

the subsequent visits, including Day 56 (37% for mirtazapine and 31% for paroxetine). A significant difference ( $p$  less than 0.05) in mean HAM-D 17 Anxiety/Somatization Factor Score change from baseline between the two groups was also demonstrated at Days 14 and 21 in favor of mirtazapine-treated patients. Both treatments appeared to be relatively well tolerated.

**Conclusions:** Both mirtazapine and paroxetine were shown to be effective and well tolerated in elderly patients with anxious depression although mirtazapine was associated with a more rapid onset of efficacy compared with paroxetine.

This research is supported by Organon Pharmaceuticals Inc.

#### **P.6.054 Influence of SCENAR-therapy on the GABA content, antioxidant and epileptic activities**

M. Maklesova<sup>1</sup>, A. Kucherenko<sup>1</sup>, M. Vakulenko<sup>1</sup>, I. Grinberg<sup>2</sup>.  
<sup>1</sup>Rostov State University, Institute of Biology, Rostov-on-Don, Russian Federation; <sup>2</sup>OKB Ritm, Taganrog, Russian Federation

SCENAR (Self Controlled EnergoNeuroAdaptive Regulator) is the name of the new apparatus and the method of electroacupuncture. In U.K. its name is "cosmed". SCENAR influence the patient skin areas by the impulse electrical current and is an electrical treatment method. At first time the main aim of the SCENAR use is the increasing of pain. It is using for all kind of neurological patients now. So, the aim of our study was to investigate the effect SCENAR on the epileptic and antioxidant activities, and also GABA content. The antioxidant system activity was included the content of thyobarbituric acid-active products, the SOD and catalase activities, the level of middle mass molecules.

The experimental results were statistically processed with the Wilcoxon criterions T for dependent and U for nondependent samples and Spirmen correlation coefficient. As know, oxygen has toxic effect to organism, especially to neural system, therefore we used the high oxygen pressure as paroxysm-inducing factor.

It was founded that the GABA content in the rat brain decrease under hyperoxya on the 57 % ( $p < 0,001$ ) for control, which is associated with epileptic activity (26+2 min). It was shown that under hyperoxya free radical production high increase and antioxidant system activity decrease, synchronously. The SCENAR treatment modulated the GABA concentrations in the brain under hyperoxya: the GABA content was higher on 33 % ( $p < 0, 001$ ) on the group "SCENAR+O2" when in the group "O2". The SCENAR treatment induces normalisation of the antioxidant system activity.

Also we observed the SCENAR effect on the epileptic patient (11 man), which had paracismal activity on EEG after psycho-emotional trauma. The arahnoiditic with very wide ventricles found out on the brain tomogramma. After SCENAR treatment in this patient we identified the normal EEG and tomogrammes. The paroxysm was absent. Thus, SCENAR may act in the hyperoxya as the defence. Accordion our results we can recommend to use SCENAR for treatment of epileptic patients. It is important to say that the SCENAR apparatus can to be use at home by patient.

#### **P.6.055 Complex supplementation containing mineral bishofit (MgCl2·6H2O) solution and pyridoxine hydrochloride normalises ethanol-induced magnesium depletion and corrects some behavioural disturbances of animals during chronic alcoholisation**

I. Iezhitsa, N. Onishchenko, N. Churbakova, V. Parshev, V. Petrov.  
*Volgograd Medical Academy, Research Institute of Pharmacology, Volgograd, Russian Federation*

Complex supplementation containing mineral bishofit (MgCl<sub>2</sub>·6H<sub>2</sub>O) solution and pyridoxine hydrochloride normalises ethanol-induced magnesium depletion and corrects some behavioural disturbances of animals during chronic alcoholisation. In therapy it is known that the combination of vitamin B<sub>6</sub> and magnesium is beneficial in the treatment of several forms of primary magnesium deficiency. The purpose of the present study was to investigate the effect of complex magnesium supplementation containing mineral bishofit solution (MgCl<sub>2</sub>·6H<sub>2</sub>O) and pyridoxine hydrochloride on behavioural (elevated plus maze test, the open-field test, forced swimming test) and biochemical (plasma and erythrocyte magnesium level) parameters of magnesium-deficient alcoholic rats. In our research the groups of animals, preferring and non-preferring alcohol, were formed outgoing from consumption 10 % ethanol by rats in conditions of free choice between water and ethanol.

In the group of non-preferring animals, diurnal consumption of alcohol (in recalculation on pure ethanol) was  $0.8 \pm 0.07$  g/kg, and in the preferring group –  $6.4 \pm 0.39$  g/kg bodyweight. Animals with initially high level of alcohol preference were subjected to three months voluntary alcoholisation, and then they have been given supplementation at doses 2.5 ml/kg (50 mg magnesium per kg, per os) for five weeks. After three months voluntary alcoholisation in open field test in rats locomotor activity (number of crossed squares) and vertical activity (number of standing on hind paws) were decreased significantly by 88 and 62%, respectively. In elevated plus maze test number of visiting open arms and residence time of rats were significantly less as compared with control group. In forced swimming test time of immobile was significantly increased by 115.9 % and time of swimming was decreased by 42.1% compared to control. After supplementation treatment the immobility time of alcohol preferring rats was decreased in comparison with this parameter in rats before administration of supplementation. Besides there were not statistical significant differences in this parameter between alcohol preferring rats after treatment and control rats. The reduction of immobility time (main sign of antidepressant effect) after supplementation treatment can be estimated as antidepressant-like effect. It is necessary to mark, that after supplementation treatment there were not significant differences between all tested behavior parameters of preferring and control non-preferring alcohol rats. We found that the erythrocytes magnesium level at rats after three months voluntary alcoholisation was much less, than at control rats. Full recovery of erythrocytes magnesium level of alcoholic rats up to normal level was observed after fourth and fifth week of supplementation treatment (difference between supplemented alcohol preferring and control non-preferring rats was statistically insignificant). In our research it was established, that the application of a complex magnesium supplementation containing mineral bishofit solution and pyridoxine hydrochloride led both to restoration of magnesium level, and to some correction of behavioural disturbances of animals during chronic alcoholisation.