ISSN: 2584-0355
DOI: doi.org/10.51219/MCCRJ/Mariana-Nunes/185

URF PUBLISHERS
connect with research world

Medical & Clinical Case Reports Journal

https://urfpublishers.com/journal/case-reports

Vol: 3 & Iss: 1

Case Report

Vertigo & Hiccups: A Posterior Stroke Unmasked

Mariana Nunes*, Ana Maria Carvalho, Pedro Almeida, Rita Magalhães and Olívia Cardoso

Internal Medicine, Chaves Hospital, Unidade Local de Saúde de Trás-os-Montes e Alto Douro, Portugal

Citation: Nunes M, Carvalho AM, Almeida P, Magalhaes R, Cardoso O. Vertigo & Hiccups: A Posterior Stroke Unmasked. *Medi Clin Case Rep J* 2025;3(1):710-711. DOI: doi.org/10.51219/MCCRJ/Mariana-Nunes/185

Received: 09 February, 2025; **Accepted:** 11 February, 2025; **Published:** 14 February, 2025

***Corresponding author:** Mariana Nunes, Internal Medicine, Chaves Hospital, Unidade Local de Saúde de Trás-os-Montes e Alto Douro, Portugal, Tel: +351917884250

ABSTRACT

Lateral medullary syndrome (LMS) or Wallenberg's syndrome is an uncommon and often underdiagnosed cause of posterior circulation stroke. It is a neurological condition resulting from an infarction in the lateral part of the medulla oblongata. This infarction is typically due to occlusion of the vertebral artery or the posterior Inferior cerebellar artery (PICA).

A 68-year-old male with a history of hypertension, type 2 diabetes mellitus, presented to the Emergency Department with three days history of imbalance and vertigo. Despite an initial normal CT angiogram, MRI revealed acute ischemic lesions in the right cerebellar hemisphere and right lateral medulla. Notably, on the ninth day of hospitalization, he developed intractable hiccups, which is an under-recognized but indicative sign of medullary involvement affecting vagal pathways (Wallenberg's syndrome).

Keywords: Vertigo; ataxia; Hiccups; Posterior circulation stroke; Wallenberg's syndrome

Introduction

Wallenberg Syndrome is a classic neurological condition caused by an infarction in the lateral portion of the medulla oblongata. It typically occurs due to the occlusion of the Posterior Inferior Cerebellar Artery (PICA) or, less commonly, due to vertebral artery occlusion that affects this region[1]. Clinically, it presents with ipsilateral cranial nerve deficits (loss of pain and temperature in the face, ataxia, Horner's syndrome) and contralateral loss of pain/temperature in the body, along with dysphagia, dysphonia and vertigo[1,2]. Persistent hiccups may also occur and they are a significant and distressing symptom[3,4].

Case Description

A 68-year-old man with a known medical history of type 2 diabetes mellitus and hypertension, presented to the emergency department with three days of imbalance and vertigo. He denied headache, visual changes, nausea, vomiting, loss of strength or sensation in any limb, loss of consciousness, altered sensorium, behavior abnormalities, involuntary movements, up-rolling of eyeball, urinary incontinence, faucal incontinence. On physical examination, he was oriented to time, place and person. Muscle tone and power were normal in all four limbs, but his gait deviated to the right and had a wide base and ataxia. There was anisocoria and a positive Romberg test deviating to the right. His blood pressure was 203/100 mmHg. The cardiac and pulmonary auscultation was normal. A clinical diagnosis of posterior circulation stroke was considered. A CT angiography was performed but it was normal. An urgent MRI was performed and revealed recent ischemic lesions in the posterior territory, involving the right cerebellar hemisphere **(Figure 1)** and the

right lateral medulla **(Figure 2)**. Angiographic studies showed atherosclerotic irregularities in the posterior cerebral arteries, with significant stenosis in the right P2 and P3 segments. The electrocardiogram showed normal sinus rhythm. Holter and trans-thoracic 2-D- Echocardiography were unremarkable. On the ninth day of hospitalization, the patient developed persistent hiccups, unresponsive to metoclopramide, partially responsive to chlorpromazine. The persistent hiccups were also consistent with an ischemic lesion in the medulla-specifically affecting the vague nerve (cranial nerve X) origin-consistent with lateral medullary syndrome or Wallenberg's syndrome. He did not exhibit dysphagia during the hospitalization.

He was managed with dual-antiplatelet therapy (aspirin and clopidogrel) and high-dose statin. Vertigo was managed with betahistine 16 mg three times daily and ondansetron 8 mg twice a day. He made good recovery as his vertigo and giddiness improved. The persistent hiccups improved with baclofen 5 mg twice daily. During hospitalization he started physical therapy focusing on balance and coordination and after 2 weeks of hospitalization he was referred to the Rehabilitation Center to continue the physical therapy.

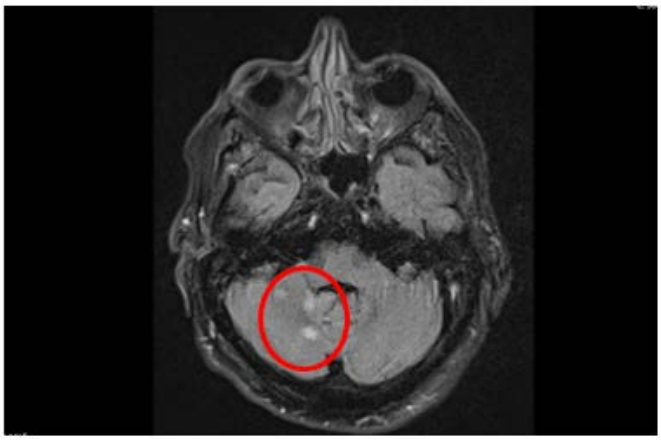

Figure 1: Brain MRI with ischemic lesions in the right cerebellar hemisphere.

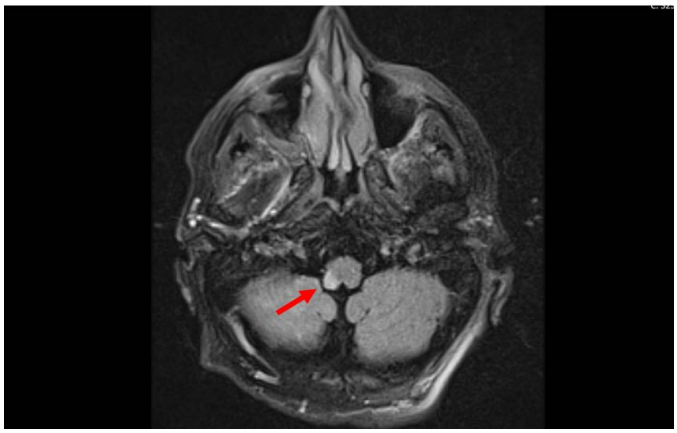

Figure 2: Brain MRI with an ischemic lesion in the medulla oblongata.

Conclusion

This clinical case demonstrates how an initial presentation of imbalance and vertigo, common and often perceived as benign in the Emergency Department, can conceal a vascular lesion in the posterior circulation, such as the ischemic stroke affecting the right cerebellar hemisphere and the lateral medulla (Wallenberg syndrome). The intractable hiccups highlights another relatively uncommon yet suggestive clinical sign of medullary involvement—particularly near the vagal nuclei (cranial nerve X)—thereby reinforcing the diagnosis of Wallenberg syndrome. Hence, this case underscores the diverse presentations of posterior circulation infarcts and the importance of early multidisciplinary investigation to minimize complications and optimize patient outcomes.

References

1. Nowak DA, Topka HR. The clinical variability of Wallenberg's syndrome. The anatomical correlate of ipsilateral axial lateropulsion. J Neurology 2006;253(4):507-511.
2. Aravind R, Athira B, Mohammed SK. A Case Report on Wallenberg Syndrome. Glob J Add and Rehab Med 2017;4(2):555634.
3. Park MH, Kim BJ, et al. Lesional location of lateral medullary infarction presenting hiccups (singultus). J Neurology Neurosurgery Psychiatry 2005;76(1):95-98.
4. Mandalà M, Rufa A, Cerase A, et al. Lateral medullary ischemia presenting with persistent hiccups and vertigo. International J Neurosci 2010;120(3):226-230.