The new antiparkinson drugs: Are they really better?

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Psychosis (PDP) develops in over 40% of Parkinson' disease (PD) patients. The most frequently used medications have been clozapine and quetiapine. Recently a selective 5-HT2A inverse agonist, pimavanserin has gained approval for the treatment of hallucinations and delusions in PD. Clinical trials have confirmed its efficacy to improve PDP with excellent tolerability, safety and a benign effect on motor function. Levodopa (LD) treatment remains the gold standard for controlling motor and nonmotor symptoms of the disease. LD is extensively and rapidly metabolized by peripheral enzymes, namely, aromatic amino acid decarboxylase and catechol-*O*-methyltransferase (COMT). Opicapone (OPC) is a novel COMT inhibitor that has been recently approved as an adjunctive therapy to combinations of LD and aromatic acid decarboxylase inhibitor in PD patients with end-of-dose motor fluctuations. Safinamide is an alpha-aminoamide derivative with a combined, dopaminergic and non-dopaminergic mode of action. Phase III clinical trials with safinamide, as add-on therapy to dopamine agonist and to LD in early and advanced stage of PD, respectively, demonstrated an imporvement of the motor symptoms. Alpha-Synuclein (Alpha-Syn) represents an important therapeutic target for synucleinopathies, including PD. Passive and active immunization targeting Alpha-Syn have both been tested in preclinical studies with promising results. Initial-phase clinical trials are already underway. Furthermore, alterations in glutamatergic neurotransmission contribute to the neurodegenerative processes and the development of motor symptoms in PD. Elevation of the level of the NMDA antagonist kynurenic acid (KYNAC) might be a novel disease-modifying therapeutic tool and also for the management of LD-induced dyskinesia.
(Supported by GINOP-2.3.2-15-2016-00034)