Organic disorders

according to DSM IV

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Overview

- Concepts and differences between classifications
- Building diagnosis
- Conditions associated with mental symptoms
- Course
- Treatment

Concepts

- organic vs. functional etiology
  - „no brain, no pain“
  - brain changes in once functional conditions
- primary vs. secondary psychiatric symptoms
  - „due to“ *(DSM IV x ICD 10 ~ „organic mental syndromes“)*
  - *defective development vs. focal lesions of normally developed brain*

Building diagnosis of an „Organic disorder“

Building diagnosis „due to“ - Diagnostic steps

1. Mental syndrome definition
2. Delineation of other manifestations of the primary disease
3. Demosntration of active cerebral or systemic disease
4. Elevated prevalence rate between primary disease and described clinical picture

- *ICD 10 – evidence of cerebral disease, temporal relationship between mental symptoms and organic lesion, recovery from the mental disorder after improvement of the primary disease, absence of evidence to suggest alternative cause of the mental symptoms*

ad 1. Mental status examination – syndrome definition

- General description
  - general appearance, sensory aids, level of consciousness and arousal, attention to the environment, posture, gait and movements
- Language and speech
  - comprehension, output (spontaneity, rate, prosody), repetition, ability to name objects
- Thought
  - form, content (ideational – preoccupation, overvalued ideas, delusions; perceptual - hallucinations)
- Insight and judgment
- Cognition
  - memory, visuospatial skills, constructional skills, mathematics, reading, writing, executive functions, abstraction

ad 1. Suspective mental symptoms

- fluctuating performance
- decline of cognitive functions („nevýpravné“ thought, loss of flexibility, perseverations, dyscalculy, wrong judgment)
- personality changes (disinhibition, accentuated features)
- „dysorientation“
- visual hallucinations
- flattening of emotions, unstable emotions
- paresthesis
- loss of motor coordination
- confusion/delirium
- age of onset (old age)

ad 1. General classification of mental syndromes

- Key feature = cognitive decline
  - dementia, delirium, amnestic disorders
- Key feature
  - perceptual disturbances – psychotic d.
  - thought content – psychotic d.
  - affective disturbances – mood, anxiety d.
  - personality and behavioral changes

ad 2., 3. Laboratory tests

- General tests
  - Blood cell count, biochemical serum examination (electrolytes, glucose, urea, creatinin, liver function, thyroid function, serum protein), urinanalysis, electrocardiography
- Ancillary tests
  - Blood (cultures, HIV testing, heavy metals, copper, ceruloplasmin, B12, folate), Urine (culture, toxicology), EEG, CSF, Radiography (CT, MRI, SPECT, PET)

ad 4. Primary conditions associated with mental syndromes

- epilepsy
- head trauma
- neuroinfection
- brain neoplasms, extracranial neoplasms with remote CNS effects (pancreatic ca)
- vascular cerebral disease
- demyelinisations (multiple sclerosis)
- autoimune/colagen diseases (SLE)
- endocrine diseases (hyper/hypothyroidism, Cushing´s disease)
- metabolic disorders (hypoglycemia, porphyria, hypoxia, liver dysfunction, renal dysfunction, electrolyte dysbalance)
- toxic effects of nonpsychotropic drugs (propranolol, levodopa, steroids)

Classification of disorders due to general medical condition (GMC)

- Psychotic disorder
- Catatonic disorder
- Mood disorder
- Anxiety disorder
- Sexual disorder
- Sleep disorder
- Personality change

Personality change due to GMC I

- **Personality** = **specific constelation** of enduring **traits** (self-consciousness, impulsivity, openness...), **behavioral style** (interests, activities, social relations, predominant mood and temperament, coping mechanisms), **cognitive schemas** (means of reality-, self-evaluation, style of thinking)
- no specific organic process linked with specific features x (pre)**frontal lobe impairment**
  - orbitofrontal area – disinhibition, inappropriate jocularity, affective lability, impulsivity
  - frontopolar area – apathy, indifference, psychomotor slowing, inaction

Personality change due to GMC II

- Diagnosis
  - at least 1 year lasting persistent personality change
  - evidence of consequence of GMC
  - no other mental disorder
  - no excluseve manifestation in the presence of delirium, do not meet criteria for dementia
  - symptoms causes significant distress in social or occupational functioning
  - Specific types
    - labile
    - disinhibited – poor impulse control, ie sexual indiscretions
    - aggressive
    - apathetic
    - paranoid

General medical contitions and their common mental manifestations

Note

- one condition may cause different mental syndromes
  - neurosyfilis and delirium, dementia, delusions, hallucinations, affective disturbances, personality changes

Epilepsy

- psychopathology may be during all stages of epileptic activity
  - **prodrome** – irritability, sullenness, apprehension
  - **aura** – focal seizures, phenomenology according to focus location (temporal lobe)
  - **ictus** – temporal lobe seizures (variaty of symptoms, psychosis, psychomotor automatic demonstration)
  - **postictal period** – delirium, mood disturbances, agression
  - **interictal period** – any type of psychopathology
- Mental syndroms
  - **agression**, **psychosis**, **cognitive disturbances** (influence of medication), **mood disorders**, **personality change** (overinclusiveness in speech, interpersonal action, writing, altered sexuality, hyperreligiosity, intensified emotivity...)

Head trauma

- **Postconcussional disorder** (3-6 months)
  - poor attention, memory dysfunction, headache, easy fatigability, irritability, anxiety or depressed mood, apathy or lack of spontaneity, sleep disturbance, vertigo
- **Cognitive disorders**
  - delirium (during the gradual recovery of consciosness)
  - dementia (multiple trauma) x gradual recovery in months
- **Personality changes**
  - orbitofrontal syndrome – disinhibition, explosiveness, jocularity
  - frotnopolar syndrome – apathy, behavioral inertia, indifference
- **Adjustment disorders**
  - reactions to the cognitive changes, irritability, traumatic situation

Infection

- acute state - cognitive disturbances (all range, delirium)
- chronic psychopathology
  - chronic infection:
    - **syphillis** (general paresis – variety of symptoms, dementia, grandiosity, depression, apathy, lability)
    - **CJD** (rapid cognitive decline, myoclonsu, extrapyramidal symptoms, typical EEG – difuse symetric rhythmic slow waves)
    - **HIV infection** – mood disturbances, dementia (subcortical)
  - structural brain change:
    - **HSV encephalitis** - temporal and frontal regions; amnesia, hallucinations

Tumor

- direct – focal affections with associated dysfunction
- indirect influence
  - lung cancer – hypoxemia, prostatic ca – obstructive uropathy with renal failure...
  - paraneoplastic syndromes – metabolic abnormalities: hypercalcemia

Cardiovascular disease

- myocardial infarction
  - higher rates of depression
- hypoxia, embolic cerebral infarction
  - neuronal loss with cognitive deterioration
- blood pressure drops, even transient
  - consciousness fluctuation, delirium

Demyelinating disorders

- Multiple sclerosis
  - delirium
  - dementia
  - psychosis
  - mood disturbances
    - euphoria (limbic, frontal and BG regions)
    - emotional incontinece (pathways connecting telencephalon with deeper structures)
    - depression (higher rates in patients with cerebral affection)

Autoimune disorders

- pathologic mechanisms - CNS vasculitis, parenchymal inflammation, indirect influence
- **Systemic lupus erythematosus** (SLE)
  - delirium
  - psychotic symptoms
  - affective lability

Course and prognosis

Course and prognosis

- No valid data available
- Depend on primary condition
  - chronic/refractory vs. reversible
  - organic/structural demage vs. functional dysbalance/state of CNS
  - neuroplasticity

Treatment

Treatment

- Treat primary condition!

- Psychiatric treatment modalities
  - supportive, symptomatic
  - psychopharmacology, rehabilitation
  - interactions with somatic medication
  - beware of adverse effects!!! (susceptibility of affected CNS)