pherol used in combination with pyrazidol, ludiomil, and herphonal not only increased the efficacy of the therapy almost 3-fold (improvements were observed in 20.9 and 58.4% of the patients, respectively, compared with the control period when the antioxidants were not applied), but also reduced considerably the side effects of the antidepressants, as assessed by the SARS scale (improvements in 3.1 and 53.3% of the patients, respectively).

Comparison of this results showed α-tocopherol has the highest potentiating effect on the therapeutic efficacy of these antidepressants. The activity of the studied antioxidants is essentially independent of the chemical structure (tri- or tetracylic) and dose of the antidepressant and of the age of the patients.

Taken together, these results indicate that antioxidants are a promising means of enhancing the efficacy of psychopharmacotherapy of endogenous depressions.

The Use of Antioxidants in the Treatment of Tic-Accompanied Hyperkineses in Children

R. N. Rzaev and M. N. Aliev

Scientific Industrial Association "Pharmacology and Folk Medicine", Baku

The principles of complex combined therapy with antioxidants and GABA-positive preparations that we had developed earlier in the experiment were employed in the therapy of tic-accompanied hyperkineses in 49 children aged 6-14 years (of whom 30 had neurosis-like and 19 had nervous tics).

Vitamin E (5 mg/kg intramuscularly for 15-20 days) and GABA-positive preparations (piracetam, pantogam, phenybut) were used in doses 20-25% lower that those conventionally applied in pediatric neurology). In the control group 40 children with tics received routine therapy (tranquilizers and neuroleptics). The control parameters (evaluation of hyperkinesis in points, subjective feelings, neurological status, EEG and seismogram dynamics) were recorded prior to and 30 days after the therapy.

The most prominent effect was observed in children with nervous tics. The number of recoveries was statistically significant ($p<0.01$) compared with the control. In children receiving complex therapy the intensity of tics was reduced by the 13th-14th day. During a 1-year period the number of relapses was 2.5-fold higher in the control group.

In the children with nervous tics the number of recoveries was 2-fold hihger, and the hyperkinesis intensity was reduced significantly ($p<0.01$) in unrecovered children. A positive EEG dynamics was recorded. In catamnesis the number of relapses was 2-fold higher in the children had received routine therapy. Our results show that the use of an antioxidant is effective in combined therapy of tic-accompanied hyperkineses in children.

The Use of Antioxidants and Some Regulatory Peptides for the Prevention of Cerebral Hemorrhages in Experimental Hemorrhagic Insult

T. V. Ryasina, V. B. Koshelev, A. L. Kushinskii, and L. M. Kuznetsova

Institute of Neurology, Russian Academy of Medical Sciences, M. V. Lomonosov State University, Moscow

The effects of the novel water-soluble antioxidant emoxipine (20 mg/kg) and three neuropeptides: thyroliberin analog (TRH, 1 mg/kg), delta-sleep-inducing peptide (DSIP, 100 μg/kg), and Semax, an ACTH (4-7), PHP (20 mg/kg) were studied in a model of hemorrhagic insult. The study was performed in Krushinsky-Molodkina rats, which are genetically predisposed to audiogenic epilepsy, i.e., acoustic stress induces in them hyperkinesia, seizures, acute arterial hypertension, and a sharp increase in the blood flow resulting in subdural, subarachnoidal, intraventricular, and cerebral hemorrhages. A study was preformed of the effects of the four preparations on the frequency and intensity of hemorrhagic manifestations in experimental disorders in the cerebral circulation. None of these preparations induced any significant changes in the intensity of seizures, although DSIP slightly increased the latency. Previously, DSIP was found to reduce penicillin- or strychnine-induced epileptic activity [G. N. Kryzhanovskii *et al.*, 1987]. Morphological studies showed that all the preparations tested significantly decreased the frequency of cerebral hemorrhages in experimental insult. Emoxipine and TRH reduced the frequency of subdural and subarachnoidal hemorrhages 2-fold, DSIP, 3.4-fold, and Semax, 4.1-fold. Thus, emoxipine, TRH, DSIP, and Semax elicit pronounced angioprotective effects. The