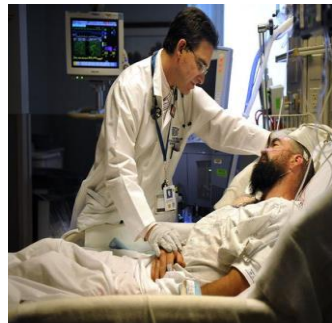


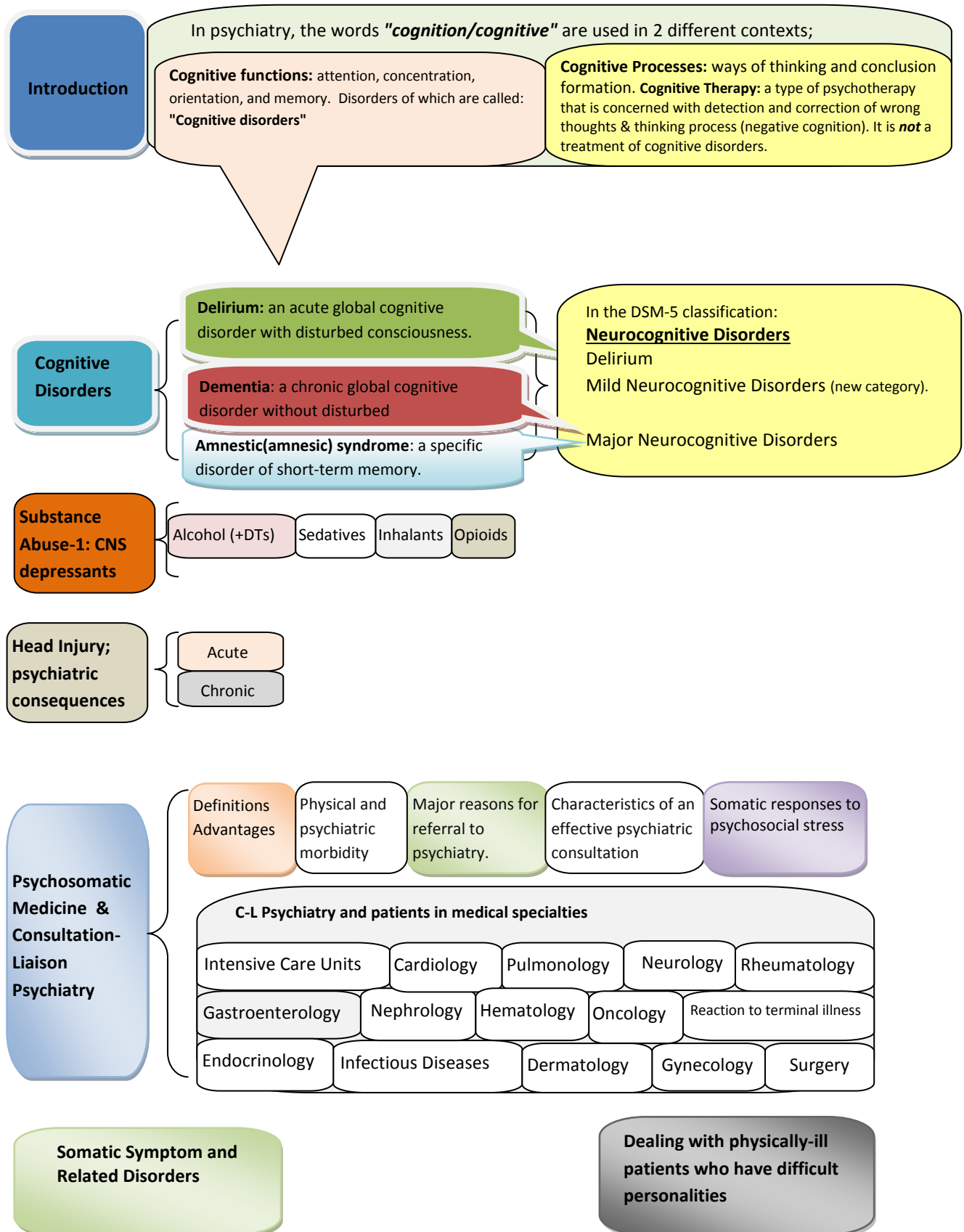
Neuro- Cognitive Disorders

Psychosomatic Medicine.

C-L Psychiatry.

**Somatic Symptom and
Related Disorders.**





(الهذيان - الهذاء) Delirium

Mr. Saleem is a 75-year-old man was brought to the Emergency Department by his sons because of 3 days history of fluctuating consciousness, disorientation, disturbed perception, speech, thinking, and behavior. Recently he developed fever and urinary incontinence.



★ **Definition:** Acute transient reversible global cognitive impairment with impaired consciousness due to a medical problem.

Epidemiology: It may occur in anyone at any age but more in elderly and children. The highest rate of delirium is found in post-cardiotomy patients > 80 %. In ICU 30%, post burn patients 20%, & among hospitalized patients about 10 %. **Delirium is under-diagnosed especially when patient is hypoactive, somnolent, or with minimal features. Such cases may be misdiagnosed as depression.**

★ **Diagnostic criteria (simplified):**

- A. Consciousness is disturbed (i.e., awareness of the environment is impaired but patient is not in coma).
- B. Cognitive functions are impaired + / - perceptual disturbances (illusions or hallucinations).
- C. Acute onset with fluctuating symptoms (within hours during the day) & transient course (few days).
- D. Caused by a physical problem (e.g. hypoxia, hypoglycemia, infection...others see causes).

Mnemonic

Acute Co Co Cause

Clinical Assessment: see p 6 , p 15-16.

[youtube.com/watch?v=IJH1Ao](https://www.youtube.com/watch?v=IJH1Ao)

★ Dr., is delirium a serious condition & why?



Yes, Ali. It is a very serious medical & psychiatric condition due to high risks of:

1-Death (b/o the serious nature of the associated medical conditions) 2- Suicide 3- Violence 4- Impaired judgment & 5- Psychosis.



★ Dr., why does a delirious patient become suicidal or aggressive?!



Due to the severe disturbance in the patient's perception, mood, thinking, and behavior. Patient may act on hallucinations, illusions or delusional thoughts as if they were genuine dangers (e.g., blood extraction by a nurse might be perceived as an attack). However, the clinical presentation differs from patient to patient. Some patients may be excessively somnolent, and some may fluctuate from one state to the other, usually restless at night and sleepy during the day with lucid intervals.




Mr. Saleem showed difficulty focusing, sustaining, and shifting attention. He was not cooperative during physical & mental status examinations. He was agitated, shouting, and tried to pull out his intravenous lines.

Is there a specific diagnostic investigation for delirium?



No, it is a bedside clinical diagnosis. Thus, good clinical skills are essential:
A. History: acute onset + medical disease + consciousness & cognitive disturbances (See definition & p 6).
B. MSE; proper assessment of mental functions (see p 15, 16).






Ali, what are the common causes of delirium?

Etiology

- **Infections:** e.g. UTI, chest infection, encephalitis, septicemia.
- **Medications** (side effects[e.g. NMS]/interaction/multiple Rx).
- **Metabolic & electrolyte disturbances.**
- **Endocrinopathies** (e.g. hypoglycemia).
- **Hypoxia;** cardiac or respiratory failure.
- **Renal failure;** uremia.
- **Hepatic failure;** encephalopathy.
- **CNS:** seizure / head trauma/substance abuse (intoxication or withdrawal).

Regardless of the cause, the presentation is similar.

Inf me me ends hypoxia Renal Hepatic CNS



Important Risk Factors that Predispose Patients to Delirium:

Age ≥ 70 years , Fever
DM - HTN- COPD-
Organ failure.

Past history of delirium. Current history of dementia,
substance abuse, or multiple medications (esp. those
with anticholinergic side effects).

Investigations :

Blood: CBC + differential WBCs. Blood chemistries (including electrolytes, renal and hepatic indexes, and glucose). Blood culture. Blood drug screen. Thyroid function tests. CPK

Urine: Urinalysis.
Culture & sensitivity.
Urine drug screen.

Additional tests when indicated:
Chest XR./ ECG./ EEG. / brain scan (CT or MRI).
Lumbar puncture and CSF examination.

Mr. Saleem's history revealed memory deterioration and time disorientation over the past 5 years.

Differential Diagnosis (DDx):

1. Dementia :

	Delirium	Dementia
Onset	Acute	Gradual /insidious (except for vascular dementia caused by stroke).
Consciousness	Impaired	Intact
Course	Fluctuates /transient /clears within 7-10 days	Chronic /deteriorating

Occasionally, delirium occurs in a patient with dementia, a condition known as **beclouded dementia**. However, a dual diagnosis (i.e. dementia and delirium) can only be made when there is a definite history of preexisting dementia (see dementia later in this chapter).

2. **Substance abuse**; alcohol, inhalants, sedatives, and opioids. (see **later**).
3. **Amnesic syndrome** (see **later**).
4. **Acute functional psychosis** (brief psychosis, mania, and exacerbation of schizophrenia or schizoaffective disorder): patients usually experience no change in their level of consciousness or in their orientation. The hallucinations and delusions are more constant and better organized than those of patients with delirium.
5. **Severe Depression** : patients with hypoactive symptoms of delirium may appear somewhat similar to severely depressed patients, but they can be distinguished on the basis of an EEG (normal in depression). When these delirious patients are treated with tricyclic antidepressants (TCAs), there cognitive functions deteriorate further because of the anticholinergic effect of (TCAs).

★ **Treatment:** (It should be in a well-equipped medical rather than a psychiatric ward).

1. The cause should be searched for and treated properly, e.g. ensure electrolyte balances, enough oxygen, nutrition, and hydration. The referring physician should do this task.
2. Control mental and physical disturbance with antipsychotics e.g. haloperidol (1mg oral, IV, or IM) or Olanzapine (5mg oral or IM) 2- 3 times/day. Intramuscular administration may be preferable for some patients with delirium who are poorly compliant with oral medications or who are too sedated to safely swallow tablets.
3. Limit benzodiazepines (or give with extreme caution) because their effects may increase disorientation, drowsiness and ataxia with possible falls, head trauma and fractures.
4. Keep the patient in a quiet, well lit-room; avoid over and under stimulation. Frequently reorient, reassure and explain procedures clearly to the patient.

Types of delirium (Meagher 1996):

Hyperactive (30%)	Hypoactive (24%)	Mixed (46%)
The most clear and least controversial.	The most difficult type to identify. A large percentage of these patients are inappropriately diagnosed and treated as depressed. Classically, these patients present with symptoms that are commonly associated with depression (lethargy, apathy, decreased level of alertness, psychomotor retardation, and decreased speech production)	The classic waxing and waning pattern. Commonly seen in surgical patients (agitated at times, with alternating episodes of hypoactivity).

Course and Prognosis: The course is usually short (7-10 days). However, the symptoms of delirium usually persist as long as the causally relevant factors are present. The longer the patient has been delirious and the older the patient, the longer the delirium takes to resolve. Delirium may spontaneously clear or progress rapidly into dementia or into death; because of the serious nature of the associated medical conditions. When treated, it usually resolves rapidly. However, some residual deficit may persist. It is sometimes followed by depression. Patients may have another episode later in their life.

Neurocognitive Disorders (DSM-5)

1.Delirium : The criteria for delirium have been updated and clarified on the basis of currently available evidence.

2.Mild Neurocognitive Disorder : it describes a less severe & less disabling level of cognitive impairment that requires compensatory strategies and accommodations to help maintain independence and perform activities of daily living. To be diagnosed with this disorder, there must be changes that impact cognitive functioning. These symptoms are usually observed by the individual, a close relative, or other knowledgeable informant, such as a friend, colleague, or clinician, or they are detected through objective testing. This diagnostic category provides an opportunity for early detection and treatment of cognitive decline before patients' deficits become more pronounced and progress to **major neurocognitive disorder** (dementia) or other debilitating conditions. Its inclusion in the manual will help clinicians develop effective treatment plans as well as encourage researchers to evaluate diagnostic criteria and potential therapies. Recent studies suggest that identifying mild neurocognitive disorder as early as possible may allow interventions to be more effective. Early intervention efforts may enable the use of treatments that are not effective at more severe levels of impairment and may prevent or slow progression.

3.Major Neurocognitive Disorder: it includes dementia and amnestic disorder. However, the term *dementia* can be used in the etiological subtypes. An updated listing of neurocognitive domains is also provided in DSM-5, as these are necessary for establishing the presence of NCD, distinguishing between the major and mild levels of impairment, and differentiating among etiological subtypes.

(الخراف) Dementia



Aminah is a 73-year-old diabetic woman noticed to show a gradual loss of social skills, a decreased range of interest, multiple somatic complaints, and memory impairment.

Definition: a progressive impairment of cognitive functions occurring in clear consciousness.

Epidemiology: The prevalence of moderate to severe dementia in the general population is 5 % > 65 years, 20- 40 % in > 85 years of age. In outpatient general medical practices, it is 15 - 20 %, and 50 % in chronic care facilities.

Affective symptoms, including depression and anxiety, are seen in 40 to 50% of demented patients. Delusions and hallucinations occur in 30%.

Features: The essential feature is a loss of intellectual abilities of sufficient severity to interfere with social or occupational functioning or both.

In early stages	In late stages
<p><i>Cognitive impairment may not be apparent.</i></p> <p>Features include :</p> <ul style="list-style-type: none"> - Mild <u>memory impairment</u>. - <u>Subtle changes in personality</u>. - A decrease in the range of interest and enthusiasm. - <u>Shallow affect, lability of affect, and agitation</u>. - Multiple <u>somatic complaints</u> and vague psychiatric symptoms. - A gradual loss of <u>social and intellectual skills</u> (first noticed in work setting where high performance is required). 	<p><i>Cognitive disturbances emerge:</i></p> <ul style="list-style-type: none"> -Increasing <u>memory impairment</u> (esp. recent memory). -<u>Attention impairment</u>. -<u>Disorientation</u>: particularly to time, and when severe to place and person. -<u>Language</u>: vague and imprecise speech with inappropriate repetition of the same thoughts (perseveration). -<u>Impaired judgment</u>. -<u>Potential aggression</u> (verbal & physical). -<u>Psychotic features</u>: hallucinations and delusions. - <u>Emotional lability</u>. - <u>Catastrophic reaction</u> marked by agitation secondary to the subjective awareness of intellectual deficits under stressful circumstances. <p>Sundowner Syndrome Drowsiness, confusion, ataxia, and accidental falls. It occurs in demented patients when external stimuli, such as light and interpersonal orienting cues, are diminished.</p>

Clinical Assessment: see p 6 , p 15-16.

[youtube.com/watch?v=uAlkCMfTASQ](https://www.youtube.com/watch?v=uAlkCMfTASQ)

[youtube.com/watch?v=_hRBPfDQVI](https://www.youtube.com/watch?v=_hRBPfDQVI)

Causes of dementia:

1. Alzheimer's disease (50 to 60% of dementias): Progressive **downhill** deterioration of intellectual functioning due to a degenerative process affecting the whole cortex, especially cholinergic neurons.

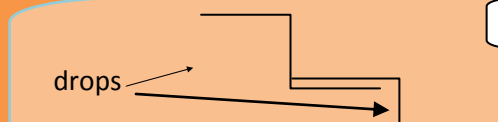
Downhill course



2. Vascular (multi-infarct) dementia (10 to 25% of dementias): Declining **stepwise** deterioration of intellectual functioning due to multiple infarcts of varying sizes or arteriosclerosis in the main intracranial vessels. It usually occurs in patients with hypertension or diabetes. Stepwise course (multiple drops) .
Onset: after stroke, its sudden onset may resemble delirium. Some cases follow a stationary course.

Stepwise course

drops



★ **3. Medical conditions** (reversible conditions; 15% of dementias) e.g., metabolic causes: vitamin deficiency (e.g. B12, folic acid), hypothyroidism, TB affecting CNS.

4. Substance- induced dementia: e.g. alcoholic dementia.

5. Parkinson's Disease: it is a disease of the basal ganglia, commonly associated with dementia and depression. An estimated 20 -30 % of patients with Parkinson's disease have dementia, and an additional 30 - 40 % has measurable impairment in cognitive abilities.

5. Others :

- **Lewy Body Disease:** a dementia clinically similar to Alzheimer's disease and often characterized by hallucinations, parkinsonian features, and extrapyramidal signs. Lewy inclusion bodies are found in the cerebral cortex. The exact incidence is unknown. These patients show marked adverse effects when given antipsychotic medications.
- **Normal pressure hydrocephalus:** Progressive memory impairment, slowness and marked unsteady gait (+ urine incontinence in late stages).
- **Huntington's chorea:** global intellectual impairment with extra pyramidal features.
- *Creutzfeldt–Jakob's disease.* • *AIDS dementia .* • *Pick's disease* (dementia of frontal lobe type).
- **Binswanger's Disease** (also known as subcortical arteriosclerotic encephalopathy): is characterized by the presence of many small infarctions of the white matter that spare the cortical regions .

Dementias are classified as **cortical** and **subcortical** depending on the site of the cerebral lesion. A subcortical dementia occurs in vascular dementia, Parkinson's disease, normal pressure hydrocephalus, Huntington's disease and Wilson's disease. The subcortical dementias are associated with psychomotor retardation, movement disorders, gait incoordination, apathy, and akinetic mutism, which can be confused with catatonia.

Course and Prognosis (depend on the cause). Alzheimer's dementia shows a progressive slow deterioration. The patient may become incontinent of urine and / or stool. Vascular dementia shows stepwise deterioration or stationary course after a massive stroke that is then followed by a good control of the risk factors e.g., HTN, DM ...etc.



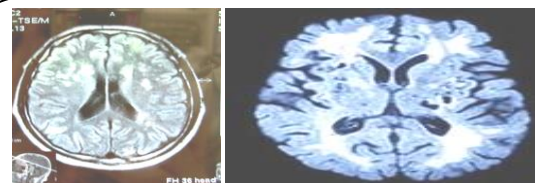
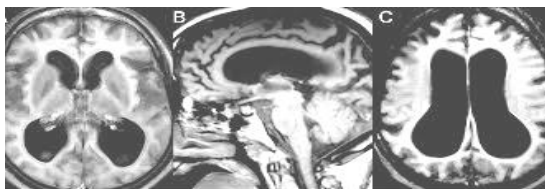
Investigations

Essential workup to confirm dx / exclude treatable causes:
B12 and folate blood levels. Thyroid Function Tests (TSH,T3, T4). Brain CT or MRI.

Alzheimer's dementia :

(cortical atrophy+ wide sulci, gyri, & ventricles).

Vascular dementia: multi-infarcts



DDx

1-Normal aging:

Age-related cognitive decline (the course is not progressively deteriorating), no loss of social or occupational functioning.



2. Pseudo-dementia (Depression in the elderly): cognitive disturbance

is relatively of rapid onset and proceeded by depressive features. Patient is aware of problems & often answers, "I don't know" compared to confabulation in demented patient. The differentiation is sometimes difficult as demented patients may also become depressed as they begin to comprehend their progressive cognitive impairment. EEG and CT scan are normal in pseudo-dementia. See major depressive episode (MDE) later.

3. Delirium: the onset is rapid and consciousness is impaired. See p 28-30.

★ Treatment:

1. **Supportive measures:** A. Provide good meals & hygiene. B. Encourage family's involvement. C. Support the caregiver. D. Keep in familiar settings if possible to avoid accidents, wandering away,...etc.

2. Specific measures:

a. Identify and correct any treatable or controllable condition e.g. : hypothyroidism, vitamin B12 deficiency, hypertension, diabetes.

b. Symptomatic treatment:

Agitation, aggression: small doses of major tranquilizers (e.g. Olanzapine 5mg).

Insomnia: a small dose of major tranquilizers (e.g. olanzapine 5mg) or benzodiazepine (e.g. lorazepam 1mg).

Depression: small doses of antidepressant (e.g. citalopram 10 – 20 mg).

Be aware of possible mental side effects of such medications (over-sedation, risk of falling down - head trauma & fractures- and central anticholinergic activity that may cause delirium).

C. Cognitive-enhancing medications (mainly for Alzheimer's dementia).

I- Cholinesterase Inhibitors :

Donepezil (Aricept): 5 mg at night & can be increased gradually to 10 mg. It is well tolerated (S/E: diarrhea, weight loss, bradycardia, and syncope).



Rivastigmine (Exelon): 1.5 mg twice/day & can be increased gradually to maximum 6mg twice/day (S/E: anorexia, fatigue, somnolence, and dizziness).



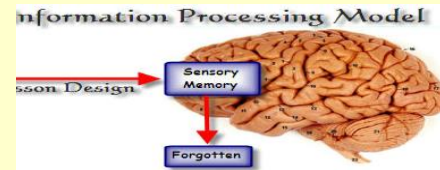
Galantamine (Reminyl): 4mg twice/day, can be increased gradually to 12mg twice/day. (S/E: similar to rivastigmine).

Tacrine (Cognex): rarely used nowadays because of high risk of hepatotoxicity.

II- **Memantine (Ebixa, Abixa, Akatinol,):** an N-methyl-D-aspartate (NMDA) receptor antagonist protects neurons from neurodegenerative process induced by glutamate excitotoxicity. Memantine has been shown to have a modest effect in moderate-to-severe Alzheimer's disease and in dementia with Lewy bodies. It is, in general, well tolerated. Adverse drug reactions include confusion, dizziness, drowsiness, headache, insomnia, agitation, and/or hallucinations. Less common adverse effects include vomiting, anxiety, hypertonia, cystitis, and increased libido.

Amnestic (Amnesic) Syndrome

A 48-year-old alcoholic man displayed significant cognitive and behavioral problems. He had difficulty with learning new information and making appropriate plans.



Definition: impairment in the **short-term memory** (retention of new information; temporal lobe function) due to a specific organic cause, in the absence of generalized intellectual impairment. It leads to social and occupational dysfunctioning. The patient may show confabulation (filling memory gaps with incorrectly retrieved information). The insight is partially impaired.



In contrast to delirium, the **immediate** memory is usually **intact**: i.e. digit span test (frontal lobe function) is normal.

In contrast to dementia, the **remote** memory is **intact**.

Clinical Assessment: see p 15 & 16; memory assessment (normal registration and long term memory but defected short-term recall).

Etiology:

- **Head injury lesions** (hippocampus, posterior hypothalamus and nearby midline structures).

- **Thiamine (B₁) deficiency**, (associated with alcohol abuse, gastric carcinoma, and persistent vomiting). Thiamine is essential for the enzyme transketolase, which is essential for glucose metabolism.

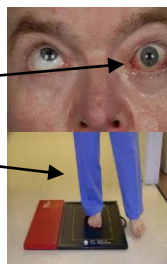
Amnestic Syndrome is most commonly found in alcohol use disorders (*Wernicke – Korsakoff's syndrome*, see below).

Wernicke – Korsakoff's syndrome

It starts as an **acute syndrome** >>>>>> then progresses to>>>> by a **chronic syndrome**.

Wernicke encephalopathy

Ophthalmoplegia.
Ataxia.
Impairment of memory.
Impaired consciousness



Korsakoff's psychosis

Peripheral neuropathy.
Chronic memory defect.
Irritability.

Treatment:

- Identify and reverse the cause if possible.
- Thiamine supply (if due to thiamine deficiency).
- Supportive medical measures; fluids & nutrition.
- (no specific treatment).

Prognosis:

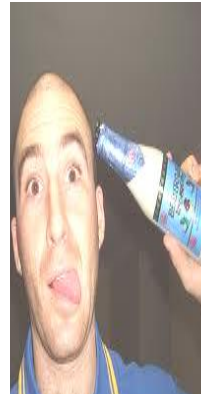
If it is due to thiamine deficiency and thiamine is provided promptly, prognosis is good. Otherwise, the course is usually chronic and may be progressive. Psychiatric symptoms occur with increased frequency in patients with seizures because of underlying brain tissue injury, side effects from anticonvulsant medications, or seizure-specific psychiatric disturbances.

Alcohol Abuse

A 43-year-old entered the hospital for an elective minor surgery. Five hours post surgery; the nursing staff noted an increase in blood pressure to 160/105, a sharp increase in the pulse rate to 120, and a **gross tremor** to both hands. An interview with the wife documented **alcohol abuse**.

Factors associated with high risk of alcohol abuse

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



Alcohol abuse may mean any one of the following specific terms:

Excessive consumption: harmful use.

Problem drinking: drinking that has caused disability, but not dependence.

Alcohol dependence: This usually denotes alcoholism.

Alcohol-related disability: physical, mental and social.

Alcohol is the major substance of abuse all over the world. Mixed abused of alcohol and other substances is very common. Recreational alcohol drinking gradually grades into problem drinking and dependence. Most alcohol abusers go unrecognized by clinicians until their physical health and psychosocial life have been significantly harmed; therefore, early recognition is important. Many people go through prolonged periods (average 15 – 20 years) of gradual dependence on alcohol before clinical symptoms or signs are evident. Alcohol depresses the central nervous system. Clinically, it may appear to be a stimulant because of early disinhibition due to suppression of inhibitory control mechanisms. Alcohol drinking may occur in the late teens but dependence is most common in those aged 40 – 55 years.

Terminology in psychoactive substance abuse:

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

Intoxication: The transient effects (physical and psychological) due to recent substance ingestion, which disappear when the substance is eliminated.

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

Tolerance: The state in which the same amount of a drug produces a decreased effect, so that increasingly larger doses must be administered to obtain the effects observed with the original use.

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

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

Detecting patients with alcohol problems :

It is important to recognize alcohol problems as soon as possible, because treatment is more likely to be successful in early stages of alcohol abuse. Clinician should have high index of suspicion of alcohol abuse in the following circumstances:

1. **High-risk groups** (vide supra).
2. **Psychiatric conditions** associated with alcohol abuse: e.g., memory impairment, sexual dysfunction, and morbid jealousy.
3. **Medical conditions:** GI (nausea, vomiting, gastritis, peptic ulcer, or liver disease) or CNS (headache, sweating, flushing, blackouts, peripheral neuropathy, fits, or repeated falls).
4. **Social conditions:** poor work records, interpersonal problems (with parents, spouse or children), financial stresses, isolated life style.
5. **Legal conditions:** e.g. reckless driving.

The stages of alcohol dependence;

Stage	Comment
1st ; The 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 ; Stage of 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 ; Stage of complications	The chronic stage of alcoholism; physic and mental complications. Trails to stop drinking with repeated failure.

CLINICAL PRESENTATIONS

- Alcohol intoxication:**

Early intoxication includes a sense of well-being, liveliness and a smell of alcohol on the breath, grading into emotional lability, irritability, and incoordination, which grades into apathy, ataxia, and slurred speech. Heavy intoxication (blood alcohol level above 300 mg/ml) can lead to alcoholic coma. Alcohol acute intoxication may mimic many psychiatric conditions (panic attacks, depression, and acute psychosis with delusions +/- hallucinations).

Blood Alcohol levels and Impairment;

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.

When you suspect alcohol abuse, ask the patient clearly about alcohol ingestion and determine the pattern of abuse. Carry out a physical examination for alcohol – related medical complications.

Laboratory test: abnormal high values of gamma glutamyl transpeptidase (GGT) and mean corpuscular volume (MCV) point to the possibility of alcohol abuse.

Complications of Chronic Alcohol Abuse:

Medical	Psychiatric	Social
Neurological Cerebellar degeneration Seizures / head trauma Periphral neuropathy Optic nerve atrophy Alimentary Gastritis, peptic ulcer. Pancreatitis/hepatitis / cirrhosis. Tumors (esophagus, liver..) Others: Cardiomyopathy. Anemia / Obesity. Impotence / Gynecomastia.	<ul style="list-style-type: none"> • amnesic disorder • delirium • dementia • psychosis • depression • reduced sexual desire • insomnia • personality deterioration • increase risk of suicide • morbid jealousy 	<ul style="list-style-type: none"> • social isolation • job loss • marital conflicts • family problems • legal troubles • social stigma • others

Treating Alcohol Intoxicated Patient

The conscious patient:

- Observation, with protective and supportive approach.
- In case of agitation, hyperactivity or risk of violence: restrain the patient and give antipsychotic drugs (e.g. haloperidol 5 – 10 mg im)
- Avoid sedatives because they may potentiate depressant effects of alcohol on CNS.
- Wait for the alcohol to be metabolized.

The unconscious patient:

- Hospitalization is required: protection of the airways, vital signs monitoring, prevention of further loss of body heat, correction of hypovolemia, and forced diuresis with maximal alkalinization of the urine. In extreme situation, hemodialysis is necessary.

Detoxification (Planned Alcohol Withdrawal)

People with alcohol-related disorders usually come to treatment because of fear that continued drinking would have a fatal outcome, or because of pressure from a spouse or an employer. A sudden cessation of drinking may cause severe withdrawal state with serious complications including seizures, delirium tremens or coma. Therefore, detoxification should be carried out under close **medical** supervision.

Long-acting benzodiazepines (e.g. diazepam or chlordiazepoxide) are generally prescribed to reduce withdrawal symptoms because of 1. lower risk of abuse compared to short-acting benzodiazepines & the smooth reduction of the drug levels in the blood (a smooth course of withdrawal).

Benzodiazepines are then gradually discontinued over 2-3 weeks; otherwise, the patient may become dependent on them.

- * Vitamin supplements, especially vitamin B1 (thiamine).
- * Monitoring of vital signs, consciousness and orientation.
- * Good hydration and glucose intake.
- * Anticonvulsants may be used to control seizures.

Maintaining Abstinence:

Disulfiram (anta-abuse) helps those whose drinking pattern is impulsive and who are highly motivated to stop drinking. It blocks the oxidation of alcohol so that acetaldehyde accumulates with consequent unpleasant flushing of the face, choking sensations, headache, nausea, vomiting, tachycardia and anxiety. There is a risk of cardiovascular complications. Therefore, the drug should be used in specialist practice and should not be within 12 hours after the last ingestion of alcohol.

Citrated calcium carbimide is another drug used in maintaining abstinence; it induces a milder reaction with alcohol, and has fewer side effects.

Psychological treatment:

To explore the reasons for drinking, alternative ways are worked out. For instance, instead of using alcohol in social situations to reduced anxiety, learn anxiety management and assertiveness techniques. Provision of information about the hazards of alcohol.

Group therapy: about 7-12 patients and a staff member in a specialist unit attend regular meetings. It provides an opportunity for frank feedback from other members of the group concerning the problems that the patient faces and to work out better ways of coping with their problems.

Alcohol withdrawal:

Occurs in the dependent state, in those who have been drinking heavily for years and who have a high intake of alcohol (**e.g. when patient is admitted into hospital and has no access to alcohol**). The symptoms may begin after six hours of cessation or reduction of alcohol and peak by 48 hours. They follow a drop in blood concentration; characteristically appear on waking from sleep, after the fall in concentration during sleep. The symptoms subside over the course of 5 - 7 days. Epileptic generalized tonic-clonic seizures may develop within 12 - 48 hours after cessation of alcohol intake. Delirium tremens may develop after about 48 hours. The minimal quantity and frequency of alcohol consumption that may lead to physical dependence and withdrawal is not known. Severe withdrawal is more likely with the higher the levels of chronic alcohol consumption (e.g. 150 grams of alcohol per day), but individuals with lower levels can experience severe withdrawal and withdrawal complications. The severity of withdrawal is only moderately predicted by amounts of alcohol consumed. Duration of heavy alcohol use for 6 years or longer increases the odds of developing withdrawal symptoms 15 times.

The stages of alcohol withdrawal syndrome;

Stage	Onset	Features
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, + autonomic hyperactivity of stage 1.
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) , see below.

Delirium Tremens (DTs)

Definition & Criteria: 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: It usually 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 include: **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%.

[youtube.com/watch?v=EosAtSpu1Pw](https://www.youtube.com/watch?v=EosAtSpu1Pw)

Screening for alcohol dependence;

CAGE questionnaire. Ask the patient: "Have you ever;

1. wanted to cut down on your drinking?
 2. felt annoyed by criticism of your drinking?
 3. felt guilty about drinking?
 4. taken a drink as an "eye opener" (to prevent the shakes)?"
- ≥ 2 "yes" answers are considered a positive screen.

One "yes" answer should arouse suspicion of abuse.

Cut Annoyed Guilty Eyes

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).
6. Keep the patient in a quiet, well lit-room; avoid over and under stimulation. Frequently reorient, reassure and explain procedures clearly to the patient.

Abuse of Anxiolytics, Sedatives & Hypnotics.

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



Clonazepam (Rivotril), alprazolam (Xanax) and flunitrazepam (Rohypnol) have become drugs of abuse.

These substances are brain depressants. Like alcohol, they can produce very significant levels of physiological dependence, marked by both tolerance and withdrawal.

- **Intoxication:** Similar to alcohol intoxication, features include:
 - slurred speech -incoordination- unsteady gait- nystagmus / ataxia.
 - impaired attention or memory- stupor or coma.



Abuse of sedative and hypnotic drugs causes clinically significant maladaptive psychological or behavioral changes, e.g. disinhibited behavior.

- **Withdrawal:** Similar to alcohol withdrawal, features include:
 - Autonomic hyperactivity (e.g. sweating, tachycardia).
 - Nausea, vomiting, anorexia.
 - Insomnia.
 - Anxiety / agitation.
 - Perceptual disturbances (e.g. illusions...).
 - Seizures.
 - Delirium.

The timing and severity of the withdrawal syndrome differ depending on the specific substances and its pharmacokinetics and pharmacodynamics. For example, withdrawal from substances with long-acting metabolites (e.g. diazepam) may not begin for 24 - 48 hours or longer; whereas withdrawal from substances with short-acting substances that are rapidly absorbed and have no active metabolites (e.g. triazolam) can begin within 4 - 6 hours after the substance is stopped. Withdrawal can be life-threatening which often requires hospitalization.

These substances are often taken with other brain depressants, like alcohol, which can produce additive serious effects (e.g. respiratory depression). Alcohol and all drugs of this class are cross-tolerant and cross-dependant, i.e., one drug is able to suppress the manifestations of physical dependence produced by another drug and to maintain the physical dependant state.

Despite the risk of dependence, benzodiazepines have less abuse potential than other drugs of this class, a higher therapeutic index, and a wide range of therapeutic indications. Therefore, **a patient should not be deprived of a benzodiazepine drug when it is clinically indicated** (e.g. anxiety, insomnia, akathisia).

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.



Inhalants are volatile organic substances (most are aromatic hydrocarbons) that can be inhaled for psychotropic effects. The active compounds in these inhalants are usually **acetone, benzene or toluene**.

The types of solvents, cleaners, and glues are numerous and include: gasoline, lighter fluids, spray paints, cleaning fluids, glues, typewriter correction fluids, & fingernail polish removers.

These agents generally act as brain depressants (similar to alcohol and sedative hypnotics in their effects). Use of inhalants occurs mainly among adolescents in lower socioeconomic groups, usually as occasional experimentation. This is often a group activity. Inhalants are inexpensive, easily available and legal substances. These factors contribute to the high use of inhalants among people who are poor. People often use inhalants with a partially closed container (e.g. a can), a plastic bag, a tube or an inhalant-soaked cloth through which a user can sniff the volatile substance through the nose, or huff and puff it through the mouth. Therefore, a recent abuse of inhalants can be identified by unusual breath or odor, rashes around the nose and the mouth or the residue on the face, hands or clothing. Other less specific identifying features include irritation of the patient's nose, mouth, eyes and throat. Inhalants are rapidly absorbed through the lungs and delivered, through the blood, to the brain. Their effects usually appear within 5 – 10 minutes and may last for several hours.

Intoxication: symptoms of mild intoxication are similar to intoxication with other brain suppressants (e.g. alcohol).

In small doses, these agents produce the attracting features: euphoria, excitement, pleasant floating sensations, and disinhibition.

High doses can cause: disturbed consciousness, perceptual disturbances, impulsiveness, assaultiveness, impaired judgment, sedation, slurred speech, 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...etc.

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: a full range of biopsychosocial assessment and treatment is needed including physical and psychiatric rehabilitation. There is no specific drug treatment for inhalant abuse, but psychiatric complications (e.g. psychosis, depression) may require drug treatment. Teenagers should receive education and counseling about the general topic of substance abuse.

Abuse of Opioids



A 53-year-old man was referred for psychiatric consultation by his physician who discovered him abusing large quantities of a codeine-containing medicine. He had come into the hospital for a severe abdominal pain which is relieved only by methadone or morphine (he claimed). His condition fluctuates during the day.

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

The pharmacological effects of opiates are mediated through interaction with endogenous opioids (enkephalins, endorphins and dynorphins) and opiate receptors (mu, kappa and delta) which are involved in many mental functions: pain perception (analgesics), mood (feeling of pleasure). The medical use of opioids is mainly for their **powerful analgesic effects**. They are abused for **their powerful euphoriant effects** (especially when taken intravenously).

Opioid Intoxication

Initial Phase: euphoria, analgesia, and relaxation.

Then: apathy, dysphoria, drowsiness, slurred speech, psychomotor retardation (or agitation), disturbed consciousness, impairment in attention, memory, and judgment. Sexual desire diminishes with repeated use.

Opioids effects on the pupils: (Important in the clinical assessment of the degree of opioids intoxication).

Pupillary constriction.



In severe overdose: Pupillary dilatation.



Treatment; in ICU: monitor vital signs, give antidote (**naloxone**) to normalize respiration and to restore consciousness. Open airway - oxygen - IV fluids.



[youtube.com/watch?v=5g9-55XxTIU](https://www.youtube.com/watch?v=5g9-55XxTIU)

Opioid Withdrawal

Features:

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).



Treatment:

Short-term; painkillers, sedatives, & observation. Clonidine can be used to control the release phenomena (sympathetic overactivity, nausea, vomiting and diarrhea).

Long-term; methadone harm reduction strategies: methadone is used as a patch for heroin addicts. It provides a slow, steady delivery that replaces the sharp highs and drops. Thus, it allows addicts to stabilize their cravings that are hard to resist. It can also be taken as syrup once a day. Frequent Counseling.

[youtube.com/watch?v=NaMgdlUcsko](https://www.youtube.com/watch?v=NaMgdlUcsko)

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: AIDS, hepatitis, endocarditis, septicemia.

HEAD INJURY - Neuro-psychiatric Aspects.

Hamad is a 19-year-old male who was involved in a road traffic accident, lost consciousness for 5 days, and remained 3 weeks in the hospital. After discharge, his parents noticed that he became impulsive and aggressive at times.



A. Acute consequences:

1. **Impaired consciousness** in varying duration (hours, days, weeks or months) long duration suggests poor prognosis.
2. **Delirium** (after severe head trauma).
3. **Memory defects** : on recovery of consciousness, defects of memory are usually present.
 - a. **anterograde (post-traumatic) amnesia**: amnesia for events in the time between the trauma and the resumption of normal continuous memory. It is a **good prognostic factor**: probably full recovery when anterograde amnesia was less than 12 hours.
 - b. **retrograde amnesia**: amnesia for events in the time between the trauma and the last clearly recalled memory before the injury. Final duration is frequently less than 1 minute. It is *not* a good predictor of outcome.

Factors affecting the outcome of head trauma:

1. Duration of loss of consciousness.
2. Duration of anterograde (post-traumatic) amnesia.
3. Amount and location of brain damage.
4. Premorbid personality and past psychiatric history.
5. Development of seizures.
6. Medico-legal factors e.g. compensation.

B. Chronic Consequences:

1. **Lasting cognitive impairment**: there is more likelihood of cognitive impairment when the injury has caused a prolonged post traumatic amnesia (of more than 24 hours). Cognitive impairment was particularly associated with parietal and temporal damage, especially on the left side. Recovery of function may be very slow and may continue over the years.
2. **Emotional disturbances**: depressive, anxiety and phobic features are common, and associated with somatic complaints such as headache, fatigue and, dizziness.
3. **Personality changes**:
 - a. There may be irritability, reduced control of aggressive impulses,
 - b. Sexual disinhibition and some coarsening of behavior and premorbid personality traits, particularly after frontal lobe injury.
4. **Psychotic features**: psychotic features related to depression (non-dominant frontal damage). Paranoid Psychosis (temporal lobe damage).
5. **Social consequences**: many patients and their relatives experience severe distress of head injury, and have to make substantial changes in their way of life.
6. **Medico-legal aspects**: compensation issue is more likely to contribute to disability if the patient feels someone else is at fault, financial compensation is possible, low social status and in industrial injury.

Treatment:

A plan for long-term treatment should be made as early as possible after head trauma. The treatment of the cognitive and behavioral disorders is similar to the treatment approaches used in other patients. However, head trauma patients may be particularly susceptible to the side effects associated with antipsychotics; therefore, these drugs should be initiated in lower dosages than usual and should be titrated upward more slowly than usual. Aggression and impulsivity can be treated with anticonvulsants or antipsychotics. Treatment should include physical and psychological rehabilitation to which the clinical psychologist can sometimes contribute behavioral and cognitive techniques. Problems of litigation and compensation should be settled as early as possible. Continuing psychosocial help should be provided to patient and carers, by a special team.

Psychosomatic Medicine & C-L Psychiatry

A 57-year-old man had **stroke** 2 years ago. He then showed low mood, loss of interest, crying spells, difficulty sleeping and death wishes.



A 48-year-old man had developed a **myocardial infarction**. In the coronary care unit, he was tearful, apprehensive, tremulous, and his chest pain symptoms worsened.

There is a unity of mind and body. Thus, psychological factors should be taken into account when considering any medical disease. It is helpful to know and differentiate between the following terms:

Disease : pathophysiological process recognized by physicians. It is **objective** based on biological changes in the body.

Illness: individual's understanding of disease. It is **very subjective** and varies from person to person.

Illness behavior: patient's behavior to adjust to his disease. This can be adaptive (e.g. consulting doctors, accepting to be referred to psychiatrist, taking medications) or non-adaptive (e.g. exaggerating symptoms, refusing medication). Personality factors play a major role in the psychological adjustment to physical diseases.

Illness-denying attitude: a tendency to underestimate physical symptoms and to deny physical diseases. It is a psychological defense against weakness. It may help some patients with certain serious diseases.

Illness-affirmative attitude: a tendency to exaggerate mild physical symptoms and to affirm physical diseases. It can lead to hypochondriasis; excessive concern & preoccupation with physical diseases see later.

Sick Role: socially expected/required role of ill person e.g. exemptions from some responsibilities, the right to seek care and help from others. If sick role continues after the disease is over the sick role is maladaptive.

Doctor - Patient Relationship (There are 4 main approaches / not mutually exclusive):

1.The autocratic (paternalistic) approach: the physician generally dominates the interview (as the doctor knows best) and the patient is expected to comply without questioning. It can of value in certain emergency situations.

2.The informative approach: the physician dispenses information without suggestion or interference and the choice is left to the patient. It may be appropriate for certain one-time consultations.

3.The shared decision approach: the physician is flexible, presents and discusses alternatives with the patient.

4.The deliberative approach: the physician advocates a particular course of action (e.g. how to lose weight).

Physicians as Patients: Physician-patients are usually poor patients, most likely because they are trained to be the masters of the patient-doctor relationship. For a physician, being a patient may mean becoming dependent, and giving up control. They may be embarrassed to ask pertinent questions for fear of appearing incompetent. The treating physician may fear criticism of his or her skills or competence.

Biopsychosocial Model (Engel 1977): It stresses an integrated systems (biological, psychological, and social) approach to human behavior and disease (etiology and management). It encourages a comprehensive understanding of disease and treatment. Each system affects, and is affected by, every other system.

Psychosomatic medicine: It is based upon observation that psychological and sociocultural factors play a role in the predisposition, onset, course and response to treatment of some physiological changes and biomedical disorders.

Liaison Psychiatry: It is the work of a psychiatrist in a general hospital, which covers the area between psychiatry and other branches of medicine where he attends medical ward rounds and other clinical meetings.

Consultation Psychiatry: Each patient, on whom an opinion is sought, is referred to the psychiatrist who may visit the ward at any time. **Consultation-Liaison (C-L) Psychiatry**: is the study, practice, and teaching of the relation between medical and psychiatric disorders. It is associated with all the diagnostic, therapeutic, research and teaching services that psychiatrists perform in the general hospital and serves as a bridge between psychiatry and other specialties. The psychiatrist and physician meet regularly to discuss individual patients and general aspects of patient care. It is not confined solely to psychiatric disorders.

Advantages of consultation-Liaison psychiatric services:

1. Improve the quality of life and the quality of care provided to patients in non-psychiatric wards, e.g. reduce the number of unnecessary investigations performed for physical symptoms that actually reflect underlying psychological distress.
2. Reduce the length of patient's stay in the hospital and the readmission rate. Thus, reducing the cost and increasing the vacancy capacity and bed turnover.

Consultation-liaison psychiatry involves the practical application of all psychiatric knowledge, ideas, skills, and techniques where they may be helpful to non-psychiatrists in the care and understanding of their patients.

Physical and psychiatric morbidity:

There are different types of association between physical and psychiatric morbidity

1. Psychiatric reactions to physical disease (e.g. anxiety provoked by heart disease).
2. Psychiatric disorder presenting with physical symptoms (e.g. dizziness as a feature of anxiety).
3. Psychological factors affect the physical illness through:
 - Prolonging the course (e.g. anxiety may prolong the course of essential hypertension).
 - Maintaining unhealthy habits (e.g. psychoactive substance abuse).
 - Determining whether a person seeks help from a doctor for a physical complaint (e.g. a person may seek medical help for backache when he feels depressed, but not when his mood is normal).
 - Affecting compliance with treatment (e.g. neglecting the oral hypoglycemic agents when depressed).
4. Psychiatric and physical illness occurring together independently (e.g. gallstone and depression). The physical illness may exacerbate psychiatric symptoms.
5. Physical disease presenting with psychiatric features (e.g. psychosis as early presentation of SLE).

The major reasons for referral to psychiatry:

1. The patient has a psychiatric disorder, on psychotropic medications, or has a past history of such.
2. The staff are under strain over the patient because of his behavior is disturbing, demanding, manipulative, or suicidal.
3. Diagnostic uncertainty with suspicion of a psychiatric problem behind the physical symptoms.
4. The patient has asked to see a psychiatrist. However, patients are usually reluctant to see psychiatrist, and families may reinforce this attitude.

Characteristics of an effective psychiatric consultation:

1. Reviewing the patient's chart.
2. Obtaining a good psychiatric history (paying attention to psychological and social factors).
3. Mental State Examination (and Mini – Mental State Examination if cognitive impairment is suspected).
4. Making a logic differential diagnosis among medical, neurological and psychiatric disorders.
5. Arriving at a diagnosis based on clinical features, laboratory investigations, and psychiatric knowledge.
6. Making reasonable treatment recommendations (medications, psychological treatment, etc.).
7. Following the patient during the entire hospitalization and after discharge.

On receiving the request for a consultation, the psychiatrist should make sure that the referring doctor has discussed the psychiatric referral with the patient. Before interviewing the patient, the psychiatrist should read the relevant medical notes and ask the nursing staff about the patient's mental state and behavior. The psychiatrist should know about treatment the patient is receiving. It may be necessary to ask further questions of the ward staff or social worker, to interview relatives and inquire about the patient's social background and any previous psychiatric history. It is often appropriate to discuss the proposed plan of management with the referring team. Nursing staff can help in the management of most brief psychiatric problems that arise in a general hospital.

Somatic responses to psychosocial stress:

Neuroendocrine responses:

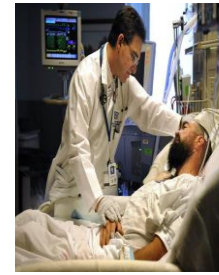
Stress >> autonomic hyperarousal >> secretion of CRF from the hypothalamus >> release of ACTH >> stimulation of adrenal cortex to release glucocorticoids >> "flight or fight" response; increasing cardiovascular activity and promoting energy use.

Neuroimmune responses:

- a- Stress >> glucocorticoids >> inhibition of immunity, reproduction, and growth.
- b- Stress >> norepinephrine release >> immune activation >> release of cytokines (humoral immune factors) >> further release of CRF >> glucocorticoids.

C-L Psychiatry and patients in medical specialties

Intensive Care Units	Cardiology	Pulmonology	Neurology	Rheumatology
Gastroenterology	Nephrology	Hematology	Oncology	Reaction to terminal illness
Endocrinology	Infectious Diseases	Dermatology	Gynecology	Surgery



Depression is significantly associated with a wide variety of chronic physical disorders, including hypertension, cardiovascular disease, stroke, chronic respiratory disorders, diabetes, arthritis, asthma, cancer, and a variety of chronic pain conditions. Depression is a causal risk factor, it leads to an increased prevalence of these physical disorders, with all their associated impairments and increased mortality risk. In physically-ill hospitalized patients depressed mood is common. It can be primary, secondary to, or coexisting with the physical disease. Many medications can induce depression (e.g. antihypertensives, steroids, chemotherapy). Depressive disorders in psychiatric patients will be discussed later (see mood disorders).

Intensive Care Units (ICUs): Patients may experience delirium, depression, or anxiety. ICUs staff members face difficult emotional and physical circumstances e.g. deaths and medical disasters.

Cardiology:

Psychiatric patients may present to cardiology clinic because of 1. Palpitation associated with anxiety or panic attacks 2. Excessive worries about having a hidden serious cardiac disease (hypochondriasis; see later). **Patients with cardiac diseases** may present to psychiatry clinic because of depression as a side effect of medications (e.g. prolonged use of beta-blockers).

Depression is an *independent risk factor* for the development of hypertension (HTN), coronary artery diseases, (CAD) myocardial infarction (MI), & heart failure and for mortality after an acute MI. Mortality rate at 6-month follow-up in depressed post-MI patients (compared to non-depressed post-MI patients) is 4 folds. Research indicate that 15 - 25% of patients with CAD fulfill criteria for major depression.

Pathophysiology:

1. Vasospasm; due to high cortisol levels (hyperactivity of Hypothalamus-Pituitary-Adrenal Axis).
2. Atherosclerosis; Inducing inflammatory process that enhances plaque formation (inflammatory cytokines; Interleukin-6 [IL-6] and C-reactive protein[CRP]).
3. Thrombus formation; platelets activation (increase in pro-coagulant activity & level of binding of anti-ligand-induced binding site -anti-LIBS- antibody to fibrinogen-induced binding sites).
- Depression increases the risk factors of cardiovascular diseases (DM, HTN, smoking, and obesity).

Antidepressants; reduce the risk of cardiovascular diseases in depressed patients.

- Avoid tricyclics (serious conduction side effects, orthostatic hypotension, & drug interactions).
- Selective Serotonin Reuptake Inhibitors (SSRIs); safe and well-tolerated but they might prolong bleeding time, and cause hyponatremia. Paroxetine has some anticholinergic activity. Citalopram 20 mg is a good choice
- Selective Serotonin-Norepinephrine Reuptake Inhibitors (SNRIs); Venlafaxine is well tolerated but in doses > 225 mg it may increase blood pressure (BP) in some persons.

Pulmonology:

Psychiatric patients may present to Pulmonology Clinic because of 1. Shortness of breath associated with anxiety, panic attacks, or as a side effect of beta-blockers, which are frequently prescribed to treat tremor and palpitation. Before starting beta-blockers always enquire about bronchial asthma [BA] (beta-2 receptors dilates bronchioles). Patients with asthma frequently suffer from anxiety symptoms. Among asthmatics, 42% reported anxiety focused on breathing, compared with 20% of COPD patients. Treatment of BA may precipitate anxiety. Obstructive sleep apnea syndrome [OSAS] is a common disorder in the adult population; it is often associated with significant cognitive impairments, depression, and irritability. Heroin addicts may develop respiratory depression (due heroin over dose) and pulmonary emboli from agents added to heroin (i.e., talc) or from septic emboli.

Neurology**# Stroke:**

A- Depression >>> stroke: meta-analysis studies demonstrate that depression is a significant modifiable risk factor for total stroke, fatal stroke, and ischemic stroke (see pathophysiology of depression in cardiovascular diseases). SSRIs increase bleeding tendency by inhibiting platelet aggregation and have been associated with higher risk of further strokes.

B- Stroke >>> depression: stroke may predispose, precipitate or perpetuate depressive disorders (Post-Stroke Depression [PSD]). Depression occurs in nearly 30 % of patients either during acute/chronic stroke period. About 80% of cases are under-diagnosed by non-psychiatric clinicians (due to lack of awareness/experience & diagnosis difficulties; aphasia, dysarthria, cognitive impairment). PSD has been associated with poor social and rehabilitation outcomes, cognitive impairment and increased mortality. About 10% PSD patients face mortality. **DDx:** vascular dementia, post-stroke apathy. **Risk Factors for PSD:** left anterior brain lesion, dysphasia and living alone. However, after 3 years post-stroke, the most important predictor for depression was cerebral atrophy. More evidence is required before recommendations can be made about the routine use of antidepressants to prevent PSD.

Treatment: pharmacologic and rehabilitation strategies are needed to treat PSD. SSRIs (e.g. citalopram) are effective in PSD and dramatically reduce the symptom of crying (but there is a risk of bleeding tendency due to inhibition of platelet aggregation).

Multiple Sclerosis: It is a central nervous system (CNS) demyelinating relapsing and remitting illness. It is chronic, disabling neurologic illness among young and middle age adults. Patients have temporary loss of vision, or dysconjugate gaze. When the spinal cord is attacked, patients typically develop paraparesis. Spinal cord involvement also leads to urinary and sexual dysfunction. Late in the illness, pseudobulbar palsy (sudden, unprovoked fits of laughing or crying) appear when large areas of frontal lobe myelin have been consumed by plaque. MRI of the brain and spinal cord typically shows lesions in affected areas. Sequelae to MS include cognitive impairment, psychosis, depression, and anxiety. Ms may be misdiagnosed as a conversion disorder (see later). Steroids can reduce neurological symptoms but may induce psychosis or affective disturbances.

Epilepsy: it has many comorbid psychiatric disturbances, which prompt psychiatric consultation and collaboration with neurologists, neurosurgeons, and other specialists. Partial complex seizures may present with psychosis, panic-like attacks, and delirium. Depression is common in epileptic patients (bidirectional relationship). Epilepsy increases the risk of depression and treatment of depression increases frequency of seizures.

Delirium, # Dementia, Amnesic Syndrome & #Head Injury (discussed early in this chapter).

Rheumatology:

Systemic lupus erythematosus (SLE): antineuronal antibodies and vasculitis in SLE can cause a range of neuropsychiatric symptoms; cognitive dysfunction, hallucinations, delusions, depression, suicidal ideation, and personality changes in $\geq 70\%$ of patients. Psychosis may be due to direct CNS involvement or, less frequently, to side effects of corticosteroid treatment. Mania, when present, is usually a side effect of corticosteroid therapy. Delirium becomes a more likely complication as the severity of overall SLE symptoms increases.

Rheumatoid arthritis (RA): is frequently characterized by psychiatric comorbidity (mostly depression or anxiety). Direct CNS involvement is rare in RA. Tricyclic antidepressants (e.g. amitriptyline 25-50mg) are prescribed to treat depressive, anxiety, and pain symptoms in RA patients.

Gastroenterology:

Peptic Ulcer (PU): psychological distress may induce and exacerbate PU. Psychological treatment is advised.

Irritable Bowel Syndrome (IBS): It is very common in G. I. Clinics. Features include fluctuating nonspecific abdominal discomfort, distention, and alteration of bowel habits; constipation or diarrhea (with occasional mucous in the stool but no blood). SSRIs and psychological treatment can improve the symptoms and quality of life.

Inflammatory Bowel diseases (IBD): early inflammatory processes in the gut might lead to psychiatric illness (depression, anxiety, or irritability) or vice versa, or a third factor might lead to both.

Interferon therapy in hepatitis C patients has psychiatric side effects (e.g. severe depression, suicidal ideation). SSRIs can be given safely to reduce depressive symptoms in such patients.

Hepatic Encephalopathy: broad range of neuropsychiatric manifestations (impairment of cognition, consciousness, the sleep-wake cycle, and personality changes).

Nephrology:

Patients with chronic renal failure are prone to have delirium because of uremia and electrolytes disturbances. Prolonged hemodialysis attributed to aluminum intoxication, which can lead to **dialysis encephalopathy** (dysarthria/dysphasia/myoclonus/ataxia/seizures/dementia). Some Psychiatric patients may develop renal problems due to side effects of psychotropic medications either directly (e.g. lithium), or indirectly (e.g. antipsychotics >> neuroleptic malignant syndrome >> severe prolonged muscle rigidity >> muscle destruction >> excessive amounts of myoglobin in the blood >> acute renal failure).

Hematology: Heroin addicts may present with vein thrombosis >>> pulmonary embolism. Patients with severe pain due to sickle cell hemolytic crises may become addict on medical narcotics (e.g. pethidine).

Oncology:

A. Depression >>> cancer: Whether depression can induce certain types of cancer remains a subject for research.

B. Cancer >>> depression (due to several biopsychosocial factors including chemotherapy). However, depression is more challenging to diagnose in patients with cancer because illness produces many neurovegetative symptoms: psychomotor retardation, fatigue, apathy, and poor concentration, appetite reduction, weight loss, and sleep disturbances. Clinical depression is prevalent among cancer patients with rates ranging between 13 and 40%. Many oncologists consider depression part of the illness and wrongly believe that if the cancer can be treated, then the accompanying depression will remit on its own. Meta-analysis research presented evidence that depression predicts mortality, but not progression, in cancer patients. Quality of life was shown to commonly predict survival perhaps even better than performance status. Most oncology divisions now have a psycho-oncology unit that provides psychosocial education, enhances the development of therapeutic communication skills for oncology staff, and seeks to study psychological and behavioral variables that may play role in cancer risk and survival. Studies that assessed depression years before cancer diagnosis found more associations with mortality than studies that assessed depression following cancer diagnosis psychological variables might have a stronger effect on disease progression and mortality in early stages of cancer. Psychological treatments (e.g. guided imagery, mindfulness based stress reduction [MBSR]) can enhance immunity, reduce fear of recurrence, and improve physical functioning in some patients. Psycho-neuro-immunity: Negative emotions are involved in the initiation or progression of cancer, and autoimmune disorders.

Psychological reactions to terminal illness & impending death.



The following psychological stages (proposed by Elizabeth Kubler-Ross) are widely encountered. These stages begin when the patient is first aware of a terminal illness. Not everyone goes through each stage and the order may be different for each person.

1. Denial/Disbelief: "This can't be happening, not to me, I feel fine". It is a temporary shock defensive response to the psychological trauma of bad news. Some persons never pass beyond this stage and may keep going from doctor to doctor searching for one who supports their position.

2. Anger - "How can this happen to me?"; "Who is to blame?"; "Why me? It's not fair!"; "Others are more deserving". Anger arises once the subconscious accepts the reality of the bad news and denial cannot continue. Patient becomes frustrated, irritable, and angry. Anger towards doctors, nurses, medical agencies, relatives, fate, self, and even God/Allah (Why me and now?!). Anger may be associated with envy of healthy people. Therefore, at this stage the person may become very difficult to care for due to misplaced feelings of rage and envy. It is essential for doctors not to take this anger personally. It represents patient's desire for controlling what he feels out of control.

3. Bargaining - "I will give/ do anything for a few more years." It is a negotiation for an extended life, made with a higher power in exchange for a reformed lifestyle. Bargaining arises when the subconscious recognizes that anger does not help. Psychologically, the subconscious is saying, "anger did not work maybe being good will work, I understand I will die, but if I could just have more time...". It involves the hope that the individual can somehow postpone or delay death.

4. Depression - "Nothing worked, death is certain; I'm going to die, no way". Depression arises when the subconscious realizes that nothing has worked to prevent or delay the coming death so that despair and hopelessness prevail. Depressive features appear; low mood, low interest, weeping, poor appetite, disturbed sleep and isolation, negative thoughts (dependence on others, loss of financial support ...). It is not recommended to attempt to cheer up an individual who is in this stage. It is an important stage for grieving that must be processed.

5. Acceptance - "death is inevitable, I can't fight it, I better give up resisting and prepare for it." The subconscious begins to come to terms with mortality. This is not a "happy" stage; it is usually void of feelings. It takes a while to reach this stage and a person who fights until the end will not reach it.

These steps do not necessarily come in the order noted above, nor are all steps experienced by all patients. Any patient could experience the stages in a different order, or could experience emotions not even mentioned in the stage theory.. Research has found that those who felt they understood their purpose in life, or found special meaning, faced less fear and despair in the final weeks of their lives than those who had not.

الأثر النفسي للاحتضار أ د محمد الصغير

يتفاوت حسب الجبلة والمعتقدات والتنشئة والظروف المحيطة

٣- الطاقم الطبي

آثار نفسية طبيعية:

مشاعر مختلطة: خوف سكرات الموت والحساب والمصير وحزن وأعراض جسدية (محدودة الشدة والمدة).

آثار نفسية مرضية:

- رعب وشعور بحلول الموت.
- تكرار المشهد في الذهن بقطعة ومناماً مع انزعاج وعجز عن التخلص منه.
- قلق وتجنب ما يتعلق بالمشهد.
- أعراض جسدية متنوعة.

التهيئة المسبقة وتدريبات خفض القلق / + -

٢- أقاربه / مرافقيه

أ- الصدمة الأولى:

- صعق الشعور فوق تحمله المعتاد/ هول المصيبة.
- # الشعور: خدر كالتمثيل لا حزن ولا غضب.
- # الإدراك: خلل في التوفيق بين الحقيقة والأمل؛ نفي الحدث داخل النفس- لعله حلم أو كذب.
- # السلوك: تشبث ببقاء المفقود (أنعشوه سيعود للحياة)+ مساومة (بالنذر أو الصدقة المشروطة)
- # الجسد: عدة أعراض متنوعة.

ب - إدراك الحقيقة بألمها:

الجزع؛ غضب للفقد (على من؟ /...).

ج - الحزن والأسى (صحية نفسية):

مهارات إيصال الخبر المريع + الانتباه لاحتمال العدوانية تجاه الذات أو الغير (الطاقم الطبي).

القتل في المشاجرة؟! < القصاص

١- المحتضر

أ- خوف على ذاته:

- خروج الروح
- (+ ألم سكرات الموت).
- الحساب.
- المصير.

ب- خوف على غيره:

أولاد / شريك حياة /..

ج- حزن:

- فراق من وما يحب.

رفع الرجاء والتذكير برحمة الله

Endocrine Disorders

Diabetes Mellitus (DM):

Depression; depression and DM have bidirectional relationship. Depression may induce DM through prolonged hyperactivity of Hypothalamus-Pituitary-Adrenal Axis >> high cortisol levels. Depression in DM is under-recognized and undertreated. Depression is two times more prevalent in patients with DM than in the general population. Depressive symptoms are reported by up to 40% of DM patients. Rates of DM complications appear to be greater in patients with depression (see effect of depression on cardiovascular system above). Research found a significant impact of depression treatment on diabetes control. Psychiatric patients receiving second-generation antipsychotics (e.g. olanzapine, risperidone) are prone to develop metabolic syndrome, which increases risk of type II DM. **SSRIs** (e.g. fluoxetine) can give good results in treating depression in DM patients and improving blood sugar control. Attention to worsening of sexual dysfunction, drug interactions, and weight change should guide the choice of SSRIs and the adjustment of dosing. **Duloxetine (SNRI)** carries possible benefits in peripheral neuropathy symptoms and control of pain.

Hypoglycemia in Type 1 DM (IDDM) patients may present with panic-like features (sweating, tremor, palpitation, and anxiety). Beta-blockers, when prescribed to patients with IDDM mask the alarming features of hypoglycemia and leading to serious metabolic and neuropsychiatric complications. Severe hypoglycemia can present with delirium.

Thyroid Dysfunctions:

Hyperthyroidism can present with anxiety, panic attacks, mania, psychosis, and delirium.

Hypothyroidism can present with depression, psychosis, and dementia. Thyroxine supplement may induce anxiety features (tremor, palpitations, and worries)

Hypercortisolism: Cushing's disease results from excessive ACTH secretion due to a pituitary adenoma) whereas **Cushing's syndrome** includes all causes of excess cortisol; it may result from exogenous administration of glucocorticoids, adrenal tumors, or other ectopic ACTH-producing tumors. Excessive steroids in the body may induce anxiety, depression, mania, psychosis, and delirium. Depression in Cushing syndrome is reported to improve with treatment of the syndrome. Corticosteroids therapy (e.g. SLE, MS) is associated with predominance of manic episodes and frequent psychotic symptoms. Antipsychotics (e.g. olanzapine 10mg) can be given to control such complications.

Infectious Diseases

TB; Psychiatric symptoms have long been recognized as common complications of anti-TB therapy (notably INH and cycloserine); depression, attempted suicide, irritability, mania, and psychosis. There have been recent concerns over the possible drug interactions between INH and SSRIs that were based on the ability of INH to inhibit MAO enzyme >> serotonin syndrome.

HIV; depression in HIV-infected individuals is as high as 50%. SSRIs/SNRIs and interpersonal psychotherapy (IPT) can reduce depressive features in such patients. AIDs can present with cognitive impairment; delirium or dementia.

Hepatitis C: interferon therapy >>> depression: give an SSRI (see gastroenterology).

Dermatology:

Psychodermatologic disorders (e.g. psoriasis, vitiligo, alopecia, pruritis ...) are conditions involving an interaction between the mind and the skin. The skin is an interface, attacked by external factors, as well as expressing psychic conflicts. Many dermatological diseases have a direct or indirect link with psychiatric pathology. Many skin diseases are cosmetically disfiguring and adversely affecting quality of life. They can be treated with psychotherapeutic techniques and psychotropic drugs.

Gynecology

Premenstrual Syndrome (PMS): A group of physical and psychological features beginning a few days before and ending shortly after the onset of menstrual period. **Psychological features:** tension, anxiety, irritability, nervousness and low mood. **Physical features:** abdominal distension and pain as well as breast tenderness. The condition may lead to social, academic or marital dysfunctioning. No specific cause has been found. Treatment: Support, identify and treat familial and social stresses, cognitive-behavior therapy (CBT). Many drugs have been tried (hormones, psychotropic drugs..) with varying degrees of response.

Amenorrhea due to antipsychotics: females with psychotic disorders treated with antipsychotics are prone to develop amenorrhea because of high prolactin levels (prolactin secretion is usually inhibited by dopamine and most antipsychotics have antidopaminergic effect notably risperidone). Some gynecologists prescribe dopaminergic medications (e.g. bromocriptine) to reverse amenorrhea in psychotic females, which may aggravate their psychosis. Quetiapine (a second-generation antipsychotic) has no effect on prolactin, thus it is a good choice in such cases.

Pregnancy: Minor psychological symptoms are common during pregnancy, especially in the first and third trimesters (anxiety, irritability and minor lability of mood). Risk increases in case of unwanted pregnancy, marital conflicts, and previous history of abortion or depression and in adolescent mothers. Management consists of: counseling, increased support by medical services as well as family and marital therapies. Medications are rarely used and should be avoided in the first trimester.

Lithium may cause congenital cardiac anomalies. Valproate may cause neural tube defects (e.g. spina bifida). Tricyclics may be indicated in second and third trimester.

Abortion: Depressive mood is an expected reaction especially if there is a previous history of abortion, a past psychiatric history or poor marital adjustment. Counseling, reassurance and supportive therapy are indicated.

Maternity Blues: Brief emotional disturbance (tearfulness, irritability, crying, lability of mood, insomnia and poor concentration) starts 2-3 days after delivery, remains for few days. Very common (about 50 %), more common in primiparous and those who complain of PMS. May be related to hormonal changes. No specific treatment. General measures are enough; reassurance, support ... etc.

The Menopause: Menopausal women often complain of multiple physical symptoms including sweating, dizziness, flushing, headache. No strong evidence that depressive symptoms are more common in menopausal women than in non-menopausal. Psychiatric symptoms at menopause could have several causes: altered perception of the self, altered relationship with husband, children leave home (empty nest syndrome), Parents become ill or die. Oestrogen deficiency has been suggested but the results of oestrogen replacement were much debated. Depression and anxiety in a menopausal women can best be treated with the usual methods that have been shown to be effective for these disorders at any other time of life.

Infertility: It can be complicated by feelings of depression, guilt, and inadequacy frequently accompanied the perception of being infertile. Psychotherapy gives good results.

Post-Partum Depression (see mood disorders). **# Post-Partum Psychosis:** (see psychotic disorders).

Surgery

Mrs. Fatima is a 34- year- old woman hospitalized for cholecystectomy. She became excessively worried about the operation procedures and complications. She refused to sign consent for the operation.

Surgical wards often have psychiatric patients who may disrupt the smooth functioning necessary for a surgical unit and can result in danger to the patient or others (e.g., staff, visitors, other patients).

Common psychiatric consultations in surgical ward:

There is a linear relationship between anxiety before and after surgery. Those who show more general ability to cope with stress suffer fewer post-operative psychiatric problems. Psychological preparations for surgery can reduce post-operative distress and problems.

Psychiatrists are sometimes asked to advise on the capacity to consent (see below) and management of patients with pain.

Delirium is common after major surgery especially in the elderly (see epidemiology of delirium).

Adjustment disorders are common following mastectomy and after surgery that has not lead to the expected benefit.

Phantom limb sensations follow limb amputation.

Organ transplantation is associated with certain psychosocial stresses that may cause anxiety or depression. Problems of transplant rejection are frequently associated with anger and low mood. Psychological symptoms may also occur as side effects of immunosuppressive drugs, steroids in high doses and antihypertensive drugs.

Clinical-legal issues

Does a mental illness imply a loss of autonomy & capacity to consent?

No, not all mental illnesses imply that. Only when a mental illness (e.g., dementia) results in a permanent impairment of understanding, judgment, and competence for decision-making. The physician then should consider alternative ways for decision-making, through official court proceedings such as guardianship, or proxy.

Durable Power of Attorney: It permits persons to make provisions for their own anticipated loss of decision-making capacity. The document permits the advance selection of a substitute decision maker who can act without the necessity of court proceedings when the signatory becomes incompetent through progressive dementia.

Respect for autonomy:

Autonomy requires that a person acts intentionally after being given sufficient information and time to understand the purpose, benefits, risks, and costs of all reasonable options and decisions about his/her wealth, family, health (e.g. providing or withdrawing consent).

Capacity to consent; ability to: 1- Understand information & options relevant to his condition. 2- Appreciate his own clinical situation (insight into the need for treatment). 3- Form a sound decision about his condition. 4- Provide a consistent choice.

Valid informed consent:

1-Person: has capacity to consent.

2-Explanation of sufficient information about the purpose, benefits, risks, and costs of all reasonable options and decisions concerning the matter in hand.

3-Time to understand and decide. **4-No coercion or deceit.**

5-The right to withdraw consent.

Somatic Symptom and Related Disorders

Mr. Ziad is a 39-year-old man referred to outpatient psychiatry clinic by a cardiologist with several months' history of intense worries about serious heart disease and fear of sudden death. He kept asking the cardiologist to repeat ECG & echocardiogram despite the normal findings.



These are a group of disorders in which physical symptoms are the main complaints and cannot be explained fully by a medical condition, a direct effect of a substance or a mental disorder. Psychological factors are judged to be behind the somatic symptoms and complaints. They usually lead to distress and / or functional impairment in social, occupational or academic aspects.

Somatic Symptom and Related Disorders (DSM -5)

Somatic Symptom Disorder
Illness Anxiety Disorder
Conversion Disorder (Functional Neurological Symptom Disorder)
Psychological Factors Affecting Other Medical Conditions
Factitious Disorder

Somatic Symptom and Related Disorders

In DSM-5, somatoform disorders are now referred to as somatic symptom and related disorders. Diagnoses of somatization disorder, hypochondriasis, pain disorder, and undifferentiated somatoform disorder have been removed.

Somatic Symptom Disorder

Because the distinction between somatization disorder and undifferentiated somatoform disorder was arbitrary, they are merged in DSM-5 under somatic symptom disorder, and no specific number of somatic symptoms is required.

Hypochondriasis and Illness Anxiety Disorder

Hypochondriasis has been eliminated as a disorder, in part because the name was perceived as pejorative and not conducive to an effective therapeutic relationship. Most individuals who would previously have been diagnosed with hypochondriasis have significant somatic symptoms in addition to their high health anxiety, and would now receive a DSM-5 diagnosis of somatic symptom disorder. In DSM-5, individuals with high health anxiety without somatic symptoms would receive a diagnosis of illness anxiety disorder (unless their health anxiety was better explained by a primary anxiety disorder, such as generalized anxiety disorder).

Conversion Disorder (Functional Neurological Symptom Disorder)

Criteria for conversion disorder (functional neurological symptom disorder) are modified to emphasize the essential importance of the neurological examination, and in recognition that relevant psychological factors may not be demonstrable at the time of diagnosis. Medically unexplained symptoms do remain a key feature in conversion disorder.

Pain Disorder

Most individuals with chronic pain attribute their pain to a combination of factors, including somatic, psychological, and environmental influences. In DSM-5, some individuals with chronic pain would be appropriately diagnosed as having somatic symptom disorder, with predominant pain. For others, psychological factors affecting other medical conditions or an adjustment disorder would be more appropriate.

Psychological Factors Affecting Other Medical Conditions and Factitious Disorder

This disorder and factitious disorder are placed among the somatic symptom and related disorders because somatic symptoms are predominant in both disorders, and both are most often encountered in medical settings.

Somatoform disorders :(for further details; >>Basic Psychiatry chapter 14)

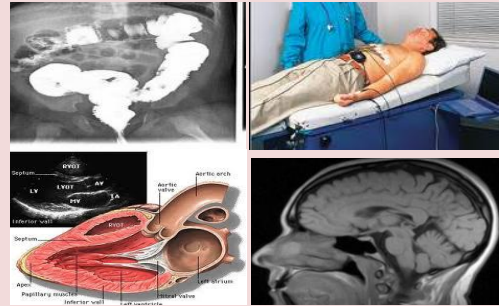
1-Somatic Symptom Disorder

Because the distinction between somatization disorder and undifferentiated somatoform disorder was arbitrary, they are merged in DSM-5 under somatic symptom disorder, and no specific number of somatic symptoms is required.



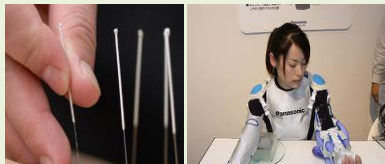
2- Illness Anxiety Disorder (Hypochondriasis)

Excessive worries about having a hidden serious physical disease (e.g. cancer, organ failure, AIDS).



3- Functional Neurological Symptom Disorder (Conversion Disorder)

A subconscious conversion of a psychological conflict into an acute loss of physical functioning, which suggests a neurologic disease; motor (e.g. paralysis) or sensory (e.g. anesthesia) deficit. The symptom is temporarily related to a psychological stressor.



4-Psychogenic Pain Disorder

Pain with no adequate physical findings. It is not intentionally produced and not due to another psychiatric disorder (e.g. anxiety). It is inconsistent with anatomical distribution of the nervous system.



5- Psychological Factors Affecting Other Medical Conditions and Factitious Disorder

This disorder and factitious disorder are placed among the somatic symptom and related disorders because somatic symptoms are predominant in both disorders, and both are most often encountered in medical settings.



1- Somatic Symptom Disorder

Features: Multiple somatic symptoms (affecting multiple organ system) that cannot be explained adequately based on physical examination and laboratory investigations. The symptoms are not intentionally produced. The disorder is chronic . It is associated with excessive medical help-seeking behavior. It leads to significant distress and functional impairment (social, occupational...). **Epidemiology:** Women > men 5 – 10 : 1. The lifetime prevalence in the general population is about 2%. More common in patients who bottle up their emotions and are less assertive. **Etiology:** Faulty perception and assessment of somato-sensory inputs due to characteristic attention impairment. Displacement of unpleasant emotions into a physical symptom. Alleviation of guilt through suffering. To obtain attention or sympathy. **DDx:** 1. Medical diseases (e.g. SLE, endocrinopathies, chronic infections). 2. Depression (multiple somatic complaints are associated with low mood and / or loss of interest). 3. Anxiety (many physical manifestations of anxiety e.g. headache, low back pain are accompanied with excessive worries and apprehension). 4. Hypochondriasis (the emphasis is on over-concern with a serious disease). 5. Psychogenic pain disorder (limited to one or two pain symptoms). **Course and Prognosis:** Chronic fluctuating course with risk of multiple unnecessary operations and possible complications. **Management:** The number of medical staff involved is better limited (a single identified physician as the primary care taker) because opportunity of the patient to express somatic complaints increases when more than one physician is involved. Arrange brief regularly scheduled appointments, e.g. every month. Repeat physical examination. Avoid additional diagnostic procedures. Shift the patient's awareness to psychological factors, and support her/him. Minimize the use of psychotropic drugs (patients tend to use drugs unreliably and erratically). Antidepressants are useful when secondary depression develops.



2- Illness Anxiety Disorder Hypochondriasis

Features: Intense prolonged over-concern and preoccupation with physical health and/or excessive worry about having a serious physical disease (e.g. cancer, organ failure, AIDS, etc). The preoccupation persists in spite of medical reassurance. It is not delusional in intensity. It causes social or occupational dysfunctioning. Associated Features:

Doctor – shopping and deterioration in doctor-patient relationships, with frustration and anger on both sides.

The patient often believes that he is not getting a proper medical care and may resist referral to psychiatry. Physical complications may result from repeated diagnostic procedures. Family and social relationships may become disturbed because the patient expects special consideration. Associated Psychiatric Disorders: major depression, dysthymic disorder, generalized anxiety disorder or adjustment disorders. Most of such patients have obsessional and anxiety personality traits.

Epidemiology: Age: it can begin at any age. However, onset is thought to be most common between 25 – 45 years. It is thought to be more common in men, and those closely associated with the disease (e.g. relatives of a patient with cancer). The true prevalence is uncertain, but it is common amongst patients attending general medical clinics. **Etiology:** No specific cause has been detected; however, there are some etiological theories: 1. The patient amplifies his normal somatic sensations due to unrealistic interpretation of physical complaints, and misattributes pathological meaning (e.g., minor usual muscular chest pain is interpreted as a sign of cardiac disease). Most of such patients have obsessional and anxiety personality traits. **DDx:** 1. Physical diseases (e.g. endocrinopathy). 2. Somatization disorder (the focus is on the symptoms and not on the over-concern with a disease). 3. Underlying other psychiatric disorders (depression – anxiety). **Course and Prognosis:** Usually chronic course with waxing and waning symptoms. Complete recovery occurs in some cases specially if there is underlying depressed or anxious mood. Presence of secondary gain (e.g. sick role) and personality problems are unfavorable prognostic factors. **Management:** 1. Exclude a possible organic pathology. 2. Search for and treat any underlying depression or anxiety. (Hypochondriasis often improves when these conditions are treated; SSRIs can give good results). A cognitive-educational approach: provide a more realistic interpretation of complaints (e.g. hyperarousal of the autonomic nervous system associated with exaggeration and misinterpretation of the consequences) explain the role of psychological factors in symptoms origin and fluctuation.

[youtube.com/watch?v=0EnDW9ljO6U](https://www.youtube.com/watch?v=0EnDW9ljO6U)

3- Functional Neurological Symptom Disorder (Conversion Disorder)

Symptoms are related to the neurological system. **Sensory:** paraesthesia/partial blindness/deafness/...

Motor: paralysis/paresis/aphonia/... **Pseudoseizures and fainting:** Pseudoseizures usually lack a number of features of the true epileptic seizures e.g. aura, cyanosis, physical consequences of seizure (tongue bite, trauma, incontinence) and do not occur in sleep. EEG findings are normal. Prolactin level usually increases within 3 hours of a true seizure but not a pseudoseizure. Patient may be unconcerned about his symptoms (denial of affect) this is called “La belle indifference” or may also present in a dramatic or histrionic fashion. **Primary gain:** the reduction of inner tension and intrapsychic conflict after developing the physical disability through conversion. **Secondary gain:** the advantage that the patient gains, e.g. avoiding unpleasant duties. Conversion disorder occurs mainly in young females. It is more common among little educated persons, those with low intelligence and in low socioeconomic groups. Common associated disorders include anxiety and depressive disorders. **DDx:** 1. Neurological diseases e.g. multiple sclerosis, stroke, optic neuritis, etc. (about 30 % of patients followed up later were discovered to have neurologic diseases). 2. Acute dystonic reaction (a side effect of antipsychotics). 3. Factitious disorders (Munchausen's syndrome: intentionally produced symptoms and sign to assume the sick role without external incentives. 4. Malingering: faked symptoms motivated by an external incentive e.g. to evade the police. Patient stops the symptoms when they are no longer useful. **Course:** symptoms usually remit in a short time (hours, days). Recurrence is common. **Treatment:** Sympathetic approach with reassurance that the condition is a reaction to stress and will resolve overtime. This helps the patient let go of symptoms without confrontation. Avoid confrontation. Abreaction (drug-aided interview): using amytal or diazepam with suggestion can result in a dramatic resolution. Stressful events in the patient's life should be evaluated and appropriate intervention made: individual, marital or family therapy. Underlying psychiatric illness, such as depression, should be recognized and properly treated. **Prognosis:** Good prognosis is associated with acute onset, an obvious stressful precipitant, good premorbid personality, above average intelligence, a short interval between onset and treatment.

✦ **Comparison between conversion, factitious, and malingering disorders.**

Diagnosis / Distinction	Conversion Disorder	Factitious Disorders	Malingering
Intentions	No	Yes	Yes
Goal & motivation	Subconscious Secondary gain	Partially aware. To assume the sick role	Fully aware. Motivated by external incentives (e.g. to evade the police, avoid work, or secure financial compensation). They always have some apparent end of their behavior.
Suggestibility	Yes	No	No
Course	Short & Recurrent	Intermittent or chronic	Varies depending on the goal.

Dealing with physically-ill patients who have difficult personalities (see details of personality disorders later):

	Personality	Traits /Attitude	Patient concern/worries	Approach
A	1.Paranoid	Mistrustful, guarded and hypervigilant.	Exploitation and betrayal.	Acknowledge complaints without arguing and honestly explain medical illness.
	2.Schizoid	Enjoys to be alone	Violations of privacy	Accept his unsociability and need for privacy. Reduce the patient's isolation as tolerated
	3.Schizotypal	Odd feelings, perception, & beliefs.	Exploration of oddities.	Empathize with the patient's oddities without confrontation.
B	1.Antisocial	Dishonest, deceptive, and exploiting.	Exploitation and loss of self-esteem	Verify symptoms & discover malingering. Control wish to punish patient. Explain that deception results in patient poor care.
	2.Histrionic	Excessively seeking attention and admiration.	Loss of love.	Set limits and avoid being too warm. Use logic thinking to counteract an emotional style of relationship.
	3.Borderline	Fluctuating emotions, extreme views, impulsivity, self-harm, and unstable relationships.	Abandonment & loss of support.	Empathize and set limits. Use logic thinking to counteract an emotional style of relationship.
	4.Narcissistic	Sense of superiority and priority	Devaluation and loss of prestige, or self-esteem	Do not confront self-inflation. Do not devalue the patient. If the patient devalues you, you may offer a referral as an option, not as punishment.
C	1.Avoidant	Shy, oversensitive to criticism, embarrassment and humiliation.	Exploration of low self-esteem, inadequacy shame, and rejection.	Empathize, support self-esteem, and encourage assertiveness.
	2.Dependent	Over-dependent seeks constant support and reassurance.	Independence	Explore why independence is so frightening and encourage independence and assertiveness.
	3.Obsessive-compulsive	Perfection seeker, over-meticulous, rigid, and self-blaming.	Imperfection and guilt.	Tolerate the patient's critical judgments and unnecessary details. Beware of his controlling behavior.

Neuro-
Cognitive
Disorders

● Test 2

1. A 75-year-old man admitted in the surgical ward because of prostate carcinoma, urinary retention and urinary tract infection. At night, he became hostile, irritable, drowsy and uncooperative. The most likely diagnosis:
 - a. Adjustment disorder.
 - b. Dementia.
 - c. Acute stress disorder.
 - d. Delirium.

2. A 74-year-old woman known case of hypertension and diabetes mellitus developed dysarthria due to a transient ischemic attack. She has poor attention span and memory impairment for several months. The likely primary diagnosis is:
 - a. Alzheimer's disease.
 - b. Delirium.
 - c. Vascular dementia.
 - d. Amnestic syndrome.

3. A psychiatric nurse phoned the psychiatrist telling him about one of the patients in the psychiatric ward. She said: "the patient looks drowsy and could not identify where he is". She described the patient's:
 - a. Cognition.
 - b. Perception.
 - c. Behavior.
 - d. Illusions.

4. A 65-year-old woman uses antihistamine drugs for her chronic increasing insomnia. Last week she was commenced on Amitriptyline 50 mg by a GP for insomnia. Her husband then found her disoriented, hallucinating and hyperthermic. Her face was flushed and her skin was dry. She developed:
 - a. Neuroleptic malignant syndrome.
 - b. Serotonergic syndrome.
 - c. Anticholinergic syndrome.
 - d. Wernicke – Korsakoff's syndrome

5. Mr. A is 45-year-old diabetic man on insulin, known to his friends as a kind, calm, and cooperative person. At 11 a.m., he suddenly became potentially assaultive and aggressive without an obvious provoking event. The most important investigation is:
 - a. Brain CT scan.
 - b. Blood glucose level.
 - c. Complete blood count (CBC).
 - d. Thyroid function test.

1	2	3	4	5
d	c	a	c	b

6. A 45-year-old businessman came to Emergency Department complaining of insomnia for 3 days after he ran short of his sleeping pills. He was asking for a specific drug, which comes in a glass bottle manufactured by ROCHE Company, and 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.

7. 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.

8. A 45-year-old man presented with disorientation, ataxia and poor memory. He asked for a referral to a specialist in eye diseases. The most likely cognitive impairment in this patient is:
 - a. Short-term memory.
 - b. Immediate memory.
 - c. Recent memory.
 - d. Orientation to time.

9. A 16-year-old girl has several unpredictable episodes of distortions of sensations and perceptions associated with memory disturbance and fear followed by periods of confusion. In between the episodes, she is completely normal. The most likely diagnosis is:
 - a. Schizophrenia.
 - b. Somatic symptom disorder.
 - c. Complex partial seizures.
 - d. Conversion disorder.

10. An 18-year-old female, brought to Emergency Department by her parents with a sudden episode of right hand weakness and muteness the night before exam. Her clinical assessment revealed no real neurological deficit. The most important management step is
 - a. Intramuscular injection of haloperidol.
 - b. Drug-aided interview with suggestions.
 - c. Arrange brief regular appointments.
 - d. Confront her that she is malingering.

6	7	8	9	10
b	d	a	c	b

11. A 50-year-old woman with 4 months history of stroke seen at neurology clinic has low mood, lethargy, loss of interest, and crying. The following medication is effective for such symptoms :

- a. Lorazepam.
- b. Imipramine.
- c. Citalopram.
- d. Carbamazepine.

12. A 48-year-old man has chronic insomnia, repeated vomiting, sexual dysfunction, social isolation, episodic tremor, and anemia. His physician requested liver function tests. The most likely abnormal result is:

- a. Low billirobins.
- b. High HDL.
- c. High GGT.
- d. Low LDL.

13.A 30-year-old woman came to primary care clinic asking for investigations because she has shoulder pain, headache, abdominal distention, numbness in her left arm, nausea, and discomfort in her pelvis for 2 years. The following is the most important first management step:

- a. Explore psychosocial stresses.
- b. Hospitalize her for close observation.
- c. Investigate her for Tuberculosis.
- d. Request a personality test.

14.A 42-year-old man has repeated chest pain, extreme worries about his heart, and afraid of sustaining ischemic heart disease. His treating physician reassured him "nothing wrong in your heart". His preoccupation persists in spite of medical reassurance. The next management step would be:

- a. Confrontation.
- b. Excluding anxiety.
- c. Amitriptyline.
- d. Repeated reassurance.

15.A 48-year-old woman was commenced on interferon treatment for hepatitis C infection. She then developed depressive features. The appropriate medication would be:

- a. Imipramine.
- b. Alprazolam.
- c. Escitalopram.
- d. Methadone.

11	12	13	14	15
c	c	a	b	c