CHAPTER
6

Alcohol and Other Psychoactive Substance Use Disorders

WHO defines *'Drug'* as any substance that when taken into the living organism, may modify one or more of its function. A *'Psychoactive drug'* is one that is capable of altering the mental functioning.

a. Substance abuse: The criteria which distinguish nonpathological substance use from substance abuse are:
- ***A pattern of pathological use:*** It is manifested by intoxication throughout the day, inability to cut down or stop use, repeated efforts to control use through periods of temporary abstinence or restriction of use to certain times of the day, continuation of substance use despite a serious physical disorder that the individual knows is exacerbated by the use of the substance, and episodes of a complication of the substance intoxication.
- ***Impairment in social or occupational functioning by the pattern of pathological use.***
- ***Duration of disturbance last at least one month.***

b. Substance dependence: It requires physiological dependence, evidenced by either tolerance or withdrawal.
- ***Tolerance:*** It means that markedly increased amounts of the substance are required to achieve the desired effect or there is a markedly diminished effect with regular use of the same dose.
- ***Withdrawal:*** In withdrawal, a substance specific syndrome follows cessation or reduction in intake of a substance that was previously regularly used by the individual to induce a physiological state of intoxication.

The substances which produce both physical and psychological dependence include opiates, barbiturates, alcohol, stimulants, cannabis and hallucinogens. Opiates produce strong physical dependence. Cocaine does not produce physical dependence while cannabis produces low physical dependence.

c. Habituation: See Table 6.1

Table 6.1: Comparison between dependence and habituation

Dependence	***Habituation***
• There is compulsion to take the drug. • There is need to increase the dose or frequency because of tolerance. • It is followed by physical withdrawal symptoms (except cocaine) • It is detrimental to individual and society Examples: Morphine, barbiturates	• There is only a desire to take the drug • There is no need to increase the dose/ frequency. • It is usually not followed by physical withdrawal symptoms. • It is detrimental to individual only. Examples: Tobacco, certain analgesics, laxatives.

d. Addiction: A state of periodic or chronic intoxication, detrimental to the individual and to the society, produced by the repeated consumption of a drug (natural or synthetic).
The term *'Addiction'* includes with *'Dependence'* and *'Habituation'*.

Predisposing Factors (Triad) for Drug Dependence

See Table 6.2

Diagnosis

The correct diagnosis depends on reliable history, signs (or complications), of psychoactive substance, laboratory tests (serum and urinary levels) and use of antidotes (e.g. nalorphine of naltrexone in an opiate addict will produce characteristic withdrawal symptoms).

Differential Diagnosis (Table 6.3)

i. *Nonpathological substance* use for recreational or medical purposes. It is not associated with impairment in social or occupational functioning or a pathological pattern of use.
ii. *Repeated episodes of substance-induced intoxication:* It is an isolated episode, not involving either abuse or dependence.

Table 6.2: Predisposing factors (triad) for drug addiction

I. Personality characteristics
• Social non-conformity
• Low self-esteem
• Depressive feelings
• Sensation seeking
• Curiosity
• Low frustration tolerance
• Impulsivity
• A need for immediate gratification
• Low religiosity
• Hostility
• Concern with personal autonomy
• A lack of interest in goals of conventional institutions
• Antisocial personality traits
• Presence of various psychiatric disorders (depression, anxiety neurosis, etc.)
II. Immediate sociocultural milieu
• Problems
• Peer pressure
• Unemployment, low income
• Abundance of information about drug effect or sources
• Abuse of socially acceptable drugs
• Laxed legal system
III. Characteristics of drug
• Pharmacodynamic characteristics of the drugs (stimulant drugs are preferred)
• Amount and frequency (drugs needed in less quantity are preferred)
• Routes of administration (drugs which can be ingested or inhalted are preferred)
• Ready availability and cost
• Public acceptance of the drug

Table 6.3: Types of psychoactive substance use disorders

Drug	*Usual route of administration*	*Physical dependence*	*Psychological dependence*	*Tolerance*
1. Alcohol	Oral	+	+ +	+
2. Opioids	Oral, parenteral, smoking	+ + +	+ + +	+ + +
3. Cannabis (marihuana)	Smoking, oral	±	++	+
4. Cocaine	Inhalation, oral, smoking Parenteral	±	+ +	—
5. Amphetamines	Oral, parenteral	+ +	+ +	+ + +
6. Lysergic acid diethylamide (LSD)	Oral	—	+	+
7. Barbiturates	Oral, parenteral	+ +	+ +	+ + +
8. Benzodiazepines	Oral, parenteral	+	+	+
9. Volatile solvents	Inhalation	±	+ +	+
10. Phencyclidine (PCP)	Smoking, inhalation, Parenteral, oral	±	+	+

— = None; + = Probable/Little; + = Some/Mild; ++ = Moderate; +++ = Severe.

Management

a. ***Treating the drug addict:*** It includes hospitalization, withdrawal of drugs, detoxification, administration of vitamins and painkillers, supportive psychotherapy, family therapy and rehabilitation facilitated through day care centres or Narcotics Anonymous Group. The *success of treatment* depends on good premorbid personality, no identifiable stresses, no psychiatric problems, newly and highly motivated addict, intake of one drug and in the lesser doses and good family support.
   The main indications of impatient treatment includes:
   – Chronic intravenous use
   – Concurrent dependency on other addictive drugs or alcohol
   – Serious medical or psychiatric problems
   – Severe impairment of psychosocial functioning
   – Insufficient motivation for outpatient treatment
   – Lack of family and supports
   – Failure of outpatient treatment
   – Free access to drug
b. ***Role of parents:*** If the parents find that their child is on the drug, then accept the truth and take immediate remedial steps.
c. ***Relapse:*** About 80 percent of the addicts resume their habit within 6 months. The *main causes of relapse* are—presence of overt or latent psychiatric illness, poor follow up, poor rehabilitation services, easy availability of the drug, continuous peer pressure and outdoor method of treatment.
d. ***Prevention:***
   i. ***Parents:***
      - Provide the child with a secure stable home environment.
      - Keep the child occupied—provide opportunity for sports, hobbies.

- Keep the child informed of the hazards of drug addiction and how to stay away from people and places, that can influence him.

ii. ***Community:*** At college campus celebrations, organizers should ensure that freedom is not misused; Indulgence in addictive drink during festivals should be avoided; teachers in school should allocate a certain period in a week for talking to students on the hazards of drug addiction. Posters and messages in society, notice boards of residential buildings can be effective.

iii. ***Legal control:*** Law enforcing agency at all levels (police, judiciary, etc.) should be committed and more vigilant.

Alcohol Related Disorders

History

The word *'Alcoholism'* was first used by ***Magnus Huss.*** The word alcohol has been derived from the Arabic word *'Alkuhl'* meaning *"**essence**"*.

Beverages differ according to the sugar source: ***Wine*** comes from grapes; ***beer*** comes from grain and hops; ***whisky*** from grain and corn while ***rum*** comes from sugarcane and ***vodka*** from potatoes and grain.

Prevalence

In India, the different drug abuse surveys have shown the prevalence of alcoholism as *5 to 20%*. There are more than *100 million* users of alcohol in the United States. Out of this, *12–15 million* experience episodes of abusive use of alcohol and are labelled alcoholics.

Pathogenesis

There are three distinct phases in alcohol dependence:

a. ***The pre-alcoholic symptomatic phase*:** The candidate for alcoholism starts out drinking in conventional social situations but soon experiences, a rewarding relief from tension. Gradually, the tolerance for tension decreases to such an extent that he resorts to alcohol almost daily.

b. ***The prodromal phase:*** This phase is marked by the sudden onset of blackouts, signs of intoxication and no memory of events.

c. ***The crucial phase:*** This stage is characterized by the loss of control over drinking, increased isolation and to further centering of his behaviour around alcohol, decrease in sexual drive.

d. ***The chronic phase:*** Intoxicated during the anytime on a weekday and marked impairment in thinking process. Alcoholic psychoses, such as delirium tremens may occur. Rationalizations begin to fail, vague religious desires begin to develop and become amenable to treatment.

Clinical Types

A. **Type I and type II** (on the basis of genetic and environmental factors).

B. **Jellineck's classification** (5 types on the basis of pattern of use not severity).

1. ***Alpha alcoholism:*** Excessive inappropriate drinking; no loss of control; presence of ability to abstain.
2. ***Beta alcoholism:*** Excessive inappropriate drinking; no clear physical or psychological dependence; physical complications (e.g. cirrhosis, neuritis, gastritis etc.) present.

3. ***Gamma alcoholism (malignant alcoholism):*** Physical dependence; tolerance; loss of control; progressive course.
4. ***Delta alcoholism:*** Inability to abstain but quality can be controlled: tolerance; withdrawal symptoms; common in wine consuming countries.
5. ***Epsilon alcoholism:*** Intermittent or spree drinking; convention drinking; dipsomania or compulsive drinking

Early Warnings

Increased consumption, frequent desire, extreme behaviour (performing acts under the influence of alcohol which leave him guilty and embarrassed the next day). "Pulling blanks" and morning drinking.

Identifying the Alcoholic

The features which indicate the presence of a drinking problem are—red palms (palmar erythema), cigarette burns between the index and middle fingers (acne rosacea), and weakness in the feet and legs, upper abdominal pain (gastritis/pancreatitis/alcoholic cirrhosis), arcus senilis and abnormal liver function tests (e.g. increased gamma glutamyl transpeptidase in more than half of alcoholics).

Causes of Alcoholism

a. ***Biological factors:*** Alcoholism runs in families. Children of alcoholics become alcoholic about 4 times more often than those of non-alcholics while over 40 percent had a parent—usually the father—who is an alcoholic. Many research studies have developed the concept of *"**familial alcoholism**"* which differs from non-familial alcoholism that there is always a family history of alcoholism, it develops at an early age and is severe, often requiring treatment.
b. ***Biochemical factors:*** A genetically determined deficiency of brain neurotransmitters (endorphins) predisposes an individual to alcoholism.
c. ***Psychological and interpersonal factors:*** Discussed earlier in this chapter.

Complications

Alcohol has been associated with over half of the deaths and major injuries suffered in automobile accidents each year and with about 50 percent of all murders, 40 percent of all assaults, 35 percent or more of all rapes and 30 percent of all suicides.

Medical Complications

i. ***Acute or short term effects:*** Nervous system depression, decreased efficiency of heart pancreatitis, gastric ulcer, cirrhosis and decreased immunity.
ii. ***Long-term effects:*** Korsakoff's psychosis, Wernicke's syndrome, dementia, personality disintegration, polyneuritis, hematemesis Marchiafava's syndrome (demyelination of corpus callosum and optic tract), central pontine myelinosis pancreatitis, cirrhosis, hepatitis, liver failure, cardiomyopathies, myopathies, ***Silvestrini Corda syndrome*** (cirrhosis, testicular atrophy and breast enlargement), skin diseases (eczema, dermatitis, seborrhoea, Acne rosacea, furunculosis or hair infection)

Psychological Complications

Anxiety, depression, paranoia, morbid jealousy (against relative, office colleagues, friends) and organic mental disorders (intoxication, amnestic disorder ('Black outs'), Wernicke-Korsakoff syndrome; idiosyncratic intoxication, withdrawal, withdrawal seizures ('Rum fits'), withdrawal delirium tremens; chronic alcoholic hallucinosis and dementia (refer to Table 6.4).

Social Complications

Increased frequency of accidents, job troubles, marital separation and divorce, increased crime rate, financial problems, etc.

Effects on Pregnancy

Maternal alcohol misuse can lead to ***fetal alcohol syndrome*** consisting of growth retardation before and after birth, abnormal features of the face and head (such as small head circumference and/or flattening of facial features); and incidence of central nervous abnormalities such as mental retardation and abnormal behaviour.

Assessment in Alcoholism

Certain laboratory markers of alcohol dependence have been suggested. These include:

i. GGT (γ-glutamyl-transferase) is raised to about 40 IU/L in 80% of alcohol dependent individuals. GGT returns to normal rapidly (within 48 hours) on abstinence from alcohol. An increase of GGT of more than 50% in an abstinent individual signifies a resumption of heavy drinking.
ii. MCV (mean corpuscular volume) is more than 92 fl (normal – 80–90 fl) in 60% of alcohol dependent individuals, MVC taken several weeks to return to normal after abstinence.
iii. Other lab markers include alkaline phosphatase, AST, ALT, uric acid, blood triglycerides and CPK.

GGT and MCV together can identify 3 out of 4 problem drinkers. In addition, BAC (blood alcohol concentration) and breath analyzer can be used for the purpose of identification.

For detection of problem drinkers in the community, several screening instruments are available. MAST (Michigan Alcoholism Screening Test) is frequently used for this purpose, while CAGE questionnaire is the easiest to be administered (it takes only about 1–2 minutes).

Management

a. ***Treatment of withdrawal:*** In the absence of serious medical complications, the alcohol withdrawal syndrome is usually transient and self limited; insomnia and irritability may persist for longer periods which require minor tranquilizers (diazepam, etc).
b. ***Treatment of alcoholism:*** The key objective of a treatment programme is the recovery of the alcoholic, his physical rehabilitation, his control over the craving for liquor and his abstinence from drinking.

Table 6.4: Alcohol-induced organic mental disorders

Disorder	*Time of onset*	*Features*	*Complications*	*Differential diagnosis*	*Management*
I. Alcoholic intoxication	1–24 hours; depends on amount & type of alcoholic beverage taken; how rapidly it was ingested, amount absorbed over time, tolerance of individual	Maladaptive behaviour, Physiological, signs (slurred speech, incoordination, unsteady gait, nystagmus, flushed face), psychological signs (mood change, irritability, loquacity, impaired attention), coma, death (common at blood levels—*100–200 mg percent*)	Accidents, criminal act, suicides, physical complication (fracture), suppressed immunity	Intoxication with barbiturates or sedatohypnotics Neurological diseases (multiple sclerosis) alcohol idiosyncratic reation	Protective environment Hemodialysis in fatal overdoses.
II. Alcohol indiosyncratic intoxication (pathological intoxication)	A few minutes to few hours; low doses of alcohol insufficient to induce intoxication in most cases.	Aggressive or Assaultiv behaviour, amnesia subsequently.	Homicide, suicide or assaultive behaviour	Barbiturates and other drugs intoxication Temporal lobe epilepsy Malingering	Improves with time; protective environment
III. Alcohol amnestic disorder ("black outs")	Few months to few years	Amnestic syndrome (peripheral neuropathy, cerebellar artaxia, myopathy) Wernicke's Encephalopathy.	Impairment in social and occupational functioning	Dementia associated wth alcohol Other causes of amnestic syndrome	Therapeutic doses of thiamine for prolonged period
IV. Alcohol withdrawal delirium tremens	Gradual onset (48–72 hours; peak 4–5 days) may last several weeks	Delirium, autonomic hyperactivity, delusions, hallucinations coarse irregular tremor, seizures, no clouding	Injuries, agitation, fits, amnestic syndrome, dementia	Functional psychoses delirium due to other causes Dementia factitious disorder major motor seizure due to other cause Hypnosedative withdrawal	Chlordiazepoxide detoxification, haloperidol (2–5 mg BD for psychotic symptoms)

(Contd...)

Table 6.4: Alcohol-induced organic mental disorders *(Contd...)*

Disorder	*Time of Onset*	*Features*	*Complications*	*Differential diagnosis*	*Management*
V. Alcohol withdrawal seizures (rum fits)	6–48 hours (peak-24 hours)	Fits, delirium, automatic signs, coma, death, (hypomagnesemia, hypoglycemia, respiratory alkalosis)	Injuries, anxiety attack, delirium, psychoses	Impoves with time;	Diazepam, phenytoin. chlordiazepoxide detoxificaton.
VI. Alcoholic hallucinosis	Within 48 hours (may last several weeks)	Organic hallucinosis (vivid frightening auditory hallucinations), no clouding of consciousness, tremors, seizures, delusions (later on)	Social drinking	Schizophrenia Other drug induced isolated hallucinosis.	Thiamine Haloperidol (2–5 mg BD)
VII. Wernicke's encephatopathy	Abrupt onset; ataxia may precede mental confusion	Encephalopathy, truncal ataxia, ophthalmoplegia, mental confusion	Dementia, Injuries	Neurological disorders	Thiamine (100 mg I/V) $MgSO_4$ (1–2 ml in 50%) prior to glucose loading
VIII. Korsakoff's + thiamine psychosis	Several months	Retrograde amnesia, confabulation	Injuries, dementia	Dementia	Abstinence + Thiamine
IX. Alcohol related dementia	See dementias				

- *Biological measures:* The various drugs are used to control acute withdrawal symptoms, e.g. Buspirone, Alprazolam, Chlordiazepoxide, etc. The other group of drugs used in treatment is to produce aversion or craving for alcoholism. The commonly used drugs are Disulfiram, Emetine, Apomorphine, Baclofen, Acamprosate, Naltrexone etc.

Outcome

The outcome is ***favourable*** when the drinking problem is discovered early, no family history of alcoholism, highly motivated individual, good family or peer support, the individual realizes that he needs help with his drinking and adequate treatment. The results are ***poor*** if there are antisocial traits, low self-esteem, depression, high neuroticism or cognitive impairment.

Sedative, Hypnotic Or Anxiolytic Dependence

See Table 6.5

Stimulants Use Disorder

See Table 6.5

Cocaine Use Disorder

See Table 6.5

Cannabis Use Disorder

Cannabis is the generic name for various preparations of hemp plant (Cannabis sativa, *C. indica*, *C. americana*). The cheapest and least potent grade called ***Bhang,*** is derived from the cut tops of uncultivated plants and has low resin content. Much of the marijuna smoked (in a pipe or a cigarette called joint) in the United States is of this grade. ***Ganja,*** the second grade, is obtained from the flowering tops and leaves of carefully selected cultivated plants, and it has a higher quality and quantity of resin than bhang. The third and highest grade called ***charas*** in India, is largely made from the resin itself, obtained from the tops of mature plants; only this version is properly called ***hashish***.

The most important of these active gradients is 9 tetrahydrocannabinol (THC). (15–40% in hashish, 8–14% in hashish/charas, 1–2% in Ganja and 1% in bhang).

Prevalence

In 2019/20, 30% of population have consumed Cannabis at some point in the UK. An estimated 48.2 million (or 18%) people smoke marijuana in the USA in 2019. 30–50 percent of all high school students had made marijuana an accepted part of life. Many areas in Himachal Pradesh, Kashmir, Rajasthan, Punjab, etc. are under the effect of cannabis.

Effects

The symptoms of intoxication and withdrawal are given in Table 6.5.

An important early clinical account of cannabis experience was written by a psychiatrist named ***Bromberg,*** in 1934, on the basis of personal experience and talks with people while they were under the influence of the drug.

For adverse effects, management—see Table 6.5.

Table 6.5: Clinical features of psychoactive substance use disorders

Substance	*Symptoms of intoxication*	*Complications*	*Withdrawal symptoms*	*Management*
I. ***Sedative, hypnotic, anxiolytics*** (Barbiturates, benzodiazepines, chloral hydrate)	Disinhibition of sexual or aggressive impulse, mood lability, impaired judgement, impaired social or occupational functioning). Slurred speech, incoordination, unsteady gait, impairment in attention or memory, hyperalgesia, hypothermia	Deficits in memory, concentration, motorness, coordination, Respiratory depression, accidents, suicide, coma, death	Nausea, vomiting, weak-anxiety, irritability, orthostatic hypotension, coarse tremors of hand, tongue or eyelids. marked insomnia, Grandmal seizures, hyperreflexia, delirium	*Intoxication* Emesis, airway maintenance, correct hypovolemia, forced alkaline diuresis or hemodialysis; Flumazenil (I.V. 0.3–1.0 mg/d), oral-100–200 mg/d for benzodiazepine intoxication (S/E nausea, dizziness, headache, withdrawal seizure of arrhythmias) *Withdrawal* Phenobarbitone (200–1200 mg) depending on degree of tolerance (not given if it is minimum) or diazepam (15–25 mg QID) decrease by 10% per day
II. ***Amphetamine or related sympathomimetic*** (Pemoline, methylphenidate)	Maladaptive behaviour (fighting, grandiosity, hypervigilance, agitation, impaired judgement and functioning) tachycardia, mydriasis, increase in BP, perspiration or chills, nausea or vomiting, flushing, insomnia, hyperthermia, delusions, paranoia, hallucinations, mania, seizures, exhaustion, , coma, arrhythmias	Seizures, arrythmias, delirium, schizophrenia or mania-like aggressive behaviour, exhaustion, coma	Somnolence, nightmares, fatigue, lassitude, Increased appetite, agitation, depression, irritability, anxiety, suicide	*Intoxication*. Phentolamine (for hypertension and hyperthermia) Haloperiodol (to counteract psychiatric symptoms) or benodiazepines Mazindol and flupenthixol to reduce crawing *Withdrawal*—antidepressents, hospitalization

(Contd...)

Table 6.5: Clinical features of psychoactive substance use disorders *(Contd...)*

Substance	*Symptoms of intoxication*	*Complications*	*Withdrawal symptoms*	*Management*
III. *Cocaine* ("Crash") (Source—erythroxylon coca) (coca, coca paste, cocaine HCl, Free alkaloid)	Maladaptive behaviour, (euphoria, fighting, grandiosity, hypervigilance, agitation, impaired judgement and functioning), tachycardia, mydriasis, increased BP, perspiration or chills, nausea, vomiting, visual or tactile hallucinations (*"**cocaine bugs**"*) or ***Magnan's symptoms,*** delusional disorder.	Nasal septal necrosis, oral numbness, malnutrition, I/V use leads to endocarditis, septicemia, hepatitis, AIDs, vasculitis, seizures, arrhythmias	Fatigue, insomnia or hypersomnia, agitation, anxiety, irritability, depression; physical dependence not seen	*Intoxication* amylnitrite is antidote, or diazepam or propranolol (agitation), haloperidol (psychosis), Psychotherapy, behaviour therapy mazindol, fluphenthixol to reduce craving *withdrawal* Imipramine or amitriptyline (to treat 'cocaine bugs') psychotherapy
IV. *Cannabis* (Bhang (***Charas/Hashish***) (Resinous exteude from flavering tops of cultivated ***Ganja*** (Small leaves and brackets of inflorescence of highly ***Bhang*** (Dried leaves, flavering shoots and cut tops of uncultivated plants. Hash oil (liquid soluble plant extract)	Maladaptive behaviour (euphoria, anxiety, suspiciousness or paranoid ideation, sensation of slowed time, impaired judgement, motivation), Conjunctival injection, increased appetite, dry mouth, tachycardia, vivid hallucinations, headache, GIT distress, impaired memory	*Hemp insanity* (Psychosis resembling paranoid state), Pathological intoxication (*'bad trips'* resembling delirium) *Amotivational syndrome,* depression, cerebral atrophy, decreased libido, teratogenic, Immunosuppression	Max. in first 72–96 hours. Increased salivation, tremors in hands, hyperthermia increased intraocular press and temperature, hyperactivitiy, Insomnia, decreased appetite, loss of weight, sweating, chills, restlessness, nausea, muscle spasms	*Intoxication* reassurance and support, anxiolytics or neuroleptics, family therapy. *Withdrawal* reassurance, diazepam (sometimes)
V. *Opioids* (*Natural:* Morphine, codeine, noscapine, thebaine, papaverine) *synthetic:* Heroin, nalorphine, pethidine (Mepheridine),	Maladaptive behaviour (initial euphoria (*"Rush"*), apathy, dysphoria, psychomotor retardation, impaired judgement and functioning), miosis, drowsiness, slurred	CNS complications, (degenerative changes, dementia, neuropathy, personality change), I/V use—endocarditis, pulmonary embolism,	Peak 24–48 hours Craving, yawning, nausea, vomiting, muscle cramps, lacrimation, rhinorrhea, mydriasis,	*Intoxication* Reassurance + Drugs naloxone *Withdrawal* Methadone (20–40 mg/d), Clonidine (0.1–0.3 mg), Naltrexone (50–150 mg/d),

(Contd...)

Table 6.5: Clinical features of psychoactive substance use disorders *(Contd...)*

Substance	*Symptoms of intoxication*	*Complications*	*Withdrawal symptoms*	*Management*
Dextropropoxyphene, Methdone, Hydramorphine, Cyclozocine, Levallorghan, Diphenoxylate)	speech, impaired attention and memory, itching, seizures, pulmonary edema	septicemia, hepatitis, AIDS, immunosuppression, ulceration, coma, death	sweating, piloerection, diarrhea, fever, insomnia, pulmonary edema	Buprenorphine (0.6–3 mg/d) lofexidine, guanabenz, etc.
VI. *Hallucinogens* (LSD, Mescaline, Psilocybin, Phencyclidine)	Maladaptive behaviour (marked anxiety or depression, ideas of reference, fear of losing one's mind, paranoid ideation, impaired judgement and functioning). Perceptual changes (illusions, hallucinations, decrelisation, depersonalization, synesthesias), Mydriasis, tachycardia, sweating, palpitations, blurring vision, tremors, incoordination	Psychosis (delusional disorder) anxiety, mania or depression, *flashbacks,* amotivation, Parkinsonism	*Flashback* (brief experiences of the hallucinogenic state)	*Intoxication* ('bad trips'), reassurance, sedation diazepam or haloperidol *withdrawal* reassurance benzodiazepines.
VII. *Inhalants* (acetone, gasoline, glue)	Maladaptive behaviour (Belligerence, assaultiveness, apathy, impaired judgement and functioning), dizziness, nystagmus, incoordination, slurred speech, unsteady gait, lethargy, depressed reflexes, retardation, tremor, muscle weakness, diplopia, coma, euphoria	Brain damage, learning disabilities, behavioural changes, cardiac arrhythmias, respiratory depression, accidents	Anxiety, depression	*Intoxication* reassurance, diazepam. *Withdrawal* reassurance

(Contd...)

Table 6.5: Clinical features of psychoactive substance use disorders *(Contd...)*

Substance	*Symptoms of intoxication*	*Complications*	*Withdrawal symptoms*	*Management*
VIII. *Nicotine*	Mild anxiety, subtle guilt; abdominal pain, respiratory symptoms, nausea, vomiting, diarrhea salivation, headache, mental confusion, palpitations, sensory disturbance.	*Physical* (emphysema, bronchogenic carcinoma, peptic ulcer, gastric cancer, liver cancer, heart disease, cancer oropharynx) and *Psychological* (anxiety, depression, dementia, increased metabolism of drug, insomnia)	Irritability, restlessness dullness, sleep and GIT disturbances, headache impaired concentration, anxiety, increased appetite, "decreased" pulse rate, BP, reduced performance, muscle cramps, weight gain	*Intoxication* Accurate information, reassurance, caffeinated drinks (to increase excretion). *Withdrawal* behaviour therapy (relaxation techniques, hypnosis, aversion, occasionally nicotine gums, sprays). Bupropion may be used to control craving
IX. *Caffeine* (coffee, tea, cola drinks, coca, chocolate)	Restlessness, nervousness, excitement, insomnia, flushed face, diuresis, GIT disturbance, muscle twitching, rambling flow of thought and speech, tachycardia, cardiac arrythymias, agitation, inexhaustibility	Gastritis, peptic ulcer, hematemesis, diarrhoea, fever, cardiac or renal damage, restless legs syndrome, fibrocystic disease of breast and impaired fetal development	Within 24–48 hours generalized weakness, lethargy, headache, drowsiness, rhinorrhoea, disinclination to work, irritability, nervousness, depression, nausea, yawning	*Intoxication* reassurance, family therapy, benzodiazepines or propranolol *Withdrawal* decaffeinated beverages, behaviour modification, anxiolytics

Opioids Use Disorder

Epidemiology

In India, not only the number of addicts, increasing but also more and more younger people, coming from all socioeconomic strata are involved. The exact prevalence is not known.

There are seven countries which produce most of the world's illicit opium. These are Iran, Afghanistan and Pakistan in South West Asia (***"The Golden Crescent"***), Burma, Laos and Thailand in the South East Asia (***"The Golden Triangle"***) and Mexico.

Hallucinogens

Inhalants

Nicotine and

Caffeine use disorder

See Table 6.5

Review Questions

1. Define
   a. Drug abuse
   b. Drug dependence
   c. Tolerance
   d. Addiction and withdrawal.
2. Describe the predisposing factors and complications of drug abuse. What are various laboratory methologies used in the evaluation of suspected illicit drug abuse?
3. Who coined the word 'Alcoholism'? Describe the pathogenesis and early warning signs of alchol dependence.
4. Name some misconceptions about causes of alcohol dependence and mention its important complications.
5. What are the alcohol-induced and alcohol withdrawal syndromes? How does alcohol affect the pregnancy?
6. Write short notes on
   a. Bezodiazepine withdrawal syndrome
   b. Amphetamine induced psychosis
   c. Cannabis induced complications
   d. Amotivation syndrome
   e. Caffeinism
   f. Opioid receptors
   g. Golden triangle and golden crescent
7. Mention some opiates which are abused. Describe the opiate withdrawal syndrome and its management.
8. What are the medical uses of cannabis? Describe its short term and long term complications.
9. What are adverse complications of nicotine (tobacco use)?
10. How will you manage a drugaddict? What are the steps important for the prevention of drug abuse?