Case Report

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A Rare Case of Simultaneous Recurrent Bilateral Hypertensive Thalamic Hemorrhage: A Rare Case Report

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ABSTRACT

Intracerebral hemorrhage is a dangerous occurrence in patients. This may occur due to hypertension, cerebral amyloid angiopathy, Drug usage, anticoagulants, antithrombotic, coagulopathies, tumors, arteriovenous malformation (AVM), and aneurysmal rupture. Bilateral thalamic hemorrhages are rare. This article presents a rare case of Simultaneous recurrent bilateral hypertensive thalamic hemorrhage in a 57-year-old woman with right hemiparesis.

Introduction

Intracerebral hemorrhage is a dangerous and potentially life-threatening complication, and the most common etiologies are hypertension, anticoagulation, aneurysmal rupture, catastrophic antiphospholipid antibody (APLA) syndrome, and comorbidities [1-6]. Bilateral thalamic hemorrhages are rare. We report a case of hypertension with unilateral thalamic hemorrhage due to hypertension which progresses to bilateral hemorrhage. No other cause for bleed was found, despite an exhaustive search.

Case Report

A 57-year-old Iranian woman with known hypertension and previous cerebrovascular accident (CVA) was

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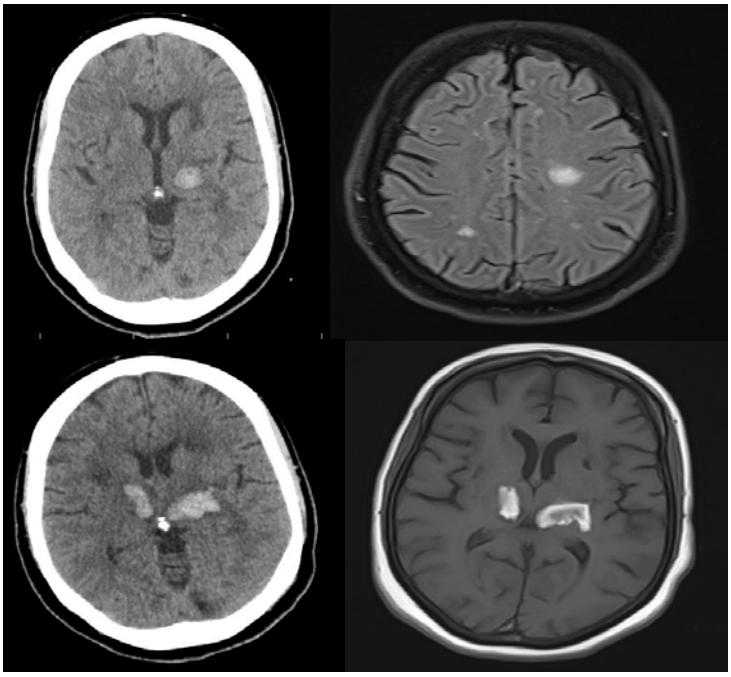

Figure 1. Computed tomography and MRI of patient

(A) Computed tomography and MRI T2 show unilateral thalamic hemorrhage. (B) Computed tomography and MRI T1 show bilateral thalamic hemorrhage

admitted to the hospital with a chief complaint of right hemiparesis with paresthesia and facial paresis. At first, her symptoms were mild and then gradually intensified. She had no history of medical diseases. She also had no history of medication and had no history of trauma. There was no history of hematemesis, hemoptysis, epistaxis, or menorrhagia. She had a history of the same symptoms 2 years ago, which diagnosed bilateral thalamic infarction proved by Magnetic resonance imaging (MRI) (the causes were unclear). The patient had nausea and vomiting before admission. On examination, she was conscious but drowsy and was obeying commands. She was non-febrile with a pulse rate of 88 beats/min, blood pressure of 160.90 mm/Hg, and respiratory rate of 16 min. She had pallor but no edema or icterus.

Cardiovascular and respiratory system examination revealed no abnormality, and the muscular force of the right side was determined to be 2.5. Her laboratory findings are shown in Table 1. Her chest X-ray and electrocardiogram were normal. First, a non-contrast computerized tomographic scan of the head was carried out to evaluate her symptoms, which revealed unilateral left thalamic hemorrhage (Figure 1-A). The patient was monitored with the diagnosis of unilateral thalamic hemorrhage due to hypertension. She was initially treated with anti-hypertensive drugs. On the third day of admission, the patient became drowsy. CT scan was repeated for the patient, which showed bilateral thalamic hemorrhage (Figure 1-B).

Cerebral deep vein thrombosis is one of the causes of bilateral thalamic hemorrhage. The patient was examined for MRI, Magnetic Resonance Venography (MRV), and D-Dimer. Brain MRI and MRV of the brain were normal. The serum level of D-Dimer was 0.53 microgram/ml (normal range of 0.3-2). At last, the patient was treated with the diagnosis of bilateral thalamic hemorrhage in hypertension. In the course of hospitalization, her clinical condition improved with proper control of her blood pressure. After 10 days, the patient was discharged from the hospital in good health status.

In the 1st month after discharge, her clinical condition was good, and there were no new findings in her history and physical examination.

Discussion

The presented case is an unusual Stroke manifestation due to a bilateral thalamus hemorrhage. Only 11 bilateral simultaneous thalamic hemorrhage cases have been reported based on the searches, including our patient (Table 2) [1-11]. In this series, 6 issues were because of hypertension. Other causes of bleeding include asphyxia, deep vein thrombosis, coagulation factor disorder, and other reasons. Unilateral or bilateral thalamic

Table 1. Laboratory Results

Lab test	Result	Lab test	Result
White Blood Cell Count	11.4 x103/µL	Na	137mEq/L
Hemoglobulin	13.5 Gr/dL	K	3.9mEq/L
Platelets	238000 x103/µL	Ca	8.7 mg/dL
Fasting blood glucose	79 mg/dl	Mg	2.6 mg/dL
PT	13 Sec	INR	1
PTT	26 Sec		
FANA	<1:10	D-Dimer	0.53 µgr /ml
Anti MPO IgG	3 U/ml		
Anti PR-3 Ab	2.1 U/ml		
Anti ds-DNA IgG	1.7 U/ml		
Anti-cardiolipin Ab IgG	1 GPL/ml		
Anti-cardiolipin Ab IgM	0.3 MPL/ml		
Lupus Anticoagulant	42 Sec		

hemorrhages are often thought to be due to hypertension; therefore, no vascular lesions, such as aneurysms or AVMs, are observed [4, 8].

Clinical experience has shown that in bilateral thalamic hemorrhages, the cause of hemorrhage is usually the incidence of deep vein thrombosis, which should be rapidly treated with high-dose heparin, which the

Table 2. Cases of multiple intrathalamic and bilateral thalamic hemorrhage

Case Report	Reference	Clinical Presentation	Radiology
58-year-old male	Kono et al., 2014 [3]	Sudden right mild hemiparesis	Bilateral thalamic hemorrhage on CT. 17 microbleeds in putamen and thalamus seen on Gradient echo magnetic resonance sequences images
35-year-old male	Yi et al., 2013 [4]	Sudden loss of consciousness	Multiple ICH including those in the cerebellum, basal ganglia, and thalamus
54-year-old male	Imai et al., 2000 [5]	Semicoma, quadriplegia and skew deviation	CT showed B/L thalamic hemorrhage
76-year-old female	Kohshi et al., 2000 [6]	Right hemiparesis	CT with right thalamic hematoma and left putaminal bleed
60-year-old male	Sunada et al., 1999 [7]	Sudden unconsciousness and left hemiparesis	CT with B/L thalamic hemorrhage
65-year-old male	Kabuto et al.,1995 [8]	Sudden coma	CT with B/L putaminal and thalamic hemorrhage
80-year-old female	Kabuto et al., 1995 [8]	Sudden unconsciousness	CT with B/L thalamic hemorrhage
64-year-old male	Lin et al., 1993 [9]	Quadriparesis	CT with B/L thalamic and putaminal hemorrhage
71-year-old female	Hickey et al., 1983 [10]	Decerebrate posturing and ataxic respiration	CT scan showing a large hematoma in the right basal ganglia and thalamus and also an area of hemorrhage in the left internal capsule and thalamus.

prognoses will be good. All the patient's neurological symptoms will resolve [7, 9]. In the patient, according to normal results of the evaluation for other causes of thalamus hemorrhage and considering the long history of hypertension in the patient, hypertension can be described as the cause of bilateral thalamus hemorrhage, and we can roll out other causes. The patient was not in critical condition due to the manifestation of hospitalization; then, no emergent action was needed.

The clinical presentations of this disease are not necessarily specific. Patients may have presented various neurological signs such as dysarthria, tetraparesis, and pseudobulbar paresis [2, 4]. Our patient exhibited hemiparesis and paresthesia, which suggests unilateral damage. The unique point of our patient is that it was a recurrent bilateral thalamic insult (first, it was bilateral thalamic ischemia, and then, after two years, sequential bilateral thalamic hemorrhage happened). She was first admitted with left thalamus hemorrhage, and then she progressed to bilateral thalamic hemorrhage. The cause of this progression under the control of patients' blood pressure is unclear.

The authors certify that they have obtained all appropriate patient consent forms. The patient has given her consent form for her images and other clinical information to be reported in the journal. The patient understands that his name and initials will not be published, and due efforts will be made to conceal his identity, but anonymity cannot be guaranteed.

Ethical Considerations

Compliance with ethical guidelines

All ethical principles are considered in this article. The participants were informed of the purpose of the research and its implementation stages. They were also assured about the confidentiality of their information and were free to leave the study whenever they wished, and if desired, the research results would be available to them. A written consent has been obtained from the subjects. principles of the Helsinki Convention were also observed.

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Conflict of interest

The authors declared no conflict of interest.

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