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Eating disorders (ED)

MUDr. Tomáš Mihok, MUDr. Barbora Móriová, Mgr. Adéla Látalová
Department of Psychiatry, University Hospital and Masaryk University Brno

ICD-10

F50 Eating disorders

F50.0 Anorexia nervosa

F50.1 Atypical anorexia nervosa

F50.2 Bulimia nervosa

F50.3 Atypical bulimia nervosa

F50.4 Overeating associated with other psychological disturbances

F50.5 Vomiting associated with other psychological disturbances

F50.8 Other eating disorders

F50.9 Eating disorder, unspecified

ED – basic symptoms

1. pathological eating behaviour
2. fear of gaining weight
3. body shape distortion

ED – etiopathogenesis („it´s not that simple…)

- risk factor x correlate… EGG OR CHICKEN?
- psychological/social aspects
- genetics
- organic brain lesions
- …

Psychosocial approach

- sex: women – binge eating 2,5x more frequent, AN or BN up to 10xmore than in men
  - ED in 27% of homo/bisexual oriented men
- ethnicity – „white people disease“ (rather in the past)

Personality traits

- impulsivity – correlation between drug abuse and binge eating
- perfectionism, traits – anancastic, narcistic, border-line personality

- diets as risk factors?
  - self-medication by restriction of tryptophan?

- trauma
  - sexual abuse … embarrassment, auto-accusation and punishment, pathological regulations of emotions (border-line PD) and form of self-control
  - bullying/pressure from family members
  - separation / acculturation

- risk environment
  - ballet dancers, models, sportswomen … cultural icons
  - **INSTAGRAM! … what do men think?**

Genetics

- up to 56-84%
- anomalies especially in chromosome 1 a 10

- family history – alcoholism, depression, OCD

- serotonine hypothesis … anorexigenic effects, carbohydrates
  - ↑ in AN, ↓ in BN … correlation with response to pharmacotherapy?
  - ↑ serotonine = anxiety, OCD symptoms, hyporexia
  - ↓ serotonine = „emotionally unstable“, impulsivity, self-harm
  - self-medication? (via decrease of tryptophan?)

- central opioid system
  - mediates feelings of delight, hedonic experiences
  - increased level of β-endorphine in BN

- dopaminergic activity on D2 rec. of hypothalamus
  - anorexigenic effect + increased physical activity
  - effect of antipsychotics?

Brain lesions

- damage of hypothalamus, brain stem and right frontal and temporal lobe
- subcortical lesions – atypical forms of ED
- right frontal lobe lesion – immitates typical forms of ED

- atypical forms of ED (personality traits) + man + elderly + neurological symptoms … **ATTENTION!!!!**
- antiepileptics – ED in epilepsy, BAP, dissociative disorders
- gourmand syndrome – front. / temp. lobe l.dx.

- brain atrophy – egg or chicken?
  - more in AN than in BN
- functional changes (PET, fMRI) - ↓ overall activity in frontal and temporal lobe
  - BUT - ↑ activity in frontal medial cortex and cingulum in AN and BN in reaction to food (esp. „unhealthy“), similiar in drug abusers and OCD
- realimentation -> restitution of white matter, parc. rest. of cortex
  - same in functional changes

ED - onset

Typical signs

- loss of social interactions
- suspicious preoccupation with food
- unstable emotions, irritability
- loss of focus, restlessness

First medical contact - GP, gynecologist, psychiatrist, other specialists

Anorexia nervosa

Prevalence:

- Women: 0,5 - 2,2%
- Men: 0,3%
- Incidence – 5-8/100 000, stabilized during 1970s

Onset and course:

- Onset usually between 12 – 15 yrs of age, 1st hospitalization between 15-19 yrs.

- Full remision
- Partial remission
- Chronic course

- Mortality: >10% (malignant arrhythmia, suicides)

Anorexia nervosa

Severity:

- Mild: BMI 17
- Moderate: BMI 16 - 16.99
- Severe: BMI 15 – 15.99
- Extreme: BMI < 15

Anorexia nervosa

Restrictive subtype (F50.01)

- dieting / fasting

Purgative subtype (F50.02)

- induced vomiting, excessive exercising, diuretics …

Diagnostic criteria of AN – ICD-10

A. Body weight below standard = <15% of expected weight / BMI < 17.5
B. Weight loss is deliberate, induced and sustained by patient (dieting, vomiting…)
C. Psychopathology – body shape distortion; intrusive, overvalued ideas on body shape
D. Associated endocrine abnormalities – amenorrhea, loss of sexual desire
E. If onset before puberty = primary amenorrhea, general growth impairment

Anorexia nervosa

Differential diagnosis:

- Other non-psychiatric conditions: gastrointestinal diseases, hyperthyreosis, tumours, AIDS
- Depression
- Schizophrenia
- Drug abuse
- OCD
- Bulimia nervosa

Anorexia nervosa

Comorbidity

- BAP
- Depression
- Neurotic disorders, OCD (esp. in restrictive subtypes)
- Substance abuse (esp. in purgative subtypes)

Bulimia nervosa – ICD-10

A. Repeated bouts of overeating and an excessive preoccupation with food

B. Purging behaviors – self-induced vomiting, laxative/diuretics/insuline, thyroid hormones abuse/misuse, excessive excercise

C. Psychopathology – body image distortion

- often evolves from AN
- DSM-V – symptoms must repeat at least once a week during period of 3 months

Bulimia nervosa

Grading by severity of purging behavior (vomiting):

- Mild: 1 – 3 episodes a week
- Moderate: 4 – 7 ep. a week
- Severe: 8 – 13 ep. a week
- Extreme: 14 and more ep. a week

Bulimia nervosa

Prevalence:

- Women: 1,1 – 2,8 %
- Men: 0,1 – 0,2 %

Onset and course:

- Onset usually between 16 - 25 years of age

- Complete remision
- Partial remission
- Chronic course

Bulimia nervosa

Differential diagnosis:

- Purgative subtype of anorexia nervosa
- Binge eating
- Border-line personality disorder
- Other non-psychiatric physical conditions

Bulimia nervosa

Comorbidites:

- Affective or neurotic disorders
- Substance abuse
- Personality disorders (mainly border-line PD)

Psychogenic overeating – ICD-10

A. repetitive overeating and excessive preoccupation with food
B. fear of gaining weight
C. absence of purging behavior
D. episodes of overeating = pathological regulation of stressful events

– more in-depth criteria in DSM-5

Psychogenic overeating

Grading by frequency of episodes of overeating

- Mild: 1 – 3 ep. a week
- Moderate: 4 – 7 ep. a week
- Severe: 8 – 13 ep. a week
- Extreme: 14 and more ep. a week

Prevalence:

- 1-4% depending on criteria of diagnosis (underdiagnosed unit!)

Consequences/complications of ED (AN,BN)

- Cardiovascular system
  - bradycardia
  - hypotension (due to fasting)
  - **arrythmias** (internal environment imbalance – ions, minerals)
  - mitral valve prolapse (fasting + excessive exercise)
  - cardiomyopathy (emetine)

- Reproductive system:
  - amenorrhea (primary x secondary) … adipose tissue at least 23.5% of bodyweight
  - loss of sexual desire (BN)
  - atrophy of uterus
  - increased risk of postnatal complications and perinatal mortality

- Nervous system:
  - brain atrophy
  - cognitive dysfunction – loss of focus, set-shifting, visuo-spatial memory
  - neruological symptoms (internal environment disruption)
  - **central pontine myelinolysis**

- Digestive system:
  - salivary gland hypertrophy
  - slow peristalsis; risk of rupture in quick realimentation
  - hyperamylasemia (salivary)
  - high liver transaminases (probably in steatosis due to dysfunction of peroxysomes)
  - superior mesenteric artery syndrome
  - esophagus varices, Barret´s esophagus
  - diabulimia (30% type 1 diabetes) – disuse of insulin, glykosuria, rethino/nephro/neuropathy

- Musculoskeletal system:
  - osteoporosis, pathological fractures (low Ca, Vit. D, growth-horm., high stress hormones, low estrogen)
  - disruption of bone growth (longitudinally when before puberty, appositionally when during puberty)

- Respiratory system:
  - morphological changes – loss of elastic fibers in pulmonary intesrtitium, weakening of respiratory muscles -> hyperinflation, air trapping, emphysema, PNO
  - infections -> weakened immunity, secondary infections due to vomiting

- Skin:
  - dry, scaling skin, lichenification, carotenodermia, cold sensitivity, lanugo (?), Russel sign, nail and hair dystropy, cheilitis, subconjuctival hemorrhage
- Oral health:
  - enamel erosions, caries, xerostomia (AD), gingivitis, apthous ulcers
- Blood count:
  - anaemia, cytopenia, hypercholesterolemia?

- Internal environment, kidneys:
  - hypo Ca/K/Na/Mg/P (in rushed realimentation!)
  - hyper P – vomiting with catabolism
  - chloruria – >10mmol/24h (diuretics), <10 mmol/24h (laxatives and vomiting)
  - comparing lab. values in blood x urine

  - **kaliopenic/hypokalemic nephropathy**
  - polyuria, polydipsia, nocturia
  - vacuolation of the epithelium of renal tubules

  - **uric nepropathy**
  - hypovolemia (via GIT) + concentrated urine + loss of ions in urine, which nomally prevent formation of crystals

Therapy of eating disorders

Outpatient clinic/office:

- Psychiatrist´s office
- Psychologist´s office
- Nutritional counselor

Hospitalisation:

- Severe malnutrition, unsuccessful outpatient care or physical complications
- Psychotherapeutic wards or intensive care units
- Involuntary hospitalisation

Somatic health care

- blood tests – full blood count, liver enzymes, kidney function, minerals, amylases, pre/albumin, Fe, vit. B9,D3; thyroid hormones,
- urine analysis (24hrs collection of urine) – esp. values of minerals/ions
- measuring - body weight (min. 1x/week), bioimpedance (2-3x)
- ICU – realimentation via nasogastric tube

Pharmacotherapy

Antidepressants

- esp. with concomitant depression, neurotic disorders
- AN: minor effects (SSRI, mirtazapin, trazodone)
- **BN: fluoxetine (60mg/D)**, fluvoxamine

Anxiolytics

- short-term usage (30 minutes before meal) to minimize accompanying anxiety

Antipsychotics

- olanzapine: taking advantage of usual side-effect = increasing appetite
- sulpiride: in functional dyspeptic symptoms

Psychotherapy

Various forms of PST:

- individual
- group
- family

Various types of PST:

- cognitive behavioral therapy
- psychodynamic therapy …

Refeeding syndrome

- increased secretion of insulin (which was low before) leads to glucose uptake by cells, also taking in P, Mg, K – resulting in low blood values of these minerals
- usually within 4 days of realimentation

- **prevention!!!!!!! – frequent blood tests + clinical examinations + slow realimentation (10kcal/kg/den)**

- symptoms:
  - confusion, agitation and fatigue, fluid retention due to hyperinsulinaemia
  - seizures, rhabdomyolysis, leucocyte dysfunction
  - arrthymia: risk of sudden cardial arrest, heart failure

– risk factors:
  – BMI < 18.5
  – no calories intake longer than 7 days
  – current weight loss more than 10% in 2 months

Other ED – diff.dg.

- **Selective eating disorder** – extreme pickiness
- **Functional dysphagia** – fear of choking or vomiting
- **Food refusal** – without body shape concerns
- **Pervasive refusal syndrome** – PTSD in children = food, drinking, speaking, walking, selfcare
- **Obsessive-compulsive disorder**
- **Depressive disorder**
- **Psychotic disorder** – sitofobia (food poisoned…)
- **Avoidant eating disorder** – due to consistence, colour or smell of meals
- **„Novel disorders“** – orthorexia, bigorexia, drunkorexia

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