Drugs for L-DOPA-induced Dyskinesia

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Technology description

Background:
Parkinson's disease is the second most common neurodegenerative disorder, with an incidence of about 2% in the population over 60 years. Parkinson’s is known to cause the loss of motor skills, such as bradykinesia, postural instability, resting tremor, and rigidity. The precursor of dopamine, levodopa, is highly effective in relieving Parkinson’s motor symptoms during the first years of administration (the so-called “honeymoon period”). However, over time, patients start experiencing side effects of levodopa usage, such as development of abnormal involuntary movements, known as dyskinesia. It has been reported that within 5 years of treatment with levodopa, about 50% of the patients develop these motor complications in response to levodopa administration. This percentage rises to about 90% after the first decade. Therefore, the appearance of dyskinesia represents a serious limitation to the use of this therapeutic agent in advanced Parkinson’s. Currently there are no effective drugs to counteract the side effects of levodopa and prolog its therapeutic efficacy for patients with Parkinson’s disease.
Invention:
This invention provides a novel therapeutic for the reduction of levodopa-induced dyskinesia associated with the treatment of Parkinson’s disease. This invention has been demonstrated to have a statistically significant effect upon dyskinesia compared to amantadine, the only drug currently given in man for dyskinesia treatment. for use in conjunction with levodopa drug therapy for patients with Parkinson’s disease to reduce the effects of levodopa-induced dyskinesia

Application area

This compound is designed to be used in conjunction with levodopa therapy for the treatment of Parkinson’s disease to reduce the pronounced dyskinesia side effects associated with levodopa usage. By reducing dyskinesia associated with the treatment for Parkinson's disease, this technology may improve daily "off" time without exacerbation of Parkinson’s and help extend the time for that the anti-Parkinsonian effects of levodopa can be exploited.

Advantages

There are currently no FDA-approved drugs for the treatment of levodopa-induced dyskinesia associated with Parkinson’s disease. Although levodopa is the most effective known treatment for the

stiffness, tremors, spasms and poor muscle control associated with Parkinson’s disease, levodopa’s significant side effects and loss of efficacy after prolonged periods of use make effective treatment of Parkinson’s extremely difficult. UA15-023 may allow clinicians to maintain higher doses of levodopa over longer periods of time, potentially improving the health and wellbeing of patients with Parkinson’s disease.

Institution

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