

### Introduction

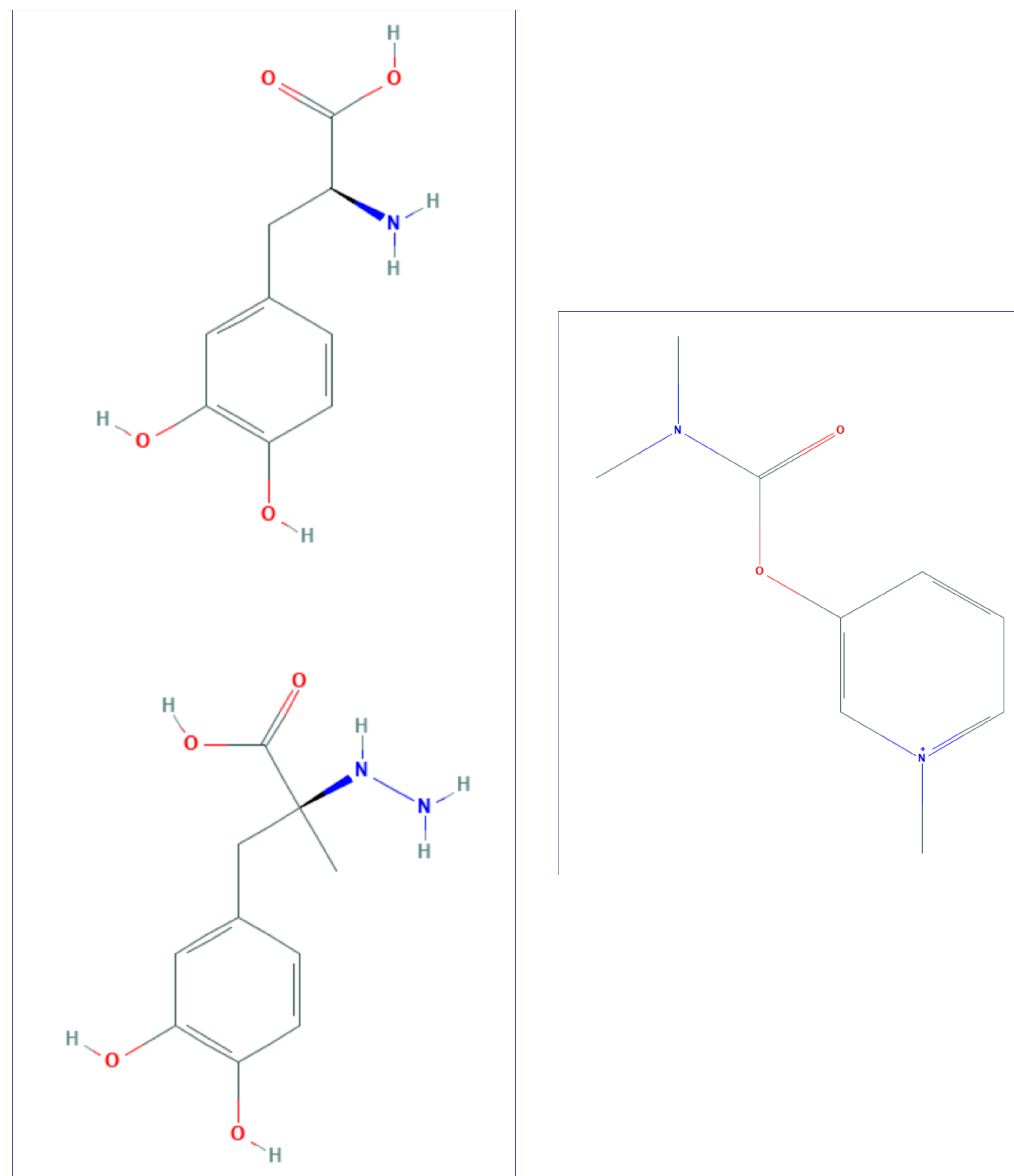
- A 79-year-old male with medical history significant for Parkinson's disease, carotid stenosis status post endarterectomy, and benign prostatic hyperplasia (BPH), presented to the emergency department after a syncopal episode with low blood pressure.
- He followed with Neurology outpatient for Parkinson's disease and was previously started on Carbidopa-Levodopa with improvement in his neurological status and motor function.

### Case Report

- He was transferred to the acute inpatient rehabilitation unit, where he continued to have orthostatic hypotension especially with therapies, limiting his ability to participate.
- Conservative measures were optimized, including applying abdominal binder and compression stockings, increasing fluid and salt intake, drinking caffeine in the morning, and eating small but more frequent meals.
- Midodrine was started but caused significant supine hypertension in the mornings.
- Per literature review and discussion with Neurology and Pharmacy, Midodrine and Tamsulosin (for his BPH) were discontinued, and Pyridostigmine was started with favorable results.
- Post-discharge, he continued with outpatient therapies and has progressed to his baseline level of functioning, most notably with marked improvements with his balance and ambulation. He has not had any further syncopal episodes and continues to follow with Neurology for his Parkinson's disease.

### Results

**Figures 1 and 2:** Chemical structures of Carbidopa-Levodopa (left image), which is commonly used to treat PD, and Pyridostigmine (right image), which can help with alleviating orthostatic hypotension. Image credits: pubchem.ncbi.nlm.nih.gov



### Discussion

Neurogenic orthostatic hypotension is common in patients with Parkinson's disease and other neurodegenerative diseases due to the inability of their autonomic nervous system to regulate blood pressure with postural changes. Symptomatic neurogenic orthostatic hypotension increases with age, duration of Parkinson's disease, and Carbidopa-Levodopa usage, causing significant impairments in function and mobility. Carotid atherosclerosis can also contribute to syncopal episodes during orthostasis due to cerebral hypoperfusion. Additionally, alpha-adrenergic antagonists often used to treat BPH can cause hypotension. A multidisciplinary approach is essential in treating these patients, with maximizing conservative measures and involving Neurology and Pharmacy to establish both pharmacologic and non-pharmacologic methods to best meet the patient's needs. Fludrocortisone and Droxidopa are other options to consider in treatment of orthostatic hypotension.

### Conclusion

Orthostatic hypotension is prevalent in patients with Parkinson's disease and other neurodegenerative diseases and greatly impacts their quality of life. Conservative management in addition to pharmacological measures can be effective and beneficial for these patients.

### References

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