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Letters to the Editor Related to New Topics

A Case of Parkinsonism Worsened by Losartan: A Probable New Adverse Effect

We describe a probable new adverse effect of the anti-hypertensive drug losartan in a patient with Parkinson's disease.

The patient is a 65-year-old man with hypertension and Parkinson's disease that started at 60 years of age. He noticed rest tremors of his left hand 5 years ago, slowness of walking and stiffness of his left sided limbs 3 years ago. Similar symptoms were noticed in the right-sided limbs 2 years back. He noticed tendency to fall backwards for the last 2 years especially while turning around. He was started on a combination of levodopa and carbidopa by his general physician 3 years back and found significant improvement in his walking speed, tremors, and stiffness of his limbs. Tendency to fall did not improve significantly. For the last 1 year, he noticed that the effect of L-dopa has been lasting for shorter duration than before, but he did not report any involuntary movements with L-dopa intake or any unpredictable fluctuations in his motor functions. His clinical features fulfilled the National Institute of Neurological Disorders and Stroke criteria for the diagnosis of Probable Parkinson's disease.

He had been stable on L-dopa/carbidopa (100/25 mg) twice a day and ramipril 5 mg/day. Three months ago, his family physician changed ramipril to losartan 25 mg/day and later increased it to 50-mg/day for better control of hypertension. The patient gradually worsened since then with several falls, freezing episodes, severe bradykinesia requiring constant support of his spouse for activities of daily living. His UPDRS motor score was 50 at the time of admission. We stopped losartan and continued L-dopa in the same doses. After 48 hours, patient made remarkable improvement in bradykinesia, rigidity, and tremors. He was walking independently and had only occasional brief freezing episodes. His UPDRS motor score improved to 39.

To establish the causal relationship of losartan to the parkinsonism symptoms, we re-challenged the patient with losartan 25 mg/day. After 48 hours, patient deteriorated again with severe bradykinesia and frequent freezing episodes. His UPDRS motor score worsened to 50 again. We discontinued losartan again. Twenty four hours later, patient was ambulating independently, with mild bradykinesia and occasional brief freezing. His UPDRS motor score improved to 41. Patient's blood pressure was later controlled with ramipril 10-mg/day.

Losartan is an angiotensin receptor blocker. There is experimental evidence to suggest that Angiotensin facilitates nigrostriatal dopaminergic release by acting on Angiotensin receptor type 1.[1–3] Losartan blocks these receptors and inhibits dopaminergic release. Angiotensin converting enzyme inhibitors like ramipril, on the contrary, may facilitate dopaminergic release.[4] The half-life of losartan is very short, about 2 hours. This may explain the rapid improvement that was seen in this patient after discontinuation of losartan.

To our knowledge, this is the first report of parkinsonism worsened by losartan. Applying Naranjo's algorithm, the present adverse event can be considered as "probable" effect of losartan. Further evidence is needed for clearly establishing the relationship between angiotensin receptor blockers and parkinsonism. It cannot be over emphasized that such information is most relevant in the treatment of Parkinson's disease associated with hypertension.

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Low Myocardial MIBG Uptake in Multiple System Atrophy with Incidental Lewy Body Pathology: An Autopsy Case Report

Myocardial scintigraphy using [^{123}I] metaiodobenzylguanidine (MIBG) is clinically useful for differentiate Parkinson's disease (PD) from multiple system atrophy (MSA). Myocardial MIBG uptake is reduced in PD patients, whereas uptake is preserved

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