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Transient Global Amnesia: Middle Age Male with Sudden Memory Loss

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Abstract: *Sudden loss of anterograde or retrograde memory that can't fall under any other neurological condition is called Transient Global Amnesia, which lasts for up to 24 hours. Mostly seen in people aged 50 – 70, the diagnosis is made clinically however, CT, MRI, EEG, laboratory tests are used to rule out other forms of amnesia. No treatment intervention is needed, as the amnesia remits spontaneously. In this case report, we described a 68-year-old male diagnosed with transient global amnesia. He represented typically with confusional state, repetition of questions, and recent event memory loss.*

1. INTRODUCTION

Transient Global Amnesia (TGA) is a sudden, temporary loss of memory. During an episode, patient cannot remember recent events and is not oriented to time or place. Patients tend to repeat the question repeatedly because they don't remember their answer. Patient can remember themselves and close family and friends, but tend to forget what happened in a day, month or even year ago. TGA mostly affects the 50–70-year old's but has a very good prognosis with symptoms only lasting for less than 24 hours[1]. Patients affected will regain complete memory afterward and are unlikely to experience similar symptoms again. Diagnosis is made primarily by clinical evaluation such as a complete neurological examination. Laboratory tests should include CBC, coagulation tests to rule out coagulopathy. Imaging tests such as brain CT/MRI and EEG are usually conducted. TGA has no specific treatment, however if there is any underlying condition, it should be treated appropriately.

2. CASE REPORT

A 68-year-old male patient with the history of hypertension, coronary artery disease, type 2 diabetes mellitus and hyperlipidemia came to the ER with acute confusional state. At bedside, the patient's wife states that the patient does not remember large parts of the previous day. The patient remembers getting up, eating breakfast and then getting on his bike to go ride with his wife through the neighborhood. The patients' wife states that during the ride he seemed fine, talking normally, however the patient doesn't remember much of the ride. Upon returning home, the wife says while she was cleaning the bikes, the patient seemed disoriented and confused. The patient mentioned to his wife, that he is not feeling well and both legs feel numb. Afterwards, the wife notes that the patient kept asking her the same question and kept repeating questions. Upon arrival to the ER, the patient was given a neurologic exam (table 1) and when assessed for mental status and was asked who the president was and kept repeating the same question multiple times. In the ER, the patient was afebrile, Systolic Blood pressure was 170, and had normal sinus rhythm. Blood tests including BMP, WBC and UA were within normal limits, and CT and MRI head (figure 1) showed no acute findings. The next morning, the patient doesn't remember coming to ER or large part of yesterday's events. The patient says he never experienced this before and he feels fine now. Upon further questioning, he states that he has not been on any new medication, denies alcohol, and has no headache, weakness, numbness, visual loss, diplopia, vertigo, aphasia.

3. DISCUSSION

This 68-year-old male was diagnosed with transient global amnesia, a condition with sudden loss of memory, sometimes mistaken as "confusion". The anterograde amnesia is abrupt and severe compared to the variable retrograde amnesia. The patient is seen repeating questions, however shows no other signs of focal neurological symptoms. There was no signs or history of head trauma in this patient. The repetitive questions are usually related to orientation as the patient is commonly alert, attentive, and cognitive. The patient at times could be seen agitated. These episodes usually last between 1-8 hours but can last up to 24 hours[4]. During the episode the patient is unable to explain new memories and retrograde memories varies from a few hours to years. TGA is sometimes accompanied by headache, nausea, vomiting, and dizziness[4]. Patients with TGA can often carry out complicated tasks such as driving during these

episodes and can maintain a full conversation. At the end of the attack, there is usually complete return of anterograde memory whereas retrograde is usually slower and variable. Patients are also unable to recall the episode. Recurrence however is quite rare[4].

The pathophysiology of transient global amnesia is unclear. The current hypotheses of TGA is migraine, seizures, or transient global ischemia, however, it does not explain the absence of neurological findings. Most precipitating findings of TGA is increase venous return from arms to superior vena cava[2]. Physiological stressors such as arguments is also a common precipitant finding.

The differential diagnosis in TGA is vast with acute confusional state (ACS) being the most common differential. However, there are key differences between TGA and ACS such as ACS patients not having a coherent stream of thought unlike TGA. ACS patients also struggle with inattention (i.e series of sevens and spelling WORLD backwards), whereas TGA patients do not. ACS patients do not repeat questions, a hallmark for TGA[3].

Table 1: *Neurologic Exam*

Mental status	No abnormality discovered, awake, alert, and oriented x3, comprehension, repetition, naming intact, speech fluent, no dysarthria, no neglect, memory and concentration normal
Cranial Nerves	• II - XII tested • eyes midline and conjugate • PERRLA (pupils equal, round, react to light, accommodation) • EOMI (extra ocular movements intact), • no nystagmus, visual fields intact to confrontation • facial sensation normal and symmetric. face symmetric without weakness. • hearing normal • tongue/palate midline • SCM (sternocleidomastoid)normal
Motor	5/5 muscle strength, no drift, tone/bulk normal
Reflexes	Bilaterally plantar reflex normal
Sensory	sensation to sharp normal, no extinction
Coordination	FTN (Finger to Nose) normal
Gait	Causal gait normal

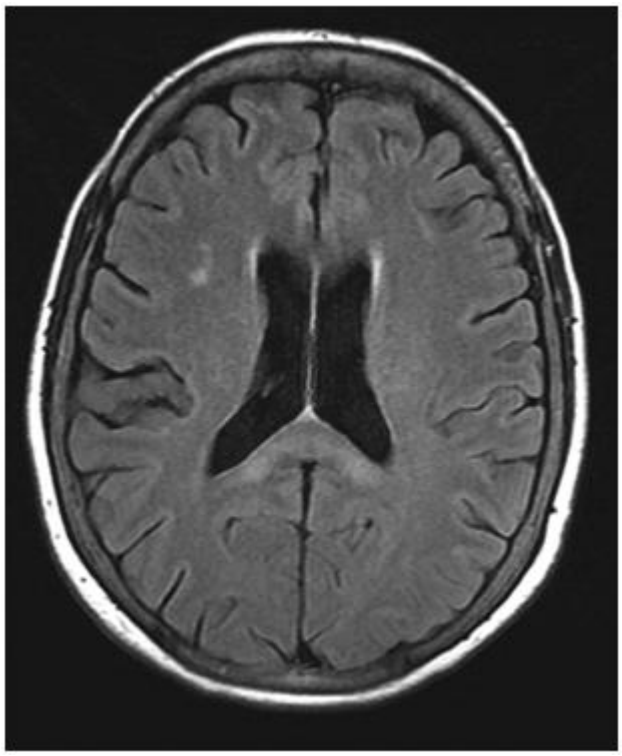

Figure 1: *MRI brain with Gadolinium contrast*

Consent

Written informed consent was taken from the patient for publication of this case report and the accompanying images.

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