International Journal of Neuroscience, 120, 226–230, 2010

ISSN: 0020-7454 print / 1543-5245 online
DOI: 10.3109/00207450903585316

informa
healthcare

Lateral Medullary Ischemia Presenting with Persistent Hiccups and Vertigo

Marco Mandalà,[1,2] Alessandra Rufa,[3] Alfonso Cerase,[4] Sandra Bracco,[4] Paolo Galluzzi,[4] Carlo Venturi,[4] and Daniele Nuti[2]

[1]*ENT Department, University of Verona, Verona, Italy*

[2]*Department of Human Pathology and Oncology, University of Siena, School of Medicine, Siena, Italy*

[3]*Department of Neurological Neurosurgical and Behavioral Sciences, University of Siena, Siena, Italy*

[4]*Unit of Neuroimaging and Neurointervention, Department of Neurosciences, Azienda Ospedaliera Universitaria Senese, "Santa Maria alle Scotte" General Hospital, Siena, Italy*

ABSTRACT

This study describes a patient with lateral medullary ischemia (LMI) presenting with persistent hiccups followed by vertigo with horizontal head-shaking-induced contralesional nystagmus (HSN) and discusses pertinent pathophysiology. A 65-year-old man presented with persistent hiccups and disabling spells of vertigo, lasting 30 seconds that became much more frequent and associated with lateropulsion to the right. A strong left beating HSN was evident. Magnetic resonance imaging and angiography, and intra-arterial cerebral digital subtracted angiography showed subacute ischemic lesions in the right lateral medulla and ipsilateral inferior cerebellar hemisphere, and two tight stenoses of the V1 and V4 segments of the right vertebral artery. Patient was treated by intravenous heparin and oral clopidogrel. After 48 hours, hiccups disappeared. One month later, vertigo spells were less frequent but still disabling. Endovascular stenting of the right vertebral artery stenoses was then performed. In the subsequent four years, the patient had no further episodes of hiccups or vertigo. Less intense HSN persisted. Hiccups followed by vertigo, lateropulsion, and HSN had been the clinical presentation of LMI and cerebellar ischemia, without other major neurologic or ocular motor findings. This unusual clinical variant of LMI could mimic a more benign labyrinthine lesion, and possibly leading to a dangerously delayed treatment.

KEYWORDS: head shaking nystagmus, hiccups, lateral medullary ischemia, vertigo, neuroimaging, stenting

INTRODUCTION

Lateral medullary infarction (LMI) syndromes include a group of clinically different pictures ranging from Wallemberg's syndrome to less dramatic clinical conditions (Kim, 2003), in which hiccups are occasional and insidious. Most notably, isolated occurrence as first symptom of LMI is very rare (Park et al., 2005). Our purpose is to increase the knowledge about LMI presentation and pertinent pathophysiological mechanisms by describing a patient with persistent hiccups as the first symptom of LMI.

Address correspondence to Marco Mandalà, MD, ENT Department, University of Verona, Piazzale L. A. Scuro, 10; 37134 Verona, Italy. E-mail: marcomand@hotmail.com

Case Report

A 65-year-old Italian man presented LMI due to persistent hiccups and disabling spells of vertigo, lasting 30 seconds that became much more frequent and associated with lateropulsion to the right. The patient complained of disabling hiccups six days before being associated with short episodes of spinning vertigo lasting 3–4 minutes and right arm paresthesia three days later. History revealed hypertension, and blood pressure was 170–185 mmHg at examination. Eye movements were examined with/without fixation removed (Frenzel glasses) and recorded by videonystagmography (Difra®). They were normal except for a strong horizontal head-shaking-induced left beating nystagmus (HSN) elicited as per Kamei et al. (Kamei, Kimura, Kanenko, & Noro, 1964) with fixation removed. Maximun slow phase velocity and duration of the HSN were 53°/seconds and 20 seconds,