EATING DISORDERS

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OUTLINE

- INTRODUCTION
- OBJECTIVE
- TYPES OF EATING DISORDERS
- ANOREXIA NERVOSA
- RECOMMENDATION/CONCLUSION
- REFERENCES

INTRODUCTION

- Eating disorders are characterized by abnormalities in the pattern of eating and the amount and nature of food eaten.
- Some eating disorders are characterised by a desire for slimness, others are not.

- Until the late 1970s, eating disorders were believed to be uncommon.
- Following the description of bulimia nervosa, views about eating disorders have changed. More people are now beng diagnosed of eating disorder and its adverse effects are gaining more recognition.

OBJECTIVE

- During the course of this presentation, the various types of eating disorders will be mentioned and explained. Anorexia nervosa however, will be accorded more attention. Its clinical features and management will be dealt with in as much details as possible among other information on anorexia nervosa.

TYPES OF EATING DISORDERS

- Anorexia Nervosa
- Bulimia Nervosa
- Binge Eating Disorder
- Avoidant-Restrictive food Intake disorder
- Pica
- Rumination-Regurgitation Disorder

Anorexia Nervosa

- A condition charecterised by abnormally low body weight, markedly distorted view of body image, an abnormal desire for thinness, avoidance of high calorie foods, and self-induced weight loss by a variety of methods.

Bulimia Nervosa

- A condition charecterised by recurrent episodes of loss of control over quantity and type of food eaten, a desire for slimness, avoidance of high calorie foods, and self-induced weight loss by a variety of methods.

Binge Eating Disorder

- A condition charecterised by recurrent episodes of loss of control over quantity and type of food eaten, in the absence of a desire for slimness and self-induced weight loss. This loss of control over eating of food is associated with significant personal distress and feelings of guilt, shame, and disgust.

Avoidant-Restrictive food Intake Disorder

- In individuals with this disorder, there is insufficient dietary intake to the point where there is nutritional deficiency, poor growth, and impaired psychosocial functioning. This disorder is more common in Infants and children. There is no disturbance of body image or preoccupation with weight or a desire for slimness. They are selective (or picky) when it comes to what the want to eat.

A variety of reasons may be given for restriction of food intake, such as:

- lack of interest in eating
- avoidance of foods with certain sensory characteristics (e.g., smell, taste, appearance, texture, colour, temperature)

Pica

- Pica is characterised by the regular consumption of non-nutritive substances, such as non-food objects and materials (e.g., clay, soil, chalk, plaster, plastic, metal and paper) or raw food ingredients (e.g., large quantities of salt or corn flour) that is persistent or severe enough to require clinical attention in an individual who has reached a developmental age at which they would be expected to distinguish between edible and non-edible substances (approximately 2 years).

- It is particularly common in people with intellectual disability, and is also seen in several other psychiatric disorders, including autism and schizophrenia.
- Pica can lead to medical or surgical emergencies due to poisoning, obstruction, nutritional deficiencies, or parasitosis.

Rumination-Regurgitation Disorder

- Rumination-regurgitation disorder is characterised by the intentional and repeated bringing up of previously swallowed food back to the mouth (i.e., regurgitation), which may be re-chewed and re-swallowed (i.e. rumination), or may be deliberately spat out (but not as in vomiting) . The onset of the disorder can occur in infancy, childhood, or adolescence.

ANOREXIA NERVOSA

Brief Description

- Anorexia means loss of appetite, nervosa means nervous. Anorexia nervosa carries the meaning of loss of appetite of nervous origin(nervous loss of appetite).
- A condition charecterised by abnormally low body weight, markedly distorted view of body image, an abnormal desire for thinness, avoidance of high calorie foods, and self-induced weight loss by a variety of methods.

Epidemiology

- The incidence of anorexia nervosa based upon primary care and mental health surveys is about 5 per 100,000.
- Incidence is greatest among young women, with 40% of all incident cases occurring in 15–19-year-old females.
- It is rare in children under 13 years of age, and in this age group the sex ratio is closer to one.

- It also rarely occurs in those greater than 30years of age.
- Several studies worldwide have shown the lifetime prevalence of typical and atypical anorexia to be between 0.9% and 4% in women; rates in men are always lower, the sex ratio (female:male ratio) is 5:1-10:1.

- The prevalence of Anorexia Nervosa among men is increasing globally, and more men are presenting for treatment of the disorder.
- The prevalence of Anorexia Nervosa is very low in Africa and Latin America and among Latinos and African Americans in the United States compared to the prevalence found in Europe and some Asian countries, such as China and Japan.

- According to an interview of psychiatrists done in kenya in 2001 and published in 2004, a total of 16 cases were discovered by 26 psychiatrists. Of the 16 cases found, 12 were aged between 13-20 years, three quarters were under weight, seven eighths had a change in perception of body weight, 63% were students. Only ten of the patients seen were of African descent. The remaining six were Asians and Caucasians. Those who conducted the interview concluded that anorexia nervosa appears to be a non African condition.

Aetiology of anorexia nervosa

- Genetics: Anorexia nervosa is strongly familial, with a reported heritability of 28–74%, suggesting that much of the familiality reflects genetic predisposition.
- Genetic Concordance: Monozygotic twins : dizygotic twins = 65%:32%
- However, no individual risk genes for anorexia nervosa have yet been identified by genome-wide association studies.

- Neurobiology: There have been many brain imaging and other neurobiological studies of anorexia nervosa, and a range of structural, functional, and biochemical abnormalities reported. These include reductions in brain volume, and alterations in the 5-HT (serotonin) system.
- However, it is often difficult to determine whether abnormalities are causal, or are the result of starvation and weight loss.

- Sociocultural factors: The fact that anorexia nervosa is more common in certain societies suggests that cultural factors play a part in its development.
- Important among such factors is likely to be the notion that thinness is desirable and attractive.
- Surveys in affluent societies show that most schoolgirls and female college students diet at one time or another.

- Emerging evidence supports the importance of media and peer groups in influencing weight and shape concerns in adolescents.

- Individual psychological causes: Epidemiological studies implicate low self-esteem and perfectionism in the development of the disorder. It has been suggested that these premorbid personality traits can make it particularly difficult for an individual to negotiate the demands of adolescence.

- Causes within the family: Disturbed relationships are often found in the families of patients with anorexia nervosa, and some authors have suggested that they have an important causal role.
- Some have also held that a specific pattern of relationships could be identified, consisting of ‘enmeshment, overprotectiveness, rigidity and lack of conflict resolution’.

Clinical Features of anorexia nervosa

1. Self report or report by relatives of extreme fear of weight gain.
2. Self report or report by relatives of preoccupation with body weight or shape.
3. Overvalueing and making low body weight a central part of self-evaluation. Patients with anorexia nervosa are usually underweight (BMI less than 17.5kg/m2).

4. Inaccurately perceiving their weight or shape as normal or even excessive.
5. Preoccupation with weight or shape, when not explicitly reported, may be manifested by behaviours such as: repeatedly checking body weight using scales, repeatedly checking one’s body shape using tape measures or reflection in mirrors, constantly monitoring the calorie content of food or searching for information on how to lose weight.

6. Preoccupation with weight or shape, when not explicitly reported, can also be manifested by extreme avoidant behaviours such as:

   refusal to have mirrors at home

   avoidance of tight-fitting clothes

   refusal to know one’s weight

   refusal to purchase clothing with specified sizing

7. Behaviors aimed at reducing body weight or maintaining a low body weight. Such behaviors include:

(a) behaviors aimed at reducing calorie intake such as:

Fasting

Choosing low calorie food

Excessively slow eating of small amounts of food

Hiding or spitting out food

(b) purging behaviors:

Induced vomiting

Misuse of laxatives(more common among females)

Misuse of diuretics

(c) excessive exercise (more common among males)

(d) motor hyperactivity

(e) deliberate exposure to cold

(f) use of medications that increase energy expenditure (e.g., stimulants, weight loss medications, herbal products for reducing weight, thyroid hormones).

(g) omission of insulin doses in individuals with diabetes

8. Binge eating

Binge eating is defined as a discrete period of time (e.g., 2 hours) during which the individual experiences a loss of control over their eating behaviour and eats notably more or differently than usual.

Note: There are 2 types of anorexia nervosa, the restricting and the binge-purge type.

- Loss of control over eating may be described by the individual as feeling like they cannot stop or limit the amount or type of food eaten; having difficulty stopping eating once they have started; or giving up even trying to control their eating because they know they will end up overeating.
- Binges are followed by remorse and intensified efforts to lose weight.

9. Concentration/memory/decision-making problems
10. Irritability

- 11. Depression:- Affective disorders are common comorbidities in patients with anorexia nervosa. 57% of those with restricting type anorexia nervosa have an affective disorder while for those with binge-purge type its 100%. For major depression, the figure is 57 and 66% for restricting and binge-purge types respectively. Anxiety, obssessive-compulsive, and substance abuse disorders are also common. These disorders should be watched out for.

- 12. Low self-esteem
- 13. Loss of appetite
- 14. Reduced energy
- 15. Insomnia
- 16 Loss of libido
- 17 Social withdrawal
- 18 Suicide

important medical features that can be observed include:

General:

- Emaciation
- Stunted growth and failure of breast development (if onset is prepubertal)
- BMI less than 17.5kg/m2 for those 16years and above
- BMI-for-age under 15th percentile in children and adolescents

- Swelling of the parotid and submandibular glands
- Eroded tooth enamel(in those who vomit frequently)
- Peripheral cyanosis (blue extremities)
- oedema
- Hypercarotinaemia (yellow skin and sclera)
- Pallor
- dry skin

- Callused skin over interphalangeal joints caused by repeatedly putting fingers down the throat to induce vomiting (Russell sign)
- brittle hair and nails
- hair loss
- lanugo body hairs

Nervous System:

- peripheral neuropathy

cardiovascular:

- slow heart rate
- low blood pressure (systolic <70mmHg)
- orthostatic hypotension
- bradycardia (30–40bpm)
- postural tachycardia(postural orthostatic tachycardia syndrome(POTS)
- cardiomyopathy

- decreased heart size
- decreased left ventricular mass (with associated abnormal systolic function)
- mitral valve prolapse (without significant mitral regurgitation)
- These changes reflect malnutrition and are reversible.

Gastro-intestinal:

- prolonged GI transit
- delayed gastric emptying
- altered antral motility
- gastric atrophy
- decreased intestinal motility
- constipation

- Swollen, tender abdomen (intestinal dilatation due to reduced motility and constipation)
- abnormal liver function test

Haematological:

- Anaemia
- low white cell count (WCC)(leucopenia)
- neutropenia
- thrombocytopenia

Metabolic:

- hypokalaemia (in those who vomit frequently or misuse laxatives or diuretics)
- hyponatraemia
- hypoglycaemia
- hypothermia

Renal:

- renal calculi
- impaired renal fuction
- Raised urea and creatinine(dehydration)

Musculoskeletal:

- Loss of muscle mass
- myopathy
- muscle weakness
- osteopenia
- osteoporosis

Endocrine and reproductive system:

- hypothalamic–pituitary–ovarian axis dysfunction
- low levels of follicle-stimulating hormone (FSH), leuteinizing hormone (LH) and oestradiol level
- multiple small follicles in the ovaries
- reduced uterine volume

- Amenorrhoea (amenorrhoea can persist (in 5–44% of cases), even after recovery)
- Some cases first come to medical attention with amenorrhoea rather than disordered eating
- Atrophy of the breasts
- infertility
- low birth weight of infant of anorexic mother

Diagnostic criteria (ICD-10)

For a definite diagnosis, the following are required:

(a) Body weight is maintained at least 15% below that expected (either lost or never achieved during the process of growth), or Quetelet's body-mass index is 17.5kg/m2 or less(BMI is used for those 16 years and above). Prepubertal patients may show failure to make the expected weight gain during the period of growth.

(b) The weight loss is self-induced by avoidance of "fattening foods". One or more of the following may also be present: self-induced vomiting; self-induced purging; excessive exercise; use of appetite suppressants and/or diuretics.

(c) There is body-image distortion in the form of a specific psychopathology whereby a dread of fatness persists as an intrusive, overvalued idea and the patient imposes a low weight threshold on himself or herself.

(d) A widespread endocrine disorder involving the hypothalamic-pituitary-gonadal axis is manifest in women as amenorrhoea and in men as a loss of sexual interest and potency. (An apparent exception is the persistence of vaginal bleeds in anorexic women who are receiving replacement hormonal therapy, most commonly taken as a contraceptive pill.) There may also be elevated levels of growth hormone and cortisol, changes in the peripheral metabolism of the thyroid hormone, and abnormalities of insulin secretion.

(e) If onset is prepubertal, the sequence of pubertal events is delayed or even arrested (growth ceases; in girls the breasts do not develop and there is a primary amenorrhoea; in boys the genitals remain juvenile). With recovery, puberty is often completed normally, but the menarche is late.

Atypical anorexia nervosa

- This term should be used for those individuals in whom one or more of the key features of anorexia nervosa, such as amenorrhoea or significant weight loss, is absent, but who otherwise present a fairly typical clinical picture. Patients who have all the key symptoms but to only a mild degree may also be best described by this term.

Types of anorexia nervosa

- Restricting type: food intake is highly restricted and the patient may be relentlessly and compulsively overactive, with overuse athletic injuries.
- Binge-purge type: patients alternate attempts at rigorous dieting with intermittent binge or purge episodes.

ICD=10 does not recognise these 2 types, but DSM V and ICD-11 do. This distinction is supported by evidence that they have different trajectories and cognitive features.

Differential Diagnoses of Anorexia Nervosa

- Depression (reduced appetite and weight loss but no desire for thinness and no fear of fatness)
- Avoidant-Restrictive Food Intake Disorder(no desire for thinness and no fear of fatness).
- Chronic debilitating diseases(no desire for thinness and no fear of fatness).

- Intestinal disorders such as Crohn's disease or a malabsorption syndrome (no desire for thinness and no fear of fatness).

Any of the above differentials can also be diagnosed separately from anorexia nervosa if the patient meets the criteria for them as well as for anorexia nervosa.

Assessment

- Most patients with anorexia nervosa are reluctant to change their behaviour, let alone see a psychiatrist, so it is important to try to establish a good relationship.
- This means listening to the patient’s views, explaining the treatment alternatives, and being willing to consider compromises.

- A thorough history should be taken of the development of the disorder, the present pattern of eating and weight control, and the patient’s ideas about body weight.
- In the mental state examination, particular attention should be given to depressive symptoms, as well as to the characteristic psychopathology of anorexia nervosa itself.

- More than one interview may be needed to obtain this information and gain the patient’s confidence.
- It is essential to perform a full physical examination including determination of weight and height and calculation of BMI.

- Necessary investigations include:
- Full Blood Count- Anaemia, leucopenia, thrombocytopenia are common in anorexia nervosa.
- ESR- Raised ESR as it may indicate physical cause.
- Electrolytes, including phosphate, magnesium, and calcium- hyponatraemia, hypokalaemic/hypochloraemic metabolic alkalosis (from vomiting), hypocalcaemia, hypophosphataemia, hypomagnesaemia, metabolic acidosis (from laxative abuse).

- Urea and creatinine- Raised urea and creatinine (from dehydration).
- Liver Function Test- Raised LFTs are also common in anorexia nervosa.
- Serum Glucose- Hypoglycaemia (prolonged starvation and low glycogen stores).

- Thyroid function test: Low triiiodothyrinine, thyroxine, increased reverse triiodothyronine (euthyroid sick syndrome—hormonal replacement not necessary; reverts to normal on refeeding).
- ECG: Sinus bradycardia, signs of ischaemia, arrhythmia, ST-segment elevation, T-wave flattening, low voltage, and right axis deviation, prolonged QTc.

- Other investigations can also be done depending on history, findings on physical examination, and suspicion of other diagnosis eg. x-ray of the kidneys ureters and bladder with contrast, or a Computed Tomographic scan(CT scan)- if renal renal calculi are suspected or x-ray of the bones if osteopenia or osteoporosis are suspected.

Management

- Educating patients and their families about the disorder and its treatment is important.
- It should be made clear that achieving an adequate weight is essential to reverse the physical and psychological effects of starvation.

- Most cases may be treated on an outpatient or day patient basis, ideally within a specialist eating disorder service.
- A combined approach is better (Psychological and pharmacological management combined together).
- Medication should not be used as sole treatment.

Psychological treatment:

- Cognitive behavioural therapy (CBT) is among the most used psychotherapies.
- Generic CBT has only modest benefits, but a specifically tailored form, CBT for eating disorder (‘CBT-E’) has efficacy in weight restoration and in weight maintenance.

- Various kinds of family therapy have been used with positive results.
- Other psychological interventions with some positive results include focal psychodynamic psychotherapy and a form of cognitive–interpersonal therapy.

Medication

- Pharmacological studies have not yet identified any medication that yields definitive improvement of the core symptoms of anorexia nervosa.
- Antidepressants are used in anorexia nervosa, with antidepressants sometimes prescribed in high dosage.
- Trials of fluoxetine (at 60mg daily) have resulted in some reports of weight gain.

- Some reports support the use of cyproheptadine (Periactin), a drug with antihistaminic and antiserotonergic properties, for patients with the restricting type of anorexia nervosa.

- Other medications that have been tried by patients with anorexia nervosa with variable results include clomipramine, pimozide, and chlorpromazine.
- Concern exists about the use of tricyclic drugs in low-weight, depressed patients with anorexia nervosa, who may be vulnerable to hypotension, cardiac arrhythmia, and dehydration. Once an adequate nutritional status has been attained, the risk of serious adverse effects from the tricyclic drugs may decrease.

Restoring weight

- Rapid re-feeding is potentially dangerous. In patients with deranged electrolytes more rapid refeeding will further worsen the derangemet.
- Whilst in hospital, eating should be supervised by a nurse, who has three roles—to reassure the patient that she will not lose control over her weight, to be clear about the agreed targets, and to ensure that the patient does not induce vomiting or take laxatives.

Inpatient management

- Inpatient management may be necessary for patients with:
- rapid or excessive weight loss
- failure of outpatient treatment
- severe electrolyte imbalance (e.g. hypokalaemia or hyponatraemia)

- temperature <36°C
- fainting due to bradycardia—PR <40bpm
- marked postural drop in BP
- cardiac complications
- significantly raised LFTs
- marked change in mental status due to severe malnutrition
- psychosis
- significant risk of suicide.

Prognosis

- If treated, ‘rule of thirds’ (one-third full recovery, one-third partial recovery, one-third chronic problems).
- There is good evidence that early intervention (within 3 years of onset) is associated with better outcomes, and so every effort should be made to engage with the patient as promptly as possible.
- A study found that about two-thirds of women with anorexia nervosa had largely or fully recovered at 5 years

- Poor prognostic factors: onset before puberty or in adulthood,
- long history (>3 years),
- bulimic features (vomiting/purging)
- very low BMI (severe underweight status is an important prognostic factor that is associated with high risk of physical complications and substantially increased mortality).

- premorbid personality problems,
- comorbid substance misuse,
- childhood obesity.
- Anorexia nervosa has the highest mortality rate of any major psychiatric disorder, with a fourfold to fivefold increase in mortality. One in five deaths is from suicide; the others reflect the many adverse health consequences of the disorder, notably cardiac events and sepsis.

RECOMMENDATION/CONCLUSION

- Eating disorders can easily go unnoticed especially when it is not severe enough to to result in presentation in the hospital. African societies are becoming increasingly westernised hence eating disorders are expected to rise in the future.
- The attention that eating disorders have received in Africa has been very minimal. In preparing for this presentation, one thing stood out: very little epidemiological studies have been done on eating disorders in Africa.
- It is therefore not out of place to recommend that more epidemological studies be carried out so the exact extent of eating disorders can can be determined.

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