

# PSYCHIATRY

## SUBSTANCE ABUSE DISORDER

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# Substance abuse

- Abuse is the voluntary use of a mood altering substance without medical indication and without the development of tolerance and without the induction of withdrawal symptoms on abstinence.
- Dependence is noted if tolerance has developed and signs of withdrawal on abstinence are noted.
- Addiction is present if a dependent individual voluntarily continues to use the substance despite knowledge of the harmful consequences of continued use.
- This terminology is not utilized in DMS5

# Characteristics

- The CAGE questionnaire for alcohol abuse was validated in two big city general hospital populations.
- The prevalence of disease in this population is 23%.
- For those with 3 or 4 positive responses:
- Positive predictive value is 98%
- Negative predictive value is 88%
- The positive likelihood ratio (LR+) for alcohol dependency is 124 if 3 positive responses.
- For those with 0-2 positive responses:
- Positive predictive value is 12%

# Screening for alcohol use

- The CAGE is insensitive for screening women at risk as measured in pregnancy clinics.
- The substitution of tolerance (the number of drinks required to get high) for the question of guilt appears useful in this population. (TWEAK)
- A positive response to any of the screening questions is associated with an elevated risk of dependency.
- However, even this will overlook 26% of pregnant women at risk.

# Alcohol

- Heavy use is the ingestion of >6 ounces ethyl alcohol per week.
- Alcohol induced mood disorders are associated with periods of substance abuse and should resolve within days of weeks of drinking cessation.
- Wernicke's encephalopathy (ataxia, memory loss, delirium) is associated with poor nutrition while abusing alcohol for an extended period.
- It is reversible with high dose thiamine (vitamin B<sub>1</sub>) administration.
- Recommended as well for those who are not ready to cease alcohol use.

# Alcohol

- Korsakoff's syndrome manifests pronounced anterograde and retrograde amnesia along with cognitive deficits.
- It may be reversed with thiamine.
- If cortical atrophy, alcohol induced dementia.
- Vitamin B<sub>12</sub> deficiency may also be seen in chronic alcohol abuse with poor nutrition.
- Peripheral neuropathy.

# Alcohol

- Common symptoms of withdrawal include anxiety and hypertension.
- Delirium tremens (DT) involves gross cognitive disturbance with agitation and tactile and visual hallucinations.
- Seizures can occur.
- Untreated DT will lead to death in 20% of cases.
- Benzodiazepines are used to minimize withdrawal symptoms (affect same GABA receptors as alcohol).
- Disulfiram is employed in drug free period as aversive therapy.

# Opioids

- Intoxication causes euphoria, followed by dysphoria, apathy, psychomotor problems, impaired judgment.
- Pupils are constricted, speech is slurred, and impaired attention and memory can also occur as can psychotic or mood disorders.
- Overdose will present with depressed respiration, coma, pinpoint pupils, and pulmonary edema.
- Meperidine can also cause seizures
- Reverse drug effect with naloxone.
- Intranasal naloxone may be life-saving in cases of overdose.



# Opioids

- Withdrawal symptoms are irritation and anxiety, hypertension, dilated pupils, tearing and rhinorrhea.
- May also complain of insomnia and myalgias.
- Methadone is a long-acting antagonist that can be used to minimize symptoms.
- Clonidine may be used in conjunction with methadone to treat constitutional symptoms.
- Naltrexone can be used with clonidine to displace opioids from receptors.
- Buprenorphine is a partial opioid agonist.

# Treatment of alcohol and opioid use disorders

- The most effective interventions are:
- Acamprosate and naltrexone for alcohol use disorder
- Naltrexone, buprenorphine, methadone for opioid use disorder

# Cocaine, amphetamines

- Intoxication produces intense euphoria and self-confidence with hypervigilance.
- May develop psychosis (that clears within 48 hours of drug abstinence).
- Complications include cardiac arrhythmias and myocardial infarction as well as seizures.
- With cocaine, tactile hallucinations may also be noted (e.g., formication).
- Withdrawal associated with anxiety, depression, anorexia, craving, hypersomnia.
- Relapse common.
- Lorazepam for agitation; haloperidol for psychosis.

# Phencyclidine (PCP)

- Ketamine is a related compound that acts through NMDA receptor antagonism.
- Intoxication can produce behavioral disinhibition and aggression with disruption of sensory input.
- Seizures, psychosis, and anti-cholinergic symptoms can also occur.
- May demonstrate strength out of proportion to body habitus.
- Hypertensive crisis possible.
- Lorazepam for agitation; haloperidol for psychosis.

# Cannabis

- Heavy use is defined as 1-2 joints/ week.
- Intoxication associated with euphoria.
- Increased appetite.
- Reduced concentration, motivation, new learning.
- Impaired coordination may persist for weeks after cessation of use.
- May see conjunctival injection.
- Can also produce anxiety, persecutory delusions, and psychosis.
- Irritability and restlessness noted with withdrawal.