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Research Article

AN UNUSUAL PRESENTATION OF SEROTONIN WITHDRAWAL SYNDROME- CLINICAL APPROACH IN DIAGNOSIS

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Abstract

Serotonin withdrawal syndrome, also known as serotonin discontinuation syndrome or SSRI withdrawal syndrome, is a constellation of symptoms that can occur when a person stops taking selective serotonin reuptake inhibitors (SSRIs) or other medications that increase serotonin levels in the brain.

Symptoms of serotonin withdrawal syndrome can include flu-like symptoms, dizziness, nausea, headache, insomnia, anxiety, irritability, and sensory disturbances. In severe cases, the syndrome can lead to hallucinations, confusion, and seizures.

A case of serotonin withdrawal syndrome might involve a person who has been taking an SSRI medication for several months or years to treat depression, anxiety, or another psychiatric condition. If the person stops taking the medication suddenly or decreases the dose too quickly, they may experience symptoms of withdrawal.

Key words: Serotonin withdrawal syndrome, hallucinations, confusion, seizures.

INTRODUCTION

Depression is a common entity in today world of virtual life we live in, its estimated 1 in 20 persons has depression[10.]With increasing in the prevalence in general community its important mentioning here the number of patient admitting to ICU for any other reasons can have past medical history of depression and on some or other type of anti-depressants. Hence a careful medical history with complete medication history must be documented. It must be bared in mind the point of abrupt discontinuation of anti-depressants can lead to potential side effects of delayed recognition of clinical symptoms and increasing the ICU stay , weaning from Mechanical ventilation sedation etc.

About 20% of patients develop antidepressant discontinuation syndrome following an abrupt stoppage of or marked reduction in the dose of an antidepressant taken continuously for one month[1]. This article is aimed at providing a general understanding of this condition, describing how we have come across a patient in an unusual presentation post recovery from his

Status Epilepticus masking Diagnosis as restless and agitation secondary to Anoxic Brain Injury overlooking the current medications he was taking, delayed in diagnosis leading to prolonged ICU stay, outlining how we have managed the case and discharged the patient. There is low information and awareness among the physicians regarding its clinical signs presentation diagnosis as often misdiagnosed and shadowed under different diagnosis.

Serotonin withdrawal syndrome can be potentially fatal if unrecognized and misdiagnosed leading to morbidity and mortality of prolonged ICU stay. It can be avoided if complete medication history obtained and SSRI resumed and tapered off rather than abrupt withdrawal, else can precipitate or lead to this catastrophic event.

The diagnosis is based on clinical symptoms rather than on any laboratory studies; Proposed criteria[2] has been developed for serotonin withdrawal Syndrome. These criteria are 2 or more of the following symptoms developing within 1 to 7 days of discontinuation or reduction in dosage of an SSRI after at least 1 month's use, when these symptoms cause clinically significant distress or impairment and are not due to a general medical condition or recurrence of a mental disorder: dizziness, light-headedness, vertigo or feeling faint; shock-like sensations or paresthesia; anxiety; diarrhea; fatigue; gait instability; headache; insomnia; irritability; nausea or emesis; tremor; and visual disturbances. As seen in our case we has the patient developed severe restlessness agitation tremors insomnia irritability not responding to any medication initiated.

CASE DESCRIPTION

A 35 year old Taxi driver was brought from DCAS in an unconscious state in his CAR safely parked road side with no Bystander.

Social/Personal/Medical/Drug history could not be obtained at time of admission as no Bystander or Family member.

In ED his GCS 3/15 Pupils equal reacting 2mm brisk ,no relevant clinical systemic/general examination findings HR sinus 114/min BP130/80 Temp 37.2 RR 24/min. Urgent intubation done for airway protection with Succinylcholine 100 mg Etomidate 20mg Midazolam 20 mg . He was taken for emergency CT scan shows nil significant was later taken for MRI/MRA inconclusive for any Neurological disease. There is an artifact in basilar artery in view of suspected stroke tPA given in ED which was of no value. The patient received Eptoin 1000mg loading dose in ED before transfer to ICU.

The patent as examined in ICU under sedation Ramsay 6 , Pupils equal , Stiffness in both UL/LL noted , hemodynamically stable not on any supports , On MV Fio 40 initial ABG shows ph 7.378,pco233 po2 281 hco3 20.6 lac 7.3, Electrolytes Na 138/k 3.9/Glu 12.3/RFTLFT normal/Sepsis markers normal wbc 10k/PCT 0.05/Cardiac markers negative/ECG sinus tachycardia/CXR left lower zone infiltrates.

Initial Diagnosis: Possible Stroke /Seizures /Suspected COVID/Meningitis Encephalitis? Auto immune vs infectious with background of Lower respiratory tract infection. Supportive treatment was initiated, plan was to extubate once he is awake. No sedation

was initiated after he received the medication in ED for intubation and close observation for his neurological status was initiated with all ICU precautions. There was plan for repeat CT brain/LP if he does not awake in next couple of days.

Next day the patient was still off sedation on MV support not waking up restless agitation open eyes to pain extension to pain Pupils equal reactive. - Low GCS ? convulsions? drug toxicity was suspected. Neurology opinion advised taken advised EEG. Room mates brough a bag containing his medication which includes Levosulpuride / Montelukast / Clonazepam /Trazodone / Escitalopram.

EEG done shows Status Epilepticus, loading dose with Levetiracetam and 1g twice daily started and repeat MRI and EEG advised. As patient developed Fever Spike Ceftriaxone 2g OD and Clindamycin started empirically after septic workup and Respiratory Panel. Also Propofol infusion started later shifted to Midazolam as patient was on MV and on off agitated restless.

Over the course of withdrawal of sedation and assessment of neurological status he developed convulsions leading to restart of Midazolam and Propofol infusion. Review with Neurology done LP was planned to rule out Auto immune Encephalitis and executed, increase in dose of anti-epileptics, repeat EEG done. Working diagnosis Seizures for evaluation status epilepticus - ? infection vs Drug withdrawal ? auto immune .Pan CS negative , Auto immune panel negative /2D echo no vegetation's. He was planned for weaning off sedation after LP was clear , immediately after stopping Propofol patient developed seizures hence restarted Propofol infusion. EEG still shows epileptogenic activity. Patient was kept on Propofol Fentanyl precede in view of weaning, on multiple anti-epileptic medications Levetiracetam 1.5g BD/ Lamotrigine 400 BD/ Perampanel8 mg OD.

The cycle was repeated off sedation for possible extubating, EEG showing Epileptogenic activity restarted sedation infusion with working diagnosis – Difficulty to wean from MV secondary to Status Epilepticus. Tracheostomy done for facilitating weaning from MV and sedation. During course of hospital acquired infection sepsis treated accordingly. Post Tracheostomy could not wean sedation as patient was severely restless upon decreasing the dose of sedation hence kept on Fentanyl 200 mcg/hr/Propofol 250 mg/hr/Midazolam 15mg/hr at maximum dose. Patient started on Methylprednisolone in view of suspicion of autoimmune encephalitis. During the course patient developed DI received Desmopressin 0.2 mcg iv regular intervals based upon urine output and all labs Urine Serum osmolality with complete urine and serum electrolytes send.

Repeat EEG shows no further seizures but clinically decorticate posturing noted , anti-epileptics dose readjusted /sedation infusion reduced close neuro monitoring done with regular EEG done. Patient was developing on off seizures and decorticating postures – Clonazepam 1mg TDS initiated along with readjustment of his anti-epileptics. As part of sepsis work up shows Enterococci in Blood both central and peripheral line with Yeast – ID consultation taken antibiotics initiated as per ID team. His neurological

condition variable on off shows awake in between with involuntary episodes of upper limbs right side nystagmus on off grimacing to pain repeat MRI done shows Hypoxic changes , repeat LP done inconclusive results, EEG no status – risperidone 0.25 BD started. Patient on multiple restrain due to severe agitation, resumed Midaz infusion along with Clonidine 150QID /Later added dexmedetomidine infusion as well. Olanzipine was also started titrated as per his clinical conditions.

Working Diagnosis – Status Epilepticus – Post Hypoxic Brain Injury leading to Agitated /restless state. The patient was transferred to medical ward after weaning iv medications, for fallow up for his agitation and restlessness , the patient was in medical ward for 25 days similar clinical condition no active diagnosis

Re shifted to ICU with worsening GCS pupils dilated Low GCS, increasing restlessness agitations, upon in ICU repeat CT brain and EEG done inconclusive. PEG placement done in icu as patient on prolonged NG tube. The patient was consulted for Second opinion from another Neurology taken – patient currently on Levitracetam 1.5g BD/ Lamotrigine 400 BD/ Perampanel8 mg OD/Clonazepam 4 mg TDS /Diazepam 10 TDS /Olanzipine 5mg BD/ Clonidine 150mcg TDS/Precedex infusion/Seroquel 200 BD/Gabapentin 400TDS/ Chlorphenamine 4 mg HS – Clinically eyes closed , moves all limbs restless.

Upon careful clinical examination showing on maximum restrained gentleman who was hyper alert restless diaphoretic moving all limbs erratically with super imposed myoclonic jerks not fixing Gaze not redirectable did not fallow any commands not focusing pupils equal and fully dilated and review of medication all signs and history carefully done came to a clinical diagnosis of Serotonin withdrawal Syndrome.

The patient was initiated on Escitalopram dose adjusted over the time. Over period of days to weeks all the other medications oral /iv were discontinued , over 8 days he developed close eye contact , calm no agitations , within 12 days of Diagnosis transferred to ward in stable condition, over 15 th day started smiling back in medical ward ,on 23 rd day in ward tracheostomy de cannulated and able to understand. On 36 th day in medical ward he is conscious coherent walking around taking oral food, He was repatriated to Home country on Commercial Flight.

DISCUSSION

Serotonin withdrawal syndrome is now interchangeable with Serotonin Discontinuation Syndrome as part of Antidepressant discontinuation syndrome (ADDS)[6] as there is no dependency for anti-depressants as mentioned in studies of Haddad & Andersons[5].

Owing to its variable symptoms, this condition is often misdiagnosed or masked by other diagnosis misleading the physicians in prompt recognition, especially as in our case it occurred, the patient was taxi driver brought in an unconscious state with no Bystander having no clinical history and the medication history has been documented but overlooked as more focus was with ongoing Status Epilepticus leading to Anoxic brain damage.

Having the complexity of the case due to lack of past medical history and unusual clinical presentations, unable to pick the neurological signs had delayed diagnosis leading to prolonged ICU stay. The patient was escalated on multiple medications for his agitations restlessness which include all infusions of Benzodiazepines, dexmedetomidine, with regular haloperidol iv, oral sedatives with no benefit but still worsening his clinical condition. Clinically he was restrained but pulls everything restless try to get out of bed even on Midazolam/Dexmedetomidine maximum dose of infusion.

A quick stop and re looking at all clinical details, medication history we gathered from his room all his old medications careful scrutiny , spoke to family back home country we arrived to know he was on Levosulpiride /Clonazepam/Montelukast/Escitalopram(SSRI)/Trazodone(SSRI).

As also seen with his chronic medication some acute medications like Amoclan/Levocetrizine also documented. Possible reason for unconscious state still debatable? Drug interactions leading to seizures unconscious state leading to hospital admission and during course of ICU stay abrupt discontinuation of his SSRI leading to Serotonins withdrawal syndrome.

Antidepressant discontinuation syndrome ADDS is frequently encountered in the primary care clinic in association with SSRI discontinuation because SSRIs are the most prescribed class of antidepressant medications. Symptoms that fit the FINISH[3] mnemonic (flu-like symptoms, insomnia, nausea, imbalance, sensory disturbances, hyperarousal), can be experienced by up to 40% of patients upon abrupt antidepressant discontinuation. This is created to facilitate rapid recognition, however neither set of criteria has been formally validated. The Discontinuation Emergent Signs and Symptoms Scale (DESS)[7,8,9] can be used to quantify symptoms. In addition, mis-diagnosing the physical symptoms of ADDS can lead to unnecessary medical and laboratory workup[5].

The patient after diagnosis of the serotonin withdrawal syndrome he was initiated on Escitalopram and gradually during course of ICU stay weaned off the iv and oral sedatives.

CONCLUSION

This case gives us in sights on the understanding the clinical signs, perceiving the medical and medication history would have led to early diagnosis. The patient admission to ICU and course of ICU stay for Status Epilepticus, non-initiation of his old medications which includes the Escitalopram (SSRI)/Trazodone (SSRI) at the very early stage would have prevented the patient slip in to the Serotonin discontinuation syndrome - which made the patient being restless agitation. Clinical nonspecific findings of diaphoresis agitation restless pupils dilation was misinterpreted to ICU delirium/Anoxic Brain Injury. His initial examination as more focused was towards the agitation and restlessness thereby increasing the sedatives /hypnotics of no benefit.

But once the Diagnosis is established we could see all the medications at high doses gradually tapered off and we could see the quick improvement in clinical condition

with social smile and more focused to a stage of independent to travel back Home.

Conflict of Interests

There is no conflict of Interests, no any marketing promotions or promotion of any medication or equipment in my clinical case.

REFERENCES

1. Diagnostic and statistical manual of mental disorders. 5th ed Arlington (VA): American Psychiatric Association; 2013:712–4.
2. Black K, Shea C, Dursun S, Kutcher S. Selective serotonin reuptake inhibitor discontinuation syndrome: proposed diagnostic criteria. J Psychiatry Neurosci. 2000;25:255-61.
3. Berber MJ. FINISH: remembering the discontinuation syndrome. Flu-like symptoms, Insomnia, Nausea, Imbalance, Sensory disturbances, and Hyperarousal (anxiety/agitation). J Clin Psychiatry. 1998;59:255.
4. Christopher H warner Am Fam Physician. 2006;74(3):449-456
5. Haddad P., Anderson I. (2007) Recognizing and managing antidepressant discontinuation symptoms. APT 13: 447–457
6. American Psychiatric Association. DSM 5. Arlington (Va): APA; 2013.
7. Rosenbaum JF, Fava M, Hoog SL, Ascroft RC, Krebs WB. Selective serotonin reuptake inhibitor discontinuation syndrome: a randomized clinical trial. Biol Psychiatry. 1998 Jul 15;44(2):77-87
8. Montgomery SA, Fava M, Padmanabhan SK, Guico-Pabia CJ, Tourian KA. Discontinuation symptoms and taper/poststudy-emergent adverse events with desvenlafaxine treatment for major depressive disorder. Int Clin Psychopharmacol. 2009 Nov;24(6):296-305
9. Fava M (2006). Prospective studies of adverse events related to antidepressant discontinuation. J Clin Psychiatry 67 (Suppl 4):14–21.
10. Marcus M., Yasamy M., van Ommeren M., Chisholm D., Saxena S. (2012) Depression: A Global Health Concern.