

Cabrini Practice OSCE 12

Candidate Information:

You are the Consultant in charge of your tertiary ED and have been called into the resuscitation cubicle to assist with the management of a 35 year old male patient who has arrived 10 minutes ago by Ambulance with an ongoing seizure.

He was found by his partner fitting at home in his bedroom with empty packets of tramadol. AV transported to hospital. En route O2 applied and i.v access obtained, no other management.

PHx

Depression
Suicide attempts
Etoh abuse
Lower back pain

Medications:

Diazepam
Fluoxetine
Tramadol

NKA

SHx lives with partner

Your team consists of a Senior ED Registrar and 2 senior ED Resuscitation trained nurses.

Your Tasks:

1. Co-ordinate and lead your team to manage the patient
2. Formulate an appropriate disposition plan
3. Address any questions from your team

Domains:

Medical Expertise-Management	40%
Prioritisation and Decision Making	30%
Teamwork and Collaboration	30%

Simulation Station Role player Instructions:

Serotonin syndrome – Status Epilepticus/Hyperthermia:

35 yo M with seizures

HOPC- pt found by partner unconscious at home in his bedroom with empty partner's empty Venlafaxine packet.

AV transported to hospital.

PHx

Depression

Etoh abuse

Suicide attempts

Medications:

Tramadol

Diazepam

Fluoxetine

NKA

SHx lives with partner

Resus team has already established iv access and administered 2 x 5mg of midazolam at 5 minute intervals over the last 10 minutes without any response

Stage 1: Ongoing Seizure

Seizure- ongoing generalized tonic-clonic seizure

Now Vitals **T 38.6** HR 130 BP 140/70 RR 4 O2sats 88% 4L n/p BSL 12

Expected management:

Role allocation- ED Reg airway, nurse 1 circulation/drugs, nurse 2 scribe

Note febrile and OD consistent with Serotonergic Syndrome

- A- Suction, L lateral position
- B- O2-bag/valve/mask
- C- 2nd IV access- VBG, BSL 12
- D- 3rd line Seizure management
 - Repeat Benzodiazepine as above or

- Phenytoin sodium 20 mg/kg intravenously, no faster than 50 mg/minute in N/saline (not dextrose) or
- Sodium valproate 40 mg/kg up to 3000 mg intravenously over 3 to 5 minutes

Note increasing temperature **40.2 PROMPT at 5 mins**

Expect also to cover CNS Sepsis- Ceftriaxone 2gm, Dexamethasone 8mg, IVF bolus

Stage 2: Intubation:

Seizure non-responsive to 2nd/3rd line medication, temperature now **41.5**

Intubation indicated for management of seizure and temperature

Prepare:

Equipment:

ETT

Bag/valve/mask

LMA/NPA – Yes, Guedel- probably not – care in seizing patient

Laryngoscope +/- video

Bougie

Suction

Difficult Airway kit

End tidal CO₂

Drugs:

Induction- Propofol accept 50-200 IV, Midazolam 5-10mg IV

Paralysis - prefer Rocuronium 100mg IV,
 - don't accept Suxamethonium 100mg IV since risk of hyperK from prolonged seizure and no VBG available yet. Also fasciculations might raise temperature slightly (note: need long term paralysis so will need Rocuronium or equivalent after Sux anyway)

Plan A/B/C

Registrar intubates without complication

Stage 3: Post intubation care and Disposition

Check ETT position - clinically- end tidal CO₂, fogging, visualize through cords, auscultate, O₂sats
 -CXR

Cooling-Passive- Paralysis, remove clothing, cool room

- Active -Non-invasive – tepid water spray, fans, “wind tunnel, ice packs,
- Invasive- cooled IVF, irrigation-bladder (with IDC and thermometer),
- stomach-NGT, peritoneum, pleura, ECMO/bypass

Note: **PROMPT from Reg-** *“What would you look for on examination to diagnose Serotonin syndrome”-clonus/rigidity/hyperreflexia*

Seizures/Serotonin Syndrome- Benzodiazepine, 3rd line anti-seizure medication, Also EEG to monitor for ongoing seizures since patient paralysed

Specific treatment indicated in this patient:

- Cyproheptadine – NGT 8-12mg 8/24 (antihistamine with anti-serotonergic action)
- Also consider – olanzapine 5-10mg s/l, Chlorpromazine 25-100mg in 100mls N/saline over 30-60mins

Consider Activated Charcoal via NGT (unclear if ingestion < 1hour)

Investigations if asked for:

ECG ST no signs Na channel blockade

VBG and other bloods pending- BC, FBE, UEC, CRP

CXR clear with satisfactory ETT position

CT Brain pending for - ? ICH/trauma/CNS abscess

Disposition- ICU + ref Toxicology/General medicine/Neurology

Examiner Marking Sheet

COMPONENT ASSESSMENT

For each Domain below, select the ONE best option that best represents the candidate's level of performance. The option "**minimum level of competency displayed**" represents the level of safe independent practice as a **junior FACEM** in Australasia

Very poor level of competency displayed	Well below minimum level of competency displayed	Below minimum level of competency displayed	Minimum level of competency displayed	Above minimum level of competency displayed	High level of competency displayed	Very high level of competency displayed
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Please rate ALL the following domains

Medical Expertise-Management	☐	☐	☐	☐	☐	☐	☐
Prioritisation and Decision Making	☐	☐	☐	☐	☐	☐	☐
Teamwork and Collaboration	☐	☐	☐	☐	☐	☐	☐

[Detailed assessment criteria](#)

Please use the following criteria to inform your ratings above (mandatory items in ***bold italics***)

Medical Expertise- Management:

Seizure Management-3rd line one of iv Benzodiazepine/Phenytoin/Na Valproate

Recognition of Serotonin Syndrome

Management of Serotonin Syndrome- Benzodiazepines, Cyproheptadine

Recognition/Management of differential diagnosis of **CNS sepsis**

Cooling- passive/active- non-invasive/invasive

Decontamination- activated charcoal

Safe Intubation - no Suxamethonium

Prioritisation and Decision Making:

Recognition of **life threatening emergency**

Urgent stepwise **seizure management**

Intubation for seizure/temperature control

Disposition ICU

Teamwork/ Collaboration: Minimum 4 of

Effectively manage a limited team in time dependent circumstances

Identification of personnel and skills.

Balancing leadership with available skills and resources – uses staff appropriately

Assigns roles effectively

Clearly and effectively communicate current tasks and priorities to team

Communicates future plan/needs to allow preparation

Create opportunities for team feedback/ contribution

Verbal recaps/ Team summaries

Station Summary: Simulation Serotonin Syndrome with Refractory Seizures and Hyperthermia

INFORMATION

EXAMINER NOTES (For examiner reference only)

OSCE 'incident reporting' notes: Please provide details if an issue occurs which may influence the candidate's

exam outcome e.g. protocol breach, candidate illness, etc.

GLOBAL RATING FOR STANDARD SETTING:

This scale is used in the standard setting process for the OSCE. Please rate the candidate's OVERALL performance in this OSCE. The rating should take into account the entirety of the OSCE, rather than just a sum average of the individual domain scores. This element **MUST** be completed for the standard of the examination to be set.

	Well Below Standard	Below Standard	Just at Standard	Above Standard	Well Above Standard
In terms of a safely practising junior emergency physician , select the ONE option that best reflects the candidate's performance in this station:	○	○	○	○	○

EXAMINER SIGNATURE: