THE MASK OF ORTHOREXIA – TWO CASES FROM MEDICAL PRACTICE

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ABSTRACT

Introduction: *Eating disorders (EDs) are common, often chronic, and potentially life-threatening conditions affecting predominantly adolescents and young people. An especially common problem in the latest years is orthorexia nervosa (ON). Often the symptoms of ON are well disguised and the condition is not included in the differential diagnosis of most medical professionals.*

Materials and Methods: *Two case studies are presented from the practice of a medical specialist in nutrition and dietetics: women with ON. Both patients received nutritional training and specific nutritional instructions. The motivation to change their dietary habits and create new ones was maintained through regular communication with the physician, and in some cases - through regular meetings with a clinical psychologist. Both women were encouraged to participate in group psychotherapy sessions under the guidance of a clinical psychologist.*

Interpretation: *These clinical cases demonstrate that when diagnosing ON there are not always large deviations in the clinical and laboratory indicators. Only the careful recording of the anamnesis and the in-depth conversation with the patient allows the correct diagnosis to be made. Insufficient awareness among medical staff (including doctors and nurses) about symptoms and diagnosis of eating disorders requires further training on this issue.*

Keywords*: orthorexia nervosa, eating disorders, diagnosis, treatment*

INTRODUCTION

Eating disorders (EDs) are common, often chronic, and potentially life-threatening conditions affecting predominantly young people and adolescents. In recent decades, their prevalence keeps increasing. The incidence of EDs in adolescence and young age is particularly high. When discussing eating disorders, the image of an anorexic usually comes to mind. However, in recent years, orthorexia has come to the fore in girls and young women. Often this disease is well masked and considered less often by medical professionals. Thus, it remains undiagnosed for a long time despite the obvious signs for the specialist. Family support and understanding are essential for a favorable outcome of the disease.

The term "orthorexia" was first used by the American physician, Dr. S. Bratman, in a scientific article in 1997 (1). The name comes from the Greek language: ορθο (ortho) – correct and ρρεξις (-orexis) - appetite. With this term, Bratman tries to explain the strange behavior of some of his patients, characterized by pathological fixation in healthy eating. In 2000 he suggests this new eating disorder should be called orthorexia nervosa (ON) (2). In essence, orthorexia is an unusually strong interest in and pursuit of healthy eating, which is leading to stereotypical behavior (obsession) (3). The focus in ON has shifted to the quality of food consumed, unlike in bulimia nervosa and anorexia nervosa, where the focus is on the amount of food consumed (4, 5). Patients with ON spend most of their time looking for healthy products and preparing them with culinary technology that they consider the healthiest. They avoid eating out and going to restaurants. They are very interested in the composition of foods, read popular and pseudoscientific information about the benefits and harms of different food groups, and gradually reduce the range of "healthy" products to only several groups. They often exclude gluten-containing foods from their menu (bread, pasta, especially made with yeast), dairy foods (due to the content of casein, lactose and possible risk of antibiotics and hormones), meat and fish (potentially contaminated with toxins

and antibiotics), nuts (contain allergens, and possibly mycotoxins), etc. Patients also experience guilt and/or anxiety when eating junk food. ON is an eating disorder that can cause both psycho-emotional and somatic problems in the individual. To date, the diagnostic criteria for ON are still debatable (6), but the most important are: an obsession with a diet which they associate with optimal health effects (including self-imposed food restrictions, education and regular activities related to the preparation of food, etc.); ON with significant duration leads to the development of somatic injuries (e.g. disorders in important areas of functioning) (7, 8). A high percentage of people with ON these days are focused on weight loss. EDs are more common among females, Caucasians, young individuals, incl. these in puberty and at prepubertal age and among the higher socio-economic strata, in intelligent, educated individuals. The majority of patients with EDs are ambitious, disciplined and self-critical, striving for perfectionism in every field (9, 10).

MATERIALS AND METHODS

Clinical Case I: B. S., 17 y.o.

The medical appointment was made by the child's mother. She stated on the phone that "they are healthy, but her daughter insisted on consultation because she wanted to gain weight." When asked if she eats well, the mother answered that her child eats "a lot, even more than normal." The mother was instructed to make a food diary for the next 4-5 days.

B. S. said that she eats healthy, often, and consumes a lot of food, but cannot gain weight. B. shared that at school she was often called "anorexic" which upset her because she was not. Furthermore, she did not like the way she looked. She had no complaints except that her arms and legs always felt cold. B. studied at an elite high school and was an excellent student. According to her, only one boy in the class was "better" than her in German language classes. The questions about her menstrual cycle were answered by her mother. She reported that her daughter's first menstruation occurred at the age of 13 years and 7 months, in 7th grade. There were 3-4 regular cycles, after which secondary amenorrhea occurred and by the time of our first consultation the menstruation had not returned (missing for almost 3 years). When she had her first menstruation cycle, B.'s weight was about 47-48 kg. Then she started preparing for exams in order to apply for high school which has been a stressful period and she lost a few kilograms. In the last 2-3 years, her weight varied between 40-43 kg while simultaneously she grew in height by about 7 cm. Due to the amenorrhea, the family consulted with a specialist twice. They were recommended hormonal drugs, which the mother refused. Once again due to the secondary amenorrhea, B. was hospitalized in a pediatric clinic for diagnostic evaluation 14 months prior. She was discharged with a diagnosis of ovarian dysfunction (hypoprogesteronemia). Recommendations for monitoring were given, and in the case of an absence of spontaneous menstruation for the following 3 months, it was proposed to start medical treatment. No recommendations were made for the child's nutrition during the hospital stay or in the discharge summary, although the BMI was 14.8 kg/m^2. Until the beginning of 8th grade, B. ate at libitum, without being picky about her food. According to her, she ate at school, incl. fast food - hamburgers, pizzas, French fries. In the new school, however, she realized that food was very important and she should consume healthy products only. She started eating a lot more fruits and vegetables, which made her feel good.

The physical examination and review of systems revealed very thin bone structure, elongated limbs and fragile physique (Marfanoid habitus). The skin on the body was pale, dry, and squamous in places. The skin turgor was preserved and subcutaneous adipose tissue was greatly reduced, especially on the abdominal wall. There was lanugo on the shoulders, forearms, back and ad sacrum. On the palms and soles was observed pronounced cyanosis. Toenails were suspected of onychomycosis. The hair was thin, soft, sparse, the scalp showed through in places. There were no pathological findings in the respiratory, cardiovascular, and other systems. B. weighed 40.2 kg at a height of 168 cm. Of particular concern was the amount of body fat measured by the method of bioelectrical impedance analysis (Tanita BC - 420MA) - only 3.2% (this corresponds to 1.3 kg of body fat) while the norm for her age is 16-29.9%. BMI was 14.2 kg/m^2. Laboratory tests revealed some abnormalities: low creatinine (32 μmol/L), severe vitamin D deficiency (25-OH vitamin D - 6 ng/mL) and low progesterone (0.64 nmol/L at a normal range of 3-68 nmol/L)

The nutritional anamnesis revealed that B. ate only food prepared at home. At school, she ate what she took from home. She was eating and chewing slowly. Furthermore, she avoided adding fat to salads and dishes and only seldom added 1 tsp. of peanut butter or chopped nuts. She reports keen interest in cooking and trying "healthy" recipes (mostly from raw products - peanut butter, cashews, honey, fruits or vegetables, etc.). B.'s food diary shows the following:

Day 1	7.00 a.m. (before school) Oatmeal 50 g (raw, soaked in water) + soy protein (1 scoop) + 1 tbsp. natural cocoa powder + 1 tsp. peanut butter + 1 tbsp. honey, cinnamon, a few blueberries 10.30 a.m. (school lunch break) Apple, orange Sandwich (2 slices of wholegrain bread - about 40 g) with a slice of ham and lettuce, tomatoes, peppers 3.30 p.m. (at home) Vegetable soup (broccoli, carrots, pumpkin) Salad of tomatoes, lettuce, onions, spinach, peppers, 2 tbsp. boiled quinoa. Mustard and lemon dressing 5.30 p.m. (at home) An apple with 1 tsp. peanut butter 8.30 p.m. (at home) Lettuce salad, spinach, garlic, radishes Lamb with spinach
Day 2	7.00 a.m. (before school) Oatmeal 50 g (raw, soaked in water) + soy protein (1 scoop) + 1 tbsp. natural cocoa powder + 1 tsp. peanut butter + 1 tbsp. honey, cinnamon, a few blueberries 10.30 a.m. (school lunch break) Apple, orange Sandwich (2 slices of brown bread with seeds - about 40 g) with a slice of ham and lettuce, tomatoes, peppers 3.30 p.m. (at home) Risotto with peppers Salad with tomatoes, lettuce, onions, spinach, peppers, soy sauce 5.30 p.m. (at home) Kiwi with 1 tsp. peanut butter 8.30 p.m. (at home) Salad with red cabbage and carrots Casserole with potatoes and broccoli
Day 3	7.00 a.m. (before school) Oatmeal 50 g (raw, soaked in water) + soy protein (1 scoop) + 1 tbsp. natural cocoa powder + 1 tsp. peanut butter + 1 tbsp. honey, cinnamon, a few blueberries 10.30 a.m. (school lunch-break) Apple, orange Plain yogurt 3.30 p.m. (at home) Pea soup Salad with spinach, lettuce, tomatoes, cucumbers A piece of raw cake (with cashew, dates, raw pumpkin) 7.30 p.m. (at home) Kiwi 2 rice cakes, spread with peanut butter and sprinkled with cocoa 9.30 p.m. (at home) Lettuce salad, spinach, garlic, radishes Pea soup + a slice of brown bread with seeds

The analysis of the food diary shows that close to ¾ of the food that B. ate was raw. Both the mother and the girl shared the opinion that this is healthy. It was explained to B. that she does not get enough calories and that's why she could not gain weight. The daughter stated that she believed her diet was great, and now she was upset as it turned out that she was wrong. Eventually, she agreed to try and eat in a way that would help her. After specific dietary recommendations and the inclusion of digestive enzymes and supplements with fat-soluble vitamins, the condition of B. changed rapidly. For the first few weeks, she sought advice by e-mail or telephone multiple times. Within a month, she gained 3 kg. At 3 months she reached 48 kg and her menstrual cycle was re-

stored. In her case, there was no need to consult a psychiatrist.

Clinical Case II: R. P., 37 y.o.

R. was a 37-year-old woman. Her strong interest in food appeared in adolescence. During her childhood, she suffered from severe constipation and when she grew up, she learned that her problem could be solved with dietary changes. She found that eating more vegetables, vegetable soups, and whole grains alleviated her symptoms. She graduated from high school with honors and began studying at a university. To support herself she worked as a model. After graduation, she lived and worked in the United States for several years. She shared that this was quite a difficult period of her life and this was when she had the most serious problems with her nutrition. She was "obsessed" and tried to eat "clean", "because Americans only eat junk" according to her. This is the period in which R. had the lowest body weight (about 52 kg at a height of 175 cm, BMI = 17 kg/m^2). After a few years, she started working as a flight attendant, but the dining options onboard the plane „did not meet her body's needs" and she changed her job again. In the meantime, she married, became pregnant and had a child. For the whole pregnancy, she gained only 4 kg and reached 58 kg at a height of 175 cm (BMI before pregnancy = 17.6 kg/m^2).

She shared that she had planned on giving birth naturally but in the course of the birth-giving there have been complications and emergency indications for a Cesarean section. R. stated that she found this outcome difficult to accept and perceived it as a betrayal of her own body. After the birth, she had fallen into a severe depression for 6-7 months but persistently breastfed her child up to 2 years and 7 months. Her weight had dropped to 50 kg. The child was not vaccinated according to the mandatory immunization calendar. It fed according to her understanding of healthy eating and did not consume many different food groups (dairy, gluten, added sugar in any form, chocolate, packaged foods, white rice, etc.). About 5-6 years after giving birth, she was diagnosed with Hashimoto's thyroiditis. She refused to take medication and treated herself only with cleansing procedures (enemas with coffee and saltwater, compresses of the liver with castor oil and essential oils, foot baths with special mixtures, etc.), EFT (emotional freedom technique using self-suggestion + tapping at certain points on the body) and diet. She refused to monitor her antibodies and thyroid hormone levels in order "not to traumatize herself." She decided to beat the disease by changing her diet. She has gone through several very restrictive diets (detoxes): starvation with water and fruit; "dry" fasting without water; drinking only juices; consuming raw food; dairy- and gluten-free diet (although they are her favorite foods).

Meanwhile, the control (so far exercised mainly on nutrition) has covered other areas of functioning in R. She has not allowed the child to attend kindergarten (because of food and watching TV) and does not allow watching TV and standing in front of a screen. At the age of 7, she enrolled the child in a private school, where it ate meals prepared at home. R. stated that for every invitation to a children's holiday with candy and treats she got angry, scolded her child for eating forbidden foods and often fell into reactive depression afterward. She was afraid that her daughter was "extremely insatiable, but already had a big belly and cellulite" and therefore restricted her. When the child was hungry between main meals, it was offered raw nuts or home-made dried fruits or vegetable chips (beets, sweet potatoes, carrots).

R. shared that at home they ate mainly organic food (they were members of a public cooperative for easier supply) and they did not use plastic containers, cutlery and disposable packaging. She was extremely critical of the cosmetics and household chemicals she used: she did not dye her hair (which has turned white), she has taken courses in aromatherapy and the production of home-made natural cosmetics; washed only with a special "Eco Egg", whitened clothes with citric acid, etc. When someone in the family fell ill, conventional medicines were not used, but various alternatives: Schussler's salts, Bach drops, essential oils, EFT, non-violent communication, Reiki, Yumeiho therapy, and other energy methods.

The reason for her consultation was an attempt to solve her reproductive problems with an alternative method - nutrition. For the last 6-7 years, she wanted to have another child, but she could not get pregnant. She refused the recommended procedures and medications (including assisted reproduction methods), wanted "everything to happen naturally" and has therefore decided that changing her diet and taking supplements would help. She reported that she has had low hemoglobin and low iron levels in her blood for years. Her menstrual cycle was very heavy, with hemorrhages and lasted about 7-8 days. She did not use the usual hygienic materials, but a reusable menstrual cup.

From the physical exams and review of systems, her visible age was corresponding to her calendar age. Subcutaneous fat tissue was severely reduced. The body was thin and almost without any typical curves. The skin was pale, yellowish, dry, the limbs were cold. The woman was feeling very cold, wearing several layers of clothes. She shared that she

had no self-confidence and she did not feel beautiful and feminine anymore. She did not like her body, she wanted to be slimmer, to have no cellulite and to have a tight stomach. In reality, there was no belly, nor cellulite.

R. was referred to a clinical psychologist for behavioral therapy. Our meetings with her continue. Currently, she is a little happier and adopts a peaceful transition out of the "limits of healthy eating." Her weight is still very low and she has not yet been able to conceive.

INTERPRETATION

The two cases of eating disorders presented are typical in recent years. These young women, as well as many others, prove that when diagnosing eating disorders there are not always large deviations in clinical and laboratory parameters and only careful taking of nutritional history and in-depth, empathetic conversation with the patient allows for the correct diagnosis to be made. Diagnosis requires screening for underlying endocrine, gynecological and other diseases. The long-term success of the therapy requires a complex approach by a team of collaborating specialists - family doctor, a specialist in nutrition and dietetics, a psychologist, and a psychiatrist. The nature of eating disorders necessitates long-term follow-up and communication with the patient. The supporting role of family and close friends is also of great importance. Insufficient awareness of eating disorders among medical staff (including doctors and nurses) highlights the need for additional training on this common problem.

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