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Case Report

CYPROHEPTADINE INDUCED SEIZURES

Dr. Luke Shankar[1], Dr. Mohammed Shabbir P[2], Dr. Mahendra[3]

1. 2nd year MEM Resident, Department of Emergency Medicine, BGS Global Hospital, Bangalore

2. Head of the Department, Department of Emergency Medicine, BGS Global Hospital, Bangalore

3. 1st year MEM Resident, Department of Emergency Medicine, BGS Global Hospital, Bangalore

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For Correspondence
Email ID:
lukeacn1@gmail.com

Abstract:
A 21 years old male not a known epilepsy was brought emergency department with history of generalized weakness and 4 episodes of convulsions since 1 day. Each episode of convulsion was followed loss of consciousness for 15-30mins. He was started on antiepileptic and MRI brain showed normal study. Few days back he started taking tab. Cyproheptadine and tab. Dexamethasone over the counter for increasing his appetite. Cyproheptadine is a H1 receptor antagonists. Histamine is found to take part in the inhibition of seizures via H1 histamine receptors. H1 receptor antagonists like Cyproheptadine are known to cause seizures in non epileptic patient and they are also found to, impair the anticonvulsant activity of some antiepileptic drugs and reduces threshold, increases severity of seizures and decreases the efficacy of clinically used anti-epileptic drugs, especially when administered chronically. After stopping cyproheptadine, patient didn't sustain any further seizures. Cyproheptadine can cause seizures in non epileptic and in epileptic patient.

Keywords: Cyproheptadine and seizure, H1 receptor antagonists and seizure, Antiepileptic drugs and H1 receptor antagonist

Introduction:

Histamine is found to take part in the inhibition of seizures via H1 histamine receptors. In past epileptic patients were frequently prescribed cyproheptadine, as an appetite stimulant for the treatment of anorexia associated with anti-epileptic drugs and for the management of 'serotonin syndrome' in depressed epileptic patients. Cyproheptadine antagonizing subtypes of 5-HT (1/2) receptors and H(1) receptor and decreases neurotransmission of serotonin and which in turn reduces seizures threshold. If used chronically it is found to increase the severity of seizure and decreases efficacy of antiepileptic drugs in animal study[1].

Case Report: On 17/12/2014 at 11:45 am a 21 years old male was brought to emergency

department with the history of 4 episodes of GTCS.

Patient arrived to emergency department at 11:45 am, the patient was alert.

Primary survey:

Airway: Patent

Breathing: Bilateral chest rise present, bilateral air entry equal, respiratory rate of 20/min, SPO2: 99% ON ROOM AIR

Circulation: peripheries were warm & peripheral pulses well felt, CRT less than 2 sec, HR-90/min, BP- 138/80 mm Hg. peripheral IV line placed, blood sample collected. CBS:174mg/dl.

Disability: GCS- E4V5M6, pupils 2mm BERL, moving all four limb, no external injuries noted,

Exposures: no external injure was seen.

Actions:

1. ECG
2. Blood sample CBC, RFT, LFT, CPK, serum calcium and magnesium,
3. Inj. Levetiracetam 1.35gm IV bolus.
4. MRI brain: normal study
5. Urine routine and microscopy was normal

HOPI: 1. Generalized weakness since 1 day

2. Convulsion 4 episodes. Each episode start with up rolling of eye balls, generalized clonic tonic movement of all four limb. Lasted for 5-10mins followed by loss of consciousness for 15-20 min No history fever, headache, pain abdomen, vomiting, nausea.

Allergies: None

medication: since few days he started taking tab. Cyproheptadine and tab. Dexamethasone over the counter for increasing his appetite.

Past medical and surgical history: none

Birth history: uneventful

Immunization history: up to date

Family history: Not significant.

Social: non smoker.

On examination:

Patient was thin built. No pallor, no cyanosis, no clubbing, no edema,

HEENT: tongue was dry: mild dehydration.

CVS: s1, s2 +, no murmur.

RS: bilateral air entry equal, no added sound.

CNS: within normal limits.

P/A: soft, non tender, no organomegly.

Investigation report: within normal range

Course in hospital:

Blood, CSF and urine culture showed no growth.

CSF analysis was normal. Antiepileptic drugs were stopped and later patent was discharged.

Discussion*:*

Cyproheptadine is a H1 receptor antagonist. Histamine is found to take part in the inhibition of seizures via H1 histamine receptors. H1 receptor antagonists like Cyproheptadine are known to cause seizures in non epileptic patient and they are also found to, impair the anticonvulsant activity of some antiepileptic drugs and reduces threshold, increases severity of seizures and decreases the efficacy of clinically used anti-epileptic drugs, especially when administered chronically. Example of antiepileptic drugs who activities impaired by H1 receptor antagonist are phenobarbital, phenytoin, in maximal electroshock-induced convulsions in mice. Valproate was resistant to this hazardous effect of antihistaminic drugs.2

Few days back he started taking tab. Cyproheptadine and tab. Dexamethasone over the counter for increasing his appetite. Later he developed generalized weakness and 4 episodes of convulsions. He was started on antiepileptic drug and cyproheptadine was stopped. MRI brain was normal. Blood, CSF and urine culture showed no growth.CSF analysis was normal. All other cause of seizure was ruled out. After stopping cyproheptadine, patient didn't sustain any further seizures. Later patent was discharged.

Conclusion: Cyproheptadine can cause seizures in non epileptic and in epileptic patient. Cyproheptadine reduces threshold, increases severity of seizures and decreases

the efficacy of clinically used anti-epileptic drugs.

References:

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