

Mysterious cause of seizure : Gas Geyser syndrome

Makarand Kanjalkar¹

ABSTRACT

25 year old, newly married lady who was suspected to have epilepsy on the basis of history of unconsciousness in bathroom was referred for EEG. Detail history revealed exposure to Gas Geyser and diagnosis of Carbon Monoxide poisoning was made. The case highlights importance of history in diagnosis of neurological disorders, things to consider before labelling as Epilepsy and awareness of Gas Geyser hazards.

Key words : Gas Geyser, History, Epilepsy, Carbon monoxide

Introduction :

Episode of unconsciousness in bathroom in otherwise healthy person is often labelled as Seizure. These patients are evaluated with MRI brain and EEG and usually started on Anticonvulsants. We report one such case which is probably unique illustrating importance of history and also social consequences of labelling recently married bride as epileptic.

Case Report :

25 years old, highly educated lady who got married 2 days back and shifted to Husband's home. The lady went to bathroom to take bath for the first time in that home and didn't come back for almost 30 minutes. When in laws noticed this they called her, knocked the bathroom door and since there was no response from the lady they ultimately broke the bathroom door to find her in unconscious state with froth from mouth. She was immediately taken to the nearby hospital. She was treated as a case of epilepsy. with IV Phenytoin along with IV fluids and nasal Oxygen. She regained consciousness but was delirious with abnormal behaviour for almost half an hour. She denied any past history of seizure or unconsciousness. Her routine haematological and biochemical investigations were normal. MRI scan of brain (on Three Tesla machine) was also normal.

She was labelled as first episode of seizure and discharged with advice to get EEG done. She was started on Tab Phenytoin 100 mg three thrice daily with advice to avoid fasting and sleep deprivation. She was told to stay away from fire, not to go in kitchen and not to drive and take medicines regularly to avoid such recurrence of such episode.

She was referred to us for EEG with her anxious parents and angry in laws. In laws had a feel that this girl had this disease prior to marriage and this fact was hidden from them. There was significant threat to marital status. Her detailed history revealed presence of Gas Geyser in small congested bathroom. The lady took hot water while the geyser was ON and took long time to take bath That lead to diagnosis of carbon monoxide poisoning secondary to gas heater. Her EEG was normal . Her phenytoin was stopped.

The nature of this disease is such that unless suspected it can be labelled as Epilepsy and sometimes can be dangerous to life. Her EEG was normal. Hence Phenytoin was stopped and family was explained precautions to be taken while using gas heater.

Discussion :

In modern days Gas geysers are preferred to electric geysers as it heats up the water faster and does not require electricity¹. LPG (Liquid petroleum gas) is the fuel used in Gas Geyser. The main composition of LPG is propane and butane (hydrocarbon gases). Other naturally occurring gases such as CO and methane are also present. Small amounts of CO are produced due to leakage of LPG tank or from partial

¹Neurophysician, Manik Hospital & Research Centre, Aurangabad

Address for Correspondence -

Dr. Makarand Kanjalkar

E-mail : mkanjalkar@yahoo.co.in

combustion of the hydrocarbon gases of LPG². CO is a toxic gas, which accumulates rapidly and reaches to toxic concentration. It has more affinity for Hb than Oxygen. Hence it quickly binds to hemoglobin to form carboxyhemoglobin (COHb). This ultimately leads to decrease in the arterial oxygen content and shift of the oxyhemoglobin dissociation curve to the left causing hypoxia². Clinical features of acute carbon monoxide poisoning include headache, dizziness and confusion. Patients can also have Coma or seizures if exposed for prolonged time³.

There are guidelines for installation for these heaters which are often neglected. Most important amongst them is the site of installation should have adequate ventilation. Also the company recommends that the person should take out hot water in bucket and then switch off the geyser before closing bathroom which are usually small in modern apartments.

This case is presented to insist importance of History taking even in busy OPD. Every neurologist has seen many such patients and attempts are being made to create awareness regarding use of the Gas geyser.

Conclusions :

Following important conclusions can be drawn from this interesting case

1. The Gas geysers are increasingly used in our town and the society needs to be told precautions to take while using them. The unit should be out of bathroom in ventilated place, hot water should be taken in bucket and the heater should be switched off before shutting the bathroom door.
2. First seizure should not be labelled as Epilepsy and it can be situational and they may not need long term anticonvulsants. The investigations like MRI brain or EEG do not substitute good history in Neurology and even in other branches of medicine.
3. Even in second decade of 21st century we face problems of marital adjustments and daughter in law is scanned with suspicious eye. Still long way to go for better society. One can imagine how her marital life would have distorted with label of Epilepsy when she was NOT an epileptic.

References :

1. Correia P, Agrawal C, Ranjan R. Gas geyser syndrome: An important preventable cause of disabling neurological events. *Ann Indian Acad Neurol* 2013;16:245-8.
2. Singh P, Lamba A, Bansal R, Singh G. Unexplained neurological events during bathing in young people : Possible association with use of gas geysers. *Ann Indian Acad Neurol* 2008;11:103-5.
3. Ely EW, Moorehead B, Haponik EF. Warehouse worker's headache: Emergency evaluation and management of 30 patients with carbon monoxide poisoning. *Am J Med.* 1995;98:14555. [PubMed].