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SCHIZOPHRENIA

Nirmal Deaddiction Centre Miraj.

EUGEN BLEULER: Coined the term as

"**SCHIZOPHRENIA"** (Split Brain)ss

There is dispute of relation between

Thought, Emotion and Behavior **(**TEB**)**

Epidemiology: Life time Prevalence is **1%**

Age of onset : Men - 10 to 25 yrs.
Women- 25 to 35 yrs.
M:F- 1 :1

Those who born in **winter and early spring** having more risk as compare to summer and late spring.

Reproductive factors: First degree biological relatives of Patient have a 10 times risk.

ETIOLOGY

Exact Etiology Is Not Known .

Theories:-

- Biological Theory.
- Genetic Theory.
- Psychosocial Theory.

Thought (विचार)

Emotion (भावना)

Behavior (कृती)

- आनंदी वाटणे.
- आनंदी होणे.
- आनंदी राहणे.

भावांक (EQ) > बुध्यांक(IQ)

ETIOLOGY

Neurobiology: Dysfunction in.

Limbic system

Frontal cortex

Cerebellum

Basal ganglia may involve in pathological process.

Neuropathology: Decrease in size of brain including Amygdala , Hippocampus and Para hippocampal gyrus .

Few studies showed increase number of D2 Receptors in Caudate , Putamen.

NEUROIMAGING:

- **MRI Brain:** Reduction in volume of Hippocampus, Amygdala , Para hippocampal Gyrus.
- **CT Scan : Lateral and Third Ventricular Enlargement and Reduction in cortical volume**
- **MRS:** Lower levels of **Phosphomonoesters and Inorganic Phosphate.**

Higher levels **of** **Phosphodiesters and ATP.**

NAA-N acetyl aspartate-marker of neuron –low in Hippocampus and Frontal lobes.

- **PET(Glucose and Cerebral blood flow) : Hypoactivity of Frontal lobes and Hyperactivity of Basal ganglia.**
- **EEG : Decreased alpha activity. Increased theta and delta activity.**
- **EYE MOVEMENT DYSFUNCTION : 50-85 % pts of Schizophrenia has abnormal eye movement suggestive of Frontal lobe pathology (Hypothesis).**
- **Psychoneuroimmunology : Abnormal Cellular and Humoral reactivity of neurons.**
- **Psych neuroendocrinology: Decreased concentration of LH, FSH etc.**

Change in Neurotransmitter levels like...

- Dopamine.
- Serotonin.
- Norepinephrine.
- GABA.
- Glutamate.
- Neuropeptides.

(Cholecystokinin, Neurotensin Etc.)

ETIOLOGY – Genetic Factors

- **Abnormality:**

in long arm of chromosomes

i.e.5,6 ,8,11,18 & 22 and short arm of **9** and **X** chromosome

- **Prevalence** :
  - General population: **1 %.**
  - monozygotic twin of Schizophrenia Patient : **47 %**
  - Dizygotic twin of Schizophrenia Patient : **12 %**
  - Nontwin sibling of Schizophrenia Patient : **8 %**
  - Child with one Schizophrenia Patient : **12%**
  - Child with both Schizophrenia Patient : **40 %**

PSYCHOSOCIAL FACTORS

- **Learning theories**: Children learn irrational reactions and ways of thinking by imitating parents who have their own emotional problems.
- **Schism Family** : If one parent is close to a child of opposite sex.
- **Skewed Family** : Power struggle between two parents and resulting dominance of one parent.
- **Social theories**: Industrialization and Urbanization have major effect on timing of onset and severity of illness.

PHASES OF ILLNESS

- **Prodromal phase:** Back pain, neck pain, somatic complaints. No Active Psychotic symptoms.
- **Acute Phase:** Florid psychotic phase with active symptoms like delusions or hallucinations etc.
- **Post Acute Phase:** Phase begins once the acute symptoms reduce in severity or remit. It lasts for about **6** months.
- **Stable or Maintenance Phase:** Symptoms are stable.

CLINICAL FEATURES

No Any Sign Or Symptom Is Path gnomic Of Schizophrenia

PREMORBID SIGNS AND SYMPTOMS

- Premorbid signs and symptoms appear before the prodromal phase of illness.
- Prodromal signs and symptoms are parts of evolving disorder.
- In Premorbid history- Patient has usually Schizoid or Schizotypal personalities. They may enjoy watching movies or television or listening to music instead of attending social activities.
- Illness can start with symptoms like Headache, Back and muscle pain, weakness or digestive problems. Later can get positive or negative symptoms.

- Eugen Bleuler :- Described symptoms as
- Fundamental (Primary):- 4 A's
  - Association (Looseness)
  - Affect
  - Autism
  - Ambivalence
- Secondary(Accessory):- Delusion and Hallucination

Kurt Schneider Criteria for Schizophrenia

First Rank Symptoms:

- Audible Thoughts.
- Voices Commenting.
- Voices arguing or discussing or both.
- Thought control.
- Delusional Perceptions.

Second Rank Symptoms:

- Other disorder of Perceptions.
- Sudden delusional Ideas.
- Perplexity.
- Dysphoric and Euphoric mood changes.

Sir T. J. Crow --- Positive Symptoms

- **Hallucinations:-** Auditory, Visual, Tactile, Olfactory, Gustatory.

- **Delusions:-** Persecution/ Reference
  Delusion of being controlled,
  Thought Broadcasting/ Thought Withdrawal
  Thought Insertion/ Thought Reading

- **Bizarre behavior :-** Aggressive/agitated behavior, Repeated / Stereotyped behavior

- **Positive formal thought disorder :-** Tangentiality, Circumstantiality, Pressure of speech, Clanging, Derailment Etc..

Negative Symptoms

- **Affective flattening:-** Unchanging facial expression, Decreased spontaneous movements, Poor eye contact, Inappropriate affect.
- **Alogia :-** Poverty of speech, blocking.
- **Avolition /Apathy:-** Poor grooming and hygiene, Impersistance at work or school.
- **Anhedonia/A sociality:-** Recreational interests, activities, Sexual interest,, Closeness, Relationship with friends & peers.
- **Attention:- Social Inattentiveness, Inattentiveness during testing.**

TYPES OF SCHIZOPHRENIA

- **Paranoid Type:-** Preoccupied with one or more delusion and frequent Auditory hallucinations. Classically Delusion of persecution.

- **Disorganized (Hebephrenic):-** Disinhibited or Disorganized behavior.

- **Catatonic Schizophrenia:-** Marked disturbance in motor function.

Characterized by, Negativism, Catatonic excitement, Waxy flexibility, Mutism. Echolalia, Echopraxia.

- **Undifferentiated type:** Can not differentiate. May get mixed presentation.

- **Residual Schizophrenia:-** Absence of active symptoms but evidence of some disturbances or symptom.

OTHER SUBTYPES OF SCHIZOPHRENIA

- **Simple Schizophrenia :-** Progressive development for a least one year of all of the following-

  - Marked decline in occupational or academic functioning.
  - Gradual appearance and deepening of negative symptoms such as affective flattening, alogia or avolition.
  - Poor interpersonal Support, social isolation or social withdrawal.

- **Oneroid Schizophrenia :-** Dreamlike state in which Patients is deeply perplexed and not fully oriented to time and place.

- **Pseudo neurotic Schizophrenia :-** Pan anxiety , Panphobia , Pan ambivalence, Obsessions and Compulsions

- **Early onset Schizophrenia :-** Children

- **Late onset Schizophrenia :-** >45 yrs.

Differential Diagnosis Of Schizophrenia

Psychiatric Illness	Medical or Neurological Conditions
Brief psychotic disorder	Substance Induced
Schizophreniform Disorder	Neoplasm, CVA, Trauma
Schizoaffective disorder	Epilepsy
Delusional disorder	AIDS
Personality Disorders-Schizoid, Schizotypal Etc.	Vit B 12 Deficiency, Pellagra
Mood Disorder	Poisoning Example: CO or heavy metal
Psychosis NOS	SLE, Neurosyphilis, Wilson disease, Huntington disease
	Normal Press Hydrocephalus
	Metabolic disorder.

MENTAL STATUS EXAMINATION(MSE)

- **General appearance :-** Agitated, Violent or completely silent, poorly groomed. We can see Gesticulating ,Hallucinating or Muttering Behavior.
  May show abnormal postures, Mootness, Negativism, Automatic Obedience, waxy flexibility or Echopraxia.
- **Mood:-** Reduced emotional responsiveness, may be anxious or perplexed.
- **Affect:-** Inappropriate/ Restricted/Blunt/Flat.
- **Thought:-** Poverty of Speech, Tangentiality , Loosening of association, echolalia , Derailment, Delusion of Reference/ Persecution/Infidelity. Thought Blocking/Thought Reading / Insertion /Withdrawal/ Broadcasting
- **Perception:-** Hallucinations.
- **Concept:-** Impaired.
- **Orientation and Memory:-** Intact.
- **Insight:-** Absent.
- **Judgement:-** Impaired.

Neurological Findings

- **Soft signs**:- Impaired fine motor skills, abnormal movements, Dysdiadochokinesia , Astereognosis etc.
- **Eye examination:-** Increased blink rate.

Systemic Examination

- Cardiovascular System
- Abdomen
- Respiratory System

DSM IV TR Diagnostic Criteria for Schizophrenia

A) Characteristic Symptom of **two** or **more** of the following.

- Delusion.
- Hallucination.
- Disorganized Speech.
  (Example:- Derailment, Loosening of Association**)**
- Disorganized or Catatonic Behavior.
- Negative symptoms.

B) Social or Occupational Impairment.

C) Duration of illness should be at least **6 months**.

D) Exclusion of Substance Use or General Medical Condition.

OTHER DIAGNOSTIC CRITERIA

- **Projective tests:-** Rorschach test.
  Thematic apperception test.
  May indicate Bizarre ideations.

- **Personality inventory test:-** MMPI.

COURSE OF ILLNESS

- **Positive symptoms** tend to become less severe with time.
- **Negative symptoms** increase in severity with time.
- **Exacerbation** or **Remission** can occur.

PROGNOSIS

- **10 - 20%** Patients - Good outcome.
- Complete Remission - **20-30 %.**
- Remission with Moderate symptoms - **20-30 %.**
- No Significant Remission - **30-40 %**

MANAGEMENT

- Investigations.
- Treatment.

Pharmacotherapy and Psychotherapy

INVESTIGATION

All Routine Investigations should be done.

Urine:- Routine and Microscopic examination.

Hb, CBC

BSL:- Fasting and PP SOS.

Liver function tests:- Sr. Bilirubin , SGOT, SGPT Etc.

Renal function tests:- Sr. Creatinine , BUN Etc.

Serum Electrolytes:- i.e. Sodium and Potassium.

Chest X ray and ECG:- If age is > 40 yrs.

Fundoscopy:- SOS.

CT Scan and MRI Brain:- SOS.

Treatment – Pharmacotherapy And Psychotherapy

Acute Phase:

- **Aim-** Reduction of Symptoms.
- If **co-operative** : Orally
- **Non co-operative** Patient : IM or IV

Inj. Haloperidol 5 mg with Inj. Phenergan 25 mg IM or IV.
Orally -For **Positive symptoms:** Tb. Haloperidol 5-20 mg with Tb. Trihexyphenidyl 2-8 mg/day
Tb. Chlorpromazine 25 Mg HS for sleep.
For **Negative symptoms:** Olanzapine 5-20 mg or
Risperidone 2-8 mg or
Quetiapine 50-400 mg or
Clozapine 50-300 mg can be given.

TREATMENT – Continued…

- IF Patient is Violent not controlled with medications or situations where rapid control of symptoms is required ECT i.e. Electro convulsive therapy is treatment of option.

- During Acute Phase:- Educate the family about Illness, role of medication.

TREATMENT – Continued…

Post Acute Phase:-

- **Aim:-** Continued reduction of symptoms
  Prevention of relapse.
- **Antipsychotic Drugs:-** Drugs used in acute phase should continue on **same dose for next 6-12 months**.
- **ECT:- 6-8 ECT** should be given if required under General Anesthesia.
- **Psychosocial Intervention:-** Further Psychoeducation of family members.
  Educate Patient about medications and relatives about side effects and supervision by relatives.

TREATMENT – Continued…

Stable / Maintenance Phase:-

- **Aims:-** 1.To Maintain or Improve functioning and Quality of life.
  2.Prevention of Recurrence.

- **Antipsychotic Drugs:-**
  Reduce dose gradually at rate about **20%** every **6 months** till a minimum effective dose is reached. Eg. 2.5 mg of Tb. Haloperidol

- **Monitor signs and symptoms** for evidence of relapse.

- **Duration of Treatment :-** **1st Episode: 6 months** of maintaince treatment.
  2nd Episode: for **2 yrs.**
  3rd or more Episodes: for **5 yrs. or life long**

- **Psychosocial Intervention :-** Find out **Key Member** or **Case Manager** from family who should take responsibility pf patients treatment. Educate him about illness, treatment, side effects, warning signs etc.

- **Other Interventions:-** Imparting social skills like Shopping, Cooking etc.
  Vocational Rehabilitation : In case of problems at work places.

SCAN ME

अधिक माहितीसाठी संपर्क करा...

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Please Give Feedback

THANK YOU

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