

# Significant Clinical Improvement with Naftidrofuryl in a 71-Year-Old Male with Small Vessel Disease and Cognitive Impairment: A Case Report

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## Abstract

A 71-year-old male with a history of recurrent falls, poor mobility, and increased confusion was admitted to Ysbyty Ystrad Fawr Hospital in September 2019. He had multiple admissions since January 2019 with similar complaints. His past medical history included exocrine pancreatic insufficiency, vitamin D deficiency, early myelodysplastic syndrome, hypertension, type 2 diabetes mellitus, and cognitive impairment. Initially treated for suspected Parkinson's disease with levodopa and rasagiline, he showed temporary improvement in mobility and cognition but soon experienced a rapid clinical decline. Subsequent assessments revealed worsening cognitive impairment without hallucinations, leading to a diagnosis of dementia. Treatment with rivastigmine yielded little response. Imaging confirmed mild small vessel disease and a chronic lacunar infarct in the right centrum semiovale. A trial of Naftidrofuryl significantly improved his condition, enhancing mobility and clinical outcomes. Post-treatment, the patient was able to move to a chair and tolerate food better. After an extended hospital stay, he was discharged home with a comprehensive care package and a long-term catheter. This case highlights the potential benefits of Naftidrofuryl in managing small vessel disease and related cognitive impairment.

## Clinical presentation

The patient, a 71-year-old gentleman, presented with a history of recurrent falls, poor mobility, and increased confusion, leading to multiple hospital admissions since January 2019. He underwent a comprehensive geriatric assessment and was initially treated for suspected Parkinson's disease with levodopa and rasagiline, showing initial improvement in mobility and cognition.

## Past medical history

Exocrine Pancreas Insufficiency

Vitamin D Deficiency

Early Myelodysplastic Syndrome

Hypertension

Type 2 Diabetes Mellitus

Cognitive Impairment

## Medication history

Daltaparin 5000 units

Rasagiline 1mg OD

Bisoprolol 1.75mg OD

Creon 50,000 units TDS

Simvastatin 20mg OD

Laxido x1 BD

Fortisip x1 BD

Adcal D3 x1 BD

Co-careldopa 62.5mg TDS

Paracetamol 1g QDS

Losartan 100mg OD

Rivastigmine patch 4.6mg OD

Novorapid insulin 6 units TDS

Lantus insulin 20 units nocte

### Diagnostic assessments

Subsequent assessments revealed worsening cognitive impairment without hallucinations. A diagnosis of dementia was made, and the patient was treated with Rivastigmine with little response.

### Imaging studies (CT and MRI scans) confirmed:

Mild/moderate cerebral atrophy

Mild small vessel disease

Chronic lacunar infarct on the right centrum semiovale

### Treatment and clinical course

Given the confirmed diagnosis of small vessel disease, the patient was started on a trial of Naftidrofuryl (600 mg daily). The medication significantly improved his condition, notably in mobility and clinical outcomes. The patient was able to move to a chair and tolerate food better, marking a notable improvement after a prolonged hospital stay. He was eventually discharged home with a QDS (four times a day) care package and a long-term catheter.

**Social history:** The patient lived with his wife, who was his main carer and was struggling to cope due to his increased care needs. At the time of admission, the patient was bed-bound.

### Discussion

Naftidrofuryl, a 5-hydroxytryptamine-2 receptor antagonist, is noted for its unclear mechanisms of action, although it is thought to promote glucose uptake and increase adenosine triphosphate levels. It has been used in Europe for the treatment of claudication and has shown promise in improving neurological outcomes in patients with cerebrovascular diseases. Admani [1] found that stroke patients treated with Naftidrofuryl showed greater neurological progress and reduced hospital stays. Jung et al. (1987) discussed its positive hemorrheological and microcirculatory effects, which likely contribute to its therapeutic benefits [2]. Lehert et al. (1994) and Moody et al. (1994) supported its effectiveness in treating intermittent claudication, demonstrating significant improvements in clinical trials [3,4]. Norgren et al. (2007) highlighted Naftidrofuryl's use in peripheral arterial disease management, indicating improved clinical outcomes [5]. Belova et al. (2015) reviewed its efficacy in cerebrovascular diseases, confirming improvements in cognitive function, behaviour, mood, and overall health in patients with chronic cerebral ischemia and vascular dementia [6].

### Patient outcome

The patient's significant improvement upon administration of Naftidrofuryl underscores the potential of this medication in managing symptoms related to small vessel disease and vascular dementia. His ability to move and improved food tolerance marked a substantial clinical improvement.

### Conclusion

This case highlights the therapeutic benefits of Naftidrofuryl in a geriatric patient with small vessel disease and cognitive impairment. Given the patient's improved mobility and clinical outcomes, Naftidrofuryl should be considered a viable option for similar cases. Further studies and clinical trials are recommended to establish its efficacy and optimize treatment proto-

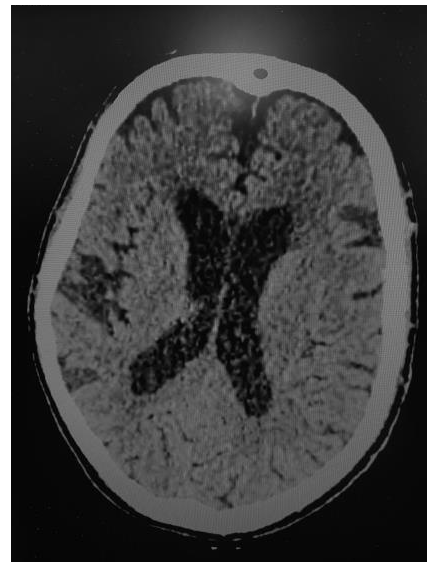


Figure 1: CT Head.

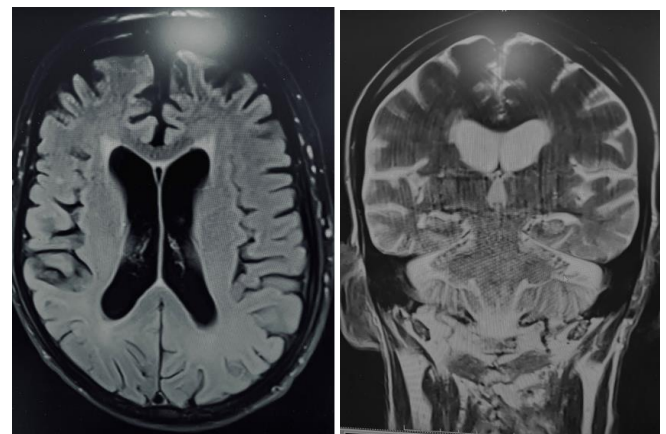


Figure 2: MRI Head.

cols for cerebrovascular conditions.

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