

Earlier Parkinson's dopaminergic treatment doesn't improve long-term outcomes

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Video Abstract

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Abstract

Parkinson's disease is a neurodegenerative disease that affects more than 10 million people across the globe. Despite improvements in treating the disease, doctors still have many unanswered questions, including when to start treatment. Now, researchers at the University of Rochester have taken another look at a past clinical trial to begin to answer that key question. Parkinson's occurs when neurons in a part of the brain called the substantia nigra die off. These neurons produce the neurotransmitter dopamine, and with the loss of those neurons, patients develop tremors, have difficulty moving, and show slow movement, among other symptoms. Restoring the dopamine with L-dopa or boosting levels with a dopamine agonist can help. Some studies have suggested that early dopaminergic treatment could protect neurons and slow disease progression. But that evidence isn't yet convincing, and the drugs might also cause uncontrolled, involuntary movements, leaving this an open question in the field. To find out, researchers looked back to the CALM-PD trial, a randomized controlled clinical trial that followed 300 patients who received either L-dopa or a dopamine agonist for four years. The team examined whether there was an association between the years since diagnosis and changes on several Parkinson's severity scales. They attempted to control for a variety of factors, such as the possibility that those diagnosed more recently might have more rapidly progressive disease. If early treatment was beneficial, the researchers expected to find better outcomes associated with shorter times since diagnosis. But the researchers found no associations between the time since diagnosis and patient score changes on any of the rating systems. At the same time, the researchers didn't find an association between the time since diagnosis and development of motor complications due to the drugs. That suggests that while earlier treatment doesn't seem to help, it also doesn't seem to hurt. The findings are preliminary and aren't the final word on whether earlier treatment for Parkinson's might be beneficial. The study, for example, may not have had enough patients with different times since diagnosis to detect a pattern, and there were other factors the researchers couldn't control for. For more definitive answers, the researchers recommend prospective studies that follow patients over time. For now, delaying treatment until symptoms become bothersome will likely remain the norm.