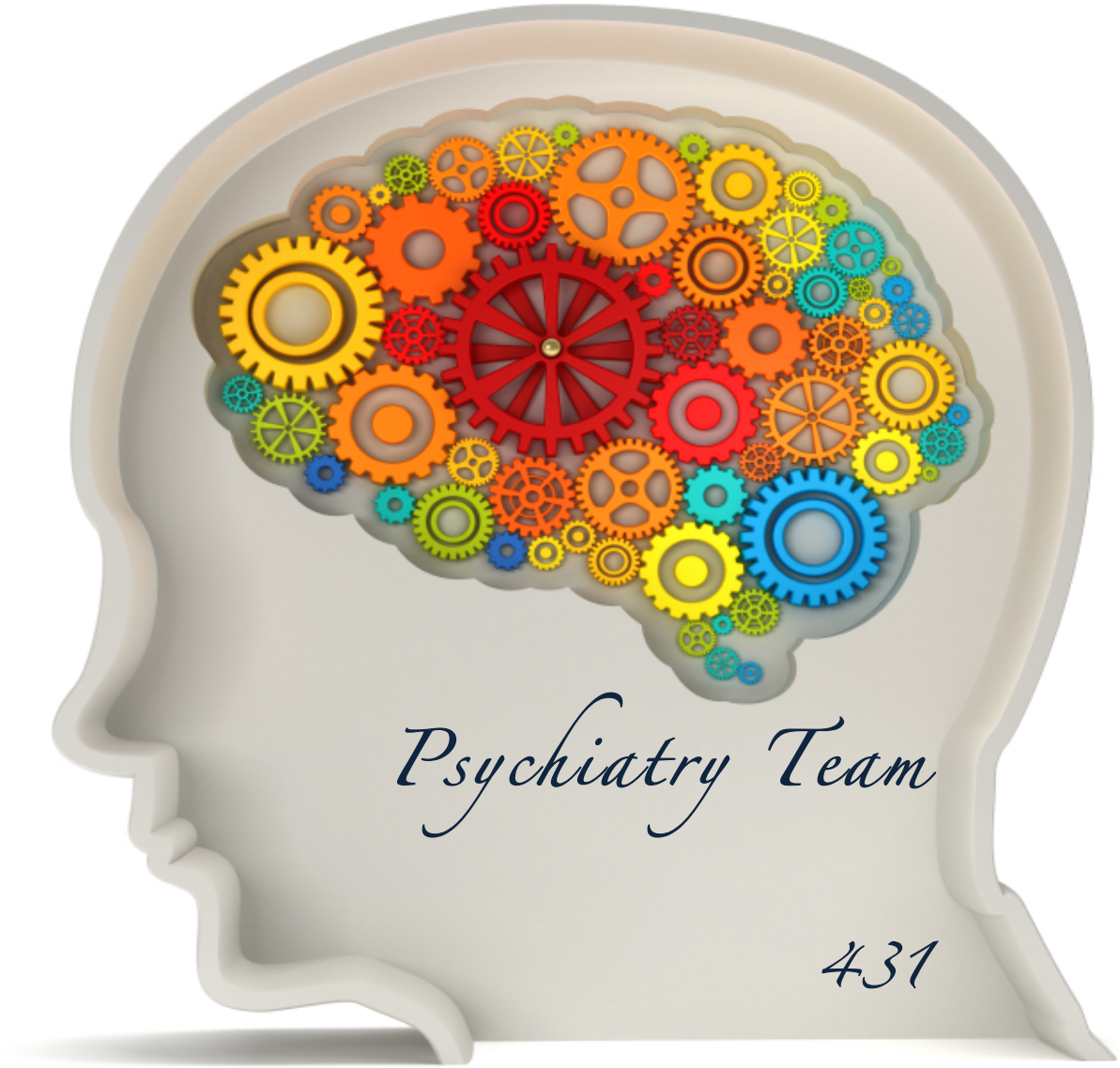

Nasser Alsaleh	Shatha Al-mweisheer
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IMPORTANT

NOTES

EXTRA INFO

SCHIZOPHRENIA

Definition:

Is a mental disorder characterized by a breakdown of thought processes and by poor emotional responsiveness.

Thought is the first & important part affected then behavior & emotion. They start with stress and loss of focusing

It is not a single disease but a group of disorders with heterogeneous etiologies
Found in all societies and countries with equal prevalence & incidence worldwide.
A life prevalence of 0.6 – 1.9 %.
Peak ages of onset are 10-25 years for ♂ & 25-35 years for ♀.

Etiology: Exact etiology is unknown.

1- Stress-Diathesis Model:

- Integrates biological, psychosocial and environmental factors in the etiology of schizophrenia.
- Symptoms of schizophrenia develop when a person has a specific vulnerability that is acted on by a stressful influence

A specific vulnerability = Genetic vulnerability.
In a simple way: it's an interaction between genetic and environmental influences

2- Neurobiology

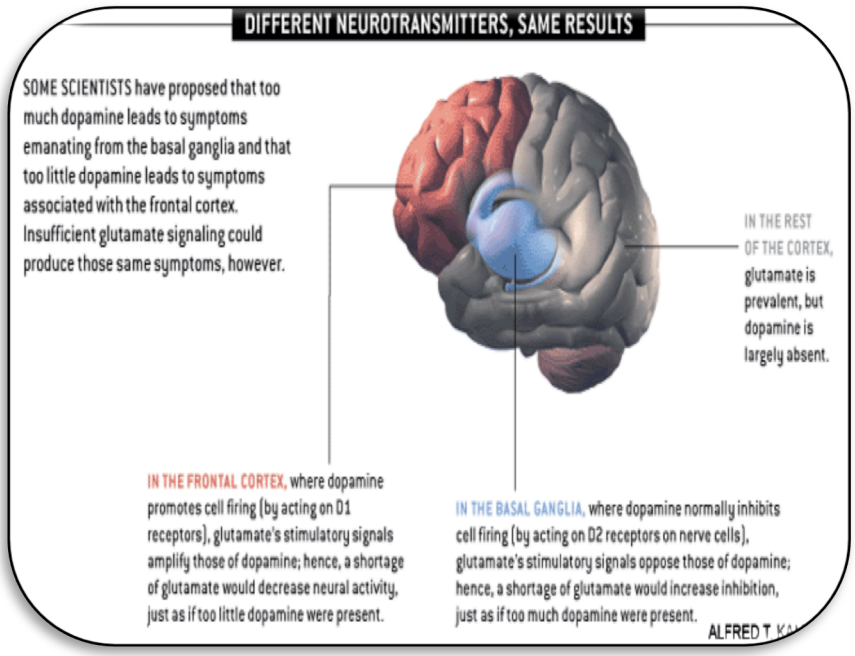
Certain areas of the brain are involved in the pathophysiology of schizophrenia: the limbic system, the frontal cortex, cerebellum, and the basal ganglia.

a- Dopamine Hypothesis;

Too much dopaminergic activity (whether it is ↑ release of dopamine, ↑ dopamine receptors, hypersensitivity of dopamine receptors to dopamine, or combinations is not known).

b- Other Neurotransmitters;

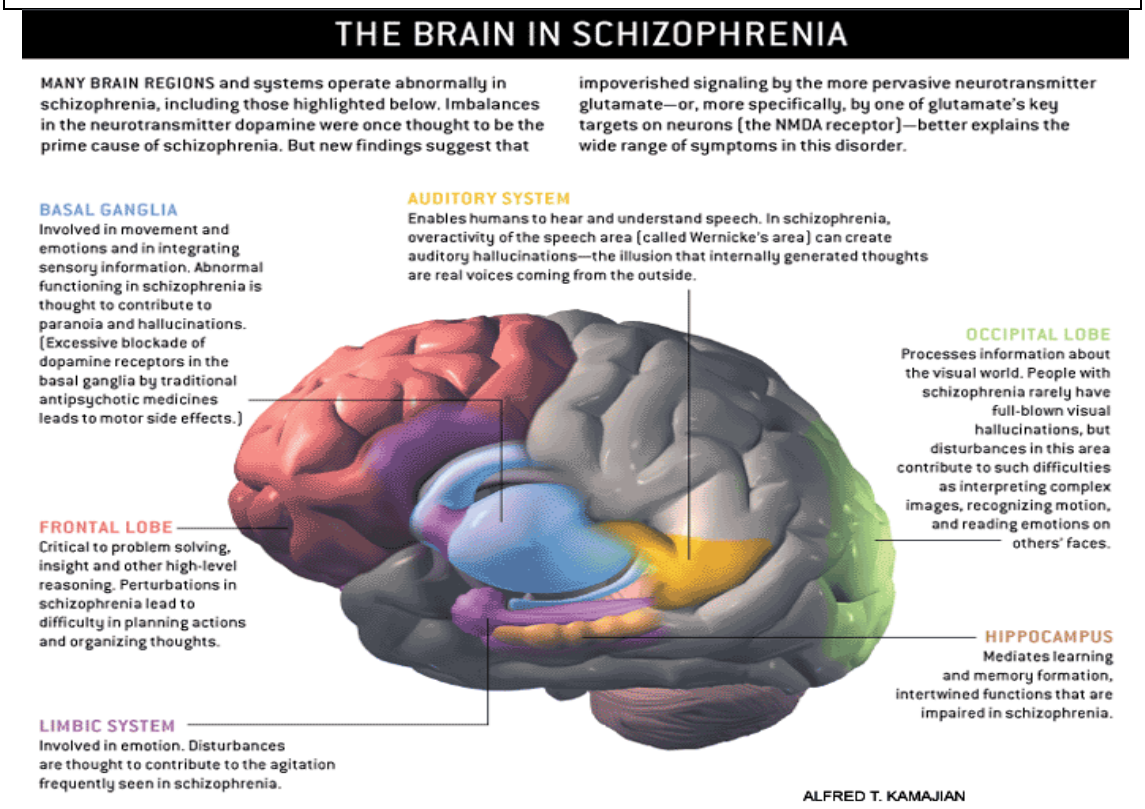
Serotonin, Norepinephrine, GABA, Glutamate & Neuropeptides



c- Neuropathology:

Neuropathological and neurochemical abnormalities have been reported in the brain particularly in the limbic system, basal ganglia and cerebellum. Either in structures or connections.

It affects the neurons gradually.



Hippocampus involvement appears in advanced cases

d- Psycho-neuro-immunology;

↓ T-cell interlukeukin-2 & lymphocytes, abnormal cellular and humoral reactivity to neurons and presence of antibrain antibodies.
These changes are due to neurotoxic virus ? or endogenous autoimmune disorder ?

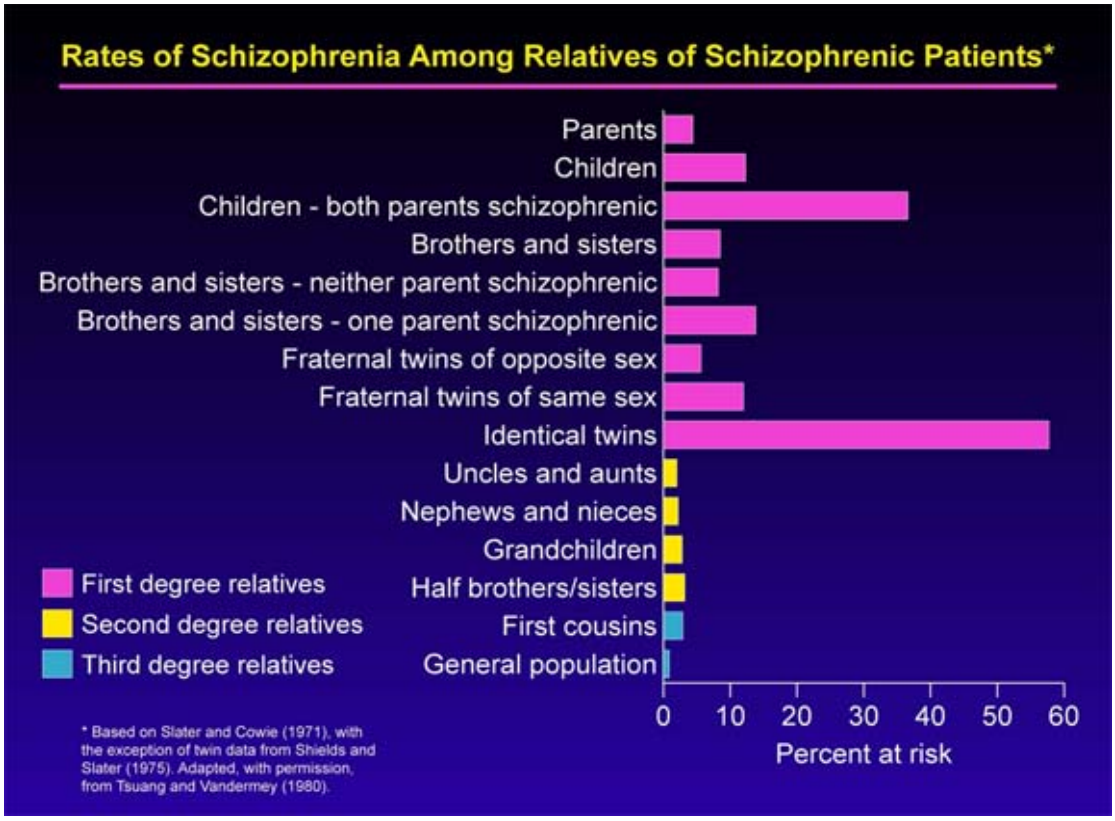
e- Psycho-neuro-endocrinology;

Abnormal dexamethasone-suppression test ↓ LH/FSH
A blunted release of prolactin and growth hormone on stimulation.

3- Genetic Factors:

A wide range of genetic studies strongly suggest a genetic component to the inheritance of schizophrenia that out weights the environmental influence
These include: family studies, twin studies and chromosomal studies

This is the most important factor.



The most important risk factors are identical twins and both parents schizophrenic.

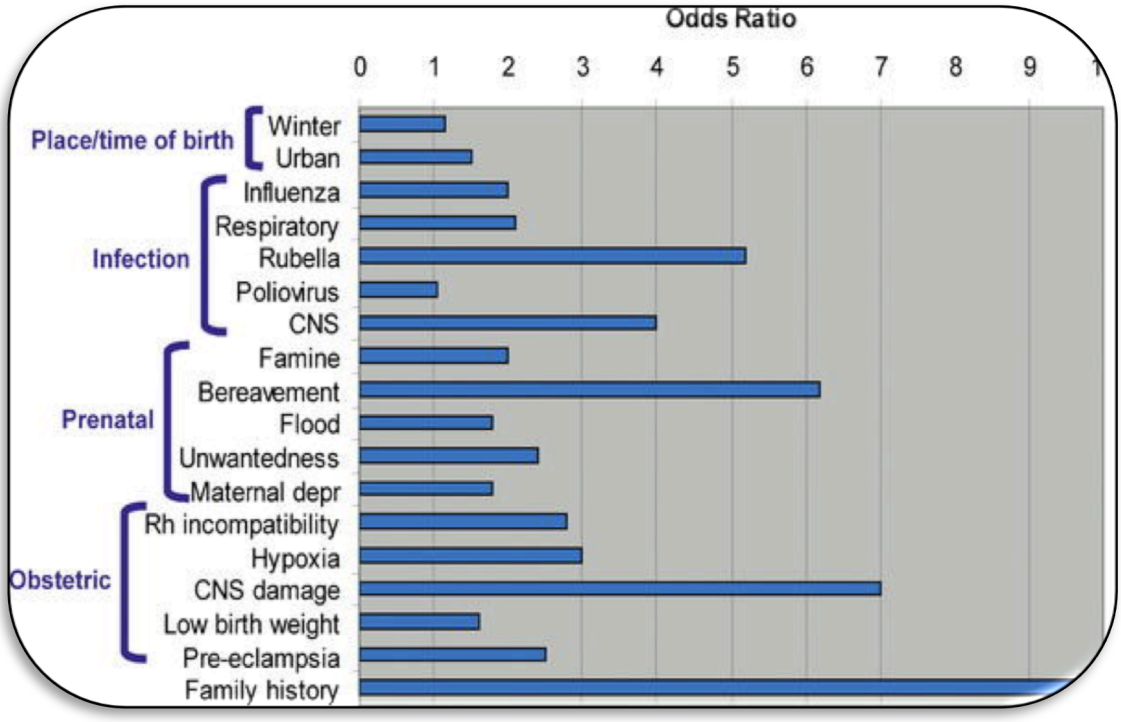
Schizophrenia: genes plus stressors:

Schizophrenia is mostly caused by various possible combinations of many different genes (which are involved in neurodevelopment, neuronal connectivity and synaptogenesis) plus stressors from the environment conspiring to cause abnormal neurodevelopment.
There is also abnormal neurotransmission at glutamate synapses, possibly involving hypofunctional NMDA receptors.

4- Psychosocial Factors:

- In family dynamics studies, no well-controlled evidence indicates specific family pattern plays a causative role in the development of schizophrenia.
- High Expressed Emotion family: increase risk of relapse.

The increase is because the family expects a full recovery from the patient which in that case is very rare so that puts him in high stress.



This chart represents the risk factor ☺

DIAGNOSIS: (based on Diagnostic and Statistical Manual of Mental Disorders)

DSM-IV-TR Diagnostic Criteria for Schizophrenia:

A- ≥ two characteristic symptoms

1- Delusions

2- Hallucinations

3- Disorganized speech

} Positive symptoms

4- Disorganized behavior

5- Negative symptoms

Delusions: are False Fixed beliefs.

Hallucinations: are false perceptions.

**Negative symptoms are deficits of normal emotion responses.. They respond less well to medication. (Ex: AntiSocial personality).*

sometimes there is a physical involvement (means not only mentally).

B- Social / Occupation dysfunction

Never diagnose an individual with Schizophrenia without the fact that there is a social/occupational dysfunction

C- Duration of at least 6 months

D- Schizoaffective & mood disorder exclusion

Schizoaffective: has both features of Schizophrenia and features of a mood disorder.

E- Substance / General medical condition exclusion

We should do a CT scan to exclude any other diseases that could present as schizophrenia; diseases such as: Frontal lobe epilepsy or frontal lobe tumors.

F- Relationship to pervasive developmental disorders

Types:

1-Paranoid type : (Best diagnosis – high cognitive abilities – good judgment)

2-Disorganized type : (Disorganized speech and behavior)

Catatonic type (A marked psychomotor disturbance that may involve stupor or mutism, negativism, rigidity, purposeless excitement, and inappropriate or bizarre posturing) (Now rarely seen)

3-Undifferentiated type (Hardest diagnosis)

4-Residual type (characterized by a past history of at least one episode of schizophrenia, but the person currently has no positive symptoms)

Clinical Features:

- No clinical sign or symptom is pathognomonic for schizophrenia

- Patient's history & mental status examination are essential for diagnosis.

- Premorbid history includes schizoid or schizotypal personalities, few friends & exclusion of social activities. (Odd behaviors)

- Prodromal features include obsessive-compulsive behaviors. (Prodromal = an early symptom)

- Picture of schizophrenia includes positive and negative symptoms.

- Positive symptoms like: delusions & hallucinations.

- Negative symptoms like: affective flattening or blunting, poverty of speech, poor grooming, lack of motivation, and social withdrawal.

Mental state examination:

- Appearance & behavior (variable presentations).

- Mood, feelings & affect (reduced emotional responsiveness, inappropriate emotion).

- Perceptual disturbances (hallucinations, illusions).

- Thought: Thought content (delusions).

- Form of thought (looseness of association).

-Thought process (thought blocking, poverty of thought content, poor abstraction, perseveration) .

- Impulsiveness, violence, suicide & homicide.

- Cognitive functioning (poor)

- Poor insight and judgment.

Course:

- Acute exacerbation with increased residual impairment
- Full recovery: very rare
- Longitudinal course: downhill

Prognosis:

Good P.F not a cure just an improvement	**Poor P.F**
Late age of onset	Young age of onset
Acute onset	Insidious onset
Obvious precipitating factors	Lack of an obvious precipitating factor
Presence of mood component	Multiple relapses
Good response to treatment	Low IQ
Good supportive system	Poor premorbid personality *(before the disorder)
	Negative symptoms Positive family history

Differential Diagnosis:

1-Nonpsychiatric disorders:

-Substance-induced disorders : substance abuse
-Epilepsy (Temporal lobe epilepsy)
-CNS diseases
-Trauma
-Others :like SLE

2-Psychiatric disorders:

-Schizophreniform disorder. (the difference between schizophrenia and schizophreniform is the duration ; schizophreniform is presented within a month or five months…"not more than 6 months")

-Brief psychotic disorder.

-Delusional disorder.

-Affective disorders.

-Schizoaffective disorder. (Accompanied by a mood disorder)

-Personality disorders (schizoid, schizotypal & borderline personality)

-Malingering & Factitious disorders. (Types of personalities).

Treatment:

What are the indications for hospitalization?

Diagnostic purpose.
Patient & other's safety.
Initiating or stabilizing medications.
Establishing an effective association between.
Patient & community supportive systems.

Biological therapies:

Antipsychotic medications are the mainstay of the treatment of schizophrenia.
Generally, they are remarkably safe.

Two major classes:

-Dopamine receptor antagonists (haloperidol, chlorpromazine)
-Serotonin-dopamine receptor antagonists (Risperidone, clozapine, olanzapine).

Other drugs:
-Anticonvulsants
-Lithium
-Benzodiazepines

Depot forms of antipsychotics e.g. Risperidone Consta is indicated for poorly compliant patients.

Electroconvulsive therapy (ECT) for catatonic or poorly responding patients to medications.

First generation antipsychotics	*Second generation antipsychotics*	*Clozapine*
Extrapyramidal effects Dystonia Pseudoparkinsonism Akathisia Tardive dyskinesia	Olanzapine Weight gain Sedation Glucose intolerance and frank diabetes mellitus Hypotension	Sedation
Sedation		Hypersalivation
Hyperprolactinaemia	Risperidone Hyperprolactinaemia Hypotension EPS at higher doses Sexual dysfunction	Constipation
Reduced seizure threshold		Reduced seizure threshold
Postural hypotension	Amisulpiride Hyperprolactinaemia Insomnia Extrapyramidal effects	Hypo & hypertension
Anticholinergic effects Blurred vision Dry Mouth Urinary Retention	Quetiapine Hypotension Dyspepsia Drowsiness	Tachycardia
Neuroleptic malignant syndrome		Pyrexia
Weight gain		Weight gain
Sexual dysfunction		Glucose intolerance and diabetes mellitus
Cardio-toxicity (including prolonged QTc)		Nocturnal enuresis
		Rare serious side effects Neutropaenia 3% Agranulocytosis 0.8% Thromboembolism Cardiomyopathy Myocarditis Aspiration pneumonia

CLOZAPINE: causes agranulocytosis (lowered WBC count)

Psychological therapies:

Social skills training.
Family oriented therapies.
Group therapy.
Individual psychotherapy.
Assertive community treatment.