A Woman Struggling for Control: How to Manage Severe Eating Disorders

9

Beate Wimmer-Puchinger and Eva Thurner

9.1 Introduction and Aims

The term "eating disorders" commonly refers to the cluster of 3 illnesses in the domain of food intake: anorexia nervosa (AN), bulimia nervosa (BN), and binge eating disorder (BED).

In terms of behavior:

- AN means eating extremely small amounts of food with the lowest calorie content possible. The thoughts of these patients are fixed on eating/postponement of eating and control, e.g., they are weighing themselves several times a day. They are dominated by compulsive thoughts and suffer from an extreme compulsion to exercise. A specific feature of AN is a distorted body image, i.e., the patient perceives their body as too fat and ignore their actual underweight.
- BN means that food is gorged hastily, which in turn triggers feelings of guilt and disgust and leads to an extreme preoccupation with purging the food that has just been eaten. This leads to a perpetual circle of uncontrolled eating and subsequent secret vomiting and/or laxating.
- BED means an extreme intake of food but without the purging. This means of course a high risk to become overweight or even obese.

B. Wimmer-Puchinger, PhD (✉)
Department of Applied Psychology, University of Salzburg, Salzburg, Austria
e-mail: beate@wimmer-puchinger.at

E. Thurner, MD
Department of Obstetrics and Gynecology/Psychosomatic Outpatient-Clinic for Women, State Hospital Korneuburg/Teaching Hospital of Medical University of Vienna (MUW), Korneuburg, Austria
e-mail: Eva.thurner@korneuburg.lknoe.at

K.M. Paarlberg, H.B.M. van de Wiel (eds.), *Bio-Psycho-Social Obstetrics and Gynecology*, DOI 10.1007/978-3-319-40404-2_9

Common to all patients with eating disorders is a basic feeling of inner emptiness, self-depreciation, depression, self-punishment, and excessive self-control.

9.2 Definition in Lay Terms

Eating disorders are severe psychiatric disorders characterized by an unnatural high or low weight or significant weight changes, a negative body image, and an eating pattern marked by restrictive food intake and/or binge eating, eventually followed by compensation mechanisms such as purging, excessive sporting, or laxative abuse.

9.3 Didactical Goals

After reading this chapter, you will know:

- When you should think of an eating disorder in a patient
- How common eating disorders are and which women are affected by them
- What are important issues taking the patient's history
- What physical examination should be carried out
- What secondary diseases may arise
- The psychodynamic background of eating disorders
- Which cultural aspects of body image play a role in eating disorders
- Which measures are effective in treatment of eating disorders

Case History

Sarah Violet, a 21-year-old woman, accompanied by her mother, comes to the psychosomatic outpatient department 7 months after the birth of her baby, which was delivered by a caesarean section because of labor arrest and a birth weight of 4.5 kg. She did not start breastfeeding after delivery. Linda Cerise, the gynecologist, is also informed that Sarah has had sleep disorders, gastric pain, amenorrhea, and mood swings ranging from depression to overexcitement since her pregnancy. She has lost 25 kg within just a few months and now weighs 85 kg.

What Linda knows from the patient's medical records is that there was a report to the Youth Welfare Office during pregnancy because of the difficult social background (unemployment, parental alcoholism, and difficult relationship to the father of the baby). Sarah's mother took custody of the baby. Moreover, Linda reads in the records that Sarah was already obese as a child and suffered from learning and concentration problems. What strikes Linda the most is the fact that the trauma surgery department's records show around 60(!) visits between the age of 10 and 20 because of different

Table 9.1 SCOFF questions

*S*ick	Do you make yourself *s*ick because you feel full?
*C*ontrol	Have you lost *c*ontrol over how much you eat?
*O*ne stone	Have you lost more than *o*ne stone (6.35 kg/14 lbs) recently?
*F*at	Do you believe yourself to be *f*at when others say you are thin?
*F*ood	Does *f*ood dominate your life?

Used with permission of BMJ Publishing from Morgan et al. [33]

injuries. Linda remembers her professor instructing her about diagnosing patients at risk for an eating disorder, "always differentiate the following fields of problems: (1) menstrual cycle, (2) check the SCOFF questions,[1] (3) check for sexual and/or domestic violence, (4) sleeping pattern, and (5) possible mood disorder."

Linda finds out that for Sarah the main problem is amenorrhea, since she is afraid of a new pregnancy but also afraid of gaining weight if Linda would treat her with oral contraception in order to control her menstrual cycle. After answering the "SCOFF questions" (Table 9.1), Sarah admits having frequent periods of "overeating" and self-induced vomiting since the age of 14. This started during her first relationship, had recovered after separation, and got worse after pregnancy again. She merely admits that she was regularly beaten by her first boyfriend.

Sleep and mood disorders let Linda think of sending Sarah to a mental health specialist. During this consultation, Sarah Violet realizes that she has severe problems—bulimia is just one of them. She agrees with at least 5 meetings at the psychosomatic outpatient department to work out a management plan. The sessions are planned with a 2–3-week interval.

9.4 Facts and Figures

9.4.1 What Are the Definitions of Eating Disorders?

Eating disorders represent a severe morbidity with a wide spectrum of subclinical to psychiatric symptoms. Please see *Diagnostic and Statistical Manual of Mental Disorders*, *Fifth Edition* (DSM-5), for the different definitions of anorexia (307.1), bulimia nervosa (307.51), and binge eating disorder (307.51).

[1] SCOFF questions: see Table 9.1.

9.4.2 How Common Are Eating Disorders?

Epidemiological studies are still needed to investigate the prevalence of eating disorders in a large population [1, 2]. Community studies assessing the incidence of eating disorders are limited [3]. As the Workgroup on Eating Disorders points out, "estimates of the incidence or prevalence vary depending on the sampling and assessment methods and many gaps exist in our current knowledgebase" [4]. The range of reported lifetime prevalence of AN among women is between 0.3 and 3.7 [5]. The median age for onset of AN in the general population is 18 years [5]. The lifetime prevalence of BN ranges from 1 to 4.2 %. For BN, the mean age of onset is 20.6 years. In a community survey with 24 124 respondents (average age 18+) across 14 developed countries, the lifetime prevalence for BN is 0.8 % on average and for BED 1.4 % [6]. The median age of onset of binge eating disorder is about 23 years [7].

9.4.3 What Are Special Risk Groups?

9.4.3.1 Adolescents and Young Women

In 90 % of the cases, eating disorders have their onset in girl's adolescence (before 25 years) [7]. Girl's adolescence has been regarded as the central time of onset of the disease, because the body's appearance changes significantly within a short period of time and the changes are more visible in girls than in boys. Moreover, especially in adolescence, young women are preoccupied with their looks. This makes them vulnerable for the media hype about perfect looks and normalized, shaped, overly slim bodies. This kind of stereotyping has a high risk of getting internalized as mental images and probably aggravates body dissatisfaction [8–11]. A last cause, which makes especially adolescent girls vulnerable for developing eating disorders, is that adverse or traumatic life events, such as physical and sexual abuse, often because of severe family problems, cannot be resolved in a normal way. They have to take their refuge in pathological coping mechanisms such as eating disorders, self-harm, suicide, addiction, and depression.

9.4.3.2 Middle Age

Recent literature addresses an increase of eating disorders in middle-aged patients [12]. For 69 % of these women, the first onset of the disease started at this age, while 21 % had a chronic eating disorder. In an Austrian study of 1500 women between the ages of 40 and 60 years, 4.6 % of these women had an eating disorder, mainly BN and BED [13]. Reported risk factors for eating disorders at this age are unresolved mourning, body image concerns, and conflicts with aging, loneliness, depression, and anxiety disorders [14, 15].

9.4.3.3 Pregnant Women

Pregnancy is another very sensitive period. The transition of social role, adapting emotionally to becoming a mother as well as to the physical changes, is challenging for many women. In this respect, weight gain during pregnancy may be difficult to handle for pregnant women with a history of eating disorder [16–18]. Furthermore,

spontaneous abortion and hyperemesis gravidarum occur significantly more often in this patient group [19, 20]. Another aspect that occurs more frequently in women with eating disorders is fertility problems [21]. Some women who have had an in vitro fertilization (IVF) have a medical history of eating disorder. Steward et al. found that 7.6 % patients of a fertility clinic suffered from BN [22]. Moreover, in pregnant women, negative feelings toward the pregnancy have been described. And after delivery, difficulties with bonding with the infant and feeding problems are quite common. These effects are due to the mother's own fear of gaining weight being projected onto the baby. Normal weight babies are perceived as having too much weight [23–25].

9.4.4 Which Physical Complications May Occur?

Eating disorders may cause a number of complications. Table 9.2 shows a list of these complications, as well as the examinations that can be carried out.

Case History: Continued

In the second meeting, gynecologist Linda Cerise discusses Sarah Violet's eating behavior in more detail. Sarah understands that she uses food as a "mood regulator" and that her gastric pain is related to bulimia nervosa, due to excessive induced vomiting resulting in acid erosion of the esophagus. Meanwhile, Linda gets the results from laboratory tests as well as hormone levels and abdominal and renal sonography, all of which are normal. To enhance compliance, Linda explains to Sarah the effects and side effects of oral contraception.

While talking with Sarah, Linda experiences that it is difficult to convince Sarah to see a mental health professional. However, Sarah describes to Linda that she wants first and foremost to gain better control over her emotional outbursts, which lead to severe disputes with her partner. Following that, she acknowledges that she has problems getting out of bed and feels unable to cope with the needs of her child. Mostly, her mother takes care of these tasks.

Linda explains that she is a gynecologist who may be able to suspect a mental health problem but is not able to diagnose or treat such a problem. Sarah understands that and finally agrees to a consultation.

The next appointment takes place after Sarah's consultation with a psychiatrist and psychotherapist who prescribes sertraline. Because he also considers Sarah to have a personality disorder of a compulsive type, he also prescribes quetiapine (an atypical antipsychotic drug).

The third meeting with Sarah and her mother makes clear that outpatient treatment will not be sufficient. Sarah is not able to structure her daily life nor keep any agreement with members of her family nor take the remedies regularly. This means she will need a more continuous treatment. She agrees to be admitted at a day care department of the social-psychiatric ward. The referral was, of course, done in Sarah's presence and with her explicit consent.

Table 9.2 Physical complications of eating disorders

Organ systems	Signs and symptoms	Laboratory studies/physical examination
Whole body	Low body weight; dehydration, weakness; lassitude; hypothermia	Check weight every visit; make sure patient has not artificially increased weight by drinking water or putting objects in her clothes
Cardiovascular	Orthostatic hypotension, palpitations, arrhythmias, bradycardia, dizziness, mitral valve prolapse, chest pain, cardiomyopathy in ipecac abusers	ECG; prolonged PR and QTc intervals; ST-T wave abnormalities Chest X-ray: small heart
Endocrine, metabolic, reproductive	Fatigue; cold intolerance, low body temperature; oligomenorrhea; amenorrhea; decreased libido; infertility; arrested sexual development; increased pregnancy and neonatal complications	Decreased T3, T4, hypokalemia (with hypokalemic hypochloremic alkalosis), hypomagnesemia, hypophosphatemia, increased serum cortisol, increased serum cholesterol, decreased estrogen, prepubertal patterns of LH, FSH Pelvic ultrasound: lack of follicular development
Musculoskeletal	Weakness, muscle wasting, bone pain, pathological fractures, point tenderness	DEXA scan reveals osteopenia or osteoporosis in hip and lumbar spine
Central nervous system	Depression, cognitive and memory dysfunction, irritability, apathy, seizures (rare), obsessiveness	Cortical atrophy, ventricular enlargement in CT and MRI, abnormal cerebral blood flow in PET scan, abnormal EEG Vitamin deficiencies, increased serum carotene
Gastrointestinal	Bloating, abdominal pain, Mallory-Weiss tears; constipation, pancreatitis	Occasionally abnormal liver functions, increased serum amylase, abnormal bowel sounds
Hematologic	Bruising/clotting abnormalities	Anemias (normocytic, microcytic, macrocytic), decreased sedimentation rate, thrombocytopenia, decreased B_{12}, decreased folic acid

ECG electrocardiography, *LH* luteinizing hormone, *FSH* follicle-stimulating hormone, *DEXA* dual energy X-ray absorptiometry, *CT* computed tomography, *MRI* magnetic resonance imaging, *PET* positron emission tomography, *EEG* electroencephalography
Used with permission of Elsevier from Zerbe [33]

9.5 Etiology and Pathogenesis

Eating disorders may result from different causes, and often, like in our case description, there seems to be a confluence of comorbidity and psychosocial risk factors. Because no large-scale or long-term epidemiological studies are available, etiology is described in terms of risk factors.

9.5.1 What Are the Symptoms of an Eating Disorder (AN, BN, BED)?

Eating disorders may cause gynecological, fertility, and obstetrical symptoms.

When one wants to understand eating disorders, the most apparent symptoms are a negative body image, body dissatisfaction, and a basic feeling of lacking self-confidence. Next to these three most prominent symptoms, a wide variety of other symptoms may occur, as depicted in Table 9.3. Table 9.3 shows an overview of risk factors and symptoms of the somatic, the mental, and the social level.

Table 9.3 Symptoms and characteristics of eating disorders

Below you will find a list of symptoms and characteristics at the *somatic*, *mental*, *and social levels*, which may also occur *in early stages of an eating disorder* and may point to this type of psychological disease
Somatic level
Amenorrhea
Weight loss
Weight gain
Digestion problems (particularly meteorism—raw fruit and vegetables, increased food intolerances)
Dysphagia
Nausea
Destruction of dental enamel
Rhagades of the corner of the mouth
Chemical burns on hands from vomiting
Hair loss
Deficiencies revealed by blood tests (cave: hypokalemia, hyponatremia)
Decreased urine specific gravity—polydipsia
Cardiovascular problems
Tachycardia
Low blood pressure
Fainting
Sleep disorders
Excessive exercising
Underweight after delivery
Mental level
Compulsive thoughts
Compulsive behavior
Depression
Anxiety
Other comorbidities: drugs, alcohol, pharmaceuticals
Strong performance orientation
Strong body awareness
Low self-confidence despite obvious skills and abilities
Dependent personality
High degree of adaptability

(continued)

Table 9.3 (continued)

Weight monitoring (extremely accurate and fast provision of weight information)
Strong preoccupation with food
Excessively healthy diet
Social level
Critical life events
Traumatic experiences (sexual abuse)
Life transition crises
Separation crises
Crises at school or at the workplace
Change of residence
Social withdrawal
"Picture book family"
"Façade family"
Apparently harmonious relationships but with symbiotic ties

Courtesy of the Wiener Programm für Frauengesundheit, Vienna, Austria: http://www.frauengesundheit-wien.at/

Anorexia nervosa is characterized by being severely underweight, which suppresses the hypothalamic hypopituitary axis. Gynecological, fertility, and obstetrics effects of AN are:

- Gynecological effects: menstrual abnormalities, such as amenorrhea, oligomenorrhea, or irregular menses
- Fertility effects: infertility due to amenorrhea or oligomenorrhea
- Obstetrical effects: increased risk of fetal growth retardation and vitamin deficiencies resulting in reduced birth weight and preterm delivery
- Postpartum: increased risk of feeding problems and an increased risk to suffer from postpartum depression

In bulimia nervosa, women are rarely underweight. Therefore, in only half of the women, suppression of the hypothalamic hypopituitary axis is present. Gynecological, fertility, and obstetrics effects of BN are:

- Gynecological effects: menstrual abnormalities, such as amenorrhea, oligomenorrhea, or irregular menses
- Fertility effects: infertility due to amenorrhea or oligomenorrhea
- Obstetrical effects: increased risk of fetal growth retardation and vitamin deficiencies resulting in preterm delivery

In binge eating disorder, women are usually obese. In this group, insulin resistance is more apparent. This leads to increased insulin levels, elevating androgen production. Polycystic ovary syndrome (PCOS) and hyperandrogenism are clinical

features of this phenomenon, which frequently occurs in women. Gynecological, fertility, and obstetrics effects of BED are:

- Gynecological effects: menstrual abnormalities, such as amenorrhea, oligomenorrhea, or irregular menses. Hyperandrogenism leading to hirsutism, acne, acanthosis nigricans, and, less commonly, clitoromegaly
- Fertility effects: infertility due to amenorrhea or oligomenorrhea
- Obstetrical effects: increased risk of pre-eclampsia, fetal macrosomia, fetal growth retardation, gestational diabetes, and obstructed labor with an increased risk for instrumental delivery or emergency caesarean section

9.5.2 Which Risk Factors Are Associated with Eating Disorders?

Risk factors of eating disorders are the following:

- Patient histories may show family conflicts or so-called façade families, which means that at first glance, everything looks great, but at a closer look, a pathological pattern can be identified (e.g., overprotection of children or even sexual abuse). Frequently, alcohol abuse in one parent and/or neglect during childhood has been present.
- Sexual, physical, or mental violence during childhood and adolescence is seen more frequently in women with eating disorders than in women without these disorders [26, 27].
- Self-harm behaviors, such as cutting arms or thighs, are more frequently seen, which may be a sign of borderline disorder and/or depersonalization as a consequence of a traumatic experience.
- An underlying depression must be assumed as an essential risk factor [5, 28].

All in all, the pathogenesis may vary depending on different comorbidities. More detailed psychodynamic explanation patterns would go beyond the scope of this chapter.

9.5.3 Which Sociocultural Factors May Play a Role?

A precursor to eating disorders has found to be previous dieting [29]. A current survey conducted in Vienna among 1427 girls and boys, aged 13–15 years, at 33 schools revealed that nearly one-third of the girls (31 % [95 % *CI*: 27–34 %]) is afraid or very afraid of gaining weight compared to 15 % of the boys [95 % *CI*: 12–17 %]), and 40 % [95 % *CI*: 36–43 %] of the girls reported that weight and shape influence their self-esteem considerably. Weight and shape are permanently checked, and eating behavior is dictated by calories, resulting in a destabilization of the hunger and satiety mechanism. Two-thirds of the girls surveyed often or constantly think about their appearance (95 % *CI*: 65–72 %), 16 % of the girls (95 % *CI*:

14–19 %) avoid specific foods due to weight and shape concerns, 11 % (95 % *CI*: 9–13 %) skip meals, 13 % (95 % *CI*: 11–16 %) use appetite suppressants, and another 13 % (95 % *CI*: 11–16 %) reported 24-h fasting [30].

There is evidence that there are links between body image dissatisfaction on the one hand and images in Western media and fashion industry of perfectly slim female bodies on the other, which can result in eating disorders [11, 31]. Women with different ethnicities and cultural backgrounds are also vulnerable for eating disorders [14, 28, 32]. Quite recently, eating disorders in middle-aged women have been recognized. This has to be explained by a culture of "young forever" as well as age discrimination. Since women's identities are more closely connected to their bodies and appearance, it is particularly they who feel the pressure.

Case History: Continued

Shortly after her stay at the day care unit, Sarah Violet comes to the psychosomatic outpatient department. Her hospital discharge letter states that she suffers from an emotionally unstable personality disorder. She received citalopram and quetiapine as well as chlorprothixene to be taken as needed. Sarah looks to be in a better state—optimistic—but has discontinued her stay without follow-up care; Linda had tried to convey to her the importance of follow-up care.

Eighteen months later Sarah comes again to the gynecological outpatient department with shifting symptoms of gastric and pelvic pain and spotting. She is afraid of pregnancy because she forgot to take her oral contraceptive. It seems she has fallen back to her former eating behavior. Examinations are without pathological findings.

Sarah gained a lot of weight and is in a very bad state. She has not taken her medication regularly for several months. The exam turns out to be difficult, spanning the requested decrease of her stay and the unwanted implications such as being addiction prone and gaining weight. Her relationship is at the brink of breaking up. She is constantly quarrelling with her parents. It seems that her wish for another child is ambivalent. Linda discusses Sarah with the psychiatrist, and he decides to refer Sarah to a long-term stay in a psychiatric hospital with a specialization in eating disorders.

9.6 Specific Diagnostic Aspects

9.6.1 What Are the Diagnostic Key Questions?

Zerbe [1] offers the following key questions for initiating a talk with patients when an eating disorder is suspected:

- Has there been any change in your weight in the past 6–12 months?
- Do you ever feel out of control with respect to your eating?

- Do you ever use laxatives or diuretics or vomit in order to lose weight?
- Do friends/family members tell you that you overexercise or don't eat enough?
- Do you spend a lot of time worrying about your appearance or thinking you are fat?

Also the SCOFF questionnaire [33] may be used as a screening instrument. See Table 9.1. A result of ≥ 2 "yes" answers indicates a likely case of AN, BN, or BED [33]. The sensitivity of the screening tool is quite high.

9.6.2 Which Symptoms Have to Be Checked?

Table 9.4 gives an overview of the symptoms that have to be checked and need further examination.

9.6.3 Which Physical and Laboratory Examinations Should Be Made?

In Table 9.5, the most important examinations are given.

Table 9.4 Symptoms of eating disorders prompting further examination

Weight loss more than 10 % within a month
Pulse under 60/min
Frequent collapses
Amenorrhea longer than 6 months
Frequent vomiting, constipation, or diarrhea
Cardiac rhythm disorder
Permanent sleep disorder
Bad teeth
Bad physical condition

Table 9.5 Examinations carried out in eating disorders

Physical examinations	Laboratory examinations
Weight check	Na+, K+, Ca+, Cl+, Mg+, phosphate, Fe+; hemoglobin level, coagulation tests, cholesterol, serum protein, blood glucose, ALAT, ASAT, gGT, amylase, urea, creatinine, vitamins B6, B12
ECG because of higher risk of arrhythmia	Hormones: estrogen, LH, FSH, TSH, T3, T4, cortisol.
Vital parameters: temperature, pulse, blood pressure	
Pelvic ultrasound in order to look for polycystic ovary syndrome (PCOS)	
DEXA scan	
EEG	
Gastroscopy	
Dentist	

ECG electrocardiography, *DEXA* dual energy X-ray absorptiometry, *EEG* electroencephalography

9.7 Specific Therapeutic Aspects

9.7.1 Which Specific Therapeutic Aspects Need to Be Considered?

9.7.1.1 Interdisciplinary Collaboration

When an eating disorder is suspected, it is important to follow an interdisciplinary approach in an outpatient setting And to strive for inpatient daytime care.

The separation of medical and psychotherapeutic functions may facilitate the process and may particularly help to avoid being involved in the patient's psychodynamics, for example, when "alliances" between parents, teachers, partners, and therapists are formed or when the patient seems to lack compliance.

The exchange between the different partners must be handled very sensitively in order to not compromise the working alliance with the patient. The unmasking of eating disorders is usually linked with shame and embarrassment and may therefore result in the patient's opposition to or rejection of the therapy. The main principle is to speak with the patient and not about her. The first step is to detect what the patient agrees to, such as preventing the body from dehydration, etc. The working alliance will be revised regularly during the therapeutic process.

9.7.1.2 Need of Hospitalization

In Table 9.6, the symptoms that are considered to be a serious reason for hospitalization are given.

9.7.2 What Is Required for a Successful Outpatient Setting?

- It is important for the patient to know that she is suffering from an eating disorder and the severity of it. She should be informed about its health consequences.
- Get a general idea of the duration and severity of the disease. For this purpose, family members or partners may be consulted after consent of the patient.

Table 9.6 Symptoms that should be regarded as reason for hospitalization

Weight loss more than 30 % within 3 months
Severe disorders of endocrinological and cardiorespiratory system
Hypopotassemia below 2.5 mmol/l
Hyponatremia below 125 mmol/L
Pulse under 40 bpm or blood pressure under 70 mmHg systolic
Frequent vomiting, constipation, or diarrhea
Blood urea nitrogen (BUN) more than 30 %
Body temperature under 36 °C
Severe depression
Suicidality
Psychosis

- Treatment begins with a specialized nutritionist who will give information about metabolic processes and nutrients and a nutrition schedule.
- Treatment steps have to be transparent.
- Schedule regular appointments in order to monitor her physical functions and mood.
- Maybe the patient needs medical support. If there are signs of post-traumatic stress disorder, depression, anxiety or distress, there is an indication to see a psychiatrist.
- Family members are frequently also in need of support. Joining a self-help group or attending family therapy may provide help and relief. Recommend self-help books.

Case History: Continued

Two years later: Sarah Violet is now 28 years old and comes to the gynecological outpatient department several times because she is pregnant again after having tried to conceive for a rather long time. She comes to the psychosomatic outpatient department one more time. Sarah brings in a new partner and seems to be relatively stable. She has her own flat (apartment). She takes sertraline as medical treatment and occasionally undergoes psychiatric and psychotherapeutic treatment. Her 7-year-old son lives with his grandmother, her mother.

The appointment at the psychosomatic outpatient department is about the pending birth of Sarah's baby, her urgent wish for analgesia during labor and her increasing states of anxiety. For this reason, her psychiatrist prescribed her fluoxetine (an anxiolytic) instead of sertraline. Linda discusses a birth plan with her, including the possibilities of induction of labor and epidural analgesia with support of an experienced midwife.

A pediatrician will be on standby in case of adaption problems of the baby's respiratory system, which occur more often as a consequence of her medication.

Sarah does not know if she wants to start breastfeeding after delivery. Linda Cerise discusses this subject with her and leaves it open for after delivery. There is an increased risk of postpartum depression; breastfeeding could be an avoidable additional stressor. She now is better able to control her eating behavior and to verbally express her wishes without showing massive physical symptoms.

9.8 Critical Reflections and Conclusive Remarks

The prognosis of eating disorders depends on the stage of the disorder at diagnosis, the severity of the symptoms, and possible comorbidities. In cases of discontinued treatment and change of care providers, which sometimes cannot be prevented even if the patient transfer is a "hand-to-hand" process, the prognosis may be worse.

It is important that psychiatric hospitals that treat women with eating disorders pay sufficient attention to nutritional programs. Long-term hospital stays sometimes counter the development of patients' autonomy and create new dependencies.

Medication-based treatment (e.g., with tranquilizers) may be overlooked or underestimated as a new potential for abuse as soon as the patient is discharged or experiences a life event.

In a number of patients, treatment is not very successful.

Here we have to ask the question: What should be considered as a "success"? All-too-rigid ideas entertained by care providers might be counterproductive. Sometimes a "holding pattern to prevent worse development" is all that can be achieved.

In conclusion, obstetricians and gynecologists should be aware of eating disorders in their patients, since these disorders are prevalent among women. Additionally, eating disorders may cause gynecological and obstetrical disorders. Gynecologists may help to detect eating disorders early, which improves the prognosis because the sooner women are diagnosed and treated the better the prognosis!

Tips and Tricks

When healthcare workers in obstetrics and gynecology suspect an eating disorder, they may use the SCOFF questionnaire [34] as a useful screening instrument (Table 9.1). A result of 2 or more "yes" answers indicates a likely case of AN, BN, or BED [36].

When women are screened positive, this has to be taken seriously leading to adequate referral to specialists in the field.

Test Your Knowledge and Comprehension

1. One of the possible consequences of bulimia nervosa in pregnant women is hyperemesis gravidarum.
   (a) True
   (b) False
2. You should think of hospitalization of a woman with anorexia nervosa if she loses weight of more than 10 % within 3 months.
   (a) True
   (b) False
3. One complication in a woman with bulimia nervosa is dental problem.
   (a) True
   (b) False
4. A frequent comorbidity in women with eating disorders is substance abuse.
   (a) True
   (b) False

5. One of the risk factors that may lead to an eating disorder is the excessive preoccupation with feeding and saturation in the mother-baby interaction.
   (a) True
   (b) False
6. A known risk factor for bulimia is (2 correct answers):
   (a) A personal history of posttraumatic stress disorder
   (b) Sleeping disorder
   (c) Familial history of eating disorder
   (d) Schizoaffective disorder
7. The percentage of women with infertility problems suffering from bulimia is about (1 correct answer):
   (a) 1 %
   (b) 7 %
   (c) 25 %
   (d) Same as the average of fertile women
8. Which treatment regimen does not have clear evidence of efficacy for bulimia? (2 correct answers)
   (a) Psychotherapy only
   (b) Nutrition rehabilitation only
   (c) Pharmacotherapy only
   (d) Psychotherapy as well as nutrition rehabilitation
9. Proposed guidelines for pregnant women or patients trying to conceive with a body mass index (BMI) under 18 are (2 correct answers):
   (a) Laboratory check for electrolytes
   (b) History of mental health treatment
   (c) Hormonal therapy
   (d) In vitro fertilization
10. Warning signs that a women with amenorrhea may have an eating disorder include (1 correct answer):
    (a) Sickness
    (b) Constipation
    (c) Feels fat at a BMI less than 18.5 kg/m^2
    (d) Collapses

Answers

1. True
2. False
3. True
4. True
5. True
6. (a) and (c)

7. (b)
8. (a) and (b)
9. (a) and (b)
10. (c)

References

1. Telch CF, Stice E. Psychiatric comorbidity in women with binge eating disorder. Prevalence rates from a non-treatment-seeking sample. J Consult Clin Psychol. 1998;66(5):768–76.
2. Spitzer RL, Kroenke K, Linzer M, deGruy F, Hahn SR, Brody D, Davies M. Health-related quality of life in primary care patients with mental disorders: results from the PRIME-MD 1000 Study. J Am Med Assoc. 1996;274:1511–7.
3. Smink FRE, Hoeken D, Hoek HW. Epidemiology of eating disorders: incidence, prevalence and mortality rates. Curr Psychiatry Rep. 2012;14:406–14.
4. American Psychiatric Association Workgroup on Eating Disorder. Practice guideline for the treatment of patients with eating disorders (revision). Am J Psychiatry. 2006;163:1–39.
5. Hudson JI, Hiripi E, Pope Jr HG, Kessler RC. The prevalence and correlates of eating disorders in the National Comorbidity Survey Replication. Biol Psychiatry. 2007;61(3):348.
6. Kessler RC, Berglund PA, Chiu WT, Deitz AC, Hudson JI, Shahly V, Aguilar-Gaxiola S, Alonso J, Angermeyer MC, Benjet C, Bruffaerts R, de Girolamo G, de Graaf R, Maria Haro J, Kovess-Masfety V, O'Neill S, Posada-Villa J, Sasu C, Scott K, Viana MC, Xavier M. The prevalence and correlates of binge eating disorder in the World Health Organization World Mental Health Surveys. Biol Psychiatry. 2013;73(9):904.
7. Anderson A, Ryan G. Eating disorders in the obstetric and gynecological patient population. Obstet Gynecol. 2009;114:1353–67. Cited by Fornari V, Dancyger I, Renz J, Skolnick R, Rochelson B. Eating disorders and pregnancy: proposed treatment guidelines for obstetricians and gynecologist. Open J Obstet Gynecol. 2014;4:90–4.
8. Becker AE, Burwell RA, Herzog DB, Hamburg P, Gilman SE. Eating behaviours and attitudes following prolonged exposure to television among ethnic Fijian adolescent girls. Br J Psych. 2002;180:480–2.
9. Orbach S. Bodies. London: Profile Books Ltd; 2009.
10. Grabe S, Hyde LM, Ward JS. The role of media in body image concerns among women: a meta-analysis of experimental and correlation studies. Psychol Bull. 2008;134(3):460–6.
11. Barlett CP, Vowels CL, Saucier DA. Meta-analysis of the effects of media images on men's body image concerns. J Soc Clin Psychol. 2008;27(3):279–310.
12. Lapid MI, Prom MC, Burton MC, McAlpine DE, Sutor B, Rummans TA. Eating disorders in the elderly. Int Psychogeriatr. 2010;22(4):523–36.
13. Mangweth-Matzek B, Hoek HW, Rupp CI, Lackner-Seifert K, Frey N, Whitworth AB, Pope HG, Kinzl J. Prevalence of eating disorder in middle-aged women. In J Eat Disord. 2014;47(3):320–4.
14. Zerbe KJ. Eating disorders in middle and later life. A neglected problem. Prim Psych. 2003;10(6):80–2.
15. Forman ME, Davies WN. Characteristics of middle-aged women in inpatient treatment of eating disorders. Eat Disord. 2005;13(3):231–43. Cited by Zerbe KJ. Eating disorders in the 21st century: Identification, management, and prevention in obstetrics and gynecology. Best Pract Res Clin Obstet Gynaecol. 2007;21(2):331–43.
16. Lemberg R, Phillips J. The impact of pregnancy on anorexia nervosa and bulimia. Int J Eat Disord. 1989;8(3):285–95.
17. Crow SJ, Agras WS, Crosby R, Halmi K, Mitchell JE. Eating disorder symptoms in pregnancy: a prospective study. Int J Eat Disord. 2008;41(3):277–9.

18. Fornari V, Dancyger I, Renz J, Skolnick R, Rochelson B. Eating disorders and pregnancy: proposed treatment guidelines for obstetricians and gynecologist. Open J Obstet Gynecol. 2014;4:90–4.
19. Micali N, Simonoff E, Treasure J. Risk of major adverse perinatal outcomes in women with eating disorders. BJP. 2007;190:255–9.
20. Micali N. Eating disorders and pregnancy. Psychiatry. 2008;7(4):191–3.
21. Easter A, Treasure J, Micali N. Fertility and prenatal attitudes towards pregnancy in women with eating disorders: results from the Avon Longitudinal Study of Parents and Children. BJOG: Int J Obstet Gynaecol. 2011;118(12):1491–8.
22. Stewart DE, Robinson E, Goldbloom DS, Wright C. Infertility and eating disorders. AM J Obstet Gynecol. 1990;163:1196–99. doi:10.1016/0002-9378(90)90688-4. Cited by Micali N. Eating disorders and pregnancy. Psychiatry. 2008;7(4):191–3.
23. Cooper PJ, Whelan E, Woolgar M, Morrell ML. Association between childhood feeding problems and maternal eating disorders: the role of the family environment. BR J Psych. 2004;184:210–5.
24. Kouba S, Hällström T, Lindholm C, Hirschberg AL. Pregnancy and neonatal outcomes in women with eating disorders. Obstet Gynecol. 2005;105:255–60.
25. Little L, Lowkes E. Critical Issues in the care of pregnant women with eating disorders and the impact on their children. J Midwifery Wom Health. 2000;45:301–7.
26. Zerbe KJ. Eating disorders in the 21st century: identification, management, and prevention in obstetrics and gynecology. Best Pract Res Clin Obstet Gynaecol. 2007;21(2):331–43.
27. Wonderlich S, Crosby R, Mitchell J, Thompson K, Redlin J, Demuth G, Smyth J, Haseltine B. Eating disturbance and sexual trauma in childhood and adulthood. Int J Eat Disord. 2001;30(4):401–12.
28. Mischoulon D, Eddy K, Keshaviah A, Dinescu D, Ross S, Kass A, Franko D, Herzog D. Depression and eating disorders: treatment and course. J Affect Disord. 2011;130(3):470–7.
29. Liechty JM, Lee MJ. Longitudinal predictors of dieting and disordered eating among young adults in the U.S. Int J Eat Disord. 2013;46(8):790–800.
30. Wimmer-Puchinger B, Langer M, Rathner E-M. Körperbild. Selbstwert und Essstörungen bei Wiener Jugendlichen: Unpublished Study; 2013.
31. Rohde P, Stice E, Marti N. Development and predictive effects of eating disorder risk factors during adolescence: implications for prevention efforts. Int J Eat Disord. 2015;48(2):187–98.
32. Gordan RA. Eating disorders: anatomy of a social epidemic. 2nd ed. Oxford: Blackwell; 2000.
33. Morgan JF, Reid F, Lacey HJ. The SCOFF questionnaire: assessment of a new screening tool for eating disorders. BMJ 1999;319:1467–68. Cited in Zerbe KJ. Eating disorders in the 21st century: Identification, management, and prevention in obstetrics and gynecology. Best Pract Res Clin Obstet Gynaecol 2007;21(2):331–43.