

ABSTRACT

After defending my doctoral thesis, in 2003 I became lecturer at the Neurology Department, then in 2008 I got the associate professor title. I was promoted head of the 2nd Clinic of Neurology in 2007 at the County Emergency Clinical Hospital of Târgu-Mureş.

As a university teacher, I actively participated in the training process of students: I led neurology practice for general medicine and dental students. I lectured neurology classes for 5th year general medicine and dentistry in Hungarian, and for a short period also infantile neuropsychiatry. I am invited annually to the Medical University of Debrecen, Hungary to lecture on dementia, in 2011 I was awarded the title of visiting professor at this university. I was consultant and supervisor in over 50 diploma works and master's dissertations.

I was the author/editor/co-author of 5 neurology books edited for students and young doctors, I also contributed in creating online teaching materials, lithographed course and book chapters in other, different specialties.

As a member of the Cochrane Dementia and Cognitive Impairment Group I submitted a protocol for the data analysis related to the effectiveness of procaine on cognitive function in 2006. The meta-analysis of studies with a total of 415 participants showed a harmful effect of procaine causing some adverse reactions (20/208 active versus 3/207 placebo, $p=0.002$). Older studies with imperfect methodologies suggest that procaine could improve memory in people without cognitive impairment, but to validate these results further and more advanced studies are needed.

Parkinson's disease (PD) has been an important research topic in our department for a long time. Over the years a large database has been created with a lot of information capturing the disease from the early stages to advanced stages. These data were statistically analyzed, and results were published in specialized journals, reflecting specific characteristics of our region regarding the medical care of this condition. We believe that we have also contributed with original ideas related to treatment and interpretation of some phenomena/complications that appear in the advanced stages of the disease.

Data collected from 2379 PD patients revealed that levodopa monotherapy was more common than combination of levodopa (LD) and dopamine agonists (DA) or monoamine oxidase-B (MAO-Bi) inhibitors in patients aged 50 to 65 years. However, the age of patients treated only with DA or MAO-Bi or their combination was obviously lower than those treated with LD. These results indicate that neurologists aim for the effectiveness of the treatment to be evident, but also weigh the potential risks against the expected benefits, especially in case of elderly patients with multiple comorbidities.

In 2011, we started a multidisciplinary assessment of patients with advanced Parkinson's disease (APD) to evaluate the feasibility of device-aided therapy (DAT). It was confirmed that patients with PD had the risk of developing advanced forms of the disease, if the onset was earlier, and the classical treatment lasted longer, highlighting the need for rigorous follow-up of this patient category, to make decisions in time if DAT is required.

We identified 43 APD patients with motor fluctuations in association with complex dyskinesias. We succeeded the follow up of 34 patients after percutaneous endoscopic gastrostomy (PEG) placement for at least 18 months. To obtain significant clinical improvement intestinal gel with levodopa/carbidopa (LCIG) was administered for 16 hours/day in 11 patients, for 18 hours/day in 10 patients and continuous treatment was needed from the beginning 24/ 24 hours in 13 patients. The results show that in several cases it is worth trying to exceed the usual dose limits. We also recorded a phenomenon that has not been described in the literature before: the increase in the duration of mild/moderate dyskinesias over the analyzed 18-month period, which, in parallel with the improvement of severe dyskinesias, respectively of biphasic ones, suggests a change in the pattern of dyskinesias under LCIG treatment.

One of our recent papers relates to the early initiation of continuous LCIG treatment 24h/day in patients with APD. The usual treatment lasts 16-18 hours/day, but in a considerable number of patients this administration seems to be insufficient. In our group of patients with LCIG administration for 24 hours/day from the beginning, the most common causes were severe dyskinesias, morning akinesia, and severe nocturnal akinesia or bradykinesia.

Recently a new intestinal gel formulation was approved, which in addition to levodopa and carbidopa also contains entacapone, a selective catechol-O-methyl-transferase inhibitor, which prolongs the half-life of levodopa and increases its bioavailability. The high addressability of patients with APD to our clinic allowed treatment with levodopa/entacapone/carbidopa intestinal gel (LECIG) to be applied in a relatively short time to 20 patients, a significant number for a single center. In 11 patients a decrease in LD doses was achieved after PEG-J insertion, most with dose differences between 88-646 mg/day, and 9 patients required an increase in LECIG doses comparing with previous need of LD. This study demonstrated that under treatment with LECIG, patients with APD achieved a significant short-term improvement in motor fluctuations, dyskinesias and freezing phenomena even though these complications had a duration and severity that exceeded the limits for which this treatment was introduced initially.

I was the director of the Ro 30/2007 intergovernmental project, in which we studied the characteristics of stroke management in our Central and Eastern European region. We have published data on demographic aspects, mortality, specific risk factors, clinical-pathological analysis of haemorrhagic transformation of ischemic stroke.

I was the national coordinator of the academic, international, multicenter study ENOS (Efficacy of Nitric Oxide in Stroke), with 217 enrolled patients from Romania. The results of this study were published in prestigious journals, and I co-authored several articles which referred to antihypertensive treatment in the acute phase of stroke. Data collected from 4011 stroke patients demonstrated a neutral effect of transdermal nitric oxide versus placebo on mortality or functional/cognitive status after stroke. Similarly, discontinuation after stroke onset of previous antihypertensive treatment was neutral in effect on these indicators.

Presumably, the main topics for research in the future are going to be cognitive disorders, Parkinson's disease, cerebrovascular diseases, epilepsy, for which I will look for local and international collaboration possibilities, I will submit projects, and I will look for funding sources.