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Short Report

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A case of moyamoya disease

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Introduction

Moyamoya Disease (MMD) is a rare cause of stroke with progressive stenosis of the end of the internal carotid artery and compensatory capillaries. The symptoms and course of moyamoya disease depend on the age of the patient at the time of symptom onset and the type of first episode (ischemic or hemorrhagic), but vary in severity from transient ischemic episodes to persistent neurological deficits [1].

Case presentation

Clinical data

The 57-year-old female patient was admitted to the hospital on May 10, 2023, due to "depression, nervousness, worry and numbness of the body for more than 2 months." The patient complained of numbness and discomfort in the left index finger, middle finger and ring finger two months ago, gradually developed numbness and discomfort in the mouth, indistinctness of speech, weakness in both lower limbs and instability in walking, which improved for about half an hour. On the same day, I went to the local hospital in Guiyang for treatment, and no special abnormalities were found after completing relevant examinations (specific details are unknown). These symptoms can occur after strenuous exercise. Patients began to repeatedly worry about their physical conditions, nervous irritability, easy to lose temper, panic discomfort. Gradually feel low mood, decreased interest, lack of motivation, negative suicidal thoughts, poor night sleep.

Past history

"High blood pressure" for 3 years, with a maximum blood pressure of 185/? mmHg, currently taking "amlodipine 20 mg QD" for the treatment of private complaints of irregular medication, poor blood pressure control.

Physical examination

T:36.2^{O}C P:93 times/min R:21 times/min Bp: 119/71 mmg. No obvious abnormality was found in the heart, lung and abdomen, and the signs were difficult to stand up (+). Conscious, repeatedly stressing that he was unwell. Lead to severe depression and anxiety, slow thinking, lead to negative ideas; Did not induce hallucinations delusions. Loss of instantaneous memory, loss of computational power. No depression or alternation of mood.

Auxiliary check

Post-admission scale HAMD: 29 points (severe), HAMA: 31 points (severe) blood biochemistry after admission: triglyceride

23.79 mmol/L, free cholesterol 3.43 mmol/L, total cholesterol 6.57 mmol/L. Head MRI+MRA: bilateral internal carotid artery intracranial segment occlusion, bilateral anterior and middle main cerebral artery shallow and local occlusion, poor development in the far branch, CTA is recommended to determine whether there is smoke change. Bilateral cerebral p1-2 is more likely to be cold than peripheral. Head and neck CTA: (1). Bilateral internal carotid artery C1-C7 segments were not developed, and severe stricture-occlusion was considered. (2). There was no development in the M1 segment of the bilateral middle cerebral artery, and there were multiple tortuous collateral circulation small blood vessel shadows around, so Moyamoya disease could be considered. (3). Bilateral anterior cerebral arteries are slender; Right-anterior cerebral artery A2 stenosis is mild to moderate. (4). Severe stenosis of P1-P2 segment of the right posterior cerebral artery is possible; The left posterior cerebral artery P1-P2 lumen is moderately narrow. Increased distal branches of bilateral posterior cerebral arteries.

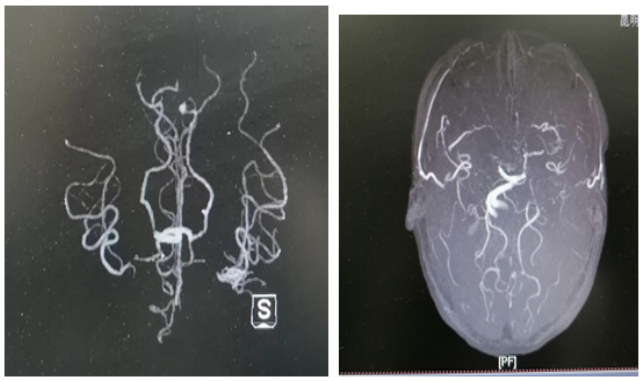

Figure 1: Head MRI+MRA.

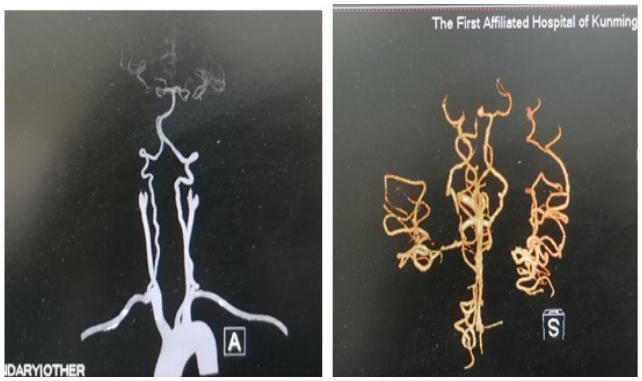

Figure 2: Head and neck CTA.

Diagnosis

Major depression without psychotic symptoms; Moyamoya disease; Hyperlipidemia

Discussion

DSA is the gold standard technique for detecting intracranial stenosis and cerebrovascular malformations. The Japanese guidelines for the diagnosis of Moyamoya disease include MRI and MRA as a non-invasive diagnostic method [2]. The latest diagnostic criteria in Japan suggest that cerebral angiography may be omitted when MRI and MRA findings meet all of the following: (i) MRA shows intracranial internal carotid artery or anterior cerebral artery and/or middle cerebral artery proximal stenosis or occlusion. (ii) MRA showed abnormal basal ganglia vascular network [3]. At present, the treatment of moyamoya disease mainly focuses on neuroprotection, cerebral blood flow reconstruction and neurological rehabilitation. Treatment strategies can be divided into medical and surgical interventions. The main purpose of surgical intervention for Moyamoya disease is to improve blood flow in the hypoperfusion brain, and revascularization is considered useful for reducing ischemic injury [4]. A 10-year follow-up evaluation from a Japanese Research Council registered study showed that antiplatelet therapy did not affect the incidence of cerebral infarction in patients with moyamoya disease. Therefore, revascularization is the most effective treatment for hemorrhagic and ischemic moyamoya patients [2].

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