

Subarachnoid hemorrhage presenting as TIA in the MCA territory

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ABSTRACT

A 71 yo woman treated with Lisinopril for HBP, was brought to our department for right-sided paresthesias, dysarthria and right-sided motor deficits. Onset of symptoms was sudden, about one hour prior to hospitalization. However, at the time of presentation, they were partially ameliorated. Clinical exam revealed right hemiparesis 4/5 MRC, right central facial palsy, BP of 150/80 mmHg and HR of 78/min rhythmic. The patient presented similar transient episodes of right-sided paresthesias and dysarthria during the last month, but without addressing to a medical department. Medical exam and history pointed to a TIA in the left MCA territory. However, CT scan revealed a small intergyral left fronto-parietal subarachnoid hemorrhage. When asked, the patient denied any headache, nausea/vomiting, altered consciousness or recent history of head trauma, while clinical exam revealed no meningism. The patient was then transferred urgently to a Neurosurgery Department.

Keywords: subarachnoid hemorrhage, hemiparesis, TIA

Abbreviations (in alphabetical order):

BP – Blood pressure	MCA – Middle cerebral artery
CT – Computer tomography	MRC – Medical Research Council
HBP – High blood pressure	SAH – Subarachnoid hemorrhage
HR – Heart rate	TIA – Transient ischemic stroke

INTRODUCTION

Subarachnoid hemorrhage usually presents with a characteristic combination of symptoms, sudden severe headache being the most important and, in up to one third of cases, the only symptom (1). In one retrospective study of nontraumatic SAH cases during a 5-year period, most common presenting features were nausea/vomiting (77%), headache (74%), loss of consciousness (53%) and nuchal rigidity (35%) (2).

CASE PRESENTATION

A 71 yo woman treated with Lisinopril for HBP, was admitted to our department for right-sided par-

esthesias, dysarthria and right-sided motor deficits. Onset of symptoms was sudden, about one hour prior to hospitalization. However, at the time of presentation, they were partially ameliorated.

Clinical exam revealed right hemiparesis 4/5 MRC, right central facial palsy, BP of 150/80 mmHg and HR of 78/min rhythmic.

The patient also reported similar transient episodes of right-sided paresthesias with dysarthria during the last month, without addressing to a medical department.

Medical exam and history pointed to a TIA in the left MCA territory. However, CT scan revealed a small intergyral left fronto-parietal subarachnoid hemorrhage. When asked, the patient denied any

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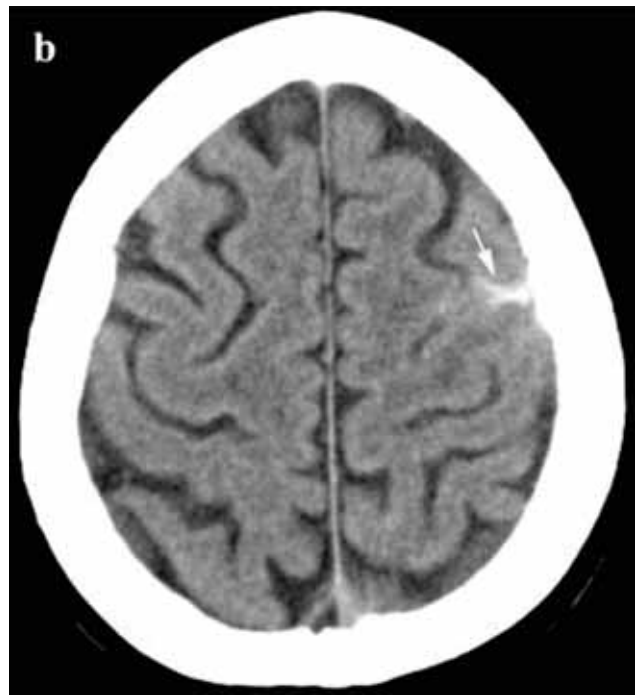
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FIGURES 1 & 2. Spontaneous hyperdense focal accumulation in the left frontal sulcus (arrow) with associated discrete hypodensity (edema – arrow head) in the frontal lobe white matter – CT appearance suggestive for limited subarachnoid hemorrhage.

headache, nausea/vomiting, altered consciousness or history of head trauma, while clinical exam revealed no meningism.

The patient was then transferred urgently to a Neurosurgery Department.

DISCUSSIONS

Our patient did not present any characteristic symptoms of SAH, although clinical picture was in accordance with hemorrhage location. Moreover, she recalled similar transient episodes over the last month.

Such episodes could be regarded equivalents of the “sentinel headaches” or “warning leaks”, which are thought to precede SAH onset. Some authors suggest abandoning the term “warning leaks”, due to its confusing nature (1,3). Based on a systematic review (Polmear), they appear to be a real entity, with varying incidence from near 0 to about 40% (4). However, their existence was not supported by a prospective study (Linn) of 148 patients with sudden severe headache (possible sentinel headache) and follow-up for 1 year (5). Another prospective study found no clinical and imaging difference between SAH cases with prior headache and those

without (6).

Additionally, warning signs may be caused by the presence of expanding aneurysms. In one study, prodromal symptoms were found in 59% of patients with intracranial aneurysms, with an average of 6 days between last warning signs and hemorrhage (for MCA aneurysms) (7). In another study, warning signs were divided in 3 groups, based on possible etiology (1 – mass effect of expanding aneurysm, 2 – minor bleeds, 3 – spasm/occlusion), with shortest interval before hemorrhage onset occurring in group 2 (≈ 10 days), and thus requiring most urgent medical attention (8).

As for headache peaking within an hour, several clinical features were found to be predictive of SAH: age ≥ 40 years, onset with exertion, arrival by ambulance, vomiting, witnessed loss of consciousness, nuchal rigidity/pain, BP >160 mmHg (systolic) and/or >100 mmHg (diastolic). Presence of any of these features should prompt investigation for SAH (9).

It should be emphasized that SAH can be triggered during non-exertional activities, sometimes more frequently than during exertional activities (2).

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