Organic mental disorders

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What is organic?

- Neurology
- Psychiatry
- Organic psychosyndromes
- Organic (mental) disorders
- Functional disorders
Neuropsychiatry

► Biological psychiatry
► Cognitive neuroscience
► Neuropsychology
► (Neurology – Psychiatry)
► Neuropsychiatry
► Clinical neuroscience
DSM

- DSM – IV. Delirium, dementia, amnestic disorders and other cognitive disorders.
- DSM-5: Delirium, Major/mild neurocognitive disorder
- Mental disorders due to a medical condition
ICD 10

► Organic and symptomatic mental disorders
  ▪ Dementia
  ▪ Organic amnestic syndrome
  ▪ Delirium
  ▪ Other mental disorders caused by brain lesion and dysfunction or somatic disorder
    ► Organic hallucinosis, organic catatonia, organic delusional disorder, organic mood disorder, organic anxiety disorder, etc.

► Mental and behavioural disorders caused by psychoactive substances
Etiology, causes, pathology

- **Central nervous system**
  - Neurodegeneration
  - Cerebrovascular origin
  - Inflammation, tumor
  - Demyelination
  - Epilepsy
  - Trauma
  - Other

- **Outside the central nervous system**
  - Endocrine
  - Metabolic, cardio-vascular diseases
  - Nutritional disturbance
  - Infection

- **Drug intoxication, drug withdrawal**
  - Alcohol, illegal drugs, medication
From neurological point of view...

- Cerebrovascular diseases
- Neurodegenerative diseases
- Parkinson’s disease, other movement dis.
- Epilepsy
- Head trauma – brain injuries
- Tumors
- Neuroinfections
- Neuroimmunology (multiple sclerosis)
Classification of syndromatology

► Acute – chronic
► Diffuse (global) – focal (local) - multifocal brain dysfunction
► Lobe syndromes
  ▪ FRONTAL
    apathy, disinhibition, lack of initiative and spontaneity, motivation, perseveration, impulsivity
  ▪ TEMPORAL
    affective, aggression, fear, explosion, psychosis, disorientation
  ▪ PARIETAL
    gnosisst and cognitive dysfunctions (alexia, acalculia, agraphia), apraxias
Delirium - Syndromatology

- Acute course – (sudden onset, short episode)
- Impairment of consciousness
- Global impairment of cognitive functions (memory, attention, orientation, thinking, etc.)
- Perceptual disturbance (multimodal illusions and hallucinations)
- Behavioural changes (agitation)
- Fluctuating course
Delirium - Etiology

- Any cause, resulting in global dysfunction
- General medical condition (e.g. infection, metabolic reasons, hypoxia)
- Substance induced
- Multiple cause

- Therapy: Causal, symptomatological (BZD, NL)
Etiology

- Etiological factors?
- Risk (predisposing) factors
- Trigger (precipitating) factors
- Hyperactive, hypoactive, mixed form
Risk factors 1.

- Age: 65+  sex: male
- Dementia (+++), other cognitive disorder
- Depression
- Vision-, hearing impairment
- Dehydration, malnutrition
- Medication (multiple drugs, psychoactive drugs), alcohol
- Immobility, pain, constipation
- Sleep deprivation

Risk factors 2.

- Somatic illnesses
  - Severe illness
  - Many illnesses
  - Chronic liver or kidney failure
  - Stroke, other neurological disorder
  - Metabolic disorder
  - Trauma, bone fracture
  - Terminal state
  - HIV infection

Precipitating 1.

► Comorbid disorders

- Infection
- Hypoxia
- Severe acute disorder (pl. AMI)
- Liver, kidney disorder
- Urinary retention, constipation
- Anaemia
- Fever
- Shock

Precipitating factors 2.

- Iatrogenic complication
- Metabolic imbalance
- Neurological disease (head trauma)
- Surgery
- Medication
  - overdose, polytherapy
  - sedatives, hypnotics, anticholinergic drugs, antiepileptics
- Environmental factors (ICU, physical restraint, bladder catheters, multiple/invasive manipulations, emotional stress)
- Pain

Dementia - Syndromatology

- Chronic course (10% above 65 y, 16-25% above 85 y)
- Multiple cognitive deficits incl. memory impairment (intelligence, learning, language, orientation, perception, attention, judgement, problem solving, social functioning)
- No impairment of consciousness
- Behavioural and psychological symptoms of dementia (BPSD)
- Progressive - static
- Reversible (15%) - irreversible
Symptomatic domains of typical AD over time

Cognitive/non-cognitive

► Non-cognitive symptoms

► Behavioural symptoms

► Psychological and behavioural symptoms in dementia (BPSD)
  - delusion, hallucination, depression, anxiety, agitation/agression, euphoria/mania, disinhibition, irritability, apathy, motor behaviour
Dementia - Classification

► Severity
- Mild cognitive impairment (MCI)
- Mild dementia
- Moderate dementia
- Severe dementia

► Localization
- Cortical
- Subcortical

► Etiology
- Primary
- Secondary
Dementia - Etiology

- Alzheimer's disease (60-70%)
- Vascular dementia (10-20%)
- Neurodegenerative disorders (FTD, Lewy body dis, Parkinson, Huntington, etc.)
- Drugs and toxins
- Intracranial masses
- Anoxia
- Trauma
- Infections (JCD, HIV, etc.)
- Nutrition
- Metabolic
- Pseudodementia
Dementia - Diagnosis

- Signs and symptoms
- Laboratory data
- EEG, CT, MRI
- Psychological testing (MMS)
Dementia - Therapy

- Causal if possible
- Nootropics
- Neuroprotection
- AChEI (rivastigmine, donepezil, galantamin)
- Glutamate antagonists (Memantine)
- BPSD (anxiolitics, antidepressant, antipsychotics, etc.)
- Non-pharmacological interventions
Mental disorders due to a General Medical Condition (DSM)

- Psychotic disorder due to a general medical condition
- Mood disorder
- Anxiety disorder
- Sexual disfunction
- Sleep disorder
- Catatonic disorder
- Personality change
Therapy in neuropsychiatry

► Pharmacotherapy

► Psychotherapy, psycho-social treatment
  ▪ Improving cognitive abilities
  ▪ Rehabilitation
  ▪ Treating affective and anxiety symptoms
  ▪ Treating other psychological symptoms
Pharmacotherapy in neuropsychiatry 1.

- **Targets of pharmacotherapy**
  - Etiological background
  - Progression
  - Psychiatric symptoms
    - Target symptom:
      - Cognitive
      - Agitation/aggression
      - Mood
      - Psychotic
      - Other behavioural
  - Neurologic symptoms
Pharmacotherapy in neuropsychiatry 2.

► Aspects of pharmacotherapy
  ▪ Mental status
  ▪ Neurological status
  ▪ Social status
  ▪ Etiological background

► Typical v. atypical symptoms
Pharmacotherapy in neuropsychiatry 3.

► Special aspects

- Age
- Polimorbidity
- Pharmacokinetics (interactions)
- Optimal dosing (+/-)
- Side effects (cognitive, other)