

Generalized Seizure Masquerading the Cause of Coma

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Abstract:-

➤ *Background:*

Diagnosis is traditionally made by taking a medical history and performing a medical examination. These have become less useful in contemporary emergency and critical care medicine.

➤ *Objective:*

The objective was to show the importance of obtaining the medical history and re-evaluating it in medical emergencies for diagnosis and management.

➤ *Methods and Materials:*

In our instance, a female patient, age 22, was taken to the emergency room by her parents when she was unconscious and exhibiting tonic posture in all limbs. Due to our insufficient medical history, we ended up doing unnecessary and expensive investigations. The re-evaluation of the patient played a crucial role in diagnosis and management.

➤ *Results:*

The patient's re-evaluation to obtain a proper medical history revealed the actual cause of unconsciousness in our case, which led to proper management.

➤ *Conclusion:*

Our case showed the importance of obtaining a medical history in a medical emergency.

➤ *Key message:*

In cases of unconsciousness or other medical emergencies, taking a proper medical history and conducting a clinical examination are crucial. A re-evaluation of the patient helps in taking a proper medical history. It helps in proper diagnosis and management.

Keywords:- Medical History, Unconsciousness, Re-Evaluation of the Patient, Diagnosis.

I. INTRODUCTION

The sequence in which the history is obtained while identifying a patient who is critically ill or acutely ill and the focus of the clinical examination should be adjusted to the unique circumstances and state of the patient¹. In modern emergency and intensive care medicine, both taking a medical history and performing a clinical examination have lost their practical value². Trigeminal neuralgia, epilepsy, and bipolar I disorder acute episodes are all treated with carbamazepine. It has been suggested by previous studies that inactivated sodium channels were maintained by carbamazepine, preventing action potentials from being generated by fewer channels opening³. The most common side effects of carbamazepine are ataxia, nausea, vomiting, giddiness, and sleepiness. Adult fatalities have been linked to carbamazepine doses greater than 24 grams. Within one to three hours of consumption, neuromuscular abnormalities are among the symptoms of acute poisoning. Patients have diminished consciousness, which can result in a coma, mydriasis, nystagmus, tremor, restlessness, athetoid movements, and psychomotor abnormalities. The goal of treating an overdose is to get rid of the substance by forcing diuresis, stomach lavage, vomiting, and activated charcoal. Benzodiazepines like diazepam are recommended for the treatment of seizures brought on by carbamazepine overdose³. Our objectives in this case report are to illustrate correlation with examination can aid in diagnosis and management.

II. CASE REPORT

A 22 years old young female, organic chemistry student was brought to the emergency department in an unconscious state with tonic posturing of all four limbs by her parents. On history-taking, there was one episode of non-projectile vomiting in the morning. In the evening, parents noticed her unresponsiveness upon awakening from sleep, with tonic posturing of limbs. There was no significant similar past history. The Patient's mother is a known case of epilepsy, and she is on carbamazepine treatment. However, parents denied any history of drug consumption, prior to the incident. On examination, no unusual smells, no marks on the body, no bite marks, no salivation, and no soiling of clothes were seen. Her pupils were 3 mm, equally reacting to light; the Glasgow

Coma Scale was E1 V1 M2. Doll's eye reflex was present, gag reflex was present, bilateral plantar reflexes are flexor, no signs of meningismus. A Fundoscopy revealed no papilledema. The Patient was intubated in view of poor respiratory effort and low GCS. Nasogastric decontamination with activated charcoal was done. Routine blood tests (CBC, RFT, LFT, Serum Electrolytes), ECG, 2D-ECHO, ABG, MRI brain with contrast (Figure 1), EEG, CSF analysis for sugars, proteins, cell type, cell count, AFB stain, Gram staining, culture, and sensitivity were normal, and CSF manometry revealed 6 mm H₂O pressure. The Urine for toxicology test was negative. She was treated with anti-epileptics, antibiotics, other supportive therapy, and causes that are yet unknown.

On day three, the patient gained consciousness, and on re-evaluation, she was conscious, coherent with no paucity of limbs and a bilateral horizontal gaze that evoked nystagmus. As soon as we asked her if she had consumed a drug, she nodded in affirmation, and with a pen and paper, she confirmed that she had taken six carbamazepine CR 400 mg tablets, vomited six tablets, and then consumed 20 tablets. She was extubated and kept on non-invasive ventilation for a day. On evaluation, serum carbamazepine levels were 25 mcg/mL. Then the patient was treated with supportive treatment, and anti-epileptics were stopped. Later, her sensorium and general condition improved gradually with no further seizures, and she was discharged in a stable condition.

III. DISCUSSION

In our case, the patient presented with an unresponsive state with tonic posturing of all four limbs, low GCS, and low respiratory effort. On history-taking, we could evaluate one episode of non-projectile vomiting in the morning; in the evening, the patient was not responding with tonic posturing of the limbs. Hence, we considered this case to be generalized epilepsy and started treatment accordingly. Due to her low GCS and low respiratory effort, we intubated her, nasogastric lavage was done for the benefit of doubt, and we started epileptics. A study by Wijdicks et al. stated that if there are no neurologic symptoms other than coma and a CT brain is normal, drug overdose must be considered in patients found to be comatose⁴. Wijdicks et al. also stated that while taking the history, neuro-intensivists must consider (and test for) other medications or drugs that the patient might have used⁴. In our case, the patient had no significant past history of epilepsy, and she was not on any medication. Parents of the patient denied consumption of other drugs before this condition. Hence, we advised multiple blood tests, body fluid tests, and radiological tests, including EEG, as shown in the case presentation. On the third day, the patient regained consciousness, and we observed that her horizontal gaze evoked nystagmus. Hence, we considered an overdose of drug causing nystagmus, and then she revealed that she had consumed around 20 tablets of carbamazepine. The patient's mother is a known case of epilepsy; she was on a carbamazepine 400mg tablets, which provoked the patient to consume the drugs, and this history was hidden by her parents. A case report by Wirfs et al., showed that Carbamazepine can cause seizures, altered consciousness, and even coma in cases

of severe toxicity and patients may also suffer nystagmus, even at the higher end of the therapeutic range (normally 4–12 ug/ml)⁵. According to a research by J. Born et al., action must be taken immediately to address the significant effort required to gather clinical data on emergency patients⁶.

IV. CONCLUSIONS

Specialists and primary care physicians frequently prescribe carbamazepine as an affordable and efficient treatment for neuropathic pain and seizure control. Over-dosage causes nystagmus, seizures that eventually lead to unresponsiveness, and even coma. To prevent, unnecessary and expensive investigations in coma patients, obtaining the proper medical history is most important. Re-evaluation of the patient helps in leading the diagnosis.

- **A statement of the Patient's Agreement:** The authors certify that they have obtained all required patient consent forms. According to this form, the patient has consented to the publication of her photos and other clinical data in the journal. The patient acknowledges that while every attempt will be made to keep her identities hidden and that her name and initials will not be disclosed, anonymity cannot be ensured.
- **Conflict of Interest:** None declared.

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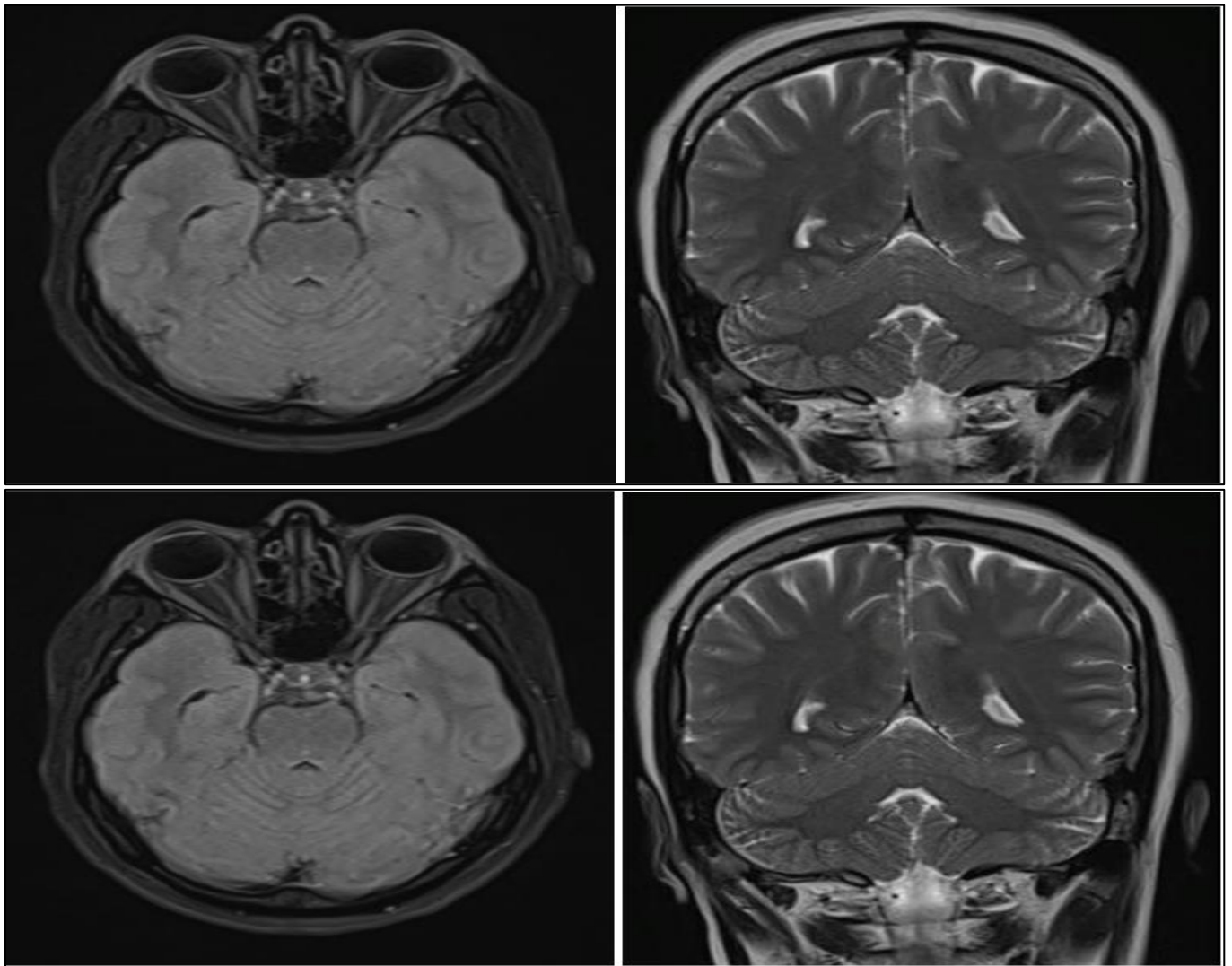


Fig 1: T2 FLAIR Axial and Coronal Sections Showed no Flair Hyper Intensities, no Significant Abnormality

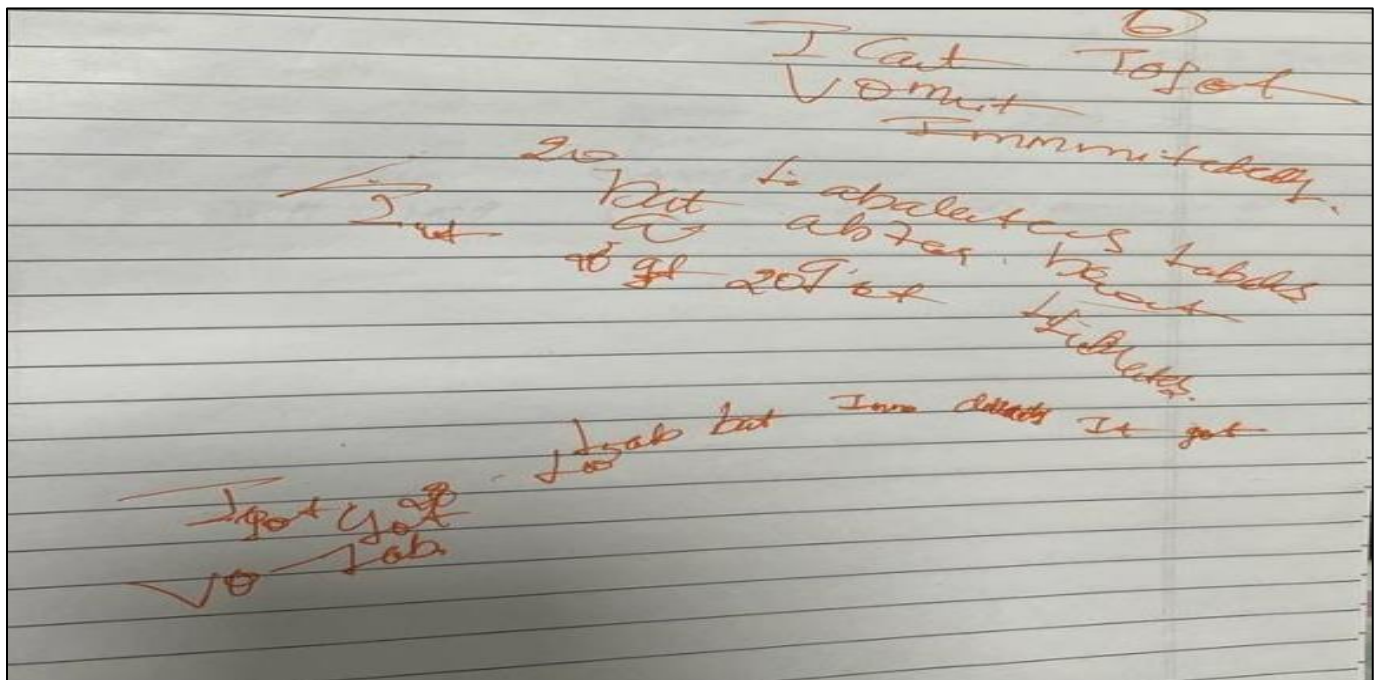


Fig 2: Information Given by the Patient During Re-Evaluation in Written Form