Educational goals

- Gather information about:
  - psychoses
  - psychopathology of schizophrenia
  - positive / negative / residual symptoms of schizophrenia
  - schizophrenia spectrum psychotic disorders
  - classification in ICD-10 and DSM-5
  - diagnostics and therapy
  - prognosis

PSYCHOTIC – NON-PSYCHOTIC - BORDERLINE

The classification of mental disorders according to severity, regardless of the etiology:

**PSYCHOTIC STATE**
- the most severe mental state
- manifestation:
  - hallucinations
  - delusions
  - incomplete, resp. lack of insight into disorder, impaired reality testing
  - disintegration of psychic functions

**NON-PSYCHOTIC STATES**
- no severe disturbances, no personality disintegration
- patient has insight
- may have a more negative impact on patient's functioning than psychosis (OCD)

Some psychiatric disorders:
- have only non-psychotic character (personality disorder)
- have only psychotic character (schizophrenia)
- non-psychotic and psychotic form (mania, depression)
Schizophrenia

- one of the major forms of psychotic disorders
- unknown etiology – endogenous psychosis
- biological basis – brain disorder with structural and functional abnormalities
- heterogeneous clinical presentations – schizophrenia spectrum disorders
- usually chronic course with psychosocial withdrawal

- affects about 1-1.5% of the population
- prevalence in men and women is 1:1
- typical age of onset: between 15-25 years in men/ 25-35 in women
  - in women the second peak occurs around the age of menopause
- High risk of mortality and suicide

Three clusters of symptoms

- positive symptoms
- negative symptoms
- cognitive symptoms
**Positive symptoms**

- **Hallucinations**
  - False sensory perceptions occurring in the absence of relevant external stimulation of the sensory organs
  - Auditory (intrapsychical, from external sources), visual, tactile, gustatory, olfactory hallucinations
- **Thought disturbances**
  - of speed (tachy-, bradypsychism)
  - of content
    - delusions: false beliefs (mostly paranoid, bizarre in nature)
    - of structure (loose associations, incoherent thinking)
- **Disorganised behaviour**

**Negative symptoms**

- affective flattening
- anhedonia
- lack of willed action
- loosing communication skills – „poverty of speech“
- loss of spontaneity
- social withdrawal
- difficulties to understand social situations

**Characteristics of negative symptoms**

- stable in clinical picture
- chronic – residual
- present form the first episode of schizophrenia
- negative prognostic factor
- associated with disability
- poor response to treatment
- sometimes difficult to distinguish from depression or from adverse effects of antipsychotics
Cognitive symptoms

- poor working memory
- poor social cognition (jokes)

The first episodes of schizophrenia

Character of schizophrenic symptoms in prodromal phase

- 7 % positive
- 73 % negative
- 20 % positive + negative

Symptoms during the course of schizophrenia

- negative symptoms: progress in clinical picture during the course of schizophrenia
- positive symptoms lose their intensity and orderliness and completeness
Different courses of schizophrenia

- prodromal phase
- initial phase
- acute (active) phases
- remissions (good, partial, poor)
- residual phase
  - lethal course in about 10% patients

Types of schizophrenia

On the basis of psychopathology, course, response to treatment:

- **Paranoid schizophrenia**
  - persecutory delusions, good response to treatment and outcome
- **Catatonic schizophrenia**
  - dominant motor disturbances
    - productive form - agitated hyperactivity
    - unproductive form - stupor, rigidity, bizarre postures - waxy flexibility
- **Hebephrenic schizophrenia**
  - early onset, disorganisation of behaviour, incoherence, inappropriate affects
- **Simple schizophrenia**
  - predominant negative symptoms, lack of hallucinations and delusions
  - changes in individualised behaviour
- **Undifferentiated schizophrenia** - mix of symptoms
- **Residual schizophrenia**

Schizophrenia spectrum disorders

- Related to schizophrenia:
  - common etiopathogenic basis
  - heterogenous clinical presentations
- According to ICD 10: codes F21 – 29
  - schizotypal disorders
  - persistent delusional disorders
  - acute and transient psychotic disorders
  - induced delusional disorder
  - schizoaffective disorders
  - other non-organic psychotic disorders
  - unspecified non-organic psychosis
**Diagnostics**

- **Psychiatric examination** (disintegration, dissimulation, autism)
  - general and focused questions
  - observation of patient's behaviour during examination
  - objective history
  - course characteristics
- **Psychodiagnostic examination**
  - projective methods: Rorschach test, hand test, associative experiment
- **Differential diagnostic investigations**
  - blood tests, toxicology, CT, MRI, EEG, etc.

**Differential diagnosis**

- Important characteristics
  - clinical picture (acute, residual symptoms)
  - course
  - duration of symptoms
  - treatment efficacy
  - organic and somatic comorbidity
- Organic causes
- Toxic causes – dual diagnoses with addictions to drugs
- Affective disorders
  - psychotic mania
  - psychotic depression

**Therapy of schizophrenia**

- **symptomatic** - causal treatment is not known
- **complex**
- according to time
  - acute (6-8 weeks)
  - maintenance (2-5 years)
- according to health care service utilization
  - hospitalization
  - partial hospitalization (psychiatric sanatorium)
  - outpatient care
Complex therapy of schizophrenia

**PHARMACOTHERAPY**
- Antipsychotics
  - Typical/atypical
  - Monotherapy/combinations
  - Parenteral/depot
  - Mood stabilizers
  - Anxiolytics
  - Hypnotics

**Mood stabilizers**

**Anxiolytics**

**Hypnotics**

**PSYCHOTHERAPY**
- Improving functioning
- Psychoeducation
- Rehabilitation
- Resocialisation

+ ECT
+ Other biological methods (TMS)

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**Antipsychotics**

1. **Generation**
   - Typical D2 receptors α2, H1, M1
   - Pure D2 blockers (haloperidol)
     - Not ideal efficacy
     - Not affect all symptoms
     - Frequent AEs

2. **Generation**
   - Multi-receptor activity
     - Synergic activity
     - Wider spectrum of efficacy
     - Pharmacoresistant states
     - Fewer AEs
     - Clozapine (granulocytopenia)
     - Risperidone (EPS, PRL)
     - Paliperidone
     - Olanzapine (weight gain)
     - Quetiapine
     - Ziprasidone (QTc)
     - Aripiprazole

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**Forms of antipsychotics**

- Tablets
- Drops
- Injections – acute antipsychotic treatment (haloperidol, olanzapine)
- Long acting injections (LAI) – depot antipsychotic treatment
  - Non-adherence to oral medication (~ 40%)
  - The first and second generation AP
  - Relaps prevention vs stigmatisation (?)
  - Administration
    - Once per 2-4 weeks
    - Deeply intramuscularly
  - Prescribed to ~ 20% patients with schizophrenia
Electroconvulsive therapy

- ECT involves applying a brief electrical pulse to the scalp while the patient is under anesthesia.
- The specific reason for the positive action of ECT is unknown.
- ECT appears to have many effects (the seizure activity itself causes an alteration of the neurotransmitters, metabolism of the brain, neuroplasticity...)

Indications

- Patients with psychoses:
  - Schizophrenia
  - Affective disorders (depression, mania)
  - Neuroleptic malignant syndrome
  - Obsessive-compulsive disorder
- Need of rapid treatment response
- Pharmacoresistance
- Catatonic stupor
- Severe risk of suicide
- A previous response to ECT

Contraindications

- Increased intracranial pressure
- Recent CNS bleeding
- Recent myocardial infarction
- Pheochromocytoma
- Severe somatic disease

AGE, EPILEPSY, PREGNANCY are not ABSOLUTE CI

Prognosis of schizophrenia

- Negative prognostic factors:
  - Early age at onset
  - Insidious onset
  - Predominantly negative symptoms
  - Non-adherence to treatment
  - Pharmacoresistance
- From 100 patients:
  - 30% recover completely
  - 30% improve greatly, recurrent hospitalisations
  - 30% need extensive permanent help
  - 10% commit suicide
Principles of classification

Diagnosis is based on the basis of the patient’s symptoms. ICD-10 and DSM-IV set out operational criteria against which a clinical diagnosis can be confirmed (symptoms + duration).

Schneider’s first-rank symptoms: pathognomonic for schizophrenia
- Audible thoughts (thought echo)
- Voices arguing
- Voices commenting on his/her actions
- Somatic/thought passivity experiences (delusions of control)
- Thought withdrawal
- Thought insertion – thought broadcasting
- Delusional perception

ICD-10: 1994
SCHIZOPHRENIA, SCHIZOTYPAL AND DELUSIONAL DISORDERS
Duration > 1 month

DSM- V: 2013
SCHIZOPHRENIA AND OTHER PSYCHOTIC DISORDERS
Duration > 6 month
(1 month active phase)

Thank you.