

Transient Global Amnesia Revisited

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Introduction

The transitory memory disturbance known as Transient Global Amnesia (TGA) remains an enigma from a pathogenic point of view. It manifests as a paroxysmal transient loss of memory function. In spite of its typical benign prognosis, transient global amnesia is a frightening experience for the patients and their relatives. More over an episode of TGA usually leads to extensive investigation of patient in search of organic alternatives that might be responsible for the event. The syndrome of transient global amnesia affects the middle age and elderly. Attack usually last for 1-24 hours.¹

Case 1

A 62 year old female, hypertensive, on treatment for last four years, presented with sudden onset of confusion, amnesia and one episode of vomiting. There had been no physical exertion or travel. There was no history of migrainous attack, headache, fever or seizures and there had been no prior similar episode. She had been upset over some family matter. She recognised the attending doctor (who was known to her) and her relatives during the episode. She was oriented in place and person but she was bewildered and repeatedly kept asking questions about present and recent events like where were the children, why she was in the hospital, when did she reach the hospital, etc.

On examination she was afebrile, had a regular pulse rate of 72/ min, blood pressure of 150/110mm Hg. On neurological examination speech, cranial nerves were normal.

There was no sensory motor deficit. On mental status examination the patient appeared to be well kempt, co-operative and communicative, appeared perplexed; there were no tics or mannerisms. Speech was relevant and coherent, but revealed stereotyped questions regarding events of that day. Psychomotor activity was normal. She was oriented to place and person but disoriented to time and date. Immediate memory was intact - patient was able to recall digit forward 5, backwards 4. Recent memory was impaired and she was not able to recall events of that whole day including the tea she had two hours prior to examination. She was able to do simple calculations, attention was rousable and sustained, affect was anxious, there were no perceptual disturbances and judgment was intact. Remote memory was intact, able to recall all past events. The biorhythms were normal. Neuropsychological testing using the tests of Wechsler memory scale was done on admission and at four hours post admission. The score was 13/20 on both occasions of administration of the test. Cardiovascular system examination was normal. Investigations revealed normal biochemical parameters, ECG, EEG, CT scan brain, MRI brain. The dosage of her antihypertensive medication was stepped up and she was given mild sedation. She recovered fully after fourteen hours. Wechsler memory scale test was repeated and the score was 19/20. To date, she is amnesic for that day, has no recall of the events whatsoever.

Case 2

A 70 year old man was brought by his wife with complaints of sudden loss of memory. While he accused her of not giving him breakfast and lunch that day, she said that he was telling lies and had gone crazy. There was no headache, nausea, vomiting, fever. There was no history of physical or emotional stress, migrainous attack, seizure or similar episode in the past. There was no history of hypertension, diabetes mellitus, ischaemic heart disease and stroke. Patient was not an alcoholic. On examination he was afebrile, pulse was 72 / min, regular and blood pressure was 130 / 70 mm Hg . On neurological examination, there

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was no sensory motor deficit and cranial nerve examination was normal. On mental status examination, he had a stereotyped speech and was repeatedly blaming his wife for not giving him meals. Affect was angry and irritable. He was disoriented to time. Registration and recall could not be tested as patient was illiterate and unable to understand the requirements of the test. Recent memory was impaired- he said he had not had meals and that his son had not visited him (though actually he was with the parents that morning). Remote memory was intact. Rest of the systemic examination was normal. Investigations revealed normal biochemical parameters and a single interpolated ventricular ectopic in rhythm strip of the ECG. CT scan brain, MRI brain and EEG were normal. Patient was kept under observation and recovered completely after 10 hours. After recovery, mental status examination revealed that he was amnesic for that day with no recall of being taken to the hospital.

Discussion

TGA is a well described phenomenon for many years. It is characterized by sudden onset of complete anterograde loss of memory and learning abilities usually occurring in middle age and elderly persons.¹ Onset of memory loss may occur in context of emotional stimulus or physical exertion.² During the attack, the individual is alert and communicative and there are no neurological signs and symptoms. Loss of memory is accompanied by repetitive questioning about present events.¹ Immediate recall ability is usually preserved as is remote memory. Patients can experience a striking loss of memory for recent events and an impaired ability to retain new information. The attack lasts for 1-24 hours, after which the patient is absolutely normal but there is total amnesia for the episode. Recurrences are rare but do occur in small proportion. Etiopathogenesis is not clear.¹ TGA has been particularly related to migraine, epilepsy and cerebral vascular pathology, although its etiology has not been fully determined.³ A Mayo clinic review of 277 patients with TGA found a past history of migraine in 14%, cerebrovascular disease in 11% and epilepsy in

7%.² Studies have shown bilateral mesial temporal lobe hypoperfusion on SPECT scan in TGA that partially resolved after 24 hours and return to normal at 3 months.⁴ Imaging studies have also shown hippocampus and thalamic hypoperfusion.⁵ Santos et al have concluded that the generally accepted theory for TGA is vascular in origin; TGA is probably a transient ischaemic phenomenon triggered following an attack of migraine. Risk factors for TGA are arterial hypertension, dyslipidemia and migraine.⁶

We report these two cases of TGA to bring out the importance of the entity. These cases, because of their transient nature and paucity of clinical signs are often mistaken for episodes of hysteria / psychosis. In a lighter tone, it is an ideal escape window in tight situations. In one of our patient's words to his wife – "At my age, if you're healthy and something out of the blue hits you, amnesia is the perfect affliction. I now have the perfect excuse for forgetting our anniversary or birthday."

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