1 BASICS OF PSYCHIATRY

- Psyche - mind
  iatry - healing/cure
- It is a branch of medicine that deals with mind problems and their treatment.
- The term "psychiatry" was coined by Johann Christain Reil

Approach to a patient 00:00:40

- History
  - Taken from both patient and informant
- Examination
- Investigation
- Diagnosis

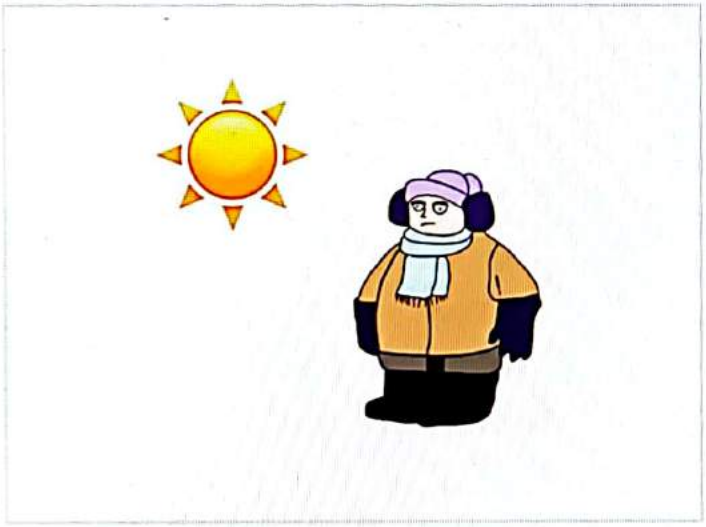
Informant

- RELIABILITY
  - Consistent - should be the same in each interview
  - Chronological - provided in a chronological manner
  - Coherent - logically connected
  - Closeness with Patient
  - Concern for the patient - genuine concern for the patient, especially for medicolegal cases
  - Intellectual/Observational ability

Mental Status Examination 00:04:21

1. **General Appearance & Behavior**

- Dressing with respect to the weather



- Grooming with self-care

2. **Speech**

- Rate of speech – increased in mania and decreased in depression.

3. **Mood and Affect**

- Emotions

Mood	Affect
1. Persistent and pervasive emotional state.	1. Expression of emotion/observed by a therapist.
2. Internal	2. External
3. Long term	3. Cross-sectional

- Structures related with emotions
  - Generation of emotions: Limbic system
  - Regulation of emotions: Frontal lobe

Abnormalities of Affect

1. FLAT affect (BLUNT AFFECT): Emotion is not changing.
- Seen in Schizophrenia

2. Labile affect
- Rapid and abrupt changes in emotion without any external stimulus
- Seen in mania
- Organic mental disorders

Other Terms

1. Anhedonia - Decreased interest in a pleasurable activity.
2. Alexithymia - Inability to express/understand emotions.
3. THOUGHT -

Disorders of thought

I. Flow/Stream
ii. Content
iii. Form
iv. Possession

Flow/Stream

A. Speed/Tempo
   i. Increases -
      1. Flight of ideas seen in mania
      2. Thoughts follow each other rapidly
      3. Goal is not reached
      4. Connections between thoughts
         a. By chance factor
         B. Clang association (Rhyming words)
   ii. Decreases -
      1. Circumstantiality
      2. Thinking proceeds slowly
      3. Unnecessary/ trivial details
      4. Goal is reached

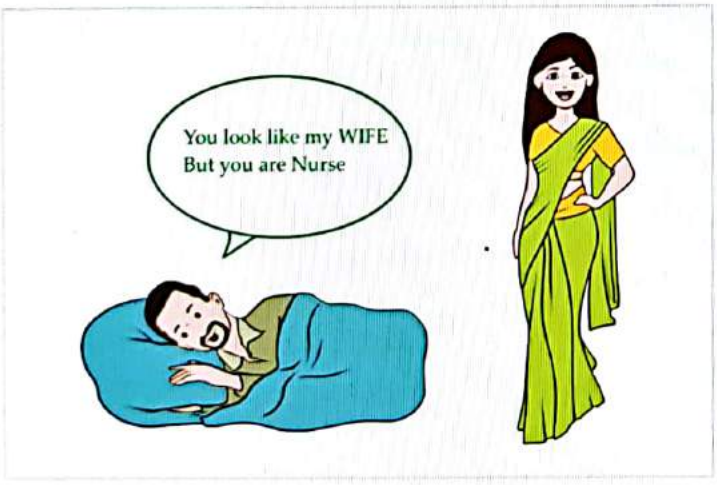
B. Continuity
   I. Perseveration
      1. Thoughts persists.
      2. Beyond the point of relevance
- Perseveration is seen in organic mental disorders and schizophrenia

Content
- Delusion - Psychotic symptom
- False/fixed/unshakeable idea/belief
- Held in extraordinary conviction
- Unexplained by cultural/social/educational background

Types of Delusions
- Delusion of persecution
  - Someone wants to harm or kill him
- Delusion of reference
  - Someone is talking about him/spying on him
- Delusion of Grandiosity
  - False big claims
  - Supernatural powers
  - Knows famous people
  - Vast knowledge/wealth seen in mania & schizophrenia
- Delusion of Nihilism/Negation
  - The patient denies the existence of
    → His body
    → Loved ones
    → World seen in depression and schizophrenia
- Cotard Syndrome
  - Delusion of Nihilism in depression
- Declerambault's syndrome / Erotomania / delusion of love
  - Patient believes someone else is in love with the patient
- Othello's syndrome / Delusion of infidelity / Morbid jealousy
  - The patient believes the partner or spouse is cheating or having an affair.
  - Alcohol may also cause this.

Delusional Misidentification Syndrome

1. Capgras Syndrome



- Patient believes someone (closely related) has been replaced by an exact double. For eg: A man identifies his wife as a nurse and not as his wife anymore.
- Physical appearance remains the same.
- Patient is usually seen fighting with his closed ones.

2. Fregoli Syndrome

- Patient believes the familiar person is imposing as a stranger.
- It can take multiple appearances.
- Physical appearance is different.
- The patient fights with the stranger

FORM
- Abnormalities of form, also called formal thought disorder
- This is disorganization.
- Seen in schizophrenia
- Normal thought: A,B,C,D,E. For example I will book a cab > reach the cafe > order coffee > drink > pay > come back.
- Loosening of association
  - Break in logical connections between thoughts - sentences not making sense.
  - C-A-E-B-D
  - Order - come back - reach cafe - black shirt - drink - book a cab

- Derailment / Knight's Move Thinking

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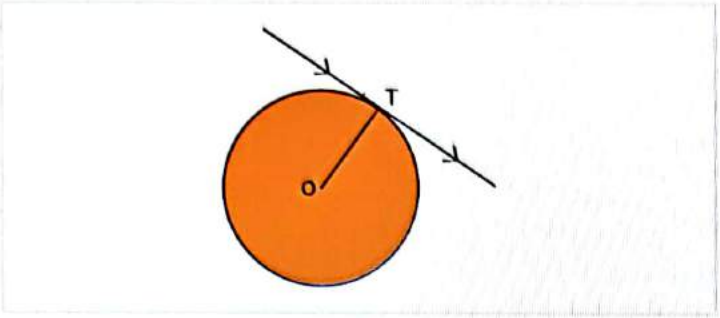
- Jump off the track to move to a different topic

- No logical association
- For instance: a man can follow this sequence. Book a cafe > Reach a cafe > weather is cold, should buy a muffler.

Tangentiality



- Reply is oblique or tangential
- Patient touches the topic and moves away
- Goal is not reached

Neologism
- Completely new word or phrase
- Whose derivation cannot be understood
- For instance, "TAKLIT PITMAT" is a word seen in schizophrenia.

Incoherence/Word Salad
- Incomprehensible thought
- Not making any sense
- For example: "I will take an umbrella back to fly water."

Talking past the point / vorbeireden
- Reply shows he understood the question but deliberately discusses the associated topic.
- For instance, colour of the grass is "RED"
- Ganser Syndrome –
- Talking past the point in prisoners

Possession
- Loss of control or loss of sense of possession of thinking.
- Obsession
  - Repetitive thoughts/images/impulses
- Thought Alienation/Passivity Phenomenon
  - Thought insertion
    → Thoughts are inserted
  - Thought withdrawal
    → Thoughts are taken away
  - Thought broadcast
    → Thoughts are getting broadcasted outside

Perception 00:39:53
- What we perceive from our sensory organs.

1. **Illusion**
   a. False perception of the real object snake instead of snak in the image

2. **Hallucination**
   a. False perception without an actual object
   b. Psychotic symptom
   c. Clear (As vivid, as real)
   d. Occur in outer objective space
   e. Independent of the will
3. **Pseudohallucination**

- Clear, independent of the will
- Inner subjective space

Types of Hallucinations
1. Auditory hallucination - "Hear", Most common
2. Visual hallucination - "See"
   a. Most common in organic mental disorder
3. Olfactory hallucination - "smell"
   a. A person who gets a foul smell always
   b. Common in temporal lobe disorder
4. Gustatory Hallucination
   a. Common in temporal lobe disorders(like epilepsy)
5. Tactile Hallucinations - "Touch"
   a. Also known as formication
   b. Small insects crawling under or above the skin
   c. Common as cocaine bugs/magnum bugs
      i. As it is common in people who consume cocaine

Reflex Hallucinations
- Also known as morbid synaesthesia
- Real stimulus in 1 sensory modality
- Hallucination in a different modality
- For example: Hearing the ring tone of a phone is a "real stimulus" and just then the patient sees another person moving around which no one else can see. This is a visual hallucination.

Delusion Vs Hallucination

Delusion	Hallucination
False belief	False perception

Higher Mental Functions 00:49:50
- These are cognitive functions

Orientation:
- Awareness of self and surrounding with respect to time/place/person.
- Disorientation may be seen in delirium.

Attention

- Ability to attend to a specific stimulus without getting distracted.
- How do you test attention?
  - Digit repetition test/span test
    → Digit forward test
    → Need to count in the forward direction
    → Digit backward test
    → Need to count in the backward direction

Concentration

- Concentration is sustained attention.
- Test: serial 7's subtraction test
  - Patient is asked to keep subtracting 7 from 100.
  - If the patient is able to subtract 5 times that means the concentration is intact

Memory

1. Immediate/short-term/working memory
2. Recent memory-To test recent memory 24 hour "recall method" is used. Asking questions what happened a few hours back. For example, about the last meal.
3. Remote memory
   a. Personal information or historic events
   b. Asking for information that happened months or years ago

Abstract Thinking

- Ability to understand hidden meanings or form concepts.
- Abstract thinking: Proverb testing
  - Ask about proverbs like "journey of thousand miles begin with a single step"
  - Patients should be able to understand the deeper meaning.
  - Loss of abstract thinking - Concrete thinking
  - Seen in disorders like Schizophrenia

- **Similarity Testing**
  - For instance, asking about the similarity of car and plane.
  - If a person says both are means of transportation then abstract thinking is intact.
  - If a person says both have tyres, both have metals. That means the person is talking about analytical things and this is classified as concrete thinking.

- **Test Judgement**
  - Making a right decision after analysing choices
  - In test judgement we give a circumstance like if there is a fire problem then what do you do?
  - A person who says they will call a fire brigade or try to put out fire is normal. Someone who says that he will put kerosene on it has impaired judgement. This is common in schizophrenia.

- **Insight**
  - Awareness of illness
  - GRADE 1 - complete denial of illness
  - GRADE 2 - Slight awareness but denying at the same time
  - GRADE 3 - Awareness of illness, attribute it to external/physical/medical/unknown factors
  - GRADE 4 - Also known as intellectual insight. Awareness of illness due to own irrational feelings or emotions. Not applying knowledge to change behaviour.
  - GRADE 5 - Also known as true emotional insight. Awareness of illness due to own irrational feelings or emotions. Apply knowledge to change behaviour.
  - NEUROSIS -
    → Insight is present
  - PSYCHOSIS
    → Insight is not present

- **CLASSIFICATION IN PSYCHIATRY**
  - ICD-II (International statistical classification of diseases, 11th revision) was given by WHO
  - DSM - 5 (Diagnostic and statistical manual of mental disorders, 5th edition) by APA (American Psychiatric association)

Psychiatric Disorders 01:01:46

- Organic disorders
  - Due to visible cause
  - Example - where a person has encephalitis and develops psychiatric symptoms. On blood count, there is a low sodium level.
  - Visual hallucination is more common.
- Functional disorders
  - No visible or apparent cause
  - A brain scan will not help if a person has depression.
  - Auditory hallucination will be more common
  - Divided into
    → Neurosis
    → Psychosis

	Neurosis	Psychosis
Insight	Insight is present	Insight is absent
Reality Testing	Intact	Impaired
Judgment	Intact	Impaired
Delusion and Hallucination	Negative	Positive

Example	Anxiety disorder, depression, obsessive compulsive disorder	Schizophrenia, delusion disorder, mania

Disorder

1. Fulfil symptom criteria
2. Fulfil duration criteria
3. Impairment of functioning

Schizophrenia & Other Psychotic Disorders 01:05:20

Schizophrenia

- History: Emil Kraeplin identified this disease
- Coined term: Dementia Praecox
- Eugene Bleuler coined the term schizophrenia
- Symptoms:
  - Bleuler 'Four As'
    - → Loosening of association
    - → Affective flattening
    - → Autism (fantasy thinking)
    - → Ambivalence (inability to make a decision)
- Kurt Schneider gave the Schneider's first-rank symptoms (SFRS)
  - Auditory Hallucinations
    - → Audible thoughts or thought echo
    - → Voices discussing about the patient
    - → Voices commenting on one's action, like running commentary
  - Thought Alienation
    - → Thought insertion
    - → Though withdrawal
    - → Thought broadcast
  - Patient experiences his feelings or impulses or acts are influenced by others
    - → Made impulses
    - → Made feelings
    - → Made acts
  - Somatic passivity
    - → Patient is a passive recipient of bodily sensations
    - → Imposed by an external agency
    - → For example: A person Mr. Bholu experiences pain in abdomen Imposed by external agents like radio waves
  - Delusional Perception
    - → A person experiences normal percepti and gives delusional meaning to it.
    - → For example, a person named Mr. Golu saw his wife in red clothes and doubts that wife wants to kill him.

Epidemiology

- Gender

	Male	Female
Peak age of onset	10 - 25 yrs	25 - 35 yrs
Prognosis	Bad	Good

- Late-onset schizophrenia - person having schizophrenia after 45 years

Etiology

1. **Genetic Factors**
- Monozygotic concordance is higher than the dizygotic concordance rate.
- Higher risk of schizophrenia in family members of patient with schizophrenia, bipolar disorder.
- Chromosome: 22q11.2 deletion syndrome /Digeorge/ velocardiofacial syndrome/30% cases

2. **Neurotransmitters**
- Dopamine - increases
- Serotonin - increase

Other Nts

- GABA
- Glutamate
- NE
- Ach
- Risk factor: Cannabis use

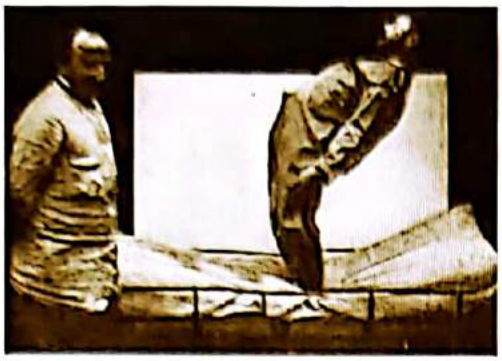
Symptoms of schizophrenia

- Positive symptoms
  - Delusions: most common delusion of persecution
  - Hallucinations: most common auditory hallucination

Two important dopamine pathways

- Mesolimbic pathway - increase in dopamine that leads to increase in positive symptoms.
- Negative symptoms: In mesocortical pathway there is decrease in dopamine
  - Anhedonia - decrease in interest
  - Avolition - decrease in the will/ drive
  - Affective blunting - decrease in expression of emotion
  - Asociality - decrease in socialization
  - Alogia - decrease in verbal output
- Disorganized symptoms
  - Disorganized speech/thought - weird symptoms
- Catatonic symptoms/motor symptoms -
  - Stupor - Extreme hyperactivity/immobility
  - Excitement- extreme hyperactivity, non goal directed behaviour
  - Mutism - No or little verbal response

- Catalepsy
  - Odd posture for a long time
  - This is passive.



- Posturing
  - Odd posture for a long time
  - This is active.
- Waxy flexibility - bending like a wax candle
- Negativism - oppose or no response to instructions
- Automatic obedience - excessive cooperation
- Mannerism and Stereotypy
  - Both are repetitive odd movement
  - The difference is that mannerism is purposeful the other is non-purposeful
- Echolalia
  - Repeating words
- Echopraxia
  - Repeating action
- Grimacing
  - Making odd facial expressions
- Ambitendency
  - Inability to decide motor movements

Diagnosis

- Delusions
- Hallucinations
- Disorganized speech
- Grossly disorganized or catatonic behaviour
- Negative symptoms
- According to DSM-5 : 2 or more symptoms should be there. (At Least 1 symptom from first 3.)
- Total duration of disturbance will be 6 months.
- According to ICD-11, Total duration of disturbance will be 1 months.
- This is the type of schizophrenia.

Subtypes of Schizophrenia

- Earlier (ICD-10, DSM-IV)
- Schizophrenia (classified based on symptoms)
- These subtypes are removed from new classification
- ICD-II (DSM-5) classified schizophrenia based on course of illness.
  - Schizophrenia, 1st episode
  - Schizophrenia, multiple episodes
  - Schizophrenia, continuous where duration is more than a year.
- ICD-11 has separate diagnostic category for catatonia symptoms
  - Treatment - catatonic symptoms
    → LORAZEPAM
    → ECT

Suicide

- Most common cause of premature death in patient with schizophrenia.
- Rate of suicide: 5-6% (earlier studies ~ 10%)
- DSM - 5 (~ 20% patients attempt suicide)

Prognosis Factors

Good Prognosis	Bad Prognosis
Acute or abrupt onset	Insidious onset
Late age of onset	Early onset
Catatonic/paranoid	Simple/hebephrenic
Female	male
Prominent positive symptoms	Prominent negative symptoms
Presence of mood symptoms	Absence of mood symptoms
Family history of mood disorder	Family history of schizophrenia
Married	Unmarried/Divorced
Good social support	Poor social support
Good premorbid functioning	Poor premorbid functioning
Employed	Unemployed
Precipitating factor - present	Absent

Treatment of Schizophrenia

- **Antipsychotics**

First generation/Typical antipsychotics	Second generation/ Atypical antipsychotics
Increase of dopamine in patients of schizophrenia D2 antagonist	D2 and 5HT2A antagonist
More EPS extra pyramidal symptoms	Less EPS
Less metabolic side effects	More metabolic side effects
Positive symptoms	Positive and negative symptoms

Side effects of Antipsychotics

1. **Movement Disorders/Extra pyramidal symptoms**

- Blockade of D2 receptors in Nigrostriatal pathway
- More with typical Antipsychotics than atypical (especially high potency drops)

Extra Pyramidal Symptoms

- D: Acute dystonia
- P: Drug induced parkinsonism
- A: Akathisia
- T: Tardive Dyskinesia
- Night: Neuroleptic Malignant syndrome

1. Acute Dystonia

- Onset: At the earliest
- Sudden muscle contraction
- Eyes rolling upwards: Oculogyric crisis
- Neck: Torticollis
- Jaw muscles: Trismus
- Laryngospasm
- Reaction:
  - Parenteral Anticholinergic
  - Benztropine
  - Promethazine

2. Drug Induced Parkinsonism

- Onset: Days or weeks
- Tremors (coarse tremors)
- Rigidity, Bradykinesia
- Rabbit syndrome (Perioral tremors, usually at later stage)
- Reaction:
  - Anticholinergic drugs
  - Trihexyphenidyl

3. Akathisia

- Most common EPS
- Restlessness
  - Subjective feeling
  - Objective signs - rocking motion while sitting, pacing around
  - Treatment : Beta blockers – propranolol (DOC)

4. Tardive Dyskinesia

- Late onset - after months
- Cause: Super Sensitization of D2 receptors
- Involuntary movements:
  - Lip smacking
  - Chewing
  - Tongue protrusion (fly catching)
  - Choreiform hand movement
- Treatment: valbenazine / Tetrabenazine
  Vesicular monoamine transporter 2 inhibitor (VMAT 2)
- Reduce or stop dose
- Switch to clozapine/ atypical antipsychotics

6. Neuroleptic Malignant syndrome

- Life threatening complication
- Fever, rigidity, increased creatinine phosphokinase
- Tachycardia, sweating, leukocytosis, altered consciousness
- Increased level of liver enzymes
- Reaction: stop drug ,supportive care
- Drugs: Dantrolene (skeletal muscle relaxant)
- Bromocriptine and Amantadine (Dopamine agonists)

2. **Endocrine Side Effects**

- Blockade of D2 receptors in tuberoinfundibular pathway
- Hyperprolactinemia
  - Decreased Libido
  - Galactorrhea ,Amenorrhea in females

Side Effects of Typical Antipsychotics

- D2 blockade - EPS, Endocrine - High potency drugs
- M1 blockade - Anticholinergic side effects - Low potency drugs
- Alpha 1 Blockade - Orthostatic Hypotension - Low potency drugs
- H1 blockade - sedation
- Chlorpromazine:
  - Anticholinergic Side effects
  - Corneal and lenticular deposits
  - Photosensitivity
  - Cholestatic jaundice
- Haloperidol
  - High D2 potency
  - High EPS
- Thioridazine

- Retinal pigmentation (Irreversible)
- Cardiac Arrhythmias (Increased Qtc)
- Least EPS (Typical)

- Penfluridol
  - Longest acting antipsychotics

Atypical/Second Generation Antipsychotics

- D2 and 5HT2A Antagonism
- Less EPS, Hyperprolactinemia

Metabolic Side Effects – More

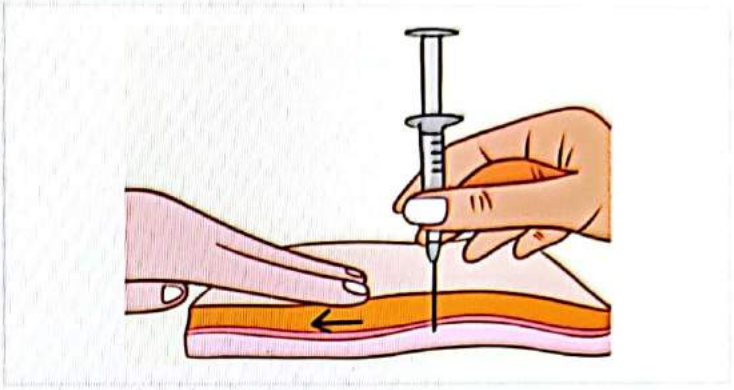
- Weight gain
- Diabetes
- Hyperlipidemia
- HTN
- CV disease
- Olanzapine - weight gain
- Risperidone and Amisulpride - Increased EPS, Hyperprolactinemia
- Ziprasidone - Increased QTc interval
- Aripiprazole
  - Partial agonist - D2
  - Antagonist - D2, 5HT2A
- Brexpiprazole
  - Partial agonist - D2, 5HT1A
  - ANTAGONIST - 5HT2A
- Cariprazine
  - Partial agonist - D2, D3, 5HT1A (D3>D2)
  - ANTAGONIST - 5HT2A
- Pimavanserin
  - 5HT2A - Inverse Agonist
  - Reaction of delusion/hallucination in Parkinson's disease
  - Increased QT interval
- Clozapine

  - Antagonist - D4>D2 (least EPS)
  - Only Anti-psychotic: Anti-suicidal property
  - Used for treatment of resistant schizophrenia
  - Side Effects:
    → Sedation (Most common)
    → Weight gain (Max, of all antipsychotics)
- Serious side effects of clozapine
  - S: Seizure (dose dependent)
  - A: Agranulocytosis ~ weekly monitor for 1st 6 months WBC, Neutrophil count.
  - M: Myocarditis - Stop when WBC < 3000 / mm3
    ANC < 1500 / mm3
  - Idiosyncratic
- Contraindication
  - WBC count < 3500 / mm3
  - Previous bone marrow disorder
  - H/O Agranulocytosis during CLOZAPINE treatment
  - Use of another BM suppressant like CARBAMAZEPINE

Long Acting Injectable (LAI) Antipsychotics (Depot Antipsychotics)

- Intramuscular injection (usually given once a month/2 weeks/ even longer)
- Can be used for patients who have poor compliance to medication

Z track technique



- To prevent tracking (leaking of drugs from muscle to other tissues)

Other Psychotic Disorders – Acute psychotic disorders 01:46:43

- Symptoms similar to schizophrenia (delusions, hallucination ,Disorganization symptoms)
- Do not meet duration criteria
- Abrupt onset, often resolve completely
- May be preceded by stressor
  - Stressful life event
  - Fever
- Fever, sudden onset, delusion, hallucination, abnormal behaviour
  - Acute psychosis
  - Delirium (with impairment of consciousness)
- ICD-11
  - Less than 1 month - Acute and transient psychotic disorder
- DSM-5
  - Less than 1 month - brief psychotic disorder
  - Greater than 1 month, less than 6 month – Schizophreniform disorder
- Treatment: Antipsychotics

Schizoaffective Disorder

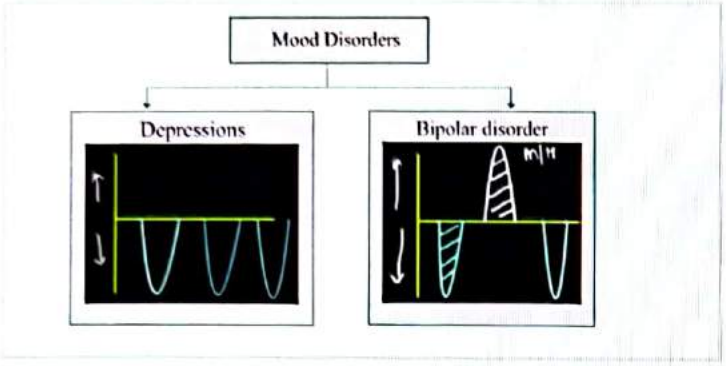
- Presence of symptoms of schizophrenia and mood disorder for the majority of time during the illness.
- Two subtypes:
  - Bipolar Type: Manic symptoms
  - Depressive Type: Depressive symptoms
- Treatment: Schizoaffective disorder
  - Bipolar type: Antipsychotic + Mood Stabilizer
  - Depressive type: Antipsychotic + Antidepressant

Delusional Disorder

- 1 or more delusions (usually related), persistent
- Hallucinations usually absent If present not prominent, short duration
- Functioning is not markedly impaired
- Function normally in areas of unaffected by delusions
- Treatment :Antipsychotics

Mood Disorders

- AKA Affective disorder - Abnormality of mood
- Mood disorders



- Depression
  - → Major depressive disorder (DSM-5)
  - → Depressing disorder
  - → Unipolar depression
  - → Only depressive episodes
- **EPIDEMIOLOGY**
  - → Most common mental disorder in India - Depression (National mental health study NMHS - 2015 - 16)
  - → Most common mental disorder in World - Anxiety disorders (specific phobia) Second most common disorder - depression
  - → More common in females than male (2:1)
  - → Mean age of onset - 40 years (most common in middle age females)
  - → Maximum DALYS - Disability adjusted life years - Depression
- **ETIOLOGY**
  - → Biological factors
    - I. Neurotransmitters: Monoamine hypothesis
    - ii. Serotonin decreased
    - iii. Norepinephrine decreased
    - iv. Dopamine decreased
- Endocrine disturbances
  - i. Hypothyroidism - associated with depression
  - ii. Treatment- Thyroid hormone (augmenting agent)+ Antidepressants

Psychological Theories

- Cognitive theory by Aaron beck
- Depression develops due to cognitive distortions
- Negative inaccurate ways of thinking
- Automatic negative thoughts

Cognitive triad of depression

- Negative views about self: Worthlessness
- Negative views about environment: Helplessness
- Negative views about future: Hopelessness

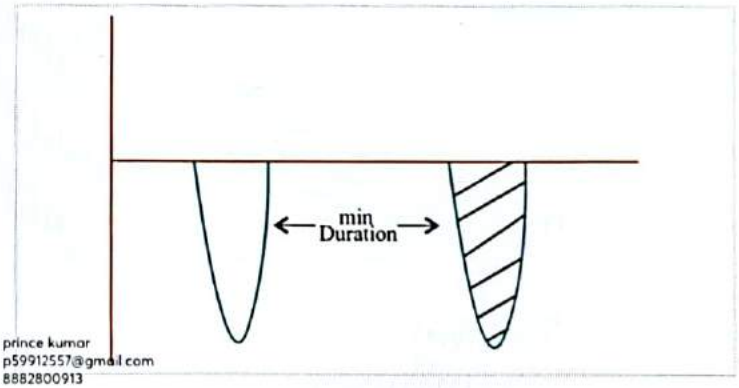
Symptoms of depression

- S: Sad/depressed mood
- I: Interest increased / anhedonia
- G: Guilt/worthlessness
- E: Energy decreased, Easy fatigability.
- C: Decreased concentration ,pseudodementia.
- A: Appetite decreased , Significant weight change. > 5% in 1 month
- P: Psychomotor retardation/agitation
- S: Suicidal thoughts/ acts
- S: Sleep (insomnia) , Early morning insomnia ,Sleep may increase as well. Known as hypersomnia.

DSM - 5

- 5 or more symptoms (atleast 1 symptom from first two)
- Duration of 2 weeks
- Decrease interest
- Low energy
- Forgetfulness
- Wakes up 2 hours before
- Crying excessively
- All the symptoms present since 2 months - depression

Recurrent Depressive Disorder



- 2 or more episodes of depression
- Minimum duration between first and second episode – 2 months

Specifiers

- Depression with features

1. With psychotic features
   a. Depression and delusions or hallucination - Psychotic depression
   b. Treatment : Antidepressants and Antipsychotics

2. With melancholic features
   a. Involution melancholia
   b. Melancholic depression
   c. Severe form
   d. Usually seen in old age
   e. Loss of pleasure to all activities / Lack of reactivity to pleasurable stimuli
   f. A distinct quality and depressed mood - profound despondency/despair
   g. Early morning awakening, mood worse in morning
   h. Anorexia/weight loss
   i. Excessive guilt, psychomotor disturbance
3. With Atypical Features
   a. My: Mood reactivity (mood brightens in response to positive event)
   b. W: Weight gain or appetite increase.
   c. I: Interpersonal rejection sensitivity (sensitive to events, feels hurt/rejected by others)
   d. L: Leaden paralysis (limbs feel heavy)
   e. High: Hypersomnia (increase of sleep)
   f. Reaction: Respond well to SSRI, MAOI, BUPROPION
   g. Not respond to tricyclic antidepressants
4. With Catatonia
   a. Depression and catatonic symptoms
   b. Treatment: Lorazepam and Antidepressant
   c. ECT
5. With postpartum onset (postpartum depression)
   a. Onset of symptoms within 4 weeks of delivery or during pregnancy
   b. DSM-5: during pregnancy or after delivery (peripartum onset)
   c. Suicide: 10 to 15% commit suicide
   d. Most common psychiatric disorder associated with suicide: depression

Treatment

- Pharmacotherapy
  - Use antidepressants
  - Takes 3 to 4 weeks for onset of action
  - Chosen according to side effects profile
- Selective serotonin reuptake inhibitors (SSRI) – (DOC)
  - Sertraline
  - Fluoxetine
  - Paroxetine
  - Citalopram
  - Escitalopram
  - Villazodone
  - Fluvoxamine
- Psychotherapy
- **Side Effects of SSRI:**
  - GI: Nausea (most common), diarrhoea, anorexia, dry mouth, constipation – (paroxetine -Anticholinergic side effect) , weight gain
  - CNS: Anxiety, Insomnia, sedation, vivid dreams
  - Sexual dysfunction: Most common side effect - Long term treatment
  - Decreased Libido, delayed ejaculation, inhibited orgasm
  - Miscellaneous: Hyponatremia
- **Vortioxetine** - "Serotonin modulator and stimulator"
  - Agonist: 5HT1A
  - Partial agonist: 5HT1B
  - Antagonist: 5HT1D, 5HT3, 5HT7
  - 5HT Reuptake Inhibitor
  - Low Sexual side effects
- SSRI and Pregnancy: Not major teratogen
  - Paroxetine: Avoid in pregnancy, cardiovascular defects
- SSRI/SNRI - (especially late pregnancy). Persistent pulmonary hypertension of newborn.
- **Side Effects of SEROTONIN NOREPINEPHRINE REUPTAKE INHIBITORS (SNRI)** -DUAL REUPTAKE INHIBITORS
  - Venlafaxine
  - Desvenlafaxine
  - Duloxetine
  - Levomilnacipran
  - Milnacipran
- Side effects:
  - Similar to SSRIs
  - Hypertension: especially with higher doses of venlafaxine
- Discontinuation Syndrome
  - Abrupt discontinuation
  - Withdrawal symptoms
  - Flu like symptoms
  - Insomnia, nausea, irritability
  - Seen with short acting drugs
  - Venlafaxine
  - Fluvoxamine
  - Paroxetine
- **TCAs: Tricyclic and tetracyclic antidepressants**
  - Block transporters of serotonin and norepinephrine (increased levels)
  - Secondary effects of TCAs: Antagonism at Muscarinic: avoid in narrow angle glaucoma
  - Antagonist - H1, alpha 1 and alpha 2 , Voltage sensitive Na channel
  - Drugs –
    → Clomipramine
    → Amitriptyline
    → Imipramine
    → Nortriptyline
- TCA (toxicity)

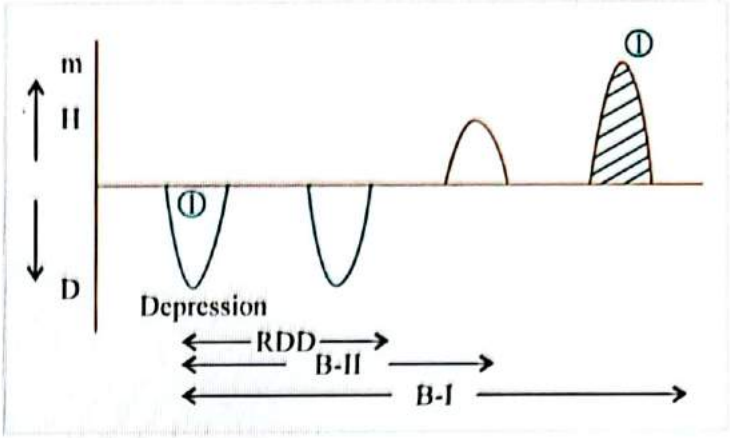
- CNS - Altered sensorium, respiratory depression, seizures
- CVS – Hypotension, ECG -Increased PR, QRS, QT Interval, AV block, RAD, QRS>100 ms
- ANS: dry mouth, blurred vision, urinary incontinence
- METABOLIC ACIDOSIS (Secondary to tissue hyperoxia, CV abnormality, seizures)

- Treatment: IV Sodium bicarbonate (Serum Alkalization)
- **MONOAMINE OXIDASE INHIBITORS**
  - 1st class of approved antidepressants
  - Inhibit metabolism of monoamines (5HT, NE, DA)
- **ATYPICAL ANTIDEPRESSANTS**
  - Norepinephrine Dopamine Reuptake Inhibitors (NDRI)
  - Bupropion
- Low risk of sexual dysfunction
- Side effects: seizure - especially at higher doses
  - Also used for smoking cessation
- **NON-ADRENERGIC AND SPECIFIC SEROTONIN ANTIDEPRESSANT** (NaSSA)
  - Mirtazapine
  - Side effect:
    - → Sedation (most common)
    - → Weight gain
    - → Sexual side effect (Not seen)
- **Novel Agents**
  - ESKETAMINE (S-Enantiomer of ketamine)
  - MOA - N-methyl-D-Aspartate (NMDA) Antagonist
  - Route: Nasal spray
  - Approved (FDA in 2019): Treatment resistant depression
  - In conjunction with oral anti-depressant
  - PSYCHOTHERAPY
  - Treatment using psychological methods
  - Cognitive Behaviour Therapy (CBT)
  - Treatment of choice:
- Combination (Higher response): pharmacotherapy and psychotherapy
- Single therapy alone is sufficient for most:
  - MILD: CBT
  - MODERATE/SEVERE: Drugs plus/minus CBT
  - OTHER SOMATIC MODALITIES
- Electroconvulsive Therapy (ECT)
  - Indications for ECT in depression
    - → Depression plus suicidal risk (preferred treatment)
    - → Depression with stupor

Bipolar Disorder

02:16:17

- Episodes of mania, hypomania, depression, mixed episodes
- Bipolar I disorder: Mania and depression
- Bipolar II disorder: Hypomania and depression



- **EPIDEMIOLGY**
  - Prevalence – 1%
    - → Bipolar I disorder: M=F (same ratio)
    - → Bipolar II disorder: more in females than males
- GENETIC FACTORS
  - 18q and 22q- strongest evidence
  - 21q
- **Mania: SYMPTOMS**
  - M: mood elation/irritable
  - E:Energy increases
  - D:Distractibility
  - I:Impulsivity: overspending, over-sexuality, over religious, oversocialization
  - G:Grandiosity / Inflated self-esteem
  - F:Flight of ideas
  - A:Activity level increases
  - S:decreased need for sleep
  - T: Talkativeness
- **DSM-5**
  - 1 and 2.
  - 3 or more symptoms
  - Duration is more than 1 week
- Mania with psychotic symptoms -Mania plus delusion or hallucination also commonly seen in patients with mania.

Hypomania

- Symptoms are similar to mania
- Not severe enough to cause marked impairment of social and occupational functioning
- No flight of ideas and Psychotic symptoms
- Duration: 4 days

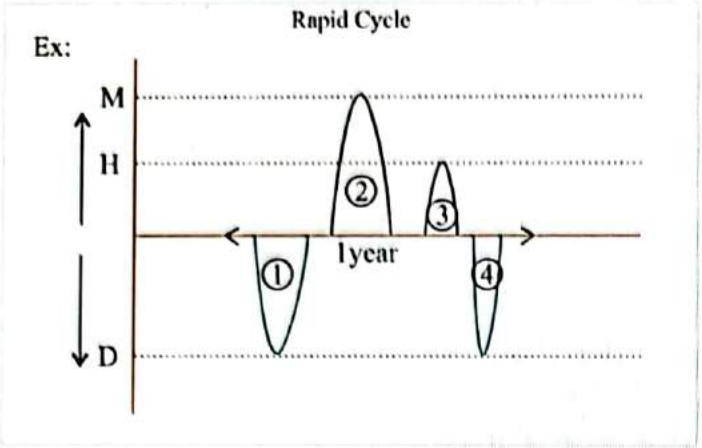
Mixed Episode

- Presence of both manic and depressive symptoms
- Duration: 7 days

Rapid Cycling

- Patients with bipolar disorder having 4 or more episodes of mania/hypomania/depression in 1 year.

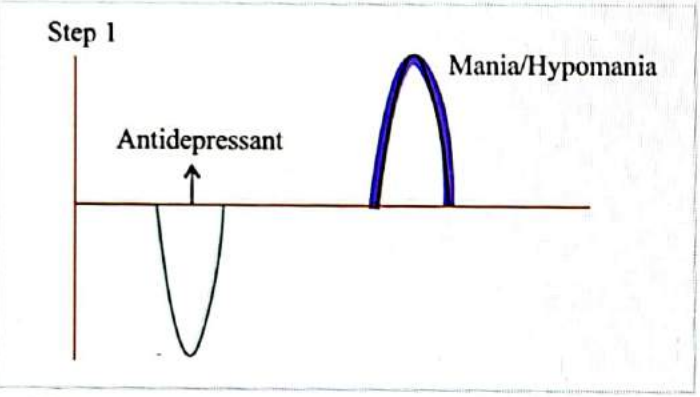
- Treatment : Valproate



Treatment of bipolar disorder : depends on phase of illness

- Acute phase: manic/ /hypomanic
- Depressive
- Mixed
- Maintenance:
  - Prophylaxis

Acute Manic/ Hypomanic Disease

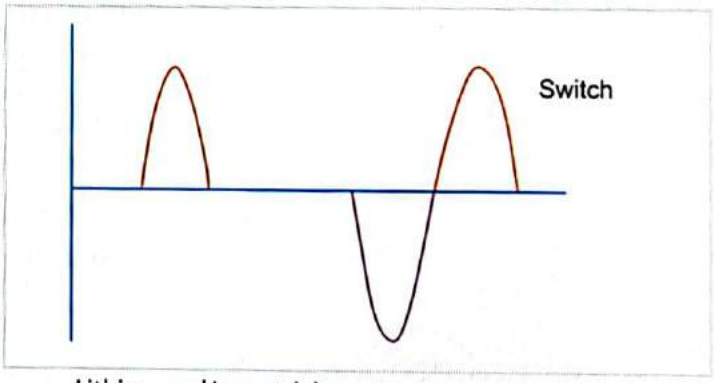


- FIRST STEP: Stop antidepressant
- First LINE DRUGS:

Antipsychotics	Lithium (most stable)	Valproate
OLANZAPINE		
RISPERIDONE		
QUETIAPINE		
ARIPIPRAZOLE		Avoided in females of reproductive age group -Can cause PCOS in reproductive age group females

Choose these if psychotic symptoms are present	Euphoric mania	Dysphoric mania
		Don't give in hepatic diabetes

- Mood Stabilizers
  - Lithium: prototypical mood stabilizer, onset of action in 1 to 3 weeks
  - Valproate:
    → Surpassed lithium in acute mania
    → Rapid onset of action
    → Better tolerability
- Benzodiazepines – can be added .
- Pregnancy:
  - Antipsychotics(safest one)>Lithium>Valproate
  - Antipsychotics does not cause teratogenic effect
  - Lithium causes Ebstein abnormality (Tricuspid valve defect)
  - Valproate to be avoided in pregnancy
    → It can cause neural tube defect .
    → 1 to 4% cases
    → Folate supplementation atleast 1 month before conception
- Severe symptoms
  - Combination: Lithium and Antipsychotics
  - Valproate and Antipsychotics
- Acute depression (Bipolar depression)
  - Don't use anti-depressant alone



  - Lithium and Lamotrigine
  - Quetiapine, Lurasidone
  - Olanzapine, Fluoxetine
  - Antidepressant and mood stabilizer
  - Lamotrigine - Safer than valproate , carbamazepine and lithium in pregnancy

Maintenance (Prophylaxis)

- 2 or more episodes or after single episode of mania (associated with significant risk)

- Treatment : Lithium, Valproate
- Duration - 2 years

Dysthymia

- Presence of mild depressive symptoms (Not enough to diagnose a depressive episode)
- Duration is 2 years
- Functional impairment is not severe

Cyclothymia

- Milder form of bipolar disorder
- Manic and depressive symptoms occur but are not severe enough to make diagnosis of mania/hypomania or depressive episodes.
- Functional impairment is not severe
- Duration is 2 years

Psychiatry aspects of pregnancy

- POSTPARTUM BLUES (Baby Blues)
  - 30 to 75 % of women after childbirth
  - Onset: 3 to 5 days after childbirth
- Symptoms: transient depression symptoms like sadness, mood lability, tearfulness, sleep disturbances
- May last for days to weeks.
- Symptoms not seen - Anhedonia, Suicidal thoughts, Thoughts of harming baby, Guilt
- Treatment: supportive care
- Postpartum Depression
  - 10 to 15 % of women after childbirth
  - Onset within 3 months of delivery
  - Symptoms: depressed mood, insomnia, change in weight ,Tearfulness, mood lability
  - Anhedonia, guilt - often
  - Suicidal thoughts and thoughts of harming baby - sometimes
  - Treatment
    → Pharmacotherapy - SSRI
    → Psychotherapy - CBT
  - Brexanolone
    → In 2019 , FDA approved for postpartum depression
    → IV infusion (continuous over 60 hours)
    → Positive allosteric modulator of GABA A receptors
    → Identical to endogenous Allopregnanolone (which decreases after child birth)
- Postpartum Psychosis
  - 1 to 2 out of 1000 child births
  - Onset within 2 to 3 weeks of delivery
  - Initial symptoms: insomnia, tearfulness, mood lability, fatigue
  - Delusions (baby is dead), hallucination (hearing voices to kill baby)
  - Psychiatric emergency
  - Treatment:
    → Antipsychotic and Lithium (often in combination with antidepressants)

Suicide

- Rate of suicide in India is 12/ 1 lac population (NCRB 2021)
- Most common method: hanging or poisoning
- Psychiatric disorders with higher risk of suicide: depressive disorders
- Risk factors
  - Most important: previous suicide attempt
  - Hopelessness
- Other risk factors:
  - Male of age more than 45 years
  - Signals of suicide intent (suicide note)
  - Divorced/separated/single
  - Unemployed
  - Chronic illness
  - Delusion or hallucinations
  - Substance abuse
  - Poor social support
  - Sexual abuse
  - Family history of suicide
- Paradoxical suicide
  - In initial stages of treatment or recovery – (gain of energy) - may attempt suicide
- Parasuicide
  - Self injurious behaviour but no intentions to kill.

2 PSYCHIATRY PART II

Anxiety Disorders

Anxiety

- Diffuse, unpleasant sense of apprehension (nervousness)
- Presents with physiological symptoms including sweating, tachycardia, tremors, restlessness, chest pain, cold clampy skin and headache.

Epidemiology

- Most common psychiatric disorder in the world.
- Most common individual disorder - specific phobias.
- All anxiety disorders are more common in females than males.
- An exception is social anxiety disorder that is equally presented in males and females.

1. Panic Disorder

00:00:54

Panic attack definition

- Acute sudden attack of intense anxiety.
- Presented with palpitations, sweating, tremors, shortness of breath and chest pain.
- Patient also presents with fear of impending doom or fear of dying or losing control or going crazy.

Panic disorder

- Recurrent panic attacks.
- Panic attacks are unexpected i.e. not restricted to any particular situation usually lasting for 20-30 minutes and rarely last > 1 hour.
- In between the attacks the patient is normal . In some patients there may be anticipatory anxiety also.
- Most common comorbid condition with panic disorder - Agoraphobia.

Differential diagnosis

- Due to presence of somatic symptoms, must be differentiated from physical disorders including:
  - Myocardial infarction.
  - Angina.
  - Mitral valve prolapse.
  - Anemia.
  - Hypertension.
  - Asthma.
  - Pulmonary embolism.
  - Seizure disorder.
  - Migraine.
  - Hypothyroidism.
  - Pheochromocytoma.
  - Hypoglycemia.

Treatment

Pharmacotherapy

- Selective serotonin reuptake inhibitors (SSRIs) are the drug of choice.
- Short term use of benzodiazepine is the drug of choice for acute attack.
- SSRIs + BZD (short term).
- Venlafaxine.

Psychotherapy

- Cognitive behavioral therapy (CBT).

Treatment of choice

- Combination of pharmacotherapy and psychotherapy.
- SSRIs + CBT.

2. Agoraphobia

- Fear or anxiety in 2 or more of the following situations:
  - Public transportation.
  - Open spaces.
  - Closed spaces.
  - In crowded places/standing in line.
  - Alone out of home.
- Patients have anxiety in places from where escape might be difficult.
- Most common comorbid psychiatric disorder with agoraphobia - Panic disorder.

Treatment

Psychotherapy

- Behavior therapy.
- Systematic desensitization is the therapy of choice, coined by Joseph Wolfe.
- Behavior therapy is preferred than CBT.

Pharmacotherapy

- SSRIs ± BZD (short term).
- Venlafaxine.

	Fear of:
Acrophobia	Heights.
Ailurophobia	Cats.
Cynophobia	Dogs.
Claustrophobia	Closed spaces.

Mysophobia	Dirt and germs.
Hydrophobia	Water.
Thanatophobia	Death.
Nyctophobia	Dark.
Xenophobia	Strangers.
Pyrophobia	Fire.

Treatment

Psychotherapy

- Behavior therapy
  - Systematic desensitization is the therapy of choice.
  - Individuals are taught relaxation techniques.
  - Hierarchy (least anxiety to maximum anxiety provoking situations)
  - The Patient moves up to the next step once he masters relaxation in previous situation.
- Therapeutic graded exposure/In-vivo exposure.
  - Similar to systematic desensitization except no relaxation techniques are used.
  - Patient learns to get habituated to anxiety.
- Flooding/Implosion.
  - Patient is exposed to supra-maximal stimulus.
  - Patient experiences intense anxiety which gradually decreases.
- Participant modeling.
  - Patient learns by imitation.
  - Therapist makes contact with a phobic stimulus and demonstrates it to the patient.

Pharmacotherapy

- SSRIs ± BZDs.

2. Social anxiety disorder or Social phobia

- Fear of social situations, including situations that involve contact with strangers.
- Fear of embarrassing oneself in front of others.

Treatment

Pharmacotherapy

- SSRIs ± BZDs (short term).
- Venlafaxine.
- β-blockers e.g. propranolol used for performance anxiety.

Psychotherapy

- CBT.

3. Generalized anxiety disorders (GAD)

- Excessive anxiety and excessive worries.
- Generalized and persistent anxiety not restricted to any particular situation (free floating anxiety).
- Excessive Worries may involve simple daily activities, timelines and health.

Treatment

Pharmacotherapy

- SSRIs ± BZD (short term).
- Venlafaxine.

Psychotherapy

- CBT.

Obsessive compulsive and related disorders 00:12:20

1. Obsessive Compulsive Disorder

- Recurrent obsessions and compulsions.

Characteristics of obsessions

- Recurrent and intrusive thoughts, images or impulses that are not pleasurable.
- Patient's own thoughts
- Senseless thoughts
- Irresistible

Characteristics of Compulsions

- Repetitive behaviors e.g. washing, checking.
- Mental acts e.g. counting.
- Patients perform compulsions in response to obsessions or in a rigid way to reduce anxiety.
- Time consuming as they may occupy > 1 hour per day.
- Cause clinically significant distress or impairment in functioning.

Ego Dystonic or ego alien

- Obsessions and compulsions are unacceptable to the mind.

Patients can have:

- Only obsessions.
- Only compulsions.
- Both obsessions and compulsions (most common presentation).

Epidemiology

- Lifetime prevalence occurs in 2-3% of cases.

Most common comorbidity

- Depression.

Etiology

- Serotonin hypothesis of OCD.
  - Serotonin dysregulation.
- Neuroanatomical model of OCD.
  - Cortico-striatal-thalamic-cortical (CSTC) circuit.

- Prefrontal cortex (orbitofrontal cortex) → Striatum (caudate) → Thalamus → Prefrontal cortex.
- Dysfunction in this circuit results in OCD.
- OCD patients have bilaterally smaller caudates.

Most common obsessions
- Contamination – most common.
- Pathological doubt – 2nd most common.
- Need for symmetry.
- Aggressive behaviors.
- Sexual behaviors.
- Sometimes Multiple.

Most common compulsions
- Checking – most common.
- Washing – 2nd most common.
- Counting.
- Symmetry and precision.
- It can be Multiple.

Treatment

Pharmacotherapy
- 1st line drug is SSRIs.
  - Clomipramine is used as the most serotonin-selective TCA
  - SSRIs are preferred due to a better side effect profile.
- Augmenting agents.
  - Antipsychotics including risperidone, aripiprazole, haloperidol.

Psychotherapy
- CBT primarily uses the behavioral technique of exposure and response prevention (ERP).
- In-vivo/Imaginal exposure of feared situations.
- Patient asked not to engage in a compulsive response.
- ERP is more preferred than CBT.

Treatment of choice for OCD
- Combination of pharmacotherapy and psychotherapy.

Other somatic therapies
- For extreme cases that are treatment resistant.
- Electroconvulsive therapy (ECT).
- Psychosurgery:
  - Sub caudate tractotomy.
  - Anterior cingulotomy.
  - Anterior capsulotomy/Gamma knife capsulotomy.

2. Body dysmorphic disorder
- Preoccupation with perceived defects or flaws in physical appearance.
- Such as concern regarding nose shape and size.

3. Hoarding disorder
- Acquiring and difficulty discarding things of little or no value.
- Leads to cluttering.
- Causes significant distress and impairment of functioning.
- Driven by fear of losing something important or distorted emotional attachment to items.

Treatment
- Difficult to treat.

Psychotherapy
- CBT is the most effective therapy.

4. Trichotillomania (Hair pulling disorder)
- Recurrent pulling out of one's hair resulting in hair loss/alopecia.
- Accompanied by unsuccessful attempts to decrease or stop the behavior.
- Hair plucking may be followed by trichophagia (mouthing of hair).
- Complications of trichophagia include:
  - Trichobezoars.
  - Malnutrition.
  - Intestinal obstruction.

5. Excoriation (Skin picking disorder)
- Recurrent picking of one's own skin resulting in skin lesions.
- Accompanied by unsuccessful attempts to decrease or stop the behavior.
- Most common area involved is the face.

ICD-11: Obsessive compulsive or related disorders
- OCD.
- Body dysmorphic disorder.
- Hoarding disorder.
- Body focused repetitive behavior disorders:
  - Trichotillomania.
  - Excoriation disorder.
- Olfactory reference syndrome.
- Hypochondriasis.

Trauma and stressor related disorders

Major life threatening events
- Exposure to war.
- Physical assault.
- Kidnapping.
- Sexual violence (rape).
- Natural disasters.
- Serious accidents.

Disorders
- Post-traumatic stress disorder (PTSD).
  - Symptoms last > 1 month.

- Acute stress disorder.
  - Symptoms last < 1 month.

PTSD

- Exposure to actual or threatened death, serious injury or sexual violence.
- Duration of symptoms is > 1 month.

Symptoms

- Mood and cognition.
  - Negative emotional state i.e. fear, anger, guilt.
  - Negative beliefs.
- Avoidance.
  - Avoiding feelings, memories and thoughts related to the trauma.
  - Avoiding people, places and objects related to the trauma.
- Hyperarousal.
  - Irritability.
  - Hypervigilance.
  - Insomnia.
  - Decreased concentration.
- Intrusion symptoms or re-experiencing symptoms.
  - Distressing dreams, memories or flashbacks.

Treatment

Psychotherapy

- CBT.
- Eye movement desensitization and reprocessing therapy (EMDR).

Pharmacotherapy.

- SSRIs

Similarities between dissociative disorders, conversion disorder and somatic symptoms and related disorders.

- Their symptoms have no bodily cause.
- Examination and investigation provides a negative result.
- Stressor may or may not be present.

Dissociative Disorders 00:28:16

- Disturbance in one or more mental functions such as memory, identity, perception, consciousness or motor behaviour.

Dissociative Amnesia

- Inability to recall important personal information, usually for traumatic events.
- Inconsistent with ordinary forgetting
- E.g. a person is rescued two days after his kidnapping and is unable to recall any information of those two days.

Depersonalization-derealization disorder

- Depersonalization refers to the feeling of detachment to self.
- Patient feels as if self is unreal.
- Derealization refers to feelings of detachment from the world.
- Person feels as if the world is unreal.
- Reality testing is intact.

Dissociative identity disorder (Multiple personality disorder)

- Two or more distinct personalities exist in an individual with only one of them evident at a time.

Conversion disorder

- Known as dissociative neurological symptom disorder in ICD-11.
- Known as functional neurological symptom disorder in DSM-5 where it is classified under somatic symptom disorder.

Symptoms

Sensory	Motor
Paresthesia. Anesthesia. Deafness. Blindness.	Abnormal movements. Paralysis. Paresis. Pseudo seizures.

La belle indifference

- Patient has an inappropriately careless attitude towards serious symptoms.

Somatic symptoms and related disorders

- Previously known as somatoform disorders.

Somatic symptom disorder or somatization disorder

- Classified under bodily distress disorder in ICD-11.
- Patient preoccupied with somatic symptoms.

Illness anxiety disorder

- Also known as hypochondriasis in ICD-11.
- Patient preoccupied with having a serious illness.
- Somatic symptoms may or may not be present.

Deliberate falsification of symptoms

- The aim may be to receive medical attention or receive external gains/benefits.

Factitious disorder or Munchausen syndrome

- Patients produce fake symptoms (physical or psychological) to assume a sick role with the aim of receiving medical attention.
- Psychiatric diagnosis.

Malingering

- Patient falsifies symptoms in order to receive external gains e.g. monetary compensation.
- Not a psychiatric diagnosis.

Factitious disorder by proxy or Munchausen syndrome by proxy

- A person (usually a caretaker) produces symptoms in another person with the aim of gaining medical attention.

Substance abuse and addictive disorder 00:36:34

Substance use disorders

- Dependence.
  - According to ICD-11, it is a strong desire or sense of compulsion to take a substance i.e. craving.
- Withdrawal symptoms and tolerance indicates development of physical dependence
- tolerance is higher amount of the substance is needed to produce the same effect.
- Difficulty in controlling substance taking behavior.
- Progressive neglect of alternative pleasures or interests because of substance use.
- Persistence with substance use despite clear evidence of harmful consequences.
- DSM-5 used the diagnosis of substance use disorder.

Alcohol

- Active ingredient in alcoholic beverages is ethyl alcohol.

Alcohol intoxication

- CNS depressant
- Legal limit of driving in India is 30 mg/dl.
- Alcoholic blackouts occur when blood alcohol concentration is 200-300 mg/dl.
- Anterograde amnesia seen during intoxication.

Alcohol withdrawal

- Symptoms that develop after reducing or stopping alcohol intake.
- Withdrawal symptoms occur in sequence.
- 6-8 hours:
  - Tremulousness (coarse tremors) – classic and most common sign.
  - GI symptoms – nausea, vomiting.
  - Autonomic hyperactivity – anxiety, arousal, sweating, mydriasis, tachycardia, hypertension.
- 8-12 hours:
  - Alcoholic hallucinosis
  - Auditory hallucinations are more common than visual hallucinations with consciousness intact
- 12-24 hours:
  - Seizures i.e. generalized tonic-clonic seizures (GTCS).
  - Rum fits or cluster seizures
- Within 72 hours:
  - Delirium tremens (Dts).
  - Disturbances of consciousness.
  - Disorientation to time, place or person.
  - Hallucinations – most commonly visual.
- Delirium tremens is the most severe form of withdrawal.
- Untreated DTs have a mortality rate of 20% i.e. medical emergencies.

Alcohol-Induced neurocognitive disorders

- Wernicke's encephalopathy.
- Korsakoff syndrome.

Wernicke's encephalopathy

- Acute onset.
- Symptoms:
  - Global confusion.
  - Ophthalmoplegia.
  - Ataxia.
- Nerves affected in ophthalmoplegia:
  - CN VI palsy (most common).
  - CN III palsy (2nd most common).
- Treatment: Responds rapidly to parenteral thiamine.
- Symptoms are reversible.

Similarities in Wernicke's encephalopathy and Korsakoff syndrome

- Cause: Thiamine (vitamin B1) deficiency.
  - Poor nutrition.
  - Poor absorption.
- Neuropathologic lesions are symmetrically involving:
  - Mammillary bodies.
  - Thalamus.
  - Hypothalamus.

Korsakoff syndrome

- Chronic onset.
- Symptoms:
  - Impaired recent memory.
  - Anterograde amnesia – inability to form new memories (more common).
  - Retrograde amnesia – inability to recall old memories.
  - Confabulation – making false stories to fill memory gaps.
- Treatment: 100 mg oral thiamine taken 2-3 times/day for 3-12 months.
- Symptoms are irreversible and only 20% of patients recover.

Evaluation of alcohol abuse disorders

- Screening test
- CAGE questionnaire.
  - Need to cut down on drinking.
  - Annoyance when asked about your drinking.

- Guilt about your drinking.
- Need for eye openers in the morning after heavy drinking.
- Positive response on 2 or more suggests alcohol use disorder.

- AUDIT.
  - Alcohol use disorder identification test.
- MAST.
  - Michigan alcoholism screening test.
- Other tests
  - SADQ.
    → Severity of alcohol dependence questionnaire.

Treatment of alcohol abuse disorders

A. Detoxification phase

- Management of withdrawal symptoms.
- Usual duration of treatment is 7-14 days.
- Drug of choice is benzodiazepine (BZD) for all withdrawal symptoms.
  - Hallucinosis, seizures, Delirium tremens.
  - Dose reduction by 20% per day.
- Short-acting BZDs:
  - Lorazepam.
- Long-acting BZDs:
  - Chlordiazepoxide.
  - Diazepam.

Treatment for alcohol withdrawal

- BZD + Thiamine.

Treatment of withdrawal in liver disease

- used in Deranged liver function tests.
  - Glucuronidation:
    → Lorazepam.
    → Oxazepam.
- Do not use
  - Oxidation glucuronidation:
    → Chlordiazepoxide.
    → Diazepam.

B. Maintenance phase

- To maintain abstinence.
- Pharmacological treatment
- Deterrent agent (aversive agent)
  - Disulfiram.
  - MOA: Irreversible inhibitor of aldehyde dehydrogenase (ALDH).
  - Alcohol/Ethanol →(alcohol dehydrogenase ADH)→ Acetaldehyde→(aldehyde dehydrogenase ALDH)→ Acetic acid→ $CO_2 + H_2O$
  - Disulfiram-alcohol reaction
    → Acetaldehyde levels increase.
    → Unpleasant symptoms: nausea, vomiting, burning sensation in face and stomach.
- Anticraving agents
  - Acamprosate
    → NMDA (N-methyl-D-aspartate) antagonist.
    → Glutamate receptor.
  - Naltrexone.
    → Opioid antagonist.
  - Ondansetron.
    → 5HT3 antagonist.
  - Topiramate.
    → Anti-epileptic agent.
  - Baclofen.
    → GABA-B antagonist.
  - Fluoxetine.
    → SSRI.

Non-pharmacological therapy

- CBT.
- Alcoholics Anonymous - Self-help group that follows a 12-step approach.

Opioids

- Derived from the opium poppy plant Papaver Somniferum.

Heroin

- Most commonly abused opioid.
- Diacetyl-morphine.
- Street names include smack or brown sugar.
- Opioid intoxication
- Clinical triad of:
  - Respiratory depression.
  - Pinpoint pupil (miosis).
  - Coma.

Treatment of opioid intoxication

- Drug of choice is IV naloxone.
  - Opioid antagonist.
  - Short acting.

Opioid withdrawal

- Flu-like symptoms.
- Muscle cramps, bone aches, abdominal cramps.
- Diarrhea, lacrimation, rhinorrhea, sweating.
- Pilorection or Glooseflesh.
- Yawning.
- Pupillary dilation (mydriasis).

Treatment of opioid withdrawal

Detoxification phase

- Management of withdrawal symptoms.
- Methadone.

- Opioid agonist.
- Buprenorphine.
  - Partial opioid agonist.
- Symptomatic treatment
- Clonidine.
  - α2 adrenergic agonist.
  - Reduces autonomic withdrawal symptoms i.e. sweating, restlessness, tremor, rhinorrhea.

Maintenance phase
- Prevent relapse.
- Pharmacological treatment
- Opioid substitution therapy (OST).
  - Principle: Substitute an illicit, medically unsafe, short-acting opiate with a medically safe, long-acting agonist.
  - Methadone.
  - Buprenorphine.
- Opioid antagonist treatment.
  - Naltrexone,
    → Blocks opioid receptors.
    → Opioid use fails to produce euphoria and the patient stops its use.

Non-pharmacological treatment
- CBT.
- Narcotic anonymous (NA) – 12-step self-help group.

Cannabis
- Derived from hemp plant, Cannabis sativa.

Most common substances
- In India, tobacco > alcohol.
- In the world, alcohol > tobacco.
- Most common substance is caffeine.
- Most common illicit substance is cannabis.
- **Various forms**
- Ganja, bhang, hash, charas, marijuana, grass, pot, weed.

Psycho-active ingredient
- Delta-9-tetrahydrocannabinol (Δ9-THC).
- Responsible for psychoactive effects.

Cannabis intoxication
- Feelings of euphoria.
- Sense of time distortion (slowing of time).
- Redness of conjunctiva.
- Increased appetite.
- Hallucinations.
- Delirium in high doses.

Bad trip
- Occurs sometimes.
- Unpleasant experience characterized by:
  - Restlessness.
  - Fear and panic symptoms.

Cannabis withdrawal
- Irritability.
- Anxiety.
- Depressed mood.
- Sleep difficulty.
- Decreased appetite.
- Physical symptoms – tremors, sweating, fever, abdominal pain, chills.

Cannabis induced psychotic disorder
- Hemp insanity.
- Psychotic symptoms e.g. delusions, hallucinations.

Flashbacks
- Re-experiencing symptoms of cannabis use, days or weeks after they last used cannabis.

Amotivational Syndrome
- Person's unwillingness to persist in a task such as at school or work.
- Person becomes apathetic, lethargic and may gain weight.

Running amok
- Development of rage after cannabis use, in which the person may hurt or kill others.

Treatment
- Supportive care – withdrawal symptoms are usually mild.
- Symptomatic treatment used for short term e.g. benzodiazepines.

Hallucinogens

Examples
- Phencyclidine (PCP or angel dust).
- Ketamine.
- Lysergic acid diethylamide (LSD).
- Mescaline from cactus.
- Psilocybin from mushrooms.
- Methylenedioxymethamphetamine (MDMA or ecstasy).

Synesthesia
- Sensation in one sensory modality causing sensation in another modality e.g. seeing music, touching lights.
- Occurs in LSD.

Flashbacks
- Re-experiencing symptoms of hallucinogen use days or weeks after last use.

- Examples:
  - Flashes of color.
  - Visual distortions.
  - Halos.
  - Macropsia.
  - Micropsia.
- Seen especially in LSD.

Withdrawal symptoms
- Usually lack withdrawal symptoms.
- Usually lack physical dependence.

Stimulants

Examples
- Cocaine.
- Amphetamine.

Cocaine
- Derived from the plant Erythroxylum coca.

Method of use
- Inhaling fine chopped powder into the nose i.e. snorting – most common.
- Due to vasoconstriction, this can cause rhinorrhea, nosebleeds and nasal septum perforation.
- Jet black pigmentation of the tongue can occur.

Speed ball
- Combination of cocaine and heroin.

Adverse effects
- Potent sympathomimetic drug.
  - Prevents reuptake of dopamine , norepinephrine and serotonin.
- Vasoconstriction.
  - In the peripheral vessels, it causes hypertension leading to damage to end organs e.g. brain and kidneys.
  - In the coronary blood vessels, it causes myocardial infarction.
- Tachycardia.

Cocaine intoxication
- Euphoria.
- Pupillary dilation.
- Tachycardia.
- Hypertension.
- Sweating.
- Respiratory depression.
- Cardiac arrhythmias.
- Seizures.
- Auditory hallucinations.
- Paranoid ideations.
- Tactile hallucinations – Cocaine bugs/formication/magnum bugs.
- Strong psychological dependence.
- Physiological dependence e.g. tolerance is relatively mild.

Cocaine-induced psychotic disorder
- Hallmark is paranoid delusions (delusions of persecution) and auditory hallucinations.
- Visual hallucinations and tactile hallucinations may also be present.

Treatment
- Withdrawal symptoms are usually mild.
- No pharmacologic agents reduce the intensity of withdrawal.

Tobacco

- Most common substance used in India.
- Active ingredient is nicotine.

Tobacco withdrawal
- Intense craving for tobacco.
- Irritability.
- Anxiety.
- Difficulty concentrating.
- Insomnia.
- Bradycardia.
- Increased appetite.
- Weight gain.

Treatment
- Pharmacological treatment
- Nicotine replacement therapy (NRT)
- Manage withdrawal symptoms.
- Various forms of NRTs:
  - Nicotine gums.
  - Nicotine lozenges.
  - Nicotine patches.
  - Nicotine nasal spray.
  - Nicotine inhalers.
- Non-nicotine medications.
- Varenicline.
  - Partial agonist at α4β2 nicotinic acetylcholine receptor.
  - Reduces reinforcing effects of nicotine, relieving craving and withdrawal.
  - Most efficacious.
  - Side effects of varenicline:
    - → Neuropsychiatric e.g- depression, suicidal ideation.
    - → Cardiovascular adverse effects in people with cardiovascular disease.
- Bupropion.
  - Antidepressant.

- Norepinephrine dopamine reuptake inhibitor (NDRI).
- Neuropsychiatric adverse effects – depression, suicidal ideation (do not worsen).
- Contraindicated in seizure disorder and current/past bulimia or anorexia nervosa.

Club Drugs
- Also known as rave drugs.
- Examples:
  - Methylenedioxymethamphetamine (MDMA) or ecstasy.
  - Flunitrazepam (rohypnol or roofies).
  - Gamma-hydroxybutyrate (GHB).
  - Ketamine.
  - LSD.
  - Methamphetamine.
- Date rape drugs produce disorientation and sedating effects include ketamine , GHB and Flunitrazepam

Gambling Disorder
- Persistent or recurrent gambling behavior, online or offline.
- Impaired control over gambling.
- Takes precedence over daily activities.
- Continuation despite negative consequences.

Gaming Disorder
- New diagnosis in ICD-11.
- Persistent or recurrent gaming behavior (digital or video games) online or offline.
- Therapy is the treatment of choice.

Child Psychiatry 01:09:13

Attention Deficit Hyperactivity Disorder (ADHD)
- Previously known as minimal brain damage/dysfunction.
- Neurodevelopmental disorder.

Clinical features
- Inattention.
  - Failure to give close attention to details.
  - Make careless mistakes.
  - Difficulty sustaining attention in tasks.
  - Failure to finish work.
  - Easily distracted.
- Hyperactivity.
  - Fidgets with or taps hands and feet.
  - Leaves seat when remaining seated is expected.
  - Acting as if driven by a motor i.e. 'on the go'.
  - Talks excessively.
- Impulsivity.
  - Interrupts others.
  - Difficulty waiting for their turn.

DSM-5
- Onset of symptoms before 12 years.
- DSM-IV states that onset of symptoms occurs before 7 years.

ICD-11
- Symptoms present in ≥ 2 settings.

Subtypes
- Combined presentation.
- Predominantly inattentive presentation.
- Predominantly hyperactive/impulsive presentation.

Epidemiology
- More common in boys than girls.

Course
- 40% of cases show remission at puberty or in early adulthood.
- Hyperactivity is the 1st symptom to remit.
- Inattention is the last symptom to remit.
- Remaining cases show partial remission and are at risk of developing antisocial personality disorder or substance use disorder.

Treatment
Pharmacotherapy
- 1st line of treatment.
- CNS stimulants and non-stimulants.

CNS stimulants
- 1st choice of agents.
- Contraindicated in cardiac risk or abnormalities.
- Given in the morning up to midday.
- Methylphenidate:
  - Drug of choice.
  - Dopamine agonist.
  - Common side effects – headaches, nausea, insomnia, exacerbation of tics, growth suppression.
  - Drug holiday implemented to cure growth suppression.
- Amphetamine:
  - 2nd drug of choice.
  - Dopamine agonist.
- Modafinil:
  - α1 agonist.
  - Adult ADHD.
  - Not FDA approved.

Non-stimulants
- Useful in patients where stimulants have poor response, are avoided due to side effects or are contraindicated.
- Atomoxetine:
  - Norepinephrine reuptake inhibitor.
  - Risk of suicidal ideation.
  - Reduce tics.

- α2 agonists e.g. clonidine, guanfacine.
  - Common adverse effects – sedation, headache, fatigue, hypotension.
  - Preferred in comorbid tic disorders when stimulants increase tics.
  - Can be used at night as they cause sedation.
  - Uses of clonidine: Tic disorder, ADHD, substance use disorder (detoxification phase).
- Bupropion.
  - Norepinephrine dopamine reuptake inhibitor (NDRI).
  - Antidepressant.
  - Risk of seizure at higher doses.
  - Not FDA approved for ADHD.
  - Uses: antidepressant, smoking cessation, ADHD.

Autism Spectrum Disorder

- Previously known as pervasive developmental disorders (PDD).
- Neurodevelopmental disorder.

Symptoms

- 2 core symptoms: deficits in social communication and restricted, repetitive behaviors.
- Deficits in social communications.
  - Poor reciprocal social skills.
  - Infants lack social smile and anticipatory posture for being picked up.
  - Poor eye contact.
  - Poor attachment behavior.
  - Social behavior is awkward.
  - Difficulty making friends or romantic relationships.
- Restricted, repetitive behaviors.
  - Activities are rigid, repetitive and monotonous.
  - Often play with toys in a ritualistic manner.
  - Any changes or disturbance in their routine may upset them or cause panic or fear.
- 3rd criteria i.e. language impairment.
  - Removed from core symptoms in DSM-V and ICD-11.
  - Not a defining but associated feature.

Associated Characteristics

- Higher incidence of abnormal dermatoglyphics (fingerprints).
- Intellectual disability seen in 30% of patients.
- Irritability and aggression.

Genetic factors

- Most common associated genetic disorder is fragile X syndrome.
- Tuberous sclerosis.

5 overlapping disorders

- Autism disorder.
- Rett syndrome.
- Childhood disintegrative disorder.
- Asperger disorder.
- PDD, NOS.
- These disorders have been put in a single diagnosis of autism spectrum disorder in DSM-5 and ICD-11.

Autistic disorder (autism, childhood autism)

- Onset before 3 years.
- Mental retardation.
- Associated with several genetic factors.

Rett syndrome

- More common in females than males.
- Mutation in X-linked gene encoding MECP2 (methyl-CpG-binding protein 2).
- Normal development in the 1st five months.
- Onset from 6 months to 2 years.
- Characteristics:
  - Loss of acquired motor skills, replaced by stereotypic hand movements e.g. hand wringing.
  - Loss of acquired speech.
  - Head circumference growth decelerates i.e. microcephaly.
  - May develop poor muscle coordination.
  - Seizures seen in 75% of children.

Specific learning disorder (SLD)

- Known as developmental learning disorder in ICD-11.
- Neurodevelopmental disorder.
- Persistent difficulty in learning academic skills e.g. reading, written expression or mathematics.
- Inconsistent with the intellectual ability of a child as IQ is usually normal.

SLD with impairment in reading: Dyslexia

- Difficulty in recognizing words.
- Poor comprehension.
- Difficulties with spellings.

SLD with impairment in written expression: Specific spelling disorder

- Poor writing skills.
- Poor spelling.
- Poor handwriting.

SLD with impairment in mathematics: Dyscalculia

- Difficulty learning numericals.
- Difficulty remembering signs e.g. + or -.
- Slow, inaccurate calculations.

Mixed disorder of scholastic skills

- Combined impairment of reading, written expressions and mathematics.

Intellectual disability

- DSM-5 → Intellectual developmental disorder.
- ICD-11 → Disorder of intellectual development.
- Previously known as mental retardation.

Clinical features

- Significant limitations in both:
  - Intellectual functioning (reasoning, learning and problem solving).
  - Adaptive behavior (conceptual, social and practical skills).
- Onset before 18 years.

IQ

- Intelligence is measured by calculating IQ.
- Intelligence quotient.

  IQ = mental age/chronological age x 100
- Chronological age should not be ≥ 15 years.
- Normal IQ → 90-109.
- Borderline IQ → 70-89.
- Mental retardation → IQ < 70.

Mental retardation (MR)

MR	IQ
Mild	50-69
Moderate	35-49
Severe	20-34
Profound	<20

Genetic factors

- Down syndrome – most common cause.
- Fragile X syndrome.

Treatment

Psychosocial interventions

- Behavioral therapy.
  - For maladaptive behaviors e.g. aggression, self-injurious behavior, hyperactivity.
  - Contingency management i.e. desired behaviors are rewarded and undesired behaviors are punished.

Pharmacotherapy

- Symptomatic treatment.

Organic Mental Disorders 01:29:03

- Neurocognitive disorders in DSM-5 and ICD-11.

	Delirium	Dementia	Amnestic disorder
Impairment in:	Consciousness. Cognition.	Cognition.	Memory.

Delirium

- Most common organic mental disorder.
- Acute onset.
- Fluctuating progress.

Predisposing factors

- Elderly age.
- Mental illness.
- Surgical illness during postoperative period.
- Substance use i.e. alcohol.

Diagnosis

- Impairment of consciousness.
- Clouding of consciousness.
- Confusion.
- Altered sensorium.
- Reduced orientation.
- Impaired attention.
  - Reduced ability to focus, sustain or shift attention.
- Cognitive impairment.
  - Memory (recent and immediate).
  - Language.
  - Perception (illusion, hallucinations).
  - Visual hallucinations are more common.
- Motor disturbances.
- Sleep disturbance.
- Emotional disturbance.

Assessment

- Confusion assessment method (CAM).
  - Diagnostic tool to identify delirium.
- EEG (electroencephalogram).
  - Diffuse slowing of background cortical activity.
  - Delirium caused by alcohol or sedative hypnotic withdrawal have low-voltage fast activity.

Treatment

- Reversible condition.
- Treat the underlying cause.

Pharmacotherapy

- Antipsychotics.
  - Management of delusions, hallucinations and agitation.
- Benzodiazepines.
  - Insomnia treatment.

- Preferred drugs for alcohol withdrawal delirium (delirium tremens) treatment.

Dementia

- Progressive cognitive impairment in clear consciousness.

Symptoms

- Cognitive impairment:
  - Memory → Amnesia.
  - Language → Aphasia.
  - Complex attention is affected.
  - Perceptual motor skills → Apraxia and agnosia.
  - Social cognition is affected.
  - Executive function affected.
- Behavioral and psychological:
  - Personality changes.
  - Delusions and hallucinations.
  - Depression and anxiety.
  - Agitation and aggression.

Early onset dementia

- Onset before 65 years.

Types of dementia

- 15% of dementias are reversible.
- Neurosurgical conditions.
- Infections e.g. encephalitis.
- Metabolic causes:
  - Deficiency of vitamin B12, folate and niacin.
  - Hypothyroidism and hyperthyroidism.
  - Hypoparathyroidism and hyperparathyroidism.
- Others: Drugs, toxins, alcohol.

Cortical and subcortical dementias

	Cortical dementia	Subcortical dementia
Site of lesion	Early involvement of cortical structures.	Early involvement of subcortical structures e.g. basal ganglia, brain stem nucleus and cerebellum.
Examples	Alzheimer's disease – most common. Pick's / fronto-temporal dementia	Parkinson's disease. Huntington's disease. Multiple sclerosis. Progressive supranuclear palsy. Wilson's disease.

Mixed dementia

- Vascular dementia.
- Lewy body dementia.

Alzheimer's disease

- Most common type of dementia.
- Gradual and insidious onset.
- More common in females than males.
- Parietotemporal distribution.
- Most common presentation is memory deficit.
- Language disturbance.

Neurotransmitters

- Decreased acetylcholine.
- Increased glutamate.

Vascular dementia or Multi-infarct dementia

- Hemorrhagic or ischemic causes.
- Step ladder pattern: stepwise deterioration of symptoms due to acute exacerbations corresponding to new areas of stroke.

Frontotemporal dementia (Pick's disease)

- Atrophy of frontal and temporal lobes.
- Pick bodies i.e. masses of cytoskeletal elements.

Variants of Pick's disease

	Behavioral variant	Language variant
Site	Frontal lobe.	Temporal lobe.
Characteristics	Disinhibitory behavior. Apathy. Stereotypy. Hyperorality.	Language impairment.

Lewy body disease

- 2nd most common cause of dementia.

Core features

- Fluctuating cognition – variations in attention and alertness.
- Visual hallucinations.
- Motor features of Parkinsonism – tremors, rigidity and bradykinesia.

Suggestive features

- REM sleep behavior disorder.
- Severe neuroleptic sensitivity – extrapyramidal symptoms.

Pathology

- Lewy bodies observed.
- Spherical intracytoplasmic eosinophilic inclusion bodies.
- Fibrillar deposits of α-synuclein.

Normal Pressure Hydrocephalus (NPH)

- Reversible neurologic cause.
- Associated with:
  - Abnormal gait.

- Dementia.
- Urinary incontinence.

- Treatment is ventricular shunting.

Assessment of dementia

- Mini mental state examination (MMSE).
  - Screening tool.
  - Score of <24 out of 30 suggestive of dementia.

Treatment of dementia

- Treat the cause.

Pharmacotherapy

- Cholinesterase inhibitors.
  - Reversible inhibitors of enzyme acetylcholinesterase (Increase Ach)
  - Tacrine is not used due to hepatotoxicity.
  - Donepezil.
  - Rivastigmine.
  - Galantamine.
- Memantine.
  - NMDA non-competitive antagonist.
- For behavioral and psychological symptoms:
  - Antidepressants.
  - Antipsychotics.
  - Benzodiazepines.

Amnestic Disorders

- Memory impairment.
- Recent memory affected → Anterograde amnesia.
- Retrograde amnesia.
- Immediate memory, consciousness and global intellectual decline remain intact.

Causes

CNS	Systemic
Seizures. Head trauma. Tumors.	Thiamine deficiency (Korsakoff syndrome).

Sleep-wake disorders

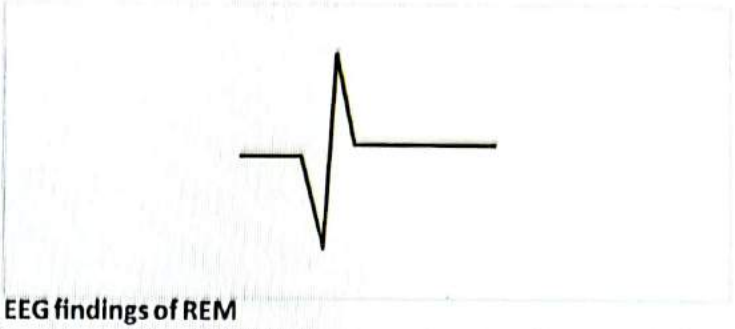
01:48:00

Physiological states of sleep

- Non-rapid eye movement (NREM).
- Rapid eye movement (REM).
- REM is also known as a paradoxical sleep.
- NREM divided into:
  - Stage 1 - N1
  - Stage 2 - N2
  - Stage 3 & 4 - N3

EEG findings of N2 NREM

- Sleep spindles i.e. bursts of waves of 12-14 Hz.
- K-complexes i.e. negative sharp waves followed by positive waves.



EEG findings of REM

- Increased activity similar to awake state (β activity) along with return of α activity.
- Sawtooth waves.

Sawtooth waves

Differences

	NREM	REM
Other names	Orthodox sleep.	Paradoxical sleep.
Brain activity and physiological activity (PR, RR, BP)	Lower than awake.	Increased except muscle tone (paralysis).
Body movements	Present.	Absent.
Penile erection	Absent.	Present.
Dreams	Not remembered.	Remembered.
Disorders	Somnambulism. Night terror. Bruxism. Nocturnal enuresis. Somniloquy.	Narcolepsy. Nightmares. REM sleep behavior disorder. Sleep apnea.

Parasomnias

- Disorders of partial arousal.

NREM-related parasomnias

Somnambulism/Sleep walking

- Person engages in motor behavior while unconscious.
- Difficult to awaken.
- May appear confused if awakened and may react violently.

Sleep terrors/Night terrors

- Sudden arousal with fearfulness.
- May scream, cry and have panic symptoms.
- Appear confused if awakened.
- Unable to recall any dream.

Bruxism/Teeth grinding

- Person grinds teeth, making loud sounds.
- Enamel damage.

Somniloquy/Sleep talking

- Person talks during sleep.
- Unable to recall in the morning.

REM-related parasomnias

Nightmare disorder

- Sudden arousal with fearfulness.
- Able to recall any dream.

Narcolepsy

Tetrad of symptoms

- Sleep attacks.
  - Most common.
  - Strong urge of excessive daytime sleepiness.
- Cataplexy.
  - Sudden loss of muscle tone.
  - Person may fall.
  - Triggered by emotional outbursts.
- Sleep paralysis.
  - Person wakes up but is unable to move the body.
- Hypnagogic (going to sleep) and hypnopompic (going out of sleep) hallucinations.

Cause

- Deficiency of hypocretin (orexin) produced in the hypothalamus.

Treatment

- Regimen of forced naps at regular interval.

Pharmacotherapy

- Modafinil.
  - 1st line of treatment.
  - α1 agonist.

Kleine-Levin syndrome

- Episodes of:
  - Hypersomnia.
  - Hyperphagia.
  - Hypersexuality.
  - Disinhibition e.g. aggression.
- Asymptomatic in between episodes.

Sexual Disorders

01:58:02

Phases of sexual response cycle

- Desire phase.
  - Includes sexual urges and wishes.
- Excitement or arousal phase.
  - Subjective feelings of sexual pleasure and accompanying physiological changes e.g. increased heart rate, blood pressure and respiratory rate.
  - Males → Penile erection.
  - Females → Vaginal lubrication.
  - Erectile dysfunction is a disorder of this phase.
- Orgasm.
  - Smallest stage lasting 3-15 seconds.
  - Peak of sexual pleasure.
  - Males → Ejaculation of semen.
  - Females → Involuntary contraction of lower third of vagina and uterus.
- Resolution.
  - Lasts 10-15 minutes.
  - Body returns to resting state.

Sexual Dysfunctions

Male erectile disorder (Erectile dysfunction)

- Marked difficulty in obtaining or maintaining erection during sexual activity for sexual intercourse.

Causes

Psychogenic	Organic
Psychological factors: • Anxiety. • Marital problems.	Medical causes: • Diabetes mellitus. • Arteriosclerosis • Neurological disorders.
More common.	
Early morning erections and nocturnal erections present.	Absent.

Investigations used to record nocturnal erections

- Nocturnal penile tumescence.
- Penile plethysmography.

Treatment

Pharmacotherapy

- Phosphodiesterase-5 inhibitors (PDE-5 inhibitors).

- Nitric oxide enhancer that facilitates blood flow into penis and enhances erection.
- Sildenafil.
- Tadalafil.
- Vardenafil.

Psychotherapy

- Dual sex therapy proposed by Masters and Johnson.
- These exercises are called sensate focus exercises:
  - Non-genital sensate focus.
  - Genital sensate focus.

Premature ejaculation

- Pattern of persistent or recurrent ejaculation with minimal sexual stimulation before or immediately after vaginal penetration.
- In DSM-5, ejaculation occurs in < 1 minute.

Treatment

Psychotherapy

- Behavior therapy including:
  - Squeeze technique.
    → Proposed by Masters and Johnson.
    → When male partner gets feeling of impending ejaculation, he or his partner squeezes the coronal ridge of glans penis inhibiting ejaculation.
  - Stop-start technique (semanus technique).
    → When the male partner gets the feeling of impending ejaculation, sexual activity is stopped for some time and restarted once excitement has decreased.

Pharmacotherapy

- SSRIs can delay ejaculation.

Nymphomania

- Excessive sexual desire in females.

Satyriasis

- Excessive sexual desire in males.

Gender Identity Disorders

02:04:25

- DSM-5 → Gender dysphoria.
- ICD-11 → Gender incongruence.
- Gender identity refers to the sense one has of being male or female, which corresponds most often to the person's anatomical sex.

Gender identity disorder of childhood

- Marked incongruence between expressed gender and assigned gender in prepubertal children.
- Strong desire to be of the other gender.
- Preference for cross dressing or toys and games engaged by the other gender.
- May have a dislike of one's sexual anatomy.

Transsexualism

- Desire to live and be accepted as a member of the opposite sex.
- Usually accompanied by a sense of discomfort with or inappropriatness of one's anatomical sex.
- Transexual identity should have been present for at least 2 years.

Treatment

- Patients who insists for sex change - Sex reassignment surgery can be done.
- Hormonal therapy.

Eating Disorders

Anorexia Nervosa

- More common in females than males.
- Most common age of onset is 14-18 years (young adolescent females).

Clinical features

- Restriction of energy intake resulting in significantly low weight than normal.
  - ICD-11 states that BMI is less than 18.5 Kg/m2 in adults and BMI-for-age under 5th percentile in children and adolescents.
- Intense fear of weight gain
- Disturbance of body image.
- Many adolescent patients have delayed sexual development while adult patients may show decreased interest in sexual activities.
- Medical complications secondary to starvation.

DSM-5 and ICD-11

- Amenorrhea has been removed as a necessary criteria (in DSM-4 and ICD-10).

Subtypes

Restricting type	Binge eating/Purging type
Seen in 50% of patients.	
• Highly restricted food intake. • Excessive exercise.	• Binge eating i.e. intake of large amounts of food in short duration. • Purging i.e. compensatory mechanism for excess calories by self-induced vomiting, laxative use, diuretic or emetic use, • May do Excessive exercise.

Course and prognosis

- High mortality rate.
- Most deaths occur due to medical complications of low weight and malnutrition.

Treatment

- Patients are often secretive, deny their symptoms and resist treatment.
- Hospitalization may be required to restore patients nutritional status and manage complications like dehydration and electrolyte imbalance (reduced Na+, K+ and Cl-).
- Hospitalization of patients may be required who are 20% below normal weight for height.
- Nutritional rehabilitation and weight restoration is the primary goal.
  - 1500-1800 Kcal/day given in divided meals.
- Monitor patients for 2 hours after each meal to prevent self-induced vomiting.
- Behavioral management.
- SSRIs.

Bulimia Nervosa

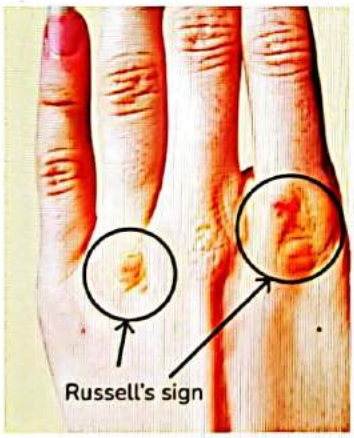
- More common in females.
- Most common age of onset is late adolescence to young adulthood.
- Episodes of binge eating combined with inappropriate ways of preventing weight gain.

Clinical Features

- Episodes of binge eating in which large amounts of food are usually consumed in small duration.
- Compensatory behavior to prevent weight gain:
  - Purging behaviors like self-induced vomiting, laxatives, diuretics, emetics, excessive exercise and fasting.
- At least once per week for 3 months.
- Fear of gaining weight or desire of losing weight.
- Weight is normal or higher (as compared to anorexia nervosa with decreased weight).

Features secondary to purging

- Enamel erosion and dental caries.
- Swollen parotid and salivary glands.
- Russell's sign i.e. callus on knuckles.



- Hypokalemia, hypochloremia, hyponatremia and alkalosis.

Treatment

- Usually outpatient.

Psychotherapy

- CBT is the 1st line of treatment.

Pharmacotherapy

- SSRI- fluoxetine.

Binge-Eating Disorder

- Most common eating disorder.
- More common in females.
- Episodes of binge eating but there are no compensatory behaviors.
- Sense of lack of self-control.
- Overweight or obese range.

Treatment

- CBT is the 1st line treatment.
- SSRI.
- Lisdexamphetamine approved by FDA for short term treatment.

Lifetime Prevalence

- Anorexia nervosa → 2-4%.
- Bulimia nervosa → 2%.

Personality Disorders 02:15:20

- Pattern of behaviors and inner experiences that deviates significantly from individual's cultural standards.
- Clinically significant distress or impairment in functioning.
- Onset in adolescence or early adulthood.
- Pattern is stable and of long duration.
- Some personality disorders e.g. antisocial and borderline tend to become less evident or remit with age.
- Maturing occurs by 40 years with resolution of abnormal patterns of behavior.

Clusters

- A → Odd/Eccentric.
- B → Dramatic/Impulsive.
- C → Anxious/Fearful.

Cluster A

Paranoid Personality Disorder

- Long standing suspiciousness and distrust of others.
- Suspects, without any basis, that others are exploiting or harming them.
- Reads hidden threatening meanings from benign events.

Schizoid Personality Disorder

- Long pattern of social withdrawal.
- Emotionally cold and indifferent to praise or criticism.
- Prefer solitary activities.
- Lacks close friends.

Schizotypal Personality Disorder

- Social difficulties and eccentric behavior.
- Exhibits odd beliefs and magical thinking e.g. superstitiousness, belief in 6th sense and telepathy.
- Speech may be vague, over elaborated and reflect odd thinking.
- May have illusions and ideas of reference.

Cluster B

Antisocial personality disorder or Dissocial personality disorder

- Do not have regards for the rights of others and often violate them.
- Frequently involved in unlawful activities such as theft, lying or conning.
- Irritability or aggressiveness (physical fights and assaults).
- Do not have guilt or remorse for their actions and blame others.
- Substance use disorders are frequently present.

Borderline personality disorder

- More common in females.
- Unstable interpersonal relationships (idealization and devaluation).
- Identity disturbance i.e. unstable self-image.
  - Sudden shift of goals, values, sexual identity etc.
- Impulsivity i.e. potentially self-damaging activities like spending, reckless driving or substance use.
- Recurrent suicidal behavior, gestures and threats e.g. wrist slash.
- Mood instability i.e. intense episodic ,anger outbursts.
- Chronic feelings of emptiness.
- Almost always appear to be in a state of crisis.
- Short-lived psychotic episodes (micro-psychotic episodes) may be seen as fleeting and doubtful.

Treatment

- Psychotherapy is the treatment of choice.
- Dialectical behavior therapy (DBT).
- Mentalization based therapy (MBT).
- Transference-focused psychotherapy (TFP).

Histrionic personality disorder

- High degree of attention seeking behavior.
- Speech and emotions are exaggerated.
- Behave in colorful, dramatic and extroverted way.
- Want to be the center of attention.
- Inappropriate sexually seductive behavior and flirtatious.
- Uses physical appearance to draw attention.

Narcissistic personality disorder

- Heightened sense of self importance, expecting to be recognized as superior without achievements.
- Preoccupied with fantasies of power and success.
- Requires excessive admiration.
- Exploitative and may lack empathy.

Cluster C

Avoidant (anxious) personality disorders

- Extremely sensitive to rejection.
- Fear of criticism, disapproval or rejection.
- View themselves as socially inapt or inferior.

Dependent personality disorders

- Difficulty in making everyday decisions.
- Dependent on others for advice and reassurance.
- Need others to assume responsibility for most areas.
- Difficulty expressing disagreement because of fear of loss of support.
- Lacks confidence and cannot initiate new things.

Obsessive compulsive personality disorders.

- Known as anankastic personality disorder in ICD-10.
- No obsessions and no compulsions.
- Preoccupied with details, rules and organization.
- Shows perfectionism that interferes with task completion and significant delays in tasks.
- Rigidity and stubbornness that are often inflexible.

ICD-11

- Older classification of personality disorder is removed.
- Personality disorders are classified based on severity:
  - Mild personality disorders.
  - Moderate personality disorders.
  - Severe personality disorders.

Type A personality

- Competitive.
- Time urgency.
- Hostility.
- Ambitious and impatient.
- 2 fold risk of myocardial infarction and CAD-related mortality.

Type B personality

- Easy-going.
- Relaxed.
- Non-competitive.
- Focus more on enjoyment than on winning.

Type D personality

- Negative affectivity – tendency to experience negative emotions.
- Social inhibition – tendency to not express emotions.
- Predisposed to development of coronary heart diseases.

Impulse control disorders

- Impulse is a feeling of increasing tension and arousal that leads to performance of a certain act.

Pyromania

- Recurrent purposeful setting of fire in absence of a clear motive e.g. no monetary gain or revenge

Kleptomania

- Recurrent stealing of objects that are not needed for personal use or for their monetary value.

Psychology facts

02:27:47

Sigmund Freud

- Coined the term psychoanalysis.
- Father of psychoanalysis.

Transference

- Patient's feelings (conscious or unconscious) towards the therapist that are based on past relationships with a significant figure.

Countertransference

- Feelings of the therapist towards the patient.

Topographical model of the mind

- Proposed by Sigmund Freud.
- Conscious.
  - Contents are in our awareness.
- Preconscious.
  - Content can be brought into conscious awareness by focused attention.
- Unconscious.
  - Content is kept away from conscious awareness.

Free association

- Technique in which a patient is allowed to speak uninterrupted, saying whatever comes in their mind without censoring any thoughts.

Slip of the tongue (parapraxis)

- Not simple mistakes but actually convey important information about the unconscious mind.

Structural theory of the mind

- Id.
  - Consist of instinctive drive
  - Based on pleasure principle.
  - Lacks capacity to delay urges.
  - Lies in the unconscious part of the mind.
- Ego.
  - Executive origin of the psyche.
  - Works on reality principle and creates a balance between id, superego and the real world.
  - Ego spans conscious, preconscious and unconscious mind.
  - Defense mechanisms reside in the unconscious part.
- Superego.
  - Moral compass insisting on socially acceptable behavior.
  - Begins to develop at 5-6 years.
  - Mostly unconscious and has some conscious component.

Defense Mechanisms

- Tools used by the ego to prevent development of excessive anxiety.

Projection

- Person projects his own desires on someone else.
- Seen in psychosis.

Acting out

- Unconscious wishes enacted in behavior to avoid being aware of them.
- Involved in impulse control disorders.

Regression

- Return to an earlier stage of development.
- Act childish or behave as their younger self.

Inhibition

- Unconsciously limiting an aim.
- Accepting partial fulfillment of desires.

Intellectualization

- Excessive use of intellect to escape painful emotions.

Isolation of affect

- Separating emotions related to a stressful event but reality is accepted.

Displacement

- Unconscious shifting of impulses from one object to another to solve a conflict.

Undoing

- An act to nullify a previous act.

Rationalization

- Giving logical explanations for unacceptable behaviors.
- Common in substance use disorder.

Reaction formation

- Unacceptable impulse transformed into its opposite.

Repression

- Idea or feeling eliminated from consciousness which you cannot access.

Altruism

- Constructive gratifying service to others to deal with their own feelings.

Suppression

- Conscious decision to postpone attention to a conflict.

Humor

- Using humor to deal with unpleasant situations.

Defense mechanisms in OCD

- Inhibition.
- Isolation of affect.
- Displacement.
- Undoing.
- Reaction formation.

Stages of psychosexual development

- Proposed by Freud.
- Development may be arrested at a particular stage i.e. fixation, resulting in a psychiatric disorder.

Oral stage

- 0-1.5 years.
- Pleasure derived through oral cavity or oral gratification.
- Fixation results in:
  - Schizophrenia.
  - Substance dependence.

Anal stage

- 1.5-3 years.
- Major site of gratification is anal (excretion).
- Fixation results in:
  - OCD.

Phallic stage

- 3-5 years.
- Site of pleasure is the genital area.
- Male child develops Oedipus complex(mother and son) and castration anxiety.
- Female child develops Electra complex(Father and daughter) and penis envy.
- Fixation results in:
  - Hysteria.
  - Sexual deviations.

Latent stage

- 5-6 years to 11-13 years.
- Relative sexual quiescence (inactivity).
- Oedipus and Electra complexes resolved at the beginning of the stage.
- Superego formed.
- Mastery of skills.

Genital stage

- 11-13 years to young adulthood.
- Maturation of genital functioning.
- Development of adult sexuality and adult identity.

Forensic Psychiatry 01:42:27

Mental healthcare act, 2017 (MHCA 2017)

- A new legislation dealing with treatment and rights of patients with mental illness came into being in 2017.

Capacity to make mental health care and treatment decisions

- Every person, including those who have a mental illness, is assumed to have the capacity to make mental health care or treatment decisions if he has the ability to:
  - Understand the information that is relevant to make a decision on treatment or admission.
  - Understand the consequences of a decision or lack of decision.
  - Communicate their decision.

Advance directive

- Every person, who is not a minor, can make an advance directive in which he can mention:
  - The way he wishes to be treated for a mental illness.
  - The way he wishes not to be treated for a mental illness.
  - Individual he wants to appoint as his nominated representative.
- Advance directive would be applicable only if a person loses the capacity to make mental health care or treatment decisions.

Nominated representative

- Every person can appoint a nominated representative.
- If a person loses the capacity to make mental health care or treatment decisions, his nominated representative will help or will take decisions about the treatment of the person.

Admission of persons with mental illness

Independent admission

- Patient wants to get admitted and has the capacity to make mental health and treatment decisions.

Supported admission

- Patient needs admission due to threatened/attempted bodily harm to himself or others or unable to care for himself leading to risk of harm to oneself.
- Patients lose capacity to make mental health care or treatment decisions and need a high level of support from the nominated representative who gives consent for admission in this case.
- Section 89 deals with admission and treatment of persons with mental illness with high support needs up to 30 days (support admission).

Prohibited procedures

- ECT without use of muscle relaxants and anesthesia.
  - Ban on direct ETC.
- ECT for minors.
  - Informed consent from guardian and prior permission from mental health review board.
- Restriction on psychosurgery for persons with mental illness.

- Informed consent of the patient and approval from the mental health review board required.

Decriminalization of suicide

- Any person who attempts suicide shall be presumed to have severe stress and shall not be tried and punished under section 309 IPC.

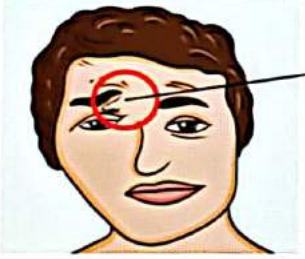
3 PSYCHIATRY IMAGE BASED DISCUSSION

Q. A 35 -year-old female is brought with symptoms of low mood, decreased interest, decreased appetite, low energy, guilt since six months. The following image depicts a sign seen in the patient. Which is correctly matched?

A. Omega sign in depression.
B. Veraguth fold in depression.
C. Omega sign in mania.
D. Veraguth folded in mania.
Ans: Omega sign in depression.

Notes

- Omega shaped fold in the forehead above the root of nose and excessive use of corrugator muscle as seen in the diagram. This is seen in depression.
- Veraguth fold - triangular fold in the nasal corner of upper eyelid, due to changes in tone of corrugator and zygomatic facial muscles.



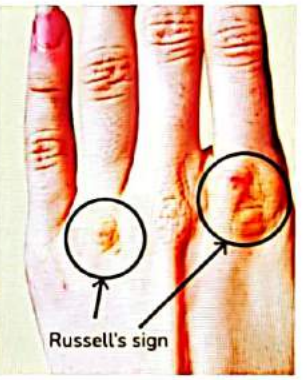
Q. A 20-year-old male patient was brought to emergency with symptoms of decreased speaking, decreased oral intake, repeating words spoken in front of him. The image depicts a sign seen in the patient. Which of the following is the treatment for this patient?

A. A.Haloperidol
B. Lorazepam
C. Sertraline
D. Olanzapine
Ans: Lorazepam haloperidol and olanzapine are anti-psychotic, sertaline is SSRI
as the patient has catatonnic symptoms so we give LORAZEPAM

Notes

- Echolalia
- The symptoms can be catalepsy or posturing. It is due to odd posture for a long time. Catalepsy is passive, and posturing is active.
- Catatonia symptoms – stupor, excitement, mutism, waxy flexibility, negativism, automatic obedience, echolalia, echopraxia, mannerism, stereotypy, grimacing, ambitendency
- Treatment - Lorazepam, ECT

Q. A 19-year-old female is brought to the clinic by her mother with complaints of unusual eating patterns for two years. She eats large amounts of food when alone and purges out food after eating. On examination, she presents with increased body weight and dental conditions. Her hands have some lesions, as shown in the image below. Which is correctly matched?



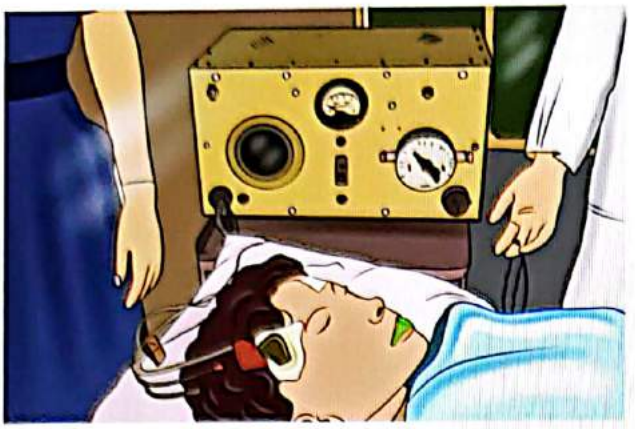
A. Anorexia nervosa- Omega sign.
B. Anorexia nervosa- Russell sign.
C. Bulimia nervosa- omega sign.
D. Bulimia nervosa- Russell sign.
Ans: Bulimia nervosa- Russell sign

Notes:

- Russel sign - Callus on knuckles (due to self induced vomitting)

- It can also be seen in Anorexia nervosa (Binge eating/purging type)

Q. Which of the following is not an indication for the procedure shown below?



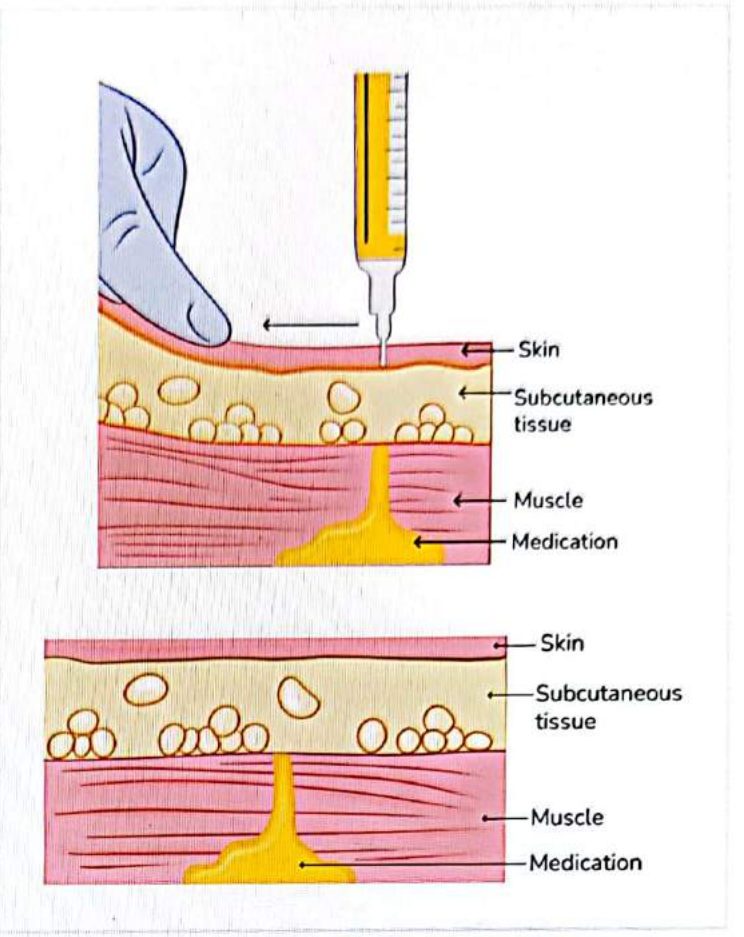
A. Catatonic schizophrenia
B. Severe depression with psychosis
C. Mild depression
D. Mania not responsive to medication

Ans: Mild depression

Notes:

- The procedure shown in the image is electroconvulsive therapy (ECT)
- It is a modified ECT or indirect ETC.
- When ECT is administered after giving anesthetic agents and muscle relaxants.
- Indications of ECT:
  1. Major depressive disorder.
     - Depression with suicidal risk - treatment of choices.
     - Depression with stupor/agitation with psychotic symptoms.
- Patients who failed medication trials or have not tolerated medication.
  2. Manic episodes
- Medications are unresponsive/ intolerant.
- Manic behavior has produced dangerous levels of exhaustion.
  3. Schizophrenia
- Catatonic schizophrenia is one of the indications of ECT
- Used for unresponsive or intolerant to medications.
  4. Other indications.
  5. Reportedly useful for - OCD, neuroleptic malignant syndrome, intractable seizure disorder, hypopituitarism, On-Off phenomenon of Parkinson's disease.

Q. The following techniques shown below are used for which of the following?



A. Monitoring carbamazepine therapy
B. Administration of antipsychotic depot.
C. Administration of nicotine patches.
D. Monitoring of lithium therapy.

Ans: Administration of antipsychotic depot

Notes:

- This technique is known as the Z track technique.
- When the medicine is given through injectable form, the skin is pulled. As the medicine reaches the muscle, the injection is pulled out and we leave the skin so a Z track is formed.
- It is used to prevent the tracking/leaking of drugs from muscle to other tissues.
- We use this technique for long, acting, injectable antipsychotics or depot antipsychotics
- First generation antipsychotics
  1. Flupenthixol
  2. Fluphenazine
  3. Zuclopenthixol
  4. Pipotiazine
  5. Haloperidol
- Second generation antipsychotics
  1. Paliperidone

2. Aripiprazole
3. Risperidone
4. Olanzapine

Q. A psychiatry Resident is showing the image given below. Which of the following test is being performed on the patient?

A. Intelligence assessment
B. Personality test.
C. Cognitive test.
D. Visual motor test.
Ans: Personality test

Notes:

- This is known as the Rorschach ink blot test.
- Developed by Herman Rorschach
- Consist of 10 inkblot cards (ambiguous and symmetrical)
- The patient is asked what he sees in the cards.
- The most frequently used projective personality test.
- Projective test - the patient projects his internal conflicts on the test, and based on the answers the patient's personality is assessed.

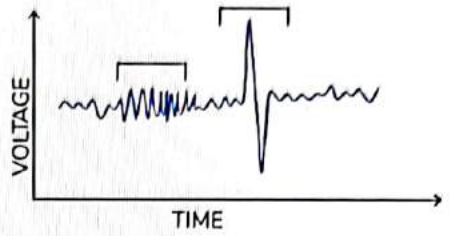
Q. Identify the test in the image below

A. Rorschach test
B. Thematic apperception test
C. Bender gestalt test
D. Sentence completion test
Ans: Thematic apperception test

Notes:

- Consist of 20 pictures depicting individuals involved in a variety of activities.
- Person asked to make stories about them.
- It is a projective personality test.

Q. EEG findings of a sleep state is depicted in the image below. Which of the following is not true about the sleep state?

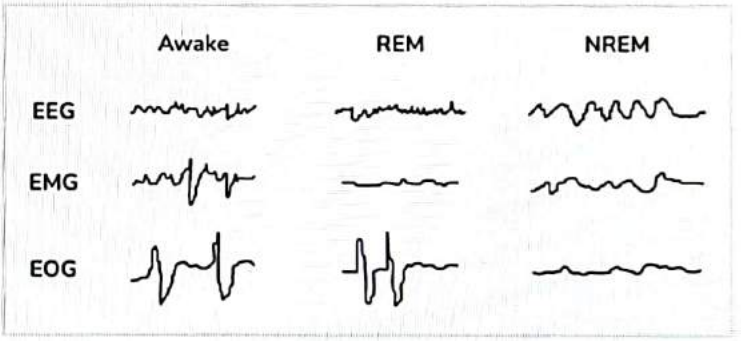


A. EEG has sleep spindles and k complexes.
B. Maximum time spent in this state.
C. It is the first stage of sleep.
D. Eye movements are slow.
Ans: It is the first stage of sleep.

Notes:

- NREM - N2 stage
- Sleep Spindles- burst of waves of 12 to 14 Hz
- K complexes - negative sharp waves followed by positive waves
- EOG: none
- EMG: low tonic activity
- 45 percent of sleep - N2.

Q. Identify the highlighted stage of sleep in the image below.



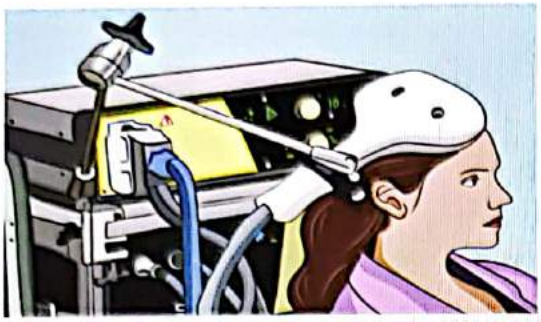
A. N1
B. N2
C. N3
D. REM
Ans: REM

Notes:

- Fist graph represents awake stage
- 2nd graph-REM

- EEG -Saw tooth appearance (BETA, ALPHA ACTIVITY)
- EMG- Minimal activity
- EOG - Fast
- 3rd graph-N3 stage
- EEG -Slow waves
- EMG- Activity present
- EOG-slow

Q. Which of the following treatment modality has been depicted in the image below?



A. ECT
B. VNS
C. rTMS
D. DBS
Ans: rTMS

Notes:

- repetitive Transcranial magnetic stimulation
- Uses short pulses of magnetic energy to stimulate nerve cells.
- rTMS(repetitive transcranial magnetic stimulation) - produces focal secondary electrical stimulation which is used to stimulate cortical regions.
- Non-convulsive
- No anesthesia required
- Safe side effect profile
- No cognitive side effects
- FDA- failed to achieve satisfactory improvements from 1 antidepressant
- MC adverse effect- scalp pain or discomfort.

Q. Which of the following theory is not given by the person depicted in the image below?

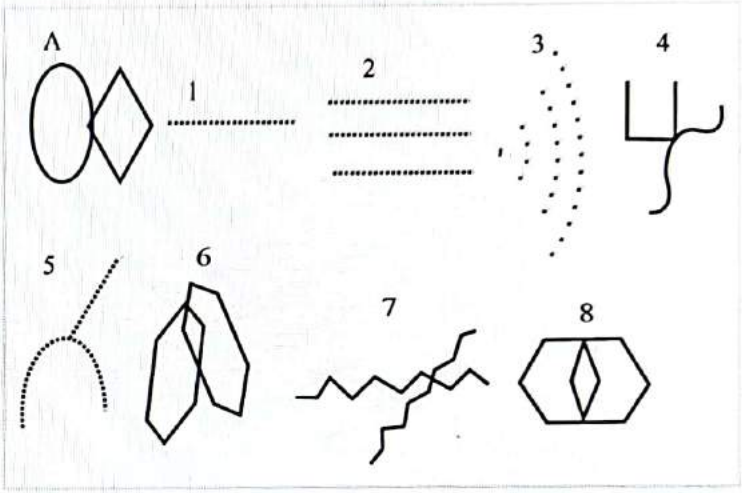
A. Topographical theory of mind.
B. Structural theory of mind.
C. Cognitive development stages.
D. Psychosexual stages of development.

Ans: Cognitive development stages.

Note:

- The person in the above given image is - Sigmund Freud
- Topographical theory of mind – Mind is divided into 3 parts: Conscious, preconscious, unconscious
- Structural theory of mind - Mind is divided into 3 parts: Id, ego, superego
- Psychosexual stages of development- 5 stages : Oral, anal, phallic, latent, genital
- Jean Piaget: 4 stages of development of thinking processes - Cognitive development stages.

Q. A 45-year-old undertook a psychological test. The image shown below is the result of the test performed by him. Which of the following is false?

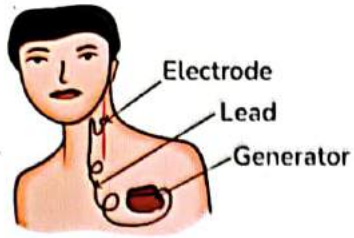


A. Assess visual and motor coordination.
B. Not of any use in organic dysfunction.
C. Involves copying of 9 figures.
D. Helps in identifying age - inappropriate perceptual performance.
Ans: Not of any use in organic dysfunction.

Notes:

- Bender gestalt test/ Bender visual and motor gestalt test
- It is used to assess various cognitive functions such as memory, sensory and motor functions, language, executive functions, arithmetic, visual spatial functions, etc
- Used as a screening tool for organic brain disorders.

Q. A patient suffering from a psychiatric disorder for 5 years with slight improvement is planned to be treated with the procedure shown below. Identify the name of the procedure.



A. rTMS
B. VNS
C. ECT
D. DBS
Ans: VNS

Notes:

- Non-invasive - ECT and rTMS
- Invasive - VNS, DBS, Psychosurgery
- Vagal Nerve Stimulation (VNS) – Left vagus nerve is stimulated by electrode, via a pulse generator implanted on chest.
- Long-term adjunctive treatment of chronic or recurrent depression in adults, who have not had adequate response to 4 or more antidepressants.
- Deep brain stimulation - Implantation of leads into specific brain areas being studied for chronic intractable depression.