Case report

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Emergencies A Series – 10

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Status Epilepticus (SE)

- Definition
- Causes
- Consequences
- Types
- Treatment
- Alcohol and epilepsy
- Alcohol withdrawal
- Neurological complications of alcohol
- Thiamine and Alcohol

We had come across a case of Status Epilepticus. Status Epilepticus is defined as a seizure lasting more than 30 min or 2 discrete seizures occurring without return to consciousness. If a Seizure lasting greater than 5 min may signal impending SE and warrant immediate and aggressive intervention. (Ref 2) Status Epilepticus is a medical emergency. Convulsive status epilepticus (CSE) is life-threatening CSE causes a variety of secondary manifestations, including hypoxia, acidosis, myoglobinuria, renal failure, DIVC and hyperthermia. Most of these complications reverse rapidly on cessation of seizures. If untreated, the mortality is high. (Ref 1) Causes of SE include inadequate levels of anticonvulsants in patients with known epilepsy, cerebrovascular accidents, anoxic/ischemic brain injury, ALCOHOL WITHDRAWAL, drugs, Infections, mass lesions and trauma.

SE can be divided into 3 types (Ref 2)

1. Generalised convulsive
2. Focal motar
3. Non Convulsive SE

The principle of treatment is to terminate the seizure as rapidly as possible. Attention must be paid to airway protection, adequate Cerebral oxygenation and bodily harm prevention. Heart rhythm should be monitored. Treatment begins with intravenous Lorazepam 4 mg and an intravenous loading dose of Phenytoin at 20mg/kg. Treatment desired general resuscitation, stopping the seizure, and treating the underlying cause. If patients do not respond rapidly, diagnosis should be reconsidered. Alcohol interacts directly with Membrane Proteins of a number of neurotransmitter systems. And much of its action depend on facilitation at inhibitory of Gamma-amino butyric acid (Gaba) receptors and inhibition at excitatory glutamate receptors. (Ref3)

Ethanol Withdrawal.

The term hangover refers to headache, Nausea, vomiting, malaise, nervousness, tremulousness and sweating that can occur in anyone after a brief but excessive drinking.

Early (<48 hours after last drink)

Tremulousness

Hallucination

Seizures

Late (>48 hours after last drink)

Delirium tremens

Neurological complications in chronic alcoholism's are Alcoholic Cerebellar degeneration, alcoholic poly neuropathy Pure thiamine deficiency neuropathy (TDN) differs from Pure Alcoholic neuropathy (ALN). ACN is sensory dominant, slowly progressive and painful and causes predominantly small fiber axonal loss

whereas TDN is more dominant and acutely progressive and causes predominantly large fiber axonal loss.

Peripheral nerves pressure palsies, especially radial and peroneal are common in alcoholics. Other complications are Alcoholic Amblyopia, Pellagra, Alcoholic Myopathy, Alcoholic dementia, Marchiafava – Bignami disease. (Ref 3)

Day 1

36-year-old female admitted was from kuravas community (the said community have the customs of using drinks since childhood during functions) with continuous tonic-clonic /clonic, rhythmic movements of left upper and lower limbs.

BP 110/70

Heart rate 72/min

Pupils equal reacting to light provisionally diagnosed as status epilepticus

Investigations

Hb 12.3gm%, TC 17500, P 85, L 10, ESR 30-65/hr, RBS 99mg/dl, [Urea 22mg%], [Creatine 1.4mg%] Na 135 meq /Ltr, K 3.1meq/Ltr. Prothrombin Time 39.2 Sec (on 1st day) PT 13 Sec (on 8th day) Other Liver functions are normal

S/B Anaesthetist

Had Convulsions since the previous evening and was not resolved with Lorazepam and loading doze of Phenytoin Known case of chronic Alcoholic Heart Sounds Normal RS BLAE + Basal creps present in both lungs CNS- PERL

Treatment

DIL / 30 deg propped up position, Inj Thiopentone 500mg IV stat, Inj Paracetamol 1g IV IVF RL/NS 75ml/hr, Thiopentol Infusion 500mg in 500ml NS 10mg/mi Inj Midazolam 2 mg IV stat and 1mg/hr IV infusion Inform SOS

Review and physician opinion

Advised urgent CT Brain / CXR / ECG and electrolytes.

Impression

1. Seizure for evaluation
2. Alcoholic intoxication/ alcohol withdrawal syndrome
3. Hypoxia associated brain injury

11:55 AM DAP note

Thrown focal fit in the left upper and lower limb Seems to be pseudo seizure Alcohol withdrawal syndrome Patient was under sedation no fit psychiatrist opinion required. DIL/ nasal oxygen/backrest IV fluids RL 2 pints NS 2 pints over 24 hrs. Tablet Librium 25 mg 1-1-2, Injection B1, B6, B12 in IV infusion, Inj Pantoprazole 40 mg IV stat, Tablet folic acid 5mg 0-0-1, Tablet Eptoin 1-0-2, Midazolam infusion 8mg in 50 ml NS 2 ml/ min

2:45 AM Duty anaesthetist notes

Case of status epilepticus for further evaluation. On examination, continuously throwing seizures disoriented/ febrile/ neck stiffness + pulse rate 140/ min both lungs air entry plus, S1 S2 heard. DIL/ Inj thiopental Na 12mg/hr, Inj Midazolam 1mg/hr, Injection mannitol 100 IV BD, Inj Paracetamol 1g IV TID, (Inform SOS) IVF NS/ RL 75 ml/ hr

Bad Prognosis

If the seizure continues plan to intubate and ventilate 3:30 AM (Duty Assistant Physician) Continue to seize. S1S2 + lungs clear 4 AM Seizure controlled Continue Midazolam / (Thiopentazole Sodium) and DNS

Day 2

7 AM Duty Assistant Physician note Comfortable / No Seizure Impression Tuberculoma vs Brain Abscess to Rule out Space Occupying Lesion CT Brain and Radiologist opinion Assistant Physician ICU Conscious / oriented/ No fit/ BP 130/100, Uric acid 6.25 mg/ dl Continue IVF RL 1000 ml NS 1000 ml 75 ml/ hr Inj mannitol 75ml Q 6H Midazolam 0.75 mg/ hr infusion Inj ceftrioxone 1g IV BD / Librium 25, 1-1-2 Inj. B1B6B12 in ivi NS, Epitoin 100 mg 1-0-2, Folvite 0-1-0, Oral glycerol 30ml TID, Inj. Vitamin k one amp Im into3 days, Inj Ceftriaxone

Psychiatrist opinion/alcoholic deprival syndrome Continue same/ CT opinion 1.10 pm conscious oriented Midazolam dose decreased to 0.5 mg per hour ivi.

Day 3

complaining of neck pain, conscious oriented impression cerebral venous thrombosis/alcohol withdrawal

Day 4

inj dexa 4 mg Q 8H Inj mannitol 100ml iv bd Tablet. Librium 50 mg tid, Eptoin 100mg 1-0-2, Tablet gardinol 60mg, 1-0-0, Inj pan iv bd Inj paracetamol tid

Day 5

continue same treatment Comfortable felt better CVT/alcoholic withdrawal

Day 6

Symptomatically better/no seizure Alcoholic withdrawal/? cerebral bleed Inj B1B6B12/Inj vitamin k

Day 7

Inj dexa 4 mg ivbd Tablet Librium 10-0-25 Tablet gardinol 60mg HS Eptoin 100mg 1-0-2

Day 8

No episode of seizure since 1 day admission to ICU BP 110/80 ml of HG Neurologist opinion alcoholic more than 20 years admitted with status epilepticus,? Alcoholic withdrawal

Headache plus on examination no seizure fundal margin blurred no deficit CT Brain – delta sign present advised CT Brain contrast, continue antiepileptic drug Inj thiamine 100mg iv Inj heparin 5000(u) SC Q8H

Day 9

patient sleeping. CT Brain contrast report superior sagittal sinus thrombosis with bilateral parasagittal haemorrhage Inj heparin 5000(u) S.C Q8H Librium 25 mg HS Inj pan 40 mg IV of Eptoin 100mg 1-0-2 gardinol 60mg HS

Day 10

No specific complaint BP 100/80 Same treatment continued

Day 11

Comfortable asymptomatic day 3 heparin SC Q8H Eptoin 100mg 1-0-2 Gardinol 100mg HS

References

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