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Cast 32 – Methadone

A 35-year-old woman presents with severe abdominal pain, anorexia and nausea on the background of being on the methadone program for opiate dependence. Furthermore, she has missed her methadone doses for the last 3 days.

a) State three (3) principles of analgesia in the treatment of opioid dependence? (3 marks)

- Dose of oral and IV short-acting opiates prescribed for anyone on Methadone will be larger than the typical patient.
- When Methadone has not been taken for a few days, dosing schedule should involve the Pharmacist.
- Consider other adjunctive non-opioid analgesic options (eg NSAIDs, Tramadol, Nerve Blocks etc)

b) Fill in the table showing 5 signs and 5 symptoms of opiate withdrawal. (10 marks)

Symptoms and signs of opioid withdrawal

****Any 5 from each column accepted****

	Symptoms	**Signs**
1	Anorexia	Yawning
2	Nausea & Vomiting	Perspiration
3	Abdominal pain	Piloerection
4	Diarrhoea	Dilated pupils
5	Hot and cold flushes	Muscle twitching (particularly restless legs while lying down)
6	Rhinorrhoea/Lacrimation	Restlessness
7	Bone, joint and muscle pain	Agitation
8	Insomnia and disturbed sleep	Seizures
9	Muscle Cramps	
10	Intense craving for opioids	

c) Fill in the table for Onset after last dose and duration of withdrawal for the following substances. (12 marks)

Opioid	**Onset after last dose**	**Duration withdrawal syndrome**
Heroin / morphine	6-24 hours	5-10 days
Pethidine	3-4 hours	4-5 days
Methadone	**36-48 hours**	**3-6 weeks**
Buprenorphine	**3-5 days**	**up to several weeks**
Kapanol / MS Contin	8-24 hours	7-10 days
Codeine orally	8-24 hours	5-10 days

d) You have diagnosed the patient to have opiate withdrawal and would like to start treatment, fill in the table below with Buprenorphine dosing for each of the next 7 days.

Day	Buprenorphine sublingual tablet regime	Total daily dose
1	4mg at onset of withdrawal and additional 2-4mg	4-8mg
2	4mg in the morning, additional 2-4mg evening dose,	4-8mg
3	4mg in the morning, additional 2mg evening dose,	4-6mg
4	2mg in the morning, if necessary, 2mg evening	0-4mg
5	2mg prn	0-2mg
6	no dose	
7	no dose	

e) List medications and doses in the table below for the various symptoms of methadone withdrawal in this patient (Fill in the table regarding management of symptomatic treatment. (8 marks)

Symptoms	**Suggested treatments**
Muscle aches/pains	Paracetamol 1000 mg, every 4 hours as required (maximum 4000 mg in 24 hours) *or* Ibuprofen 400 mg 6 hourly as required (if no history of peptic ulcer or gastritis).
Nausea	Metoclopramide 10 mg, 4-6 hourly as required, reducing to 8th hourly as symptoms reduce *or* Prochlorperazine 5 mg, every 4-6 hours as required reducing to 8th hourly as symptoms reduce. Second line treatment for severe nausea/vomiting: Ondansetron 4-8 mg, every 12 hours as required.
Abdominal Cramps	Hyoscine 20 mg, every 6 hours as required. Second line treatment for continued severe gastrointestinal symptoms: Octreotide 0.05-0.1 mg, every 8-12 hours as required by subcutaneous injection
Diarrhoea	Loperamide 2mg as required
Sleeplessness	Temazepam 10-20 mg at night. Cease the dose after 3-5 nights.
Agitation/Anxiety	Diazepam 5 mg four times daily as needed.
Restless legs	Diazepam (as above) or Baclofen 10–25 mg every 8 hours.
Sweating, sedating agitation	Clonidine 75 mcg every 6 hours

Withdrawal syndrome

Buprenorphine withdrawal is similar to other opioids but is generally milder than withdrawal from methadone or heroin because of its slow dissociation from the opioid receptors

The opioid withdrawal syndrome can be very uncomfortable & distressing, but not life-threatening unless there is a severe underlying disease

Patients may have a low tolerance to pain because of long-term opioid use & this needs to be acknowledged & treated effectively

Buprenorphine for treatment of withdrawal

- Buprenorphine is well suited in the hospital setting as it alleviates symptoms of withdrawal without significantly prolonging the duration of symptoms
- There should be some ability to tailor doses to degree of withdrawal as assessed by the Clinical Opiate Withdrawal Scale (COWS) (see *Appendix 4*)
- Buprenorphine should not be commenced until objective withdrawal is present (COWS score greater than eight) to reduce likelihood of precipitating withdrawal
- Commencing buprenorphine before the patient has withdrawal signs can cause them to go into a a rapid withdrawal syndrome & cause great distress to them
- Using the COWS as noted can help reduce this risk
- Buprenorphine will bind tighter to the opiate receptor sites than the opiate drug (e.g. heroin/methadone) the person is normally on.
- This will throw the opiate off the receptor site & put the patient into to a precipitated (severe) withdrawal