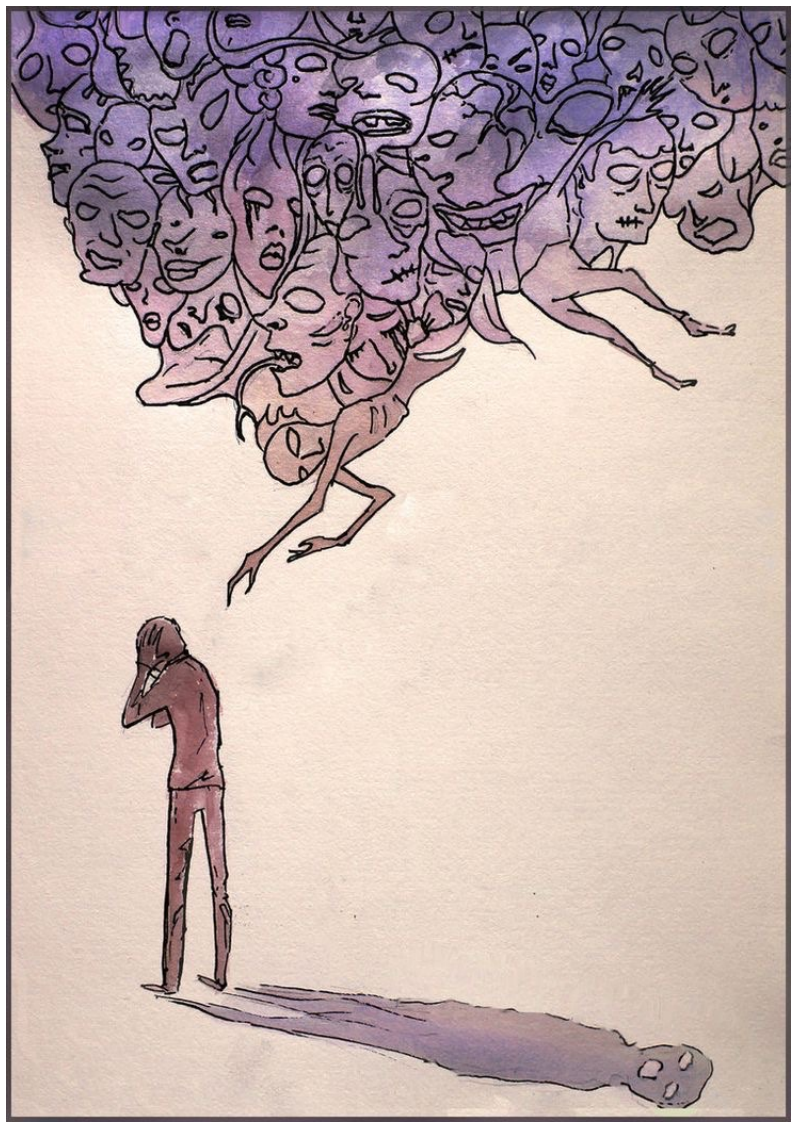
Psychosis



~ It's a distorted perception of reality

~ it can occur in psychiatric disorders (Schizophrenia, mania ...) or in medical disorders like delirium & dementia, and it can be induced by substances/medications

~ includes 3 main manifestations:

1 Delusions

↳ fixed false beliefs that persist despite evidence to the contrary & aren't shared by the person's culture

↳ might be:

- Non-bizarre: possible but not true (the neighbors are spying on me)
- Bizarre: Impossible (Aliens are spying on me)

↳ can be categorized by theme:

Persecutory/ Paranoid	Someone is after me
Reference	Cues in external environment are related to him (The TV character is speaking directly to me)
Control	**Thought broadcasting:** my thoughts can be heard by others **Thought insertion:** outside ideas are being placed in my head
Grandeur	Belief that one has special powers أنا نبي- أنا المهدي المنتظر
Guilt	I'm responsible for all the world's wars
Somatic	Belief that one has a certain illness while he doesn't 'I'm pregnant' while she's not

2 Hallucinations

↳ sensory perception without an external stimulus

↳ Types:

~ Auditory: MC in schizophrenia

~ Visual: Mostly due to an organic cause (drugs/ delirium)

~ Olfactory: an Aura assoc. with temporal lobe epilepsy & brain tumors

~ Tactile: drugs / Alcohol withdrawal

~ Gustatory: with epilepsy

** illusion Vs Hallucinations **

illusion is an inacurate perception of an existing stimulus "I see the wall moving", the wall 'stimulus' exists but it's not moving, Hallucinations are like "I've seen a unicorn", unicorn 'stimulus' - unfortunately - doesn't exist ˙˙

3 Disorganized thought/ behavior

Alogia	Speech poverty
Loosening of association	Thoughts discussed aren't connected
Tangentiality	Diverging from the topic/ point never reached & Q's aren't answered
Clanging	Words rhyme but don't make sense "My car is red, it hurts my head"
Word salad	Incoherent word collection
Thought blocking	Abrupt cessation of speech before idea is completed
Neologisms	Made up words
Perseveration	Repeated words/ ideas persistently

* Tangentiality ↓ point never reached Vs Circumstantiality ↓ reaches a point

* Auditory hallucinations that directly tell the patient to perform certain acts ⇒ Command Hallucinations

* Differential Diagnosis for Psychosis

- Psychotic disorder due to another medical condition.
- Substance/Medication-induced psychotic disorder.
- Delirium/Major neurocognitive disorder (dementia).
- Bipolar disorder, manic/mixed episode.
- Major depression with psychotic features.
- ✓ Brief psychotic disorder.
- ✓ Schizophrenia.
- ✓ Schizophreniform disorder.
- ✓ Schizoaffective disorder.
- Delusional disorder.

Psychosis due to another medical condition

1) CNS disease (CVA, MS, Alzheimer, Parkinson, etc)
2) Endocrinopathies (Cushing, Addison)
3) Vitamin deficiencies (B12, Folate)
4) CT disease (SLE, GCA)/ porphyria

Dx criteria (DSM-5)
- Prominent hallucinations or delusions
- Symptoms don't occur only during delirium
- Another medical condition is supported by Hx, PE &labs

Psychosis due to substance / medication

* Prescribed medications: Anesthetics, antimicrobials, steroids, antihistamine, anti-convulsant and others.
* Substance: Alcohol, cocaine, cannabis and others

Dx criteria (DSM-5)
- Hallucinations/delusions (Most likely visual)
- Symptoms don't occur only during delirium
- Medication/substance induced cause is supported by Hx, PE & labs
- Disturbance not better accounted for by a psychotic disorder that's not substance induced

Schizophrenia

- is a chronic psychiatric disorder characterized by periods of psychosis, disturbed behavior & thought & decline in function lasting more than 6 months

ATTENTION, PLEASE!

xx Common Misconception xx

people with schizophrenia do NOT have multiple personalities or a split personality, that's a different disorder called "D.I.D"

Pathophysiology

↑ Dopamine activity in certain neural tracts << as most anti psychotics that are successful in treatment are Dopamine receptor antagonist >> which yeilds positive symptoms, while ↓ Dopamine activity in other brain regions yeilds negative symptoms.

Epidemiology

- Lifetime prevalence ≈ 0.3-0.7% (♀=♀)
- It's a disorder of young age
  - ♀ : early to mid 20's
  - ♂ : late 20's
- rare to happen <15 or >55

Symptoms:

Positive symptoms
⇒ Abnormal behaviors

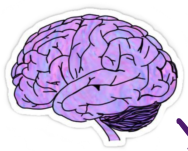
- Delusions
- Hallucinations : mainly Auditory
- Disorganized speech : mainly Tangential & Circumstantial speech

⇒ what's positive is that positive symptoms respond well to antipsychotics (as they're related to Dopamine activity)

Negative symptoms
⇒ Absent normal behaviors

↘ 5 A's:
- Anhedonia (Cannot feel pleasure)
- Asociality
- Alogia (speech poverty)
- Avolition / Apathy (lack of motivation)
- Affective flattening (lacking facial expressions)

⇒ resistant & often persist despite therapy



Cognitive symptoms

- Impaired attention
- Difficulty processing infos
- Poor learning & memory

⇒ They lead to poor work/school performance

Phases

1. Prodromal

Decline in function that precedes the first psychotic event (irritability, social withdrawal, physical complaint decline in performance, new religious interest)

2. Psychotic
3. Residual

After a psychotic episode, mild hallucinations & delusions, social withdrawal and negative symptoms

There's strong genetic predisposition in that monozygotic twins have a risk of 50%, a child for two affected parents has a risk of 40%, and if there's one 1st degree relative affected the risk is 12%.

Diagnosis:

⇝ 2 or more of these for at least 1 month

- Delusions
- Hallucinations
- Disorganized speech

} & at least one of these 3 must exist

- Catatonic behavior
- Negative symptoms

⇝ symptoms cause significant social, occupational or functional deterioration

⇝ Duration of illness at least 6 months

⇝ Symptoms aren't bc of substance / meds use

Prognostic Factors

Better Prognosis	Worse Prognosis
Later onset	Early onset
Good social support	Poor social support
Positive symptoms	Negative symptoms
Acute onset	Gradual onset
Female	Male
Few relapses	Many relapses
Good premorbid function	Poor premorbid function (social isolation)
Mood symptoms	Comorbid substance use

In teens, frequent cannabis use is associated with schizo./psychosis

Substance use is comorbid to schizophrenia, MC is Nicotine (50%) then Alcohol

* Extra :
- MC symptom of schizophrenia ⇝ Lack of insight (97%)
- MC +ve symptom ⇝ Delusions
- When pt reports visual / olfactory hallucinations → you have to rule out organic causes (do CT / MRI)

* Pathophysiology :

Theorized Dopamine Pathways Affected in Schizophrenia

- *Prefrontal cortical:* Inadequate dopaminergic activity; responsible for negative symptoms.
- *Mesolimbic:* Excessive dopaminergic activity; responsible for positive symptoms.

Other Important Dopamine Pathways Affected by Antipsychotics

- *Tuberoinfundibular:* Blocked by antipsychotics, causing hyperprolactinemia, which may lead to gynecomastia, galactorrhea, sexual dysfunction, and menstrual irregularities.
- *Nigrostriatal:* Blocked by antipsychotics, causing Parkinsonism/extrapyramidal side effects such as tremor, rigidity, slurred speech, akathisia, dystonia, and other abnormal movements.

OTHER NEUROTRANSMITTER ABNORMALITIES IMPLICATED IN SCHIZOPHRENIA

- **Elevated serotonin:** Some of the second-generation (atypical) antipsychotics (e.g., risperidone and clozapine) antagonize serotonin and weakly antagonize dopamine.
- **Elevated norepinephrine:** Long-term use of antipsychotics has been shown to decrease activity of noradrenergic neurons.
- Low **gamma-aminobutyric acid (GABA):** There is lower expression of the enzyme necessary to create GABA in the hippocampus of schizophrenic patients.
- Low **levels of glutamate receptors:** Schizophrenic patients have fewer NMDA receptors; this corresponds to the psychotic symptoms observed with NMDA antagonists like ketamine.

* Catatonia *

- Catalepsy → rigidity & fixed limbs
- echolalia (mimicking speech) echopraxia (" actions)
- Mutism / negativism
- Waxy flexibility
- Bizzare posture & purposless movements

* Best treated by Benzos ↓ lorazepam & ECT

Schizophrenia is found in lower socioeconomic groups likely due to "downward drift" (many patients have difficulty in holding good jobs, so they tend to drift downward socioeconomically).

- With medication :
  - 40-60 % → remain impaired
  - 20-30 % → function well in society
  - 20 % → attempt suicide

- On MRI / CT :
  - ~ Lateral ventricular enlargement
  - ~ Diffuse cortical atrophy
  - ~ Reduced brain volume

- On PET scan:
  - ~ Hypoactive frontal lobe
  - ~ Hyperactive Basal ganglia

* Treatment ⇒ Antipsychotics

- Typical antipsychotics (1st Gen)
  - ↳ Dopamine antagonists
  - ↳ they treat +ve sym
  - ↳ SE's : Extrapyramidal symptoms (Parkinsonism / Dystonia / Akathisia)
    Neuroleptic malignant syndrome
    Tardive dyskinesia

- Atypical antipsychotics (2nd Gen)
  - ↳ Serotonin antagonist + Dopamine (D4 > D2)
  - ↳ treat both +ve & -ve sym.
  - ↳ SE's : Metabolic syndrome but lower EPS

* For more details about drugs check page 28-29 or Pharmacotherapy chapter from the book ☺ to

⇝ Medications must be taken for at least 4 w's b4 efficacy is determined

+ Psychotherapy → behavioral
→ Family therapy "Schizophrenia relapses are ↓ by good family support "
→ Group therapy

* Brief Psychotic Disorder :-

↳ same schizophrenia symptoms but their duration is between 1 day to 1 month & pt must fully return to premorbid lvl of functioning

↳ may be seen in rxn to extreme stress (Bereavement / sexual assault)

↳ almost all pts completely recover

↳ Treatment:
brief hospitalization + supportive therapy + course of antipsy &/or Benzos for agitation

* Schizophreniform Disorder :-

↳ same schizophrenia symptoms but their duration is between 1 – 6 months

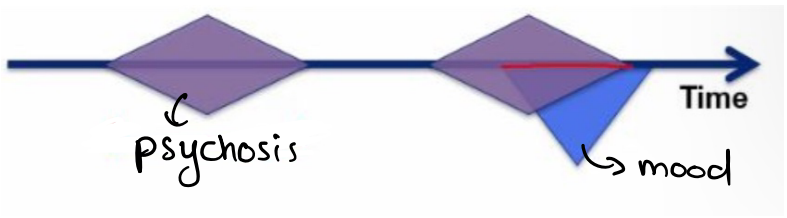
↳ 1/3 → recover completely
2/3 → progress to schizophrenia or schizoaffective

↳ Treatment:
Hospitalization / 6 months antipsychotics / supportive psychotherapy

* Schizoaffective Disorder :-

↳ pt meets criteria of MDD or mania episode during which psychotic symptoms of schizophrenia also exist

↳ psychosis alone for 2 weeks in absence of mood episode (to differentiate it from mood disorder with psychosis)



↳ Worse prognosis with Poor Premorbid adjustment slow, early onset / psychotic sym. predominance / long course & Family Hx of schizophrenia

↳ Treatment:
- Hospitalization + supportive psychotherapy
- Antipsychotics
  ↳ a typical ⇒ work on both psychosis & mood
- mood stabilizer, anti-dep., ECT ⇒ for mood

* Delusional Disorder :-

↳ pt has ≥1 delusions for 1 month atleast

↳ Delusions differ from schizophrenia delusions in that they're Non bizzare, don't impair daily function, doesn't meet schizoph. criteria

↳ with treatment: 1/2 → full recovery
>1/5 → Symptoms
<1/5 → no change

↳ Treatment:
Difficult due to pts lack of insight
→ antipsychotics + supportive therapy

↳ Types of delusions

- **Erotomanic type:** Delusion that another person is in in love with the individual. (usually a celebrity)
- **Grandiose type:** Delusions of having great talent.
- **Somatic type:** Physical delusions.
- **Persecutory type:** Delusions of being persecuted.
- **Jealous type:** Delusions of unfaithfulness.
- **Mixed type:** More than one of the above.
- **Unspecified type:** Not a specific type as described above.

↳ Occurs more common in
- elderly >40
- immigrants
- Deaf people
- Schizoph. family Hx

- Prognosis (Best → Worst)

Mood + psychosis > Schizoaffective > schizophreniform > schizophrenia

- Culture-Specific Psychosis

	Psychotic Manifestation	Culture
Koro	Intense anxiety that the penis will recede into the body, possibly leading to death.	Southeast Asia (e.g., Singapore)
Amok	Sudden unprovoked outbursts of violence, often followed by suicide.	Malaysia
Brain fag	Headache, fatigue, eye pain, cognitive difficulties, and other somatic disturbances in male students.	Africa

Good luck
~ Hala khannah