



433 Teams

PSYCHIATRY

Substance Abuse Disorders

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Manual of Basic Psychiatry

Doctor's notes

important

sychiatry.team433@gmail.com



جامعة
الملك سعود
King Saud University



Terminology:

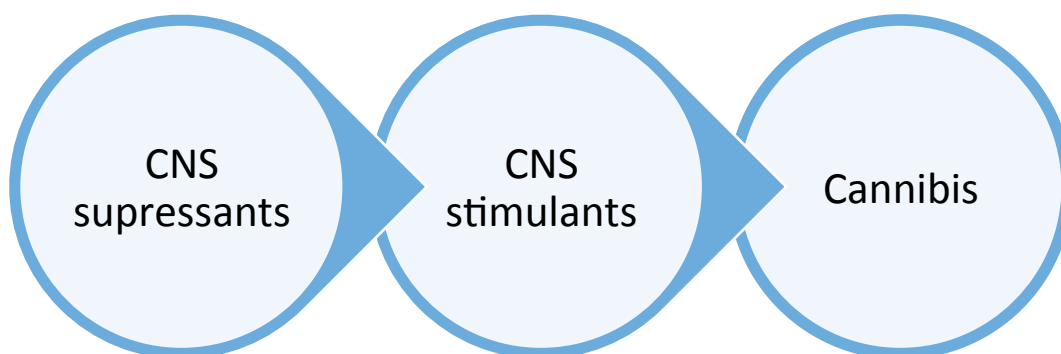
Abuse: self-administration of any substance in a **culturally disapproved** manner that causes adverse consequences.

Intoxication: the **transient effect** (physical and psychological) due to recent substance ingestion, which disappears when the substance is eliminated.

Withdrawal: a group of symptoms and signs occurring when the drug is withdrawn or reduced in amount.

Dependence: the physiological state of **neuroadaptation** produced by repeated administration of a drug, necessitating continued administration to prevent appearance of withdrawal state.

Addiction: a nonscientific term that implies dependence and associated deterioration of physical mental health as well as high tendency to relapse after discontinuation.



Assessment in substance abuse:

- Collateral history.
- Urine screening tests.
- Blood screening tests (alcohol, barbiturates).
- Pattern of Abuse:
 - What? (type, dose, route, effect: nature and duration).
 - How? (frequency, duration, how long, source, and situation).
 - Why? (? psychosocial problems). Dependence?
- Complications: Psychosocial, Physical.

Risk factors of Alcohol abuse:

1. **Vulnerable personality:** impulsive, gregarious, less conforming, isolated or avoidant persons.
2. **Vulnerable occupation:** senior businessmen, journalists, and doctors.
3. **Psychosocial stresses:** social isolation, financial, occupational or academic difficulties, and marital conflicts.
4. **Emotional problems:** anxiety, chronic insomnia depression.

Clinical presentation:

- ♣ **Alcohol intoxication:** early intoxication includes sense of well-being, emotional lability, irritability and incoordination> to ataxia and slurred speech.
- ♣ **Heavy intoxication** (blood level > 300 mg/ml) > alcoholic coma & death
- ♣ **Acute intoxication** may mimic: panic attacks, Depression, acute psychosis with delusions +/- hallucinations.

Ethanol plasma concentrations Vs. CNS effects:

Level	impairment
20 - < 30 mg/dL	Slowed thinking and motor performance.
30 - < 80 mg/dL	Observable cognitive and motor impairment.
80 - < 200 mg/dL	Deterioration in cognition with impaired judgment and mood lability.
200 - < 300 mg/dL	Marked slurring of speech, ataxia, nystagmus, and alcoholic blackouts.
>300 mg/dL	Impaired autonomic nervous system functions, disturbed vital signs, coma and possible death.

Stages of alcohol dependence:

1st (early stage): The drinker has not lost control of his health. Relatives and friends do not find anything unusual. He drinks for stress relief or mood elevation.

2nd (excessive consumption): He drinks so much and for no reasons, loses control of physical and mental capacity, and sometime may become a nuisance. Relatives and friends become aware that he has a problem with alcohol and he still believes that he can quit alcohol at any time.

3rd (complications): The chronic stage of alcoholism; physic and mental complications. Trails to stop drinking with repeated failure.

Complications of chronic alcohol abuse:

Medical	Psychiatric	Social
Neurological	Amnesic disorder	Social isolation
Cerebral degeneration	Delirium	Job loss
Seizures	Dementia	Marital conflicts
Peripheral neuropathy	Psychosis	Family problems
Optic nerve atrophy	Depression	Legal troubles
Alimentary Tumors (esophagus, liver)	Reduced sexual desire	Social stigma
Gastritis, peptic ulcer	Insomnia	
Pancreatitis	Personality deterioration	
Hepatitis, liver cirrhosis	Increased risk of suicide	
Cardiomyopathy Anemia	Morbid jealousy	
Gynaecomastia		

Screening for alcohol dependence: CAGE questionnaire.

Ask the patient: "Have you ever":

1. Wanted to **C**ut down on your drinking?
2. Felt **A**nnoyed by criticism of your drinking?
3. Felt **G**uilty about drinking?
4. Taken a drink as an "**E**ye opener" (to prevent the shakes)?

" ≥ 2 "yes" answers are considered a positive screen. One "yes" answer should arouse suspicion of abuse.

Alcohol withdrawal:

Stage	Symptoms
I (6-8 hours)	Autonomic hyperactivity tremor, agitation, diaphoresis, anxiety, tachycardia nausea, vomiting, anorexia, headache, insomnia, and craving for alcohol
II (10-30 hours)	Hallucinations (auditory or visual, tactile, olfactory or mixed), illusions, disordered perception + above
III (12-48 hours)	Grand mal seizures 3-4% of untreated patients progress to stage 3; more than 50% have multiple seizures; >30% have Delirium Tremens if untreated.
IV (> 2-3 days)	Delirium tremens (DTs)

Delirium tremens (DTs): it is a severe form of alcohol withdrawal starting 2 – 3 days after last alcohol intake; it may be precipitated by infections, and characterized by: **delirium, gross tremor (tremens)**, and other features: electrolyte disturbances & dehydration, autonomic disturbances (fever, dilated pupils & unstable BP, pulse and respiratory rates), and insomnia.

Course: peaks on 3rd or 4th day, lasts for 3 – 5 days, worsens at night, and followed by a period of prolonged deep sleep, from which the person awakes with no symptoms and has amnesia for the period of delirium.

Complications: Violence (may lead to homicide or suicide), Seizures (may lead to aspiration, chest infection, & coma), and Death (it can be due to: suicide / cardiac arrhythmias/ electrolyte imbalance/aspiration/ chest infection/ volume depletion. Mortality rate: 5 -15%.

Treatment:

1. It should be in an ICU or a medical ward because it is a serious medical emergency.
2. **Avoid antipsychotics** (because they lower seizure threshold).
3. Guard against seizures; benzodiazepines (e.g. diazepam) +/- magnesium sulfate & an anticonvulsant Rx.
4. Rehydration is a vital step.
5. **Thiamine (B1) supplement** is essential for glucose metabolism (B1 is usually low in DTs patients).

Treatment:

Treating Alcohol Intoxicated Patient:

Conscious: supportive, antipsychotic if agitated.

Unconscious: ABC

Detoxification (planned alcohol withdrawal):

Treating alcohol withdrawal:

1. Supportive
2. Thiamine
3. Long acting benzodiazepines.
4. ± Anticonvulsants for seizure.

Maintaining Abstinence:

Disulfiram – blockade of aldehyde dehydrogenase → accumulation of acetaldehyde
nausea, flushing, tachycardia, hyperventilation, panic.

Naloxone – reduces alcohol-induced reward.

Acamprosate – anti-craving effects.

Psychological:

Individual, group Rx, relapse prevention.

Sedatives, Hypnotics, and Anxiolytics:

This class of substances includes all controlled antianxiety and sleeping medications:

- Benzodiazepines (e.g. diazepam, lorazepam)
- Benzodiazepine - like drugs (e.g. zolpidem, zopiclone)

Intoxication and withdrawal features are similar to alcohol. These substances are often taken with other brain depressants, like alcohol, which can produce additive serious effects (e.g. respiratory depression).

Abuse of inhalants (volatile solvents):

Adeeb is a 16-year-old boy lives with his divorced mother, presented with **slurred speech**, **facial rashes**, **incoordination and nausea**.

The active compounds in these inhalants are usually acetone, benzene or toluene. **Brain depressants**. Abuse commonly seen in **adolescents in low socioeconomic status**. Recent abuse can be identified by unusual breath or odor, **rashes around the nose and mouth**.

Intoxication:

- Low doses:** euphoria, excitement, pleasant floating sensations, and disinhibition.
- High doses:** disturbed consciousness, perceptual disturbances, impulsiveness, assaultiveness, impaired judgment, sedation, slurred speech, nystagmus, ataxia, incoordination, nystagmus, ataxia, incoordination, nausea, and vomiting.

Complications:

- Physical:** irreversible **multi-organ damages** (brain, lungs, liver, kidneys, muscles, peripheral nerves and bone marrow).
- Psychological:** depressions, conduct or personality disorders.
- Social:** broken or abusive family life.
- Death** may occur during intoxication because of: respiratory depression, asphyxiation, aspiration of vomitus, cardiac arrhythmia or serious injury.

Treatment:

Symptomatic treatment (for complications), and psychiatric rehabilitation.

No specific medical treatment.

Opioids

Opioids include several narcotic substances: (**opium, heroin, morphine, codeine, pethidine, methadone**).

Opioid intoxication:

Presentation	Treatment
Euphoria, Relaxation, Analgesia, Disturbed consciousness, Small pupil (initially), Bradycardia, Reduced appetite, Constipation, Respiratory depression Opioids effects on the pupils: (Important in the clinical assessment of the degree of opioids intoxication). Pupillary constriction. In severe overdose: Pupillary dilatation	in ICU: 1. Monitoring 2. Naloxone 3. Open airway – oxygen – IV fluids

Opioid withdrawal:

Presentation	Treatment
1. Rhinorrhea (runny nose). 2. Lacrimation. 3. Pupillary dilation. 4. Yawning. 5. Insomnia. 6. Fever / sweating/piloerection. 7. Muscle/joint aches. 8. Nausea or vomiting. 9. Diarrhea. 10. Dysphoric mood. 11. Craving (desperate searching for opioids).	Short-term: 1. painkillers, 2. sedatives, 3. observation. 4. Clonidine can be used to control the release phenomena (sympathetic over activity, nausea, vomiting and diarrhea) Long term: Harm reduction strategies 1. Methadone 2. Buprenorphine/Naloxone

Tolerance develops rapidly (especially in IV usage) leading to rapid dependence and withdrawal (6 hours after the last dose, reach a peak after 36 - 48 hours, and then wane). However, untreated withdrawal results in no serious medical sequence and rarely threatens the life of someone in a reasonable physical health, though they cause great distress.

Tolerance also diminishes rapidly and this can result in immediate death (an accidental overdose during time of IV self-injection because of immediate serious respiratory depression). This occurs when a previously tolerated high dose is resumed after a drug-free interval (e.g. after a stay in hospital or prison).

Complications of IV Usage:

1. AIDS
2. Hepatitis
3. Endocarditis
4. septicemia

CNS stimulants: amphetamine [captagon], cocaine [crack]

Rakan is a 20-year-old male brought to Emergency Department by police who arrested him because of reckless driving (drifting with high speed) and violent behavior. He looked over-suspicious, agitated, and over-talkative.

Main features:

- hypervigilance/Hyperactivity / agitation/
- Suspiciousness>> paranoid delusion. Overconfidence >> grandiosity.
- Aggression & violence. Insomnia, Euphoria or irritable mood, Hallucinations (visual more than auditory), Confusion and incoherence.

Treatment:**Inpatient setting.**

-Symptomatic use of an **antipsychotic medication** e.g. **olanzapine 10-20mg**. For **4- 6 months**).

- Upon abstinence, some patients develop headache and depression, and may require **antidepressants** (e.g. **paroxetine 20 mg/ day or 6 months**).

-Psychotherapeutic methods (individual, family, and group psychotherapy) are usually necessary to achieve lasting abstinence.

However , it can be indistinguishable from functional psychosis (e.g. brief psychotic disorder, schizophreniform), and schizophrenia) and only the resolution of the symptoms in a few days or a positive finding in a urine drug screen test eventually reveals the diagnosis.

Cannabis: (marijuana/hash/ hashish).

euphoric effects appear within minutes, peak in about 30 minutes, and last 2 to 4 hours.

Bandar is a 32-year-old male brought to outpatient clinic by his concerned wife because of recurrent brief periods of being **over-suspicious**, **euphoric**, and **talkative**. He admitted abusing cannabis in the week-ends.

Main features	Physical effects
<ul style="list-style-type: none"> -Euphoria. -Heightened perception. -Talkativeness. -Slowed time perception. -Disinhibition. 	<ul style="list-style-type: none"> -Red conjunctiva. -Dry mouth. -Mild tachycardia. -Increased appetite. -Impaired coordination. -Respiratory tract irritation & impaired motor coordination.
	<ul style="list-style-type: none"> -Impaired cognitive function and judgment. -Anxiety +/- panic attacks with derealization and depersonalization -Brief psychosis (paranoid ideations)

Treatment:**Outpatient setting**

- ✓ Antipsychotics (e.g. **risperidone 3 mg/day**) for **6 months**.
- ✓ Psychotherapeutic methods (individual, family, and group psychotherapy) are usually necessary to achieve lasting abstinence.

Cannabis may trigger anxiety / panic attacks & can induce delirium.

Following discontinuation of cannabis, some patients may develop depressive features.

Chronic use of cannabis can lead to a state of apathy and amotivation (**amotivation syndrome**) but this may be more a reflection of patient's personality structure than an effect of cannabis.

Quiz:

- 1- In Aug 2011, The American Society of Addiction Medicine (ASAM) has officially recognized Addiction as mostly:
 - a) a social problem
 - b) a social problem
 - c) a social problem
 - d) a primary chronic brain problem
 - e) a behavioral disorder occurs as the result of other causes such as emotional or psychiatric problems

- 2- A 41-year-old businessman came to the emergency department complaining of insomnia for 3 days after he ran short of his sleeping pills. He was asking for a specific drug manufactured by ROCHE Company. He knows that each tablet is 2 mg. He said he uses 5 tablets each night to sleep. The most likely problem of this patient is:
 - a) Heroin abuse.
 - b) Benzodiazepines abuse.
 - c) Methadone abuse.
 - d) Abuse of painkillers.

- 3- A 33-year-old single man was caught by police officers and put in prison because he was driving his car recklessly with high speed at 3am in the highway. Next day he started to show excessive lacrimation, runny nose, repeated vomiting, and abdominal cramps. However, his consciousness was intact. The most likely problem of this patient is:
 - a) Cannabis abuse.
 - b) Methadone intoxication.
 - c) Abuse of naloxone.
 - d) Opioid withdrawal.

- 4- A 32-year-old man became increasingly irritable, insomniac, hypervigilant for the past 4 weeks with unpredictable mood and accusing his wife with extramarital sexual relationships. The most likely diagnosis is:
 - a) Heroin abuse.
 - b) Generalized anxiety disorder.
 - c) Amphetamine abuse.
 - d) Paranoid Schizophrenia.

- 5- A 43-year-old man has episodic behavioral disturbances including; euphoria, talkativeness, and disinhibition. His eyes look red most of the time. The most likely diagnosis is:
 - a) Alcohol abuse.
 - b) Cannabis abuse.
 - c) Amphetamine abuse.
 - d) Cocaine abuse.

- 6- A 16-year-old boy presented with slurred speech, incoordination and nausea. Physical examination revealed facial rashes around his mouth and nose. When asked about substance abuse his reply was affirmative. The most likely substance is:
 - a) Cannabis.
 - b) Alcohol.
 - c) Volatile substance.
 - d) Morphine.

Done By:

Afaf Almutairi

Nada Dammas

