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Interaction of benactyzine with analgesics and prothiadene.

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The dynamic of psychotropic drug prescriptions in a gerontopsychiatric ward.

Kuhn, E., Rysánek, K., Kujalová, V., Brodan, V., Válek, J., Rotrekýl, J.
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Rysánek, K., König, J., Spánková, H., Mlejnková, M.
Effect of tricyclic antidepressants on phosphodiesterase. Correlation between aggregability and thrombocyte metabolism.

Cerný, M., Jírak, R., Krulík, R., Lukášová, A., Pavlát, J., Pokorná, P.
Comparison of the effect of methylphenidate, diazepam and their combination on some psychophysiological variables.

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Experience in the treatment of schizophrenia with clozapine.

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Electrophysiological study of a new long-acting neuroleptic, noroxyclothepin decanoate.
Vrazda, L., Langos, J., Blazícek, P., Vencel, P., Pekár, S.  
Comparison of a combination nortriptyline-amitriptyline and placebo on gastrointestinal diseases in a controlled clinical study.  

Myslivecek, J., Chaloupka, Z., Rokyta, R.  
Time course of changes in cortical evoked potentials following administration of bemegride in pentobarbitatal narcotized rats  

Hine, C.H.  
Biological threshold of impairment drugs in industrial performance  

Faber, J., Vedralova, J., Psenickova, J.  
Height width correlation of alpha waves in children  

Abstract  
The correlation between the height and width of alpha waves in healthy children was analyzed. A directly proportional but rather nonlinear correlation was found, indicating that under physiological conditions a natural inhibition of recruiting processes occurs. This general tendency (increase in amplitude and decrease in frequency) was described by Gibbs in 1945. The values measured approached mostly the hyperbola, i.e. a rapid decrease in frequency with increasing amplitude at low amplitudes and a slow decrease at high amplitudes. A tendency to hypersynchrony in high alpha waves is therefore evident. Authors describing more frequent, high and 'well organized' alpha activity in epileptics are cited.

Tesarova, O., Balazova, E., Kolibas, E.  
To the problem of maintenance therapy of psychopathological symptoms in temporal epilepsy  
Grunner, O.


Res. Cent., Inst. Balneol., Lazne Jesenik, Czechoslovakia

Abstract
The author used cerebral electrotherapy in the treatment of neurotic and depressive patients for more than 10 yr, during which treatment the classical pulse current, electronic noise, pulses of high frequency magnetic field and continuous direct magnetic field were examined. The various new forms of cerebral electrotherapy allow modification of the effects of intensive treatment in neurotic and depressive patients.

Ruther, E., Fussmann Hegewald, M., Eben, E.


Nervenklin., Univ. Munchen, Germany

Stowell, H., Yuasa, H.


Dept. Neurosurg., Univ. Mississippi Med. Cent., Jackson, Miss., United States

Abstract
The early components of evoked responses to digital indentation and to moderate intensity clicks, delivered in the free field from the hand position or from a source in the interaural plane, were compared to one another and to similarly evoked responses derived from the hand region of postcentral gyrus in a nembutalized chimpanzee. The waveforms resulting from the two modalities of stimulation were always discriminable on inspection by reliable peak latency criteria.

Bricháček, V.

Chocholova, L., Radil Weiss, T.
The effects of some antiepileptic and other drugs on the EEG in rats with a cobalt epileptogenic focus
Inst. Physiol., Czech. Acad. Sci., Prague, Czechoslovakia

Bastecky, J., Vinar, O., Tosovsky, J.
Prediction of the therapeutic effects in schizophrenic psychosis by means of DAF
Inst. Psychiat., Prague, Czechoslovakia

Servit, Z., Strejckova, A.
Contribution to the comparative pharmacology of antiepileptic drugs. Influence of diazepam (Valium Roche) on electrographic manifestations of epileptic activities in the brain of the turtle
Inst. Physiol., Czech. Acad. Sci., Prague, Czechoslovakia

Gebhart, J., Nesvadbova, L.
Psychotropic drugs and working ability

Pekarek, O., Uhlir, F.
Olfactory stimulation in a comprehensive psychiatric treatment
Psychiat. Clin., Opava, Czechoslovakia

Abstract
In an institute for mentally ill patients in Opava, 43 patients were influenced with five
types of differently scented creams. The patients with schizoform psychoses were treated simultaneously with neuroleptics in a daily dosage of 200 to 400 mg. The first cream was indifferent, the second was evil smelling and the other three had a pleasant odor. The type of cream was changed every week. It was found that olfactory stimulation did not influence the patients’ excitability, vigilance and affectivity, but produced in 90% a sense of well being, satisfaction, pleasant feelings and pleasant dermal sensations and may, therefore, be expected to influence favourably the treatment and rehabilitation of hospitalized mentally ill patients.

Slanska, J., Tikal, K., Hvizdsova, J., Benesova, O.

Sobotka, P., Hinzen, D.H.
Effect of complete cerebral ischemia on brain phospholipid metabolism (1973) Activitas Nervosa Superior, 15, p. 28.

Abstract
Complete cerebral ischemia under normothermia was applied to 28 isolated dog heads, and the total and individual cerebral phospholipids were measured. Changes were seen after 30 or 60 min of ischemia, consisting of a drop in all phospholipids measured. In experiments involving reperfusion after 30 min ischemia phosphatidyl ethanolamine and cardiolipin returned to normal after 8 hr. No phospholipid level could be fully restored after 60 min ischemia.

Vencovsky, E., Peterova, E., Baudis, P.
Psychiat. Univ., Pilsen, Czechoslovakia

Abstract
When noxiptiline is combined with butaperazine, the indication for noxiptiline treatment is, in the authors’ experience, extended to anxious agitated and paranoid forms of depression and melancholia, which do not respond so favorably to noxiptiline treatment alone. The authors consider this to be the advantage of the therapeutic combination.
Naneishvili, B.R., Zurabashvili, S.A.

Nuclear cytoplasmic ratio in leucocytes of schizophrenics

Inst. Psychiat., Tbilisi, Russia

Abstract

The weight, area and nuclear cytoplasmic ratio (Gertwig index) of the leucocytes (neutrophils and lymphocytes) were studied in 20 male catatonic schizophrenics and in 10 healthy males. All drugs were stopped 7 days before blood sampling. Blood was taken from the finger and the smears were quickly dried and fixed in Carnua liquid. DNA was determined histochemically (Feulgen method, 1% light green). The mean weight and area of neutrophils and lymphocytes were higher in the controls than in the patients, as were the nucleus and cytoplasm. These results indicate that in schizophrenics the neutrophil and lymphocyte cells are shrunk and that the cytoplasm is affected more than the nucleus.

Stika, L., Vinar, O.

Psychotropic drugs prescribed in three Prague districts

Dept. Neurol., OUNZ, Prague, Czechoslovakia

Zloty, R.B., Burdick, J.A., Adamson, J.D.

Sleep of distance runners


Abstract

Previous research has indicated that there is a positive relationship between daytime exercise and the amount of slow wave sleep. As a group of athletes who were homogeneous as to the nature of their sport, the authors studied 16 male distance runners. Ss slept for three consecutive nights in the sleep laboratory where continuous all night recordings were made. The results showed that the distance runners had more slow wave (stages 3+4) sleep than a group who engaged in regular exercise, presumably at a less strenuous level. There is also evidence that the increased slow wave sleep found here is primarily due to elevated percent stage 4. The findings are consistent with the hypothesis that the amount of slow wave sleep is related to the amount of daytime energy expenditure.
Uhlir, F., Kanczucka, V., Lukacikova, E. 
Placebo periods in chlorpromazine maintenance treatment 
Psychiat. Clin., Opava, Czechoslovakia

Paul, K., Dittrichova, J. 
Responsivity in infants during sleep 
Inst. Care Mother Child, Prague, Czechoslovakia

Abstract 
EEG, EMG of chin muscles, EOG and respiration were monitored in eleven 20 wk old full term infants during quiet and paradoxical sleep, and the responses to auditory, visual and tactile stimuli were observed. Increases in EMG amplitude were seen after all stimuli; EMG discharges following a noise, a voice or a light were more frequent during paradoxical than during quiet sleep. During quiet sleep respiratory frequency increased only after a 125 Hz sine wave tone; during paradoxical sleep it increased after tone, noise, voice tube tactile stimulus, but the respiratory amplitude was reduced. K complexes and EEG flattening were seen after most stimuli; in this context, as in the others, responsiveness was rather greater during paradoxical than during quiet sleep.

Tejral, J., Vodnansky, J., Peregrin, J., Voplatek, V. 
The use of floating electrodes in electroencephalography 

Abstract 
Electrode systems were designed primarily for EEG records made under nonrest conditions. Best results have been obtained with the so called 'floating' electrodes. In Czechoslovakia, RIMEM SSE-01 and UTRIN electrodes, made of a homogeneous mixture of Ag (70%) and AgCl (30%) have been used. A modification of floating electrodes for record of the EEG curve and visual evoked responses was tested. The employed modification of floating electrodes made it possible to obtain reliable records even under nonrest conditions.

Servit, Z. 
Physiological mechanisms of the effect of antiepileptic drugs and etiopathogenetic diagnosis of epilepsy 
Dostalek, C., Krasa, H.
Lab. Graph. Diagn., Czechoslovak Acad. Sci., Prague, Czechoslovakia

Mares, P.
Inst. Physiol., Czechoslovak Acad. Sci., Prague, Czechoslovakia

Abstract
The discharge frequency of a cortical epileptogenic focus, induced by the local application of potassium penicillin, was estimated in rats 10, 15, 20 and 90 days old. The average duration of the interval between two consecutive discharges was found to be longest on the 10th day of life, it then decreases distinctly while between the 15th and 20th day the values differ only slightly. The mean interval increases until adult age. The histograms constructed for each age group from all intervals measured differed significantly from each other. The interval found most often became shorter in the course of development. In adult rats, after the focus had been induced, discharges appeared randomly 12 to 15 min after penicillin application, in groups of 2 to 6 discharges in quick succession, these groups spaced at longer intervals. This phenomenon was indicated in the histogram of interspike intervals in the form of double peak distribution. In young animals the character of discharges did not change while the focus lasted, only a small shift of the histogram to the right was observed in 10 day old rats. The frequency of the discharges and the distribution of the histogram of intervals varied distinctly in the period between the 10th and 15th day. The second shift took place after the 20th day of life. In the discussion, the importance of these two periods and their correlation with the development of further physiological as well as morphological phenomena are discussed.

Shibata, M., Bures, J.
Inst. Physiol., Czech. Acad. Scis, Prague, Czechoslovakia

Abstract
4 techniques were successful in stopping the reverberating cortical spreading
depression induced in anesthetized rats by microinjections of 10% KCl. These involved the application of appropriately spaced 10% KCl in different places, which cancelled each other out, the production of latent anoxic depolarization by 1 min asphyxia, and the use of high concentrations (more than 6%) of magnesium chloride.

Gaal, L.
Inst. Psychol., Bratislava, Czechoslovakia

Misurec, J., Nahunek, K.
Psychiat. Clin., Brno Bohunice, Czechoslovakia

Abstract
EEGs were recorded in 12 volunteers, 6 men and 6 women, after psychological testing. Single 5 mg doses of the neuroleptics oxyprothepin and octoclothepin and placebos were given. EEG computer analysis showed an increase in theta activity after the active drugs and the frequency of the alpha rhythm slowed.

Kristof, M., Kolinova, M.
Inst. Physiol., Czech. Acad. Sci., Prague, Czechoslovakia

Wolburg, I.
Frankova, S.
Influence of the familiarity with the environment and early malnutrition on the avoidance learning and behaviour in rats


Abstract
Early protein calorie malnourished rats display behavioral disturbances during avoidance learning which are manifest in stereotype jumps on the screen of the experimental box without the presence of conditioned stimulus. These reactions may be related to fear in a novel situation. The rate of learning and spontaneous behavior of previously malnourished and control rats were studied under 3 levels of familiarity with the experimental environment. The first group was unfamiliar with the test situation prior to learning, the second group was adapted to the conditions prior to learning, the third group was given a double number of trials during learning. It was found, that the preliminary experience in the malnourished group had a beneficial influence on behavior during learning. The stereotype responses were eliminated in such a way that this group did not differ from controls.

Tikal, K., Benesova, O., Frankova, S.
The effects of pyrithioxine and pyridoxine in rats with early protein or caloric malnutrition. I. Effect on social interaction and avoidance acquisition in adult rats


Abstract
Protein or caloric malnutrition was applied from birth to 43 days of life, and the drugs were given from the 40th to the 50th day. Tests on behavior were carried out between the 120th and 200th day. Protein malnutrition induced greater aggression in adult rats; this effect was abolished by pyrithioxine treatment, and reduced by pyridoxine. A low calorie diet did not influence aggression, but in combination with pyridoxine resulted in more aggression and more sexual behavior. The acquisition of an active avoidance reaction was not altered by diet, but both forms of deprivation resulted in a larger number of intersignal reactions, which was abolished by pyridoxine but enhanced by pyrithioxine.

Mager, P.P.
Repeated measurement designs.
Low, H., Bruckner, R.
Experiences with Irwin’s behavior test as a first screening test in the detection of compounds with a central action
[ERFAHRUNGEN MIT DEM VERHALTENSTEST NACH IRWIN ALS ERSTE SCREENING STUFE ZUR AUFFINDUNG ZENTRALWIRKSAMER VERBINDUNGEN]
Abt. Pharmakol., VEB Fahlberg List, Magdeburg, Germany

Benesova, O., Tikal, K., Benes, V., Frankova, S.
The effect of pyrithioxine on behavior, learning and biochemical variables of brain in rats malnourished in early postnatal life

Vinar, O.
Czechoslovak psychotropic drugs: their clinical use
Inst. Psychiat., Praha, Czechoslovakia

Abstract
It is assumed that of the thousands of substances prepared by synthetic chemistry, pharmacologists can verify hundreds and clinicians only tens. As to the original Czechoslovak psychotropic drugs, it can be said that of the 12 compounds tested only 2 have been introduced into practice, dosulepine and octoclothepine.

Petrek, J.
Recovery function of primary and suprasylvian acoustic responses in unanaesthetized cats
Med. Fac., Inst. Physiol., Palacky Univ., Olomouc, Czechoslovakia

Abstract
In unanaesthetized cats with chronically implanted electrodes, primary and short latency suprasylvian responses to paired acoustic stimuli were recorded. The testing stimulus followed the conditioning stimulus in various intervals (22-385 msec). The recovery curves of the first positivity of the primary and suprasylvian responses had,
except for small differences, practically the same dynamics. A similar situation was met in the study of amplitude changes of the second positivity of both responses. There was, however, a marked difference between the recovery cycles of the first negativity of the primary and suprasylvian response. Summing up, it can be said that the amplitude of each wave of both cortical responses to the second stimulus depends in the first place on the length of the interval between the first and second stimulus. Besides, the momentary functional state of the CNS and the location of the recording electrode represent further factors which affect the recovery function of each wave of the cortical acoustic responses.

Protiva, M.  
Res. Inst. Pharm. Biochem., Prague, Czechoslovakia

Drtíl, J., Vinar, O.  
Res. Inst. Psychiat., Praha, Czechoslovakia

Abstract  
The basic principle of the direct photographic recording method is the same as described earlier (Drtíl et al. 1972). The present method has been used for recording spontaneous psychomotor activity of 17 psychotic patients in the course of psychopharmotherapy, and that of 16 neurotic patients.

Machek, J., Pavlík, V.  
Inst. Physiol., Czech. Acad. Sci., Prague, Czechoslovakia

Gamkrelidze, S.A., Putkoradze Gamkrelidze, N.A.  
Cerebral responses to flickering light in clinical research

Abstract
Cerebral responses to repetitive photic stimulation were studied in 291 children, both healthy and suffering from various disorders, ranging in age between 32 wk of conception and 15 yr. A close relationship was found between photic 'driving' and some functional and structural changes taking place in the CNS. Responsiveness to flicker improved conspicuously during ontogeny; it was reduced in organic disorders of the CNS, in hypothyroidism and during sleep. Photic, responses can be regarded as an important criterion for the assessment of brain development and as a valuable complement of the routine EEG.
more than 1 mV amplitude were repeatedly observed (topical application of 18 to 27 μM solutions). The frequency of discharges was 70 and 115/min-1 on average at concentrations of 100 and 180 μM respectively. Tetramine is more than 70 times as active as strychnine and more than 160 times as active as sodium benzylpenicilline. The ECoG action of tetramine could be modified by many compounds applied together with the convulsant. Significant depression was observed in the case of glutamic acid, GABA and homotaurine. The synergistic action of sulphiami (100 to 250 μM) induced a 5 to 10 fold increase in discharge frequency.

Boleloucky, Z., Vinar, O., Tosovsky, J.
Placebo and neuroleptic drug response in schizophrenics in correlation with the ‘16 PF’ personality profiles
Inst. Hyg. Epidemiol., Prague, Czechoslovakia

Abstract
It is possible to assume that clusters derived from clinical scales of the Minnesota Multiphasic Personality Inventory reflect more accurately those traits of schizophrenic personality, which are responsible for the development of psychosis, than do the clusters derived from factors of the ‘16 PF’ test.

Wunschova, B., Stika, L., Vinar, O.
Prescribing behaviour of psychiatrists in three Prague districts
Inst. Psychiat., Prague, Czechoslovakia

Tosovsky, J., Faber, J., Hynek, K.
Application of the periodogram to human alpha activity
Neurol. Clin., Praha, Czechoslovakia

The influence of schizophrenic plasma on the human embryo brain tissue culture
Inst. Psychiat., Tbilisi, Russia
Abstract
The blood plasma of patients with a nuclear form of schizophrenia compared with plasma taken from other patients (involutional psychoses, progressive paralysis) provoked intensive shifts in the morphologic structure and in the metabolism in neuroblast like cells of the human embryo brain. The metabolism of nucleic acids in neuroblast like cells changed by the 2nd day on 'pathologic material' and by the 4th to 5th day on the control material. The previous experiment which was performed with brain tissue culture of new born white rats and with blood tissue culture showed no such intensive changes in the growth 'zone', morphologic structure and metabolism of neuroblast like cells. The comparison points to a selective action on the human brain tissue. Chlorpromazine decreased the RNA and DNA exchange in the tissue culture.

Popelar, J., Syka, J., Radil Weiss, T.
Periodical changes in the spontaneous neuronal activity in the reticular formation in relation to barbiturate narcosis
Inst. Physiol., Czech. Acad. Scis, Prague, Czechoslovakia

Abstract
Experiments were carried out on rats immobilized with δ tubocurarine. Paired neurons were monitored in the mesencephalic reticular systems, and parietal EEG was also recorded. Pentobarbital i.v. in 15 mg/kg incremental doses led to burst activity after an initial period of synchronization. Periodicity with a period of 150 to 300 msec appeared in 7 pairs of neurons after 15 to 30 mg pentobarbital. This period may be related to spindle formation.

Horvath, M., Frantik, E.
To the relative sensitivity of nervous functions and behaviour to nonspecific effects of foreign substances
IHE, Praha, Czechoslovakia

Tesarova, O.
A catamnestic study in experimental depression
Bazova 8, Bratislava, Czechoslovakia
Topiar, A., Stevkova, K., Kanczucka, V., Rampacek, J.


Abstract
Over a period of 5 yr, 1,564 patients (793 men and 771 women, mean age 29.4 yr, age range 18 to 86) were hospitalized for attempted suicide. The age group 20 to 25 yr was represented most often. Of the patients 942, 60% (575 women 74%) used drugs sometimes in combination with other methods for their attempted suicide; of these more than 1/3 consumed 2 or more types of drugs. 10% of patients used drugs that were regularly prescribed by the physician, primarily in psychiatric outpatient departments and in centers for epileptics. 112 types of drugs were used, and of these 25% were psychotropic drugs including hypnotics. Of the 1,285 drugs used, analgetics (43%) occupied the first place, followed by anxiolytics (13%), hypnotics (13%), sedatives and tranquillizers (6% each) and antidepressants including psychostimulants (3%). The most common drug was Algena, a phenacetin preparation (aminophenazonum 300 mg, phenacetinum, 150 mg, caffein 50 mg, acidum allyliso propyl barbitaricum 50 mg in one tablet), which is the most easily accessible analgetic. Thus every 3rd patient chose Algena for poisoning, every 10th, meprobamate and every 12th phenobarbital (the latter hypnotic was twice as often used by women than by men). The preference of analgetics and anxiolytics in comparison to hypnotics testifies to the accessibility of these drugs and their popularity. The frequency of some of the most commonly used drugs is listed.

Inst. Physiol., Czech. Acad. Scis, Praha, Czechoslovakia

Brozek, G., Buresova, O., Bures, J.

EEG correlates of conditioned taste aversion (1973) Activitas Nervosa Superior, 15, pp. 4-5.

Abstract
Taste aversion was produced in rats by gastrointestinal poisoning after drinking saccharine solution. With a 3 hr delay between these events significant aversion was still present the next day, but if repeated waves of bilateral cortical spreading depression were elicited 15 min after the saccharine the maximum interval (for retention) before poisoning was reduced to 1 hr. No aversion was produced in decorticate rats. Functional decortication by spreading depression appeared to reduce both the acquisition and the readout of aversion.

Inst. Care Mother Child, Prague, Czechoslovakia

Tautermannova, M.

Observations carried out in infants in the first 6 months of life show that individual differences are a significant factor influencing the duration of waking time, duration of facial movements, smiling, vocalization and body movements. Individual differences in the duration of the smile increased with age, whereas differences in vocalization diminished. Individual differences were also found in the way infants responded by the length of smiling to the social stimulation. A positive correlation was ascertained between individual differences in the duration of waking time and individual differences of facial movements, vocalization and body movements. This correlation was almost nonexistent between individual differences in the duration of waking time and duration of the smile. Infants whose waking time was the longest did not belong to those who smiled most frequently.