in a cycle of traditional R.O.T.

Conclusion: The use of a Telerehabilitation Program in people with mild Alzheimer disease can represent a valid integration of the pharmacological therapy. Thus, the modified setting can allow the applications of such techniques, resulting in economic savings in the patient's management.

P-17-23

Estimation of factors having an influence on functioning of persons in elder age in the sphere of basic and complex life activities

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Objective: In the research one estimated an influence of community support, depression and cognitive dysfunctions for activity of persons over 60 yo. in the sphere of taking on the basic and complex life activities.

Methods: The examination covered the 52 patients in the age of 62-81, hospitalized on the psycho-geriatric ward because of depression and cognitive dysfunctions (with the exclusion of dementia of medium and profound degree). Group of patients suffering of serious somatic disease were also excluded. In analyzes one used interview and scales: GDS, ADL, IADL, MMSE.

Results: Patients with high scores in GDS were receiving worse scores in ADL, IADL and MMSE scales. During curing of depressive disorders one observed improvement in the scope of cognitive functions, and slight but important improvement of functioning. Patients systematically visited during hospitalization by their intimates improved cognitive functions quicker than alone ones. Similar dependence weren't observed in the case of basic and complex life activities.

Conclusion: Patients with finished advanced studies were receiving better scores in the scope ADL and IADL, but characterized of greater lowering the frame of mind. Especially

high scores in GDS in that group of patients were received by alone persons. Patients receiving the strong instrumental and emotional support from the inmates quicker received improvement of psychic state. Slightly slower improvement were among patients receiving only instrumental support, however the slowest improvement observed among the alone persons.

P-17-24

The use of trazodone in the elderly with dementia

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Objective: To estimate the efficacy of trazodone in an elderly population with diagnosed dementia and behavioral and psychological symptoms of dementia (BPSD).

Methods: This was a 4 week open – label study. 35 community dwelling patients (14 men, 21 women) aged $74,5 \pm 8,5$ years were included. They all had a Mini Mental State Exam score < 24 and met the criteria for Alzheimer's disease, Lewy Body Dementia, and frontotemporal dementia. In order to estimate the efficacy of trazodone at baseline, in Day 14 and Day 28 the Cohen-Mansfield Agitation Inventory, the Neuropsychiatric Inventory (NPI) and the Instrumental Activities of Daily Living Scale (IADL) were used. The range of dose of trazodone was 50-150 mg/day. All patients were receiving acetylcholinesterase inhibitors at steady doses throughout our study. No other drugs were administered.

Results: At baseline the mean CMAI score was $58,4 \pm 13,2$, and at Day 28 a mean change from baseline was $-19,1 \pm 4,7$. At Day 28 statistically significant reductions from baseline were observed in 3 of the NPI subscores: agitation/aggression, irritability and night time behaviors. The scores in MMSE and IADL showed no significant change throughout our study.

Conclusion: In our sample of elderly population with dementia the use of trazodone was effective in controlling symptoms of agitation and other behavioral problems as measured by the CMAI and the NPI, in combination with acetylcholinesterase inhibitors. In conclusion trazodone may be an option in the treatment of BPSD, especially in cases where the use of atypical antipsychotics or sedatives may cause more problems.