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Transient Global Amnesia: A Case Report

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Abstract Transient global amnesia (TGA) is a clinical syndrome characterized by the sudden onset reduction of anterograde memory. Many etiologies were debated, such as migraine, focal ischemia, venous flow abnormalities, and epileptic phenomena. A large proportion of TGA cases are preceded by stressful events, which may be emotional or physical. Here we are reporting a case of TGA in a 60-year-old woman triggered by emotional stress.

Keywords: *anterograde amnesia, emotional stress, reassurance*

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1. Introduction

TGA usually occurs in middle-aged or older people. It typically affects patients aged between 50 and 80 years [1]. It was characterized by the abrupt onset of anterograde amnesia, accompanied by repetitive questioning. Except for amnesia, there were no neurological deficits [2].

Neuroimaging studies performed after an episode of TGA display transient alteration of the specific hippocampal circuits that contribute to the creation and storage of memories [3]. Emotional stress, anxiety were found to be precipitating factors for TGA in women; however, precipitating physical events were found in men [2].

2. Case Report

A 60-year-old woman with a past medical history of increased BMI of 36, hyperlipidemia, prediabetes, premature menopause at the age of 36, and endometriosis presented to the emergency department due to a lapse in her memory for an hour.

The patient reported that she remembers coming back from work, making lunch and talking to her mother and sister-in-law, and then going to the shower at noon. She also remembers going out of the shower to the living room. Afterward, she could not remember why she showered and what day it was. She only remembers being surrounded by her family members. The history was corroborated by her mother, who reported the patient questioned at least 15 times about what day it was. Her mother became very concerned, and the family brought her to the emergency department. The mother stated that this episode lasted roughly 45 minutes. She also reported that this had never occurred before. She denied having any seizures, bowel or bladder incontinence, biting her tongue, or sensory and motor abnormalities. She reported an increased level of stress at work and home over the preceding three months.

Her initial intake vitals were a blood pressure 136/84 mmHg, heart rate of 87 beats per minute, respiratory rate of 18 breaths per minute with an oxygen saturation of 99%, and a temperature of 98.5°F. There were no significant abnormalities noted in the initial lab work. Her EKG showed normal sinus rhythm with left axis deviation. Chest radiograph did not show any cardiopulmonary process. A CT head without contrast did not show any acute intracranial process.

Upon our initial encounter with the patient, the patient was sitting comfortably and not in distress. There were no abnormalities noted on a complete neurological examination. She was alert and oriented to herself, time, location, and long-term memory. She was able to spell backward, count backward, and draw a clock.

The patient's lapse in memory may be due to multiple reasons. In our differentials, we include transient ischemic attack and transient global amnesia. The patient had negative brain imaging (no intracranial process on CT head without contrast and MRI). Based on the history, we are sure she did not have a seizure. Her mother witnessed the whole event. The patient denied loss of consciousness, falls, trauma, new onset of medication, and sensory/motor abnormalities. The patient was able to recognize her family during this lapse in memory. She denied any gross neurological abnormalities before, during, and after the episode at that time and afterward. Her ASCVD is 7 %. Despite medication, she has a few risk intensifying factors, including premature menopause, prediabetes, increased BMI, and persistent hypertriglyceridemia.

3. Discussion

Transient global amnesia (TGA) is defined as sudden onset anterograde amnesia that is more common in females [4,5,6,7,8]. Fisher and Adams reported seventeen cases for the first time in 1964 [7,9]. In 1990 the criteria of

pure TGA was provided by Hodges and Warlow and included the following, witnessed the attack by a capable observer, anterograde amnesia with no focal neurological symptoms or signs during or after the attack, no personal identity loss or recent head injury, no epileptic features, or history of seizure, and resolution of the TGA within 24 hours [7,8,10]. Our patient has met these criteria.

Multiple theories have been suggested regarding the pathophysiologic mechanisms of TGA, including migraine-related mechanisms, venous flow abnormalities, psychological disturbance; however, the exact cause is still unknown [4,8]. Multiple risk factors may be associated with TGA [4]. as physical exercise or head trauma, emotional stress, water contact or temperature change (hot or cold shower) [7], migraine, sexual intercourse, recent procedures as gastric endoscopy, contrast-induced as in cerebral angiography [6], or drug-related as sibutramine [5]. There is no current treatment for TGA, only observation and reassurance [8].

4. Conclusion

Clinicians should be aware of the TGA as a sudden onset of global amnesia, particularly anterograde amnesia, usually in the seventh decade and is more common in females. Multiple risk factors are associated with this clinical syndrome. Reassurance and observations are the standard treatment.

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Conflict of Interest

None of the authors have any conflict of interest to declare.

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