Drug Withdrawal

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Specific Learning Objectives:

Knowledge
Subinterns should be able to describe and define:

a) History findings that identify patients admitted for reasons other than detoxification at risk for withdrawal from alcohol or other substances of abuse
b) The symptoms and physical exam findings of different stages of alcohol withdrawal
c) The timing of and risk factors for alcohol withdrawal seizures and delirium tremens (DTs)
d) Non-pharmacologic treatment of alcohol withdrawal, including modifying environmental stimuli
e) The need for early, aggressive treatment of withdrawal to prevent the development of complications
f) The indications for short-term nicotine replacement therapy in medical inpatients unable leave the ward to smoke but uninterested in smoking cessation
g) The impact on hospital length-of-stay and discharge planning in initiating methadone therapy for narcotic withdrawal

Skills
Subinterns should be able to:

a) Conduct a history and physical:

    i) Recognize the clinical signs and symptoms of alcohol stimulant (cocaine, amphetamine) and opioid withdrawal
    ii) Use of the Clinical Institute Withdrawal Assessment (CIWA) instrument to classify patients into stages of alcohol withdrawal
b) Develop a management plan:
    i) Treat alcohol withdrawal seizures, uncomplicated withdrawal, and Delirium Tremens (using benzodiazepines, beta or alpha blockers, anti-convulsants and/or vitamins and minerals)

    ii) Treat stimulant withdrawal using appropriate pharmacologic and non-pharmacologic methods

Attitudes and professional behavior

Subinterns should demonstrate:

a) A compassionate and non-judgmental attitude towards patients with active substance abuse

Use the information from the references, textbooks (and other sources as appropriate) to answer the questions following each case. The questions are "open-ended" and therefore there are no right or wrong answers.

Section I
Case 1

You are asked to admit a 41-year-old female presenting to the hospital from an out patient clinic for treatment of nonhealing lower extremity ulcers. On your arrival, she appears somewhat anxious but is cooperative with interview and examination. She has a 5 year history of poorly controlled type 2 diabetes mellitus and has been treated for the leg ulcers at another facility for three months with topical dressings and whirlpool therapy. She admits she is changing physicians because her previous doctor refused to give her "stronger medicine" for pain in her legs. She has been started on appropriate therapy for her leg ulcers and diabetes. You are concerned about possible substance abuse.

Question 1
What further information do you need to obtain in evaluating possible substance abuse in this patient?

Case continued….
She reports daily consumption of a liter of wine for the last four years. Her last drink was approximately 8 hours ago. She has not experienced any symptoms related to lack of alcohol intake as she has not had any periods of abstinence. She was enrolled in a methadone maintenance program ten years ago but left after six months and "quit on my own". She last used heroin two years ago. She has been taking the prescribed hydrocodone/acetaminophen 10mg/500mg (Lortab) two tablets four times daily with inadequate pain relief. She is requesting a "pain shot" especially before dressing changes. She denies any cocaine or marijuana use in the last six months. She smokes 1-2 packs of cigarettes daily.

On physical examination:
She is ill-kept and appears somewhat older than her stated age. She seems restless and easily distracted during the interview. Mild diaphoresis noted.
Vital signs: BP 150/90 mmHg Pulse 110/min, RR 18/min, Temperature 99 degree Fahrenheit
Oral mucosa is moist. Poor dental repair with multiple caries but no obvious oral abscess
Normal heart, lung, and abdominal exam except for tachycardia
Lower extremities reveal multiple stage 3 ulcers with foul smelling greenish discharge, tender to palpation even with light touch.
Neuro exam: Patient refuses to allow testing of her reflexes during pain. There is no tremor or focal motor deficit.

Question 2
What testing would you request along with routine admission labs and why?

Question 3

a) ***What are some of the manifestations of alcohol withdrawal?***
b) ***What are the signs and symptoms of opiate withdrawal? How does the nature of opiate affect the onset of withdrawal symptoms?***

Question 4
How would you monitor this patient for possible signs/symptoms of alcohol and/or opiate withdrawal?

Case continued…
You prescribe hydromorphone (Dilaudid) 1 mg sq every four hours for pain with fair pain relief. At 16 hours from her last alcohol intake, she is reassessed to have a CIWA-Ar score of 26. You decide to begin treatment.

Question 5

a) ***What are your treatment options?***
b) ***What other considerations should you have when you approach the management of this patient's alcohol withdrawal symptoms?***

Question 6
How will you manage her presumed opiate addiction?

Question 7:
How will you manage this patient's nicotine addiction?

Section II:
Case Scenarios:
For each of the following scenarios identify the possible substance associated with clinical signs and symptoms.

I) You are called to evaluate a patient while on call for increasing agitation. Patient is a 68 year old female with hypertension, depression and osteoporosis who was admitted to the hospital for left leg cellulitis 3 days ago. Patient was started on IV antibiotics and has been responding well to therapy. Patient was doing well, till about 4 hours prior to the call when the nurse noted that the patient was getting more agitated and seeing things. On examination: Patient is afebrile; BP 160/90mm Hg, HR 110/min, RR 20/min, patient is tremulous. Patient is awake, but not oriented to place or time. Patient reports seeing insects on the wall
Neuro exam: reveals brisk bilateral reflexes but otherwise normal

II) A 20 year old male is brought to the ED by his family members who note that patient has been very withdrawn and not participating in family activities over the last couple of days. Patient does not have a past history of psychiatric illness, his family does state that they suspect he uses illicit drugs, but not sure of which one.
On exam, patient has stable vital signs and is in no acute distress. Patient is asleep but easily arousable. Occasional twitching is noted in his lower extremities. Rest of his physical exam is unremarkable. ECG shows J point elevation, but otherwise normal.

References:

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APPENDIX 1

Alcohol Screening Questionnaires

CAGE **(2 or more "yes" answers = positive screen for abuse or dependence)**

1. Have you ever felt the need to **Cut down** on your use of alcohol?
2. Has anyone **Annoyed** you by criticizing your use of alcohol?
3. Have you ever felt **Guilty** because of something you've done while drinking?
4. Have you ever taken a drink to steady your nerves or get over a hang-over? (**Eye-opener)**

TWEAK (**2 or more "yes" answers = positive screen for abuse or dependence)**

1. **T**olerance: How many drinks can you hold ($\geq$ 5 = positive)
2. **W**orry: Have close friends or relatives worried or complained about your drinking?
3. **E**ye-opener: Have you ever taken a drink to steady your nerves or get over a hangover?
4. **A**mnesia: Has a close friend or relative ever told you about things you said or did when drinking that you could not remember?
5. **K**ut down: Have you ever felt the need to cut down on your use of alcohol?

AUDIT **(Alcohol Use Disorders Identification Test score $\geq$ 8 = positive)**

1. How often do you have a drink containing alcohol?
   (0) never (1) monthly or less (2) 2-4 x/month (3) 2-3 x/week (4) $\geq$4 x/week
2. How many drinks containing alcohol do you have on a typical day when you are drinking?
   (0) 1 or 2 (1) 3 or 4 (2) 5 or 6 (3) 7 to 9 (4) $\geq$ 10
3. How often do you have $\geq$ 6 drinks on one occasion?
   (0) never (1) less than monthly (2) monthly (3) weekly (4) daily
4. How often during the last year have you found that you were not able to stop drinking once you had started?
   (0) never (1) less than monthly (2) monthly (3) weekly (4) daily or almost daily
5. How often during the last year have you failed to do what was normally expected from you because of drinking?
   (0) never (1) less than monthly (2) monthly (3) weekly (4) daily or almost daily
6. How often during the last year have you needed a first drink in the morning to get yourself going after a heavy drinking session?
   (0) never (1) less than monthly (2) monthly (3) weekly
   (4) daily or almost daily
7. How often during the last year have you had a feeling of guilt or remorse after drinking?
   (0) never (1) less than monthly (2) monthly (3) weekly (4) daily or almost daily
8. How often during the last year have you been unable to remember what happened the night before because you had been drinking?

(0) never (1) less than monthly (2) monthly (3) weekly (4) daily or almost daily

9. Have you or someone else been injured as a result of your drinking?
   (0) no (2) yes, but not in the last year (4) yes, during the last year
10. Has a relative, friend, or a physician or other health care worker been concerned about your drinking or suggested you cut down?
    (0) no (2) yes, but not in the last year (4) yes, during the last year

APPENDIX II

Clinical Institute Withdrawal Assessment of Alcohol Scale, Revised (CIWA-Ar)

Patient:_____ **Date:** _____ **Time:** _____ (24 hour clock, midnight = 00:00)

Pulse or heart rate, taken for one minute:_____ **Blood pressure:**_____

NAUSEA AND VOMITING -- Ask "Do you feel sick to your stomach? Have you vomited?" Observation.
0 no nausea and no vomiting
1 mild nausea with no vomiting
2
3
4 intermittent nausea with dry heaves
5
6
7 constant nausea, frequent dry heaves and vomiting

TACTILE DISTURBANCES -- Ask "Have you any itching, pins and needles sensations, any burning, any numbness, or do you feel bugs crawling on or under your skin?" Observation.
0 none
1 very mild itching, pins and needles, burning or numbness
2 mild itching, pins and needles, burning or numbness
3 moderate itching, pins and needles, burning or numbness
4 moderately severe hallucinations
5 severe hallucinations
6 extremely severe hallucinations
7 continuous hallucinations

TREMOR -- Arms extended and fingers spread apart. Observation.
0 no tremor
1 not visible, but can be felt fingertip to fingertip
2
3
4 moderate, with patient's arms extended
5
6
7 severe, even with arms not extended

AUDITORY DISTURBANCES -- Ask "Are you more aware of sounds around you? Are they harsh? Do they frighten you? Are you hearing anything that is disturbing to you? Are you hearing things you know are not there?" Observation.
0 not present
1 very mild harshness or ability to frighten
2 mild harshness or ability to frighten
3 moderate harshness or ability to frighten
4 moderately severe hallucinations
5 severe hallucinations
6 extremely severe hallucinations
7 continuous hallucinations

PAROXYSMAL SWEATS -- Observation.
0 no sweat visible
1 barely perceptible sweating, palms moist
2
3
4 beads of sweat obvious on forehead
5
6
7 drenching sweats

VISUAL DISTURBANCES -- Ask "Does the light appear to be too bright? Is its color different? Does it hurt your eyes? Are you seeing anything that is disturbing to you? Are you seeing things you know are not there?" Observation.
0 not present
1 very mild sensitivity
2 mild sensitivity
3 moderate sensitivity
4 moderately severe hallucinations
5 severe hallucinations
6 extremely severe hallucinations
7 continuous hallucinations

ANXIETY -- Ask "Do you feel nervous?" Observation.
0 no anxiety, at ease
1 mild anxious
2
3
4 moderately anxious, or guarded, so anxiety is inferred
5
6
7 equivalent to acute panic states as seen in severe delirium or acute schizophrenic reactions

HEADACHE, FULLNESS IN HEAD -- Ask "Does your head feel different? Does it feel like there is a band around your head?" Do not rate for dizziness or lightheadedness. Otherwise, rate severity.
0 not present
1 very mild
2 mild
3 moderate
4 moderately severe
5 severe
6 very severe
7 extremely severe

AGITATION -- Observation.
0 normal activity
1 somewhat more than normal activity
2
3
4 moderately fidgety and restless
5
6
7 paces back and forth during most of the interview, or constantly thrashes about

ORIENTATION AND CLOUDING OF SENSORIUM -- Ask "What day is this? Where are you? Who am I?"
0 oriented and can do serial additions
1 cannot do serial additions or is uncertain about date
2 disoriented for date by no more than 2 calendar days
3 disoriented for date by more than 2 calendar days
4 disoriented for place/or person

Total **CIWA-Ar** Score _____
Rater's Initials _____
Maximum Possible Score 67

 This assessment for monitoring withdrawal symptoms requires approximately 5 minutes to administer. The maximum score is 67 (see instrument). Patients scoring less than 10 do not usually need additional medication for withdrawal.

Sullivan, J.T.; Sykora, K.; Schneiderman, J.; Naranjo, C.A.; and Sellers, E.M. Assessment of alcohol withdrawal: The revised Clinical Institute Withdrawal Assessment for Alcohol scale (**CIWA-Ar**). *British Journal of Addiction* 84:1353-1357, 1989.