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THE USE OF PERAMPANEL IN ADOLESCENTS WITH INTELLECTUAL DISABILITY AND EPILEPTIC SEIZURES

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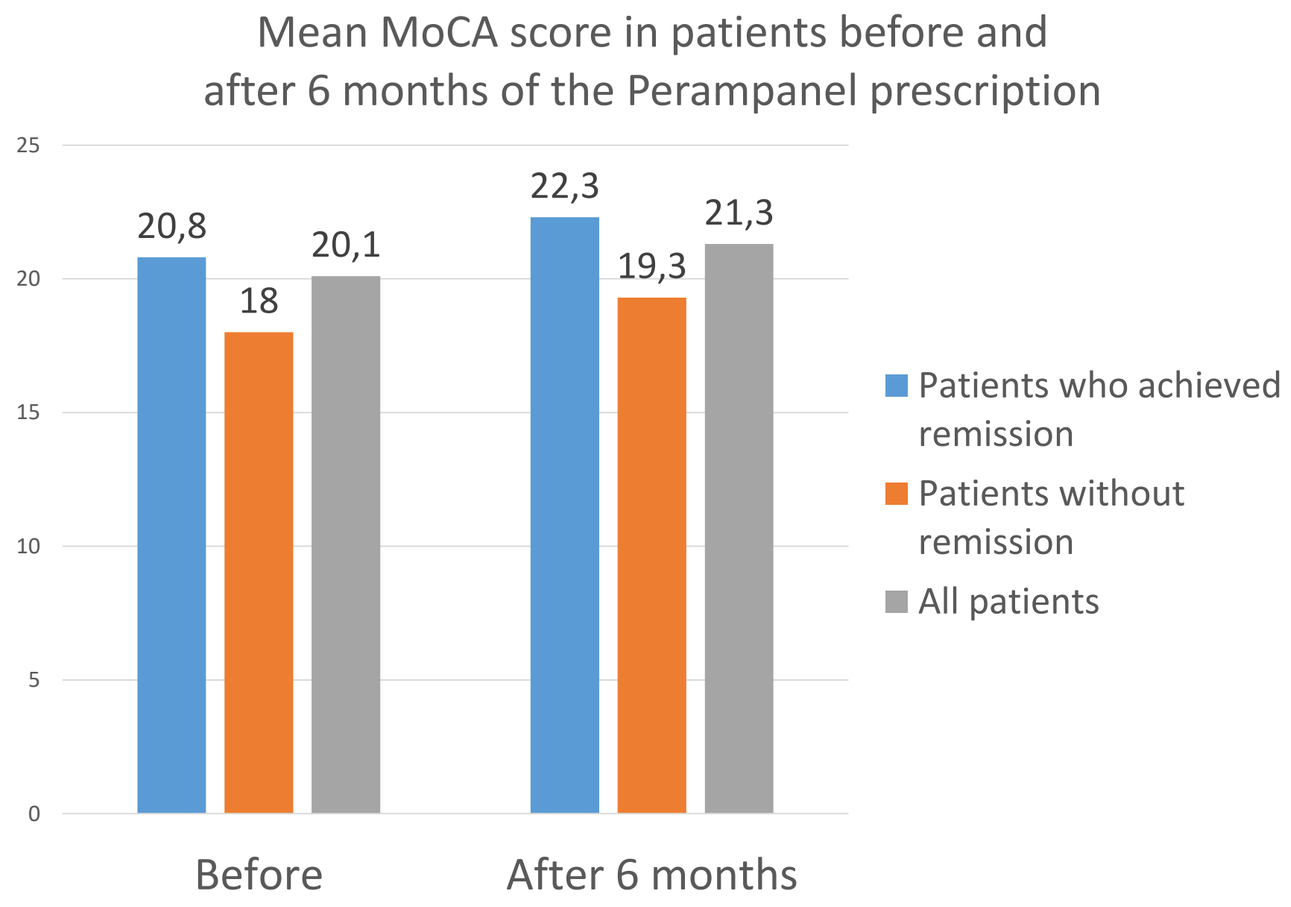
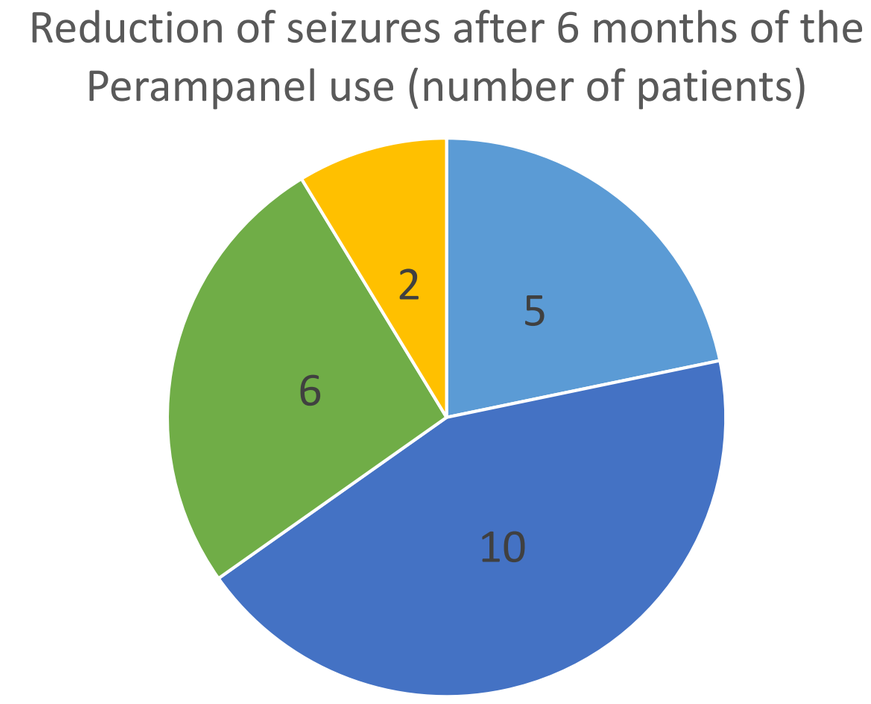
Introduction: Perampanel is a new antiepileptic drug (AED) approved for duo-therapy in patients with both focal and generalized seizures. The purpose of the study was to assess the influence of perampanel on cognitive functions in patients with pre-existent cognitive impairment and epileptic seizures receiving polytherapy.

Methods: We analyzed the examination results of 23 patients with continuous epileptic seizures before and in 6 months after adding perampanel to therapeutic scheme. An average dosage of perampanel was 6 mg (4-8 mg). Age of patients was 13-16 years. In 19 patients we changed ineffective AED to perampanel (duotherapy), in 4 patients we added perampanel to other two AEDs. At the moment of the perampanel prescription the frequency of seizures (with motor manifestation) was 2-5 per month. All patients were examined with Montreal Cognitive Assessment Test (MoCA-test) and Hospital Anxiety and Depression Scale (HADS, to exclude emotional disorders), diaries of seizures were examined as well.

Results: After 6 months 5 patients were seizure-free, 10 patients had 75% reduction of the seizure frequency, 6 patients had 50% reduction, 2 patients had 25% reduction. MoCA-test score was 20,1 ± 3,0 before the perampanel prescription and 21,3 ± 2,2 after 6 months (M ± SD, $p<0,06$). The group of patients who achieved remission had higher the MoCA-test score increase after 6 months (20,8 ± 2,8 vs 22,3 ± 2,3; M ± SD, $p < 0,01$) compared to patients without remission (18 ± 4,2 vs 19,3 ± 1,8; M ± SD).

Participants	23 patients with continuous seizures
Age of patients	13-16 years
Perampanel dosage	6 mg/day (4-8 mg/day)
Number of AEDs after Perampanel prescription	2 in 19 patients 3 in 4 patients





Conclusion: The use of perampanel as an additional AED in patients with intellectual disability and intractable epileptic seizures can significantly decrease the frequency of seizures (up to remission in some cases). Perampanel has no negative effect on cognitive functions in patients with pre-existent cognitive impairment and reliably improve the cognitive testing score in patients in remission.