EM

DPU

Emergency Medicine
Dr. D. Y. Patil Medical College, Hospital & Research Center

Brush with STROKE !!!

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Under the guidance of Dr. Varsha Shinde
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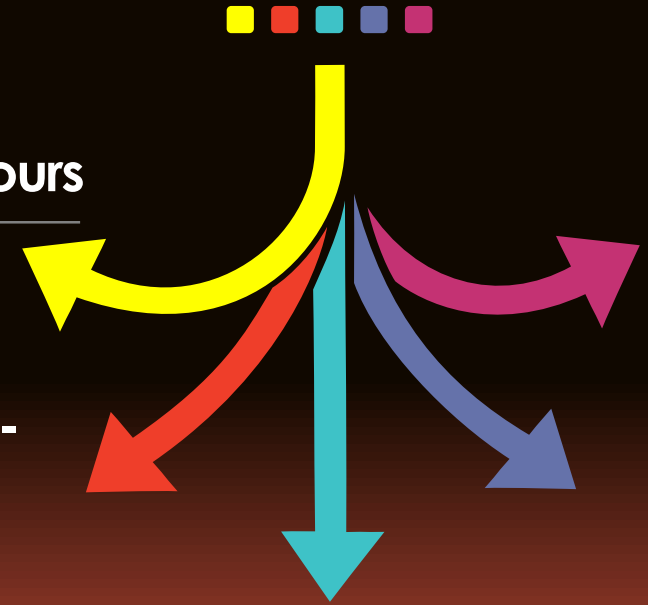
Meet Mr. RR a 45/M Thin Built Individual



Difficulty in walking - 6 hours

Headache - 2 hours

Difficulty in speaking - 6 hours

Bodyache - 2 hours

Dizziness - 3 hours

PRIMARY SURVEY

Blood Pressure
110/70

Pulse
88/min

BSL
105mg/dl

Pupils
b/l reactive

ECG
Normal Sinus Rhythm

GCS
15/15

Co-morbidities

- **Known case of Seizure disorder since 6 years on treatment: (Last episode 6 months ago)**
  T. Levetricetam 500mg BD (since 6 years)
  T. Phenytoin 100mg BD (since 6 months)

- **History of CVA 4 years ago.**

- **No known addictions.**

Physical Examination

Positive Findings

- Gaze evoked nystagmus
- Vertigo when still
- Gait instability
- Dysarthria

CNS Examination

- Sensations intact
- DTR UL LL all 2+
- Plantars 
- Power

5/5	5/5
5/5	5/5

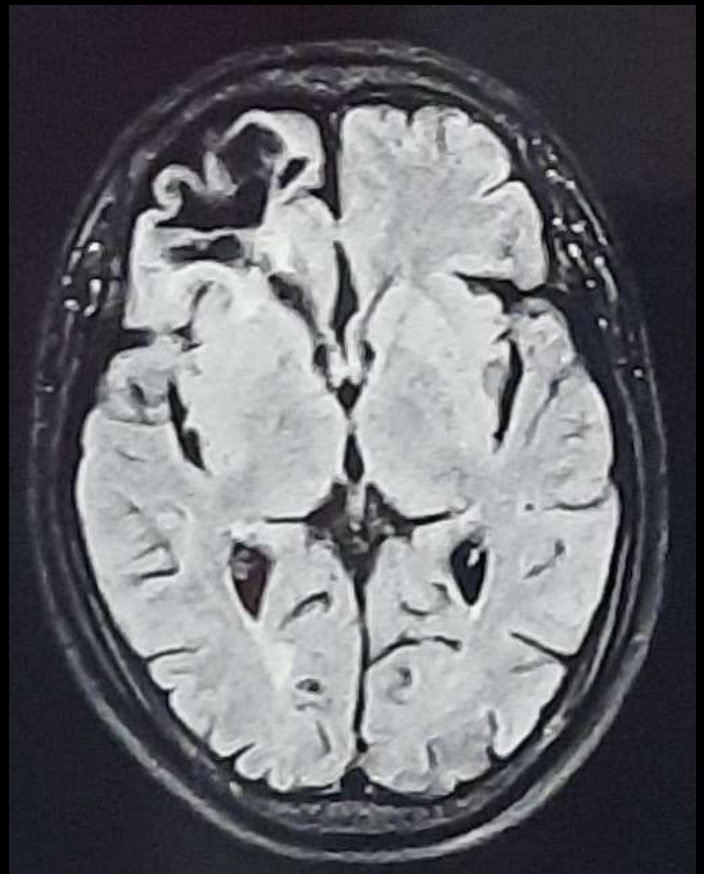
INITIAL HISTORY TAKING AND EXAMINATION WAS HIGHLY SUGGESTIVE OF

Posterior circulation STROKE

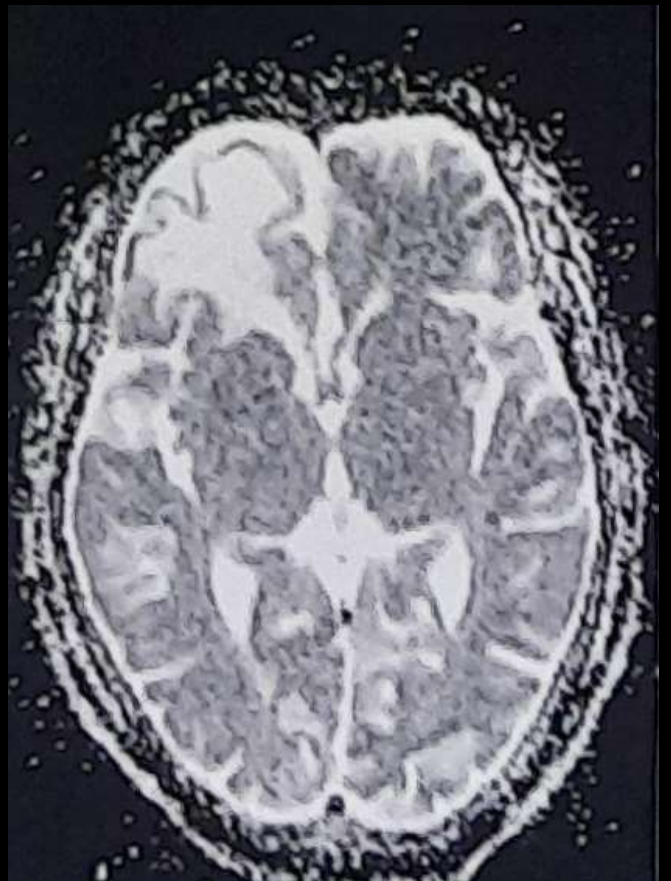
NEUROLOGIST WAS INFORMED

OUTSIDE CT WAS ALREADY DONE S/O NO ACUTE CHANGES

MRI ADVISED BY NEUROLOGIST



NO NEW CHANGES



The Twist

Repeat history taking revealed Patient was compliant with all his medication, but when the patient was told to bring his medication and show it, we found that he was accidentally consuming

T. Phenytoin 200mg BD

Progress

01

T. Phenytoin was withheld i/v/o phenytoin toxicity

02

Serum Phenytoin levels were sent

03

PHENYTOIN LEVELS >40 ug/ml (Normal 10-20; toxic range >20)

Final Diagnosis

Phenytoin Toxicity

↓

A Stroke Mimic

Stroke mimic → Looks like a stroke but is not a stroke

Stroke chameleon → Not a stroke but is in fact a stroke

STROKE MIMICS

01

SEIZURE/
POST ICTAL

02

SYNCOPE

03

SUBARACHNOID
HEMORRHAGE

04

HYPOGLYCEMIA

05

HYPONATREMIA

06

EPIDURAL
HEMATOMA

07

CONVERSION D/O

08

MENINGITIS

09

COMPLICATED MIGRAINE

10

BELL'S PALSY

11

LABYRINTHITIS

12

WERNICKE'S ENCEPHALOPATHY

13

MENIERE'S DISEASE

14

HYPERTENSIVE ENCEPHALOPATHY

15

DRUG TOXICITY

16

BRAIN NEOPLASM

Discussion

- Acute ataxia can be caused by infection as well as immunity-related, metabolic, vascular, and organic causes [1].
- Drugs that commonly cause ataxia include anticonvulsants, benzodiazepines, and anti neoplastic drugs [2]. Phenytoin is a hydantoin-derived anticonvulsant. Of orally absorbed phenytoin, 90% is bound to plasma albumin, and it is metabolized mainly by cytochrome P450 enzymes [2,3]. Although widely used, the therapeutic window for phenytoin is narrow (5–20 μg/mL).

- Dose-related side effects appear acutely with drug plasma concent

PHENYTOIN LEVELS AND THE USUAL CORRESPONDING SYMPTOMS

<10 µg/ml	Rare
10-20 µg/ml	Occasional mild nystagmus
20-30 µg/ml	Nystagmus
30-40 µg/ml	Ataxia, slurred speech, vomiting
40-50 µg/ml	Confusion, delirium, lethargy
>50 µg/ml	Seizures, coma

- Manifestations of mild phenytoin toxicity include ataxia, nystagmus, slurred speech, and headaches. Confusion and cognitive impairment can occur at high plasma concentrations [3,4].

- In this case, withholding T. phenytoin led to a resolution of the patient's symptoms, confirming the diagnosis.

- Patients with drug-induced ataxia are sometimes subjected to unnecessary diagnostic tests or are misdiagnosed with other conditions, such as alcohol intoxication or TIA [3].
- Physicians should consider other treatable causes such as drug-induced ataxia, in addition to cerebrovascular disease, when they encounter patients with recurrent ataxia.

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A Phenytoin-Induced Ataxia Mimicking a Stroke

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A 53-year-old woman presented to our emergency department (ED) with acute ataxia. The patient reported that she had suddenly developed vertigo and slurred speech when she was creating origami the previous night. She reported that she had also experienced episodes of transient vertigo, slurred speech, and gait ataxia 14 days and 4 days previously. She had visited two other hospitals, prior to visiting our hospital. She had undergone head magnetic resonance imaging (MRI) during

The patient underwent three head MRI scans to exclude cerebellar infarction before she was given the correct diagnosis. However, if physicians consider drug-induced ataxia in the differential diagnosis during the initial evaluation of patients with ataxia, unnecessary diagnostic tests can be avoided.

Take Home Message

Our History Taking is worth more than this !

Rs 10,00,000

THANK YOU!

References

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