Acute Occlusion of the Percheron Artery during Pregnancy: A Case Report and a Review of the Literature

Giovanna Viticchi, MD,* Lorenzo Falsetti, MD,† Chiara Fiori, MD,* Giorgia Jorio, MD,* Andrea Plutino, MD,* Laura Buratti, MD,* Marco Bartolini, MD,* and Mauro Silvestrini, MD*

Objectives: The Percheron artery (PA) is a rare variant vessel. Its acute occlusion can cause a bilateral symmetrical thalamic stroke, clinically manifested as a sudden alteration of consciousness that could vary from sleepiness to coma. In this paper, we illustrate a case of acute PA occlusion in a young, pregnant woman and present a review of the literature, focusing on the possible causes of the acute occlusion. *Methods:* A 35-year-old woman, at the fourth week of pregnancy, came to the emergency department of our hospital because of a sudden onset and persistent loss of consciousness. Brain magnetic resonance imaging (MRI) showed a symmetrical and bilateral thalamic infarction without evidence of other ischemic lesions, compatible with an acute PA occlusion. *Results:* The patient, who showed full clinical recovery within a few hours of symptom onset, received a short-term anticoagulant treatment followed by aspirin for long-term prevention. *Conclusions:* We reviewed the literature about the possible causes of acute PA occlusion. This ischemic condition is usually associated with cardioembolic or small-vessel disease. However, in our patient, we did not find any element supportive for coagulative alteration or embolyzing conditions. *Practice:* The presence of this type of thalamic stroke should be considered in the management of persistent loss of consciousness. PA occlusion is rare, but it needs a brain MRI examination for a correct diagnosis, a narrow evaluation of all the possible causes, and a long-term anticoagulant therapy. Pregnancy itself should constitute a rare but possible cause of a PA occlusion.
Key Words: Percheron artery—stroke—pregnancy—thrombophilia.
© 2015 National Stroke Association. Published by Elsevier Inc. All rights reserved.

Introduction

The Percheron artery (PA) is a rare anatomical variant arising from the posterior cerebral artery (P1 segment) and supplying the median thalamus bilaterally.[1] The typical clinical symptom of an acute PA occlusion is an alteration of consciousness that could vary from sleepiness to coma.

In this paper, we present the case of a young pregnant woman affected by an acute PA occlusion. A review of the imaging studies and performed treatments, compatible with the gestational state, is discussed. Finally, we present a review of the literature regarding the most frequent cause of PA occlusion and its therapy.

Case Report

A 35-year-old woman, in her fourth week of spontaneous pregnancy, suddenly developed weakness and dizziness followed by loss of consciousness during her general practitioner's visit. The patient was immediately referred to the emergency department of our hospital. On arrival, 2 hours after the onset of symptoms, a

From the *Neurological Clinic, Marche Polytechnic University, Ancona, Italy; and †Internal and Subintensive Medicine, Ospedali Riuniti, Ancona, Italy.

Received June 5, 2015; revision received September 24, 2015; accepted November 5, 2015.

Address correspondence to Giovanna Viticchi, Neurological Clinic, Marche Polytechnic University, Via Conca 1, Ancona 60020, Italy. E-mail: viticchi.g@gmail.com.

1052-3057/$ - see front matter

© 2015 National Stroke Association. Published by Elsevier Inc. All rights reserved.

http://dx.doi.org/10.1016/j.jstrokecerebrovasdis.2015.11.011

remarkable change in consciousness was detected: the patient was sleepy but arousable and responsive to painful stimuli. Results of the routine blood collection, comprehensive of complete blood count, electrolytes, glycemia, and hepatic and renal function tests, were found to be within normal limits. Urinary examination excluded illicit drug abuse. Electrocardiogram (ECG) and arterial blood gas analysis turned out to be normal. Neurological examination showed persistent sleepiness responsive to intense vocal or painful stimuli: no sensitive or motor focal signs were detected, and deep tendon reflexes were present and symmetrical with no evident cranial nerve involvement. Because the patient in this acute phase was not completely cooperative, we were not able to establish with certainty the presence of eye movement impairment, but we verified that pupils were isochoric and tended to be miotic. Pupillary light reflex was present but slow. During intensive care observation, the patient presented stable hemodynamic parameters without fever or bleeding signs, and she did not require any oxygen therapy. Seventy-two-hour ECG monitoring did not reveal any significant arrhythmias. Brain computed tomography, performed within the first hour of arrival with lead protection for the fetus, turned out to be negative for acute ischemic or hemorrhagic lesions. The patient remained in the subintensive care unit until she showed slow progressive improvement. Six hours after symptom onset, she had complete recovery of consciousness. At admission to the neurological ward, a transcranial echo-color Doppler was immediately performed showing complete patency of both basilar and vertebral arteries. This diagnostic procedure is recognized as one which is able to support reliable information on the routine evaluation of patients.[2] In particular, this technique is able to provide a diagnosis of stenosis, occlusion, or other alteration of intracranial vessels including dissection. On the following day, the patient was submitted to a brain magnetic resonance imaging (MRI) without contrast enhancement, which showed hyperintensity of the medial part of both thalamic fluid-attenuated inversion recovery (FLAIR) sequences (Fig 1) and a restricted diffusion at diffusion-weighted images (Fig 2). No other pathological finding was found. Clinical and radiological manifestations were typical of an acute PA occlusion. Angiographic examination was not performed due to the patient's state of pregnancy.

In the following days, the patient was submitted to a thrombophilic state evaluation including antithrombin-III, C and S proteins, lupus anticoagulant, and homocysteine. We also assessed the presence of an antiphospholipid syndrome by evaluating the presence of anticardiolipin or anti-beta 2 globulin antibodies. All these evaluations did not reveal any pathological condition. Genetic assessment of mutations for factor V Leiden and factor VII did not show any thrombophilic mutation. A careful anamnestic evaluation excluded the presence

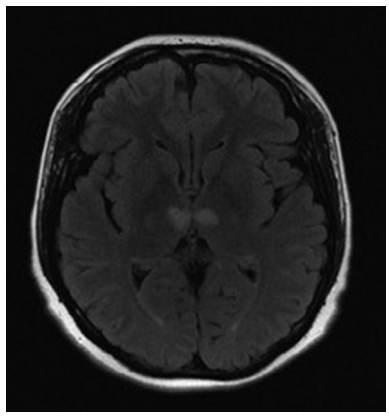

Figure 1. *Brain MRI, FLAIR sequences showing a symmetrical bilateral ischemic hyperintensity of the medial part of the thalamus. Abbreviations: FLAIR, fluid-attenuated inversion recovery; MRI, magnetic resonance imaging.*

of vascular risk factors. In particular, she neither smoked nor took estrogen or progestinic drugs. In the past, she had had another normal pregnancy without any complication. There was no history of seizures, head trauma, or other neurological pathologies.

All common causes of stroke in young patients were assessed. In particular, we obtained transthoracic echocardiogram that was found to be normal. Contrast-enhanced transesophageal echocardiogram showed the presence of a small patent foramen ovale active only after the Valsalva maneuver. Prolonged evaluation of the cardiac rhythm with Holter recording did not reveal any significant arrhythmia. Doppler ultrasound excluded the presence of plaque, thrombosis, or extracranial vessel dissection. Doppler ultrasound examination of the deep venous circle of the legs did not show any evidence of thrombosis.

Considering the state of pregnancy and the absence of any pathological element, we decided to treat the patient with enoxaparin at the dose of 100 U/kg bid. Clinical conditions remained stable, and she did not present any neurological deficit when she was discharged on day 10

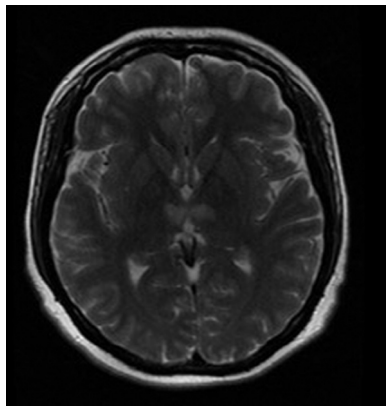

Figure 2. *Brain MRI, T2 images showing a bilateral, symmetrical restricted diffusion at diffusion-weighted images of the thalamus. Abbreviation: MRI, magnetic resonance imaging.*

Download English Version:

https://daneshyari.com/en/article/5872975

Download Persian Version:

https://daneshyari.com/article/5872975

Daneshyari.com