

Question 27

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A 16 year old boy presents to the ED with confusion, agitation and blurred vision. His mother suspects he has taken an overdose of promethazine.

i. What is the likely diagnosis? (1 mark)

Anticholinergic syndrome

A 16 year old boy presents to the ED with confusion, agitation and blurred vision. His mother suspects he has taken an overdose of promethazine.

ii. List 4 other precipitants of this syndrome. (4 marks)

(Other) antihistamines

TCA

Antipsychotics – quetiapine, olanzapine, chlorpromazine, droperidol

Carbamazepine

Atropine

Homatropine

Benzotropine

Plants – mushrooms, Datura/Angel's trumpet

- Best answers listed specific drugs.
- Incorrect: “anti-convulsants” or “anti-depressants”
 - not all drugs in these groups are anticholinergic

A 16 year old boy presents to the ED with confusion, agitation and blurred vision. His mother suspects he has taken an overdose of promethazine.

iii. List 3 other clinical signs you would assess for. (3 marks)

mydriasis

tachycardia

dry mouth

dry flushed skin

hyperthermia

absent bowel sounds

urinary retention

tremor

hallucinations

mumbling speech

seizures (rare)

Common mistakes: signs of serotonin syndrome e.g clonus, sweating

Shortly after arrival he becomes more restless and agitated. He appears to be hallucinating and is trying to climb out of bed.

iv. Outline 4 key treatment steps including 2 medication options (with doses) for sedation. (8 marks)

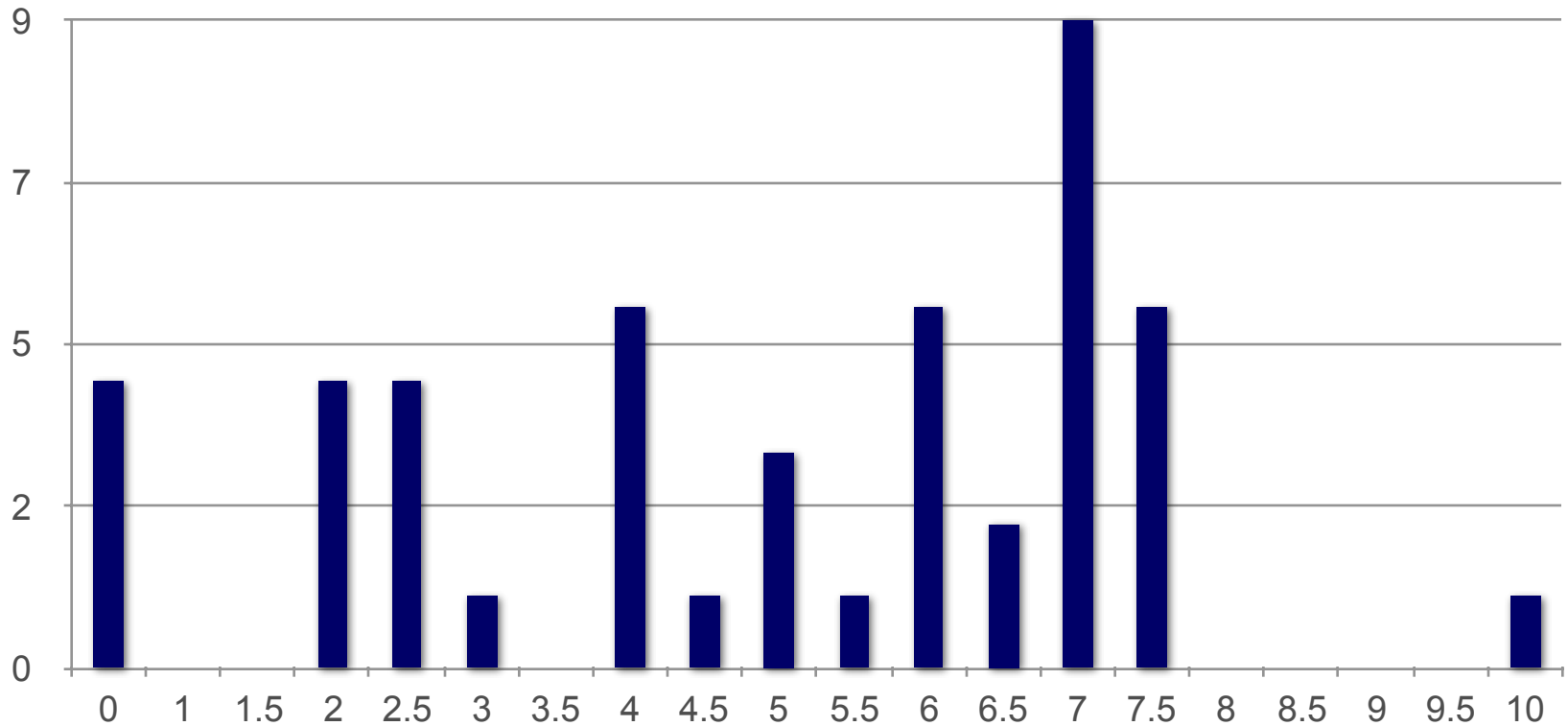
1. **Verbal reassurance** (enlist the help of his mother), calm environment, ±temporary physical restraint, if required, to maintain patient safety.
2. Check for **urinary retention**/ insert urinary catheter.
*Must mention this to get >4 marks for this question
Sedation/other measures unlikely to work if patient is distressed by urinary retention
3. Titrated IV **benzodiazepine** to achieve gentle sedation. e.g. IV midazolam 2.5 – 5mg, (or diazepam)
4. If remains agitated, **physostigmine** iv 0.5 – 1mg, titrated to effect, (max. 4mg)

Common mistakes:

- using physical restraint/"Code Grey"/"show of force" without any attempt at verbal reassurance
 - this is a delirious teenager, don't want a template answer for a psychotic agitated patient – requires tailored approach.
- failure to recognise and treat urinary retention
- using anticholinergic agents for sedation e.g. olanzapine
- be careful with drug doses
 - 0.2mg/kg IV midazolam in 70kg teenager = 14mg!

Pass mark – $10/16 = 6/10$

22/45 candidates achieved a pass.



Summary

- Revise your toxicology!
- Learn the toxidromes:
 - anticholinergic
 - cholinergic
 - serotonin syndrome
 - sympathomimetic
- Read Sections 1 & 2 of Tox Handbook
 - general approach, toxidromes etc.
- Tailor your approach to the agitated patient
- Be careful with drug doses
- Hand writing!!!

