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Department of Clinical Dietetics and Health Sciences, Medical University of Lublin

JANUSZ BIELAK, ELŻBIETA ZARĘBA, RENATA KRZYSZYCHA

The influence of obesity on human health

In 1997 the World Health Organization published a report on treatment of obesity as a social disease. The importance of this problem was also stressed in the Milano Declaration during the 9th European Obesity Congress in 1999, appealing to the governments of European countries to draw up and implement their own strategies of fighting obesity. The World Health Organization data indicate a specific "epidemic" of obesity in the highly-developed countries.

Due to the range of the problem, analysis of a case was carried out, whose aim was to examine the level of knowledge of an obese person about obesity, its influence on the organism and every-day life. The history was taken after the third stay of the obese person in hospital.

CASE REPORT

In 1995, a 31-year-old woman, Ann P., a nurse by profession, was admitted to the admission room of the Military Hospital in Lublin. The patient complained of a pain in the right hypogastrium, which appeared two hours after a meal. The patient vomited repeatedly with gastric contents. In the physical examination the muscle guarding of the right hypochondriac region was found. The patient's breathing was shallow, quickened, the pulse 92 bits per hour, RR 140/80 mm/Hg, the body temperature 38.2°C. The sharpening of face features and pallor of skin integuments was observed. An acute cholecystitis was diagnosed. Due to the patient's obesity, she was operated on in a routine way. On discharge a 6-month, low animal fat and simple sugars diet was recommended, as well as the reduction of body weight (patient's body weight 85 kg, height 168cm, BMI = 30.1 kg/m$_c$ – norm 20.0–24.9 kg/m$_c$). Due to high arterial blood pressure the patient was recommended to measure the pressure level twice a day and take Enarenal.

In 1997 on her check-up, Ann P. found out that she suffered from diabetes type II and she was again sent to hospital, this time to The University Hospital nr 4 in Lublin. The patient was recommended to take oral hypoglycemic agents: Phernformin and Diabetol twice a day. On discharge, low-caloric and low-fat and simple sugar meals were ordered, and the patient was recommended to include within a diet cereal coarse products as well as vegetables and fruits rich in cellulose. The patient was again recommended to reduce body weight, which increased (body weight 92kg, BMI=32.6) and to check the blood sugar level before every meal.

In 2003 Ann P. was admitted to the Intensive Cardiological Care Unit of the University Hospital number 4. She felt palpitations, dyspnoea and dizziness. The physical examination revealed well-detectable, irregular pulse (151 beats per minute), and pulse deficiency. In the ECG the absence of P wave was found, whereas atrium stimulation was observed in the form of small, irregular waves of an altered shape. QRS complexes and T waves occurred irregularly. After coronarographic examination the diagnosis was: ischemic heart disease, arterial hypertension, atrial fibrillation. A detailed history

revealed that the patient's obesity appeared during her 5th year of studies. According to the patient, it was triggered by her sedentary lifestyle and stress connected with master's defence, for which she compensated by consuming high amounts of food containing simple sugars. The patient attempted to lose excessive kilos; however, due to the lack of strong will she stopped dieting and exercising. In Ann P.«s closest surrounding her mother suffered from gluteal obesity – BMI=37.5. During the periods between hospital stays Ann P. experienced high fluctuations of body weight; the jojo effect occurred. Application of a slimming diet caused the fall of body weight up to 11 kg; however, the lack of motivation and support (from her husband's part as she thought), resulted in her coming back to her previous lifestyle. Ann P. controlled her body weight unsystematically, and put on 15 kg. During the history taking, the patient confirmed that she was aware that her bad, even reprehensible lifestyle contributed to her present health condition. The neglect in the diet's application as well as low physical activity resulted in weight gain. The woman admitted that she was aware of the negative impact of obesity on her organs and locomotor system. She drew the knowledge on this subject reading medical literature and talking with doctors. After some time, the patient noticed that during the evenings there appeared and intensified, especially at rest, the pains of lower limbs. Frequently, the pain in the lumbar spine occurred, which made it difficult to carry out everyday life activities. During the evenings there also appeared ankle swellings, which forced the patient to lift the limbs above the heart level while lying. The platypodia developed and the woman started to wear moulded insoles. Moreover, the patient started to suffer from the II° effort dyspnoea, was frequently forced to rest, and during spring and summer spells of high temperature she felt extremely bad. The patient admitted that on account of work specificity (duties at hospital), despite the diagnosed diabetics type II, she consumed the meals irregularly, at 6-hour-intervals, in a hurry. Her diet was deficient in fresh vegetables, fruits, brown bread, groats and low-fat dairy products. She fried and baked using a lot of fat, to care for her husband»s tastes, as she claimed. Ann P. also admitted that she frequently snacked between the meals, sweets especially, and that she usually ate her last meal 1 hour before sleep.

DISCUSSION

The work presented a case of simple obesity in a young, educated woman, whose bad eating habits, wrong lifestyle and lack of motivation to fight obesity led to cardiovascular complications, hypertension and diabetes before 40.

The analysis of the case revealed a family tendency to obesity probably connected with the wrong dieting and sedentary lifestyle. The overweight appeared in the patient already in early youth and was a result of excessive eating , simple sugars in particular, and reluctance to physical activity. The first symptom of malnutrition was gall bladder inflammation and hypertension, which often accompany obesity. Numerous studies demonstrated that the risk of gall bladder pathology increased with age and body weight which was the most important factor. The frequency of cholecystolithiasis in obese people can be explained with excessive production and secretion of cholesterol to bile, which becomes saturated with it (3). Obesity also leads to cardiovascular disorders. The increased blood volume causes left-ventricular hypertrophy and arterial hypertension (1). Along with the increase in body weight thrombotic-embolic changes develop, which lead to cerebral stroke, myocardial infarction, or crural varices (2).

Despite the operation and dietary recommendations the woman returned to her previous dietary habits. The patient did not check her blood pressure and body weight systematically, and as a result, put on 15 kg. She also returned to the habit of smoking. In 1997 the patient was diagnosed with diabetes type II. According to numerous studies, overweight and obesity are associated with increased mortality because of cardiovascular system diseases and diabetes (2). In the obese patients, a decreased

number of insulin receptors in the cell membrane is found. The tissues are resistant to insulin, impaired glucose tolerance occurs, which in consequence leads to diabetes type II (1). Moreover, the studies demonstrated that, as in the analyzed case, obesity can lead to impaired breathing mechanics. It is most visible in Pickwick syndrome and sleep apnoea syndrome (4). Moreover, as a consequence of chronic osteoarticular system overloading the obese may develop inflammation of bones and joints, spine and lower limbs degenerative changes and platypodia (2), which was confirmed by the history results.

The diagnosed diseases did not motivate the patient to appropriate self-control. She consumed the meals irregularly, did not watch her diet, started to lead an unhealthy lifestyle again, did not avoid harmful substances. As a result, already at the age of 39 she was admitted to the Intensive Cardiological Care Unit with cardiovascular complications (coronary heart disease, atrial fibrillation, arterial hypertension). Her eight-year history contains information about short-lived attempts to fight obesity. However, lack of strong will and motivation, greediness and bad dietary habits, family and professional duties, as well as concomitant stress led to serious complications, despite the knowledge about obesity that the young woman possessed.

CONCLUSION

1. Simple obesity has an unfavorable impact on the general health state.
2. Obesity complications are likely to be: early occurrence of arterial hypertension, diabetes type II, coronary heart disease and cholepathy.
3. The fundamental role in fighting obesity should be played by motivation based on conscious care of health.

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SUMMARY

The paper is a case study of an obese patient. On the basis of the history the authors presented the basic causes of simple obesity, which led to digestive disorders, cardiovascular complications, arterial hypertension and diabetes before 40 years of age.

Wpływ otyłości na zdrowie człowieka

Praca stanowi studium przypadku osoby otyłej. Na podstawie wywiadu przedstawiono podstawowe przyczyny zaistnienia otyłości prostej, która doprowadziła młodą kobietę do zaburzeń ze strony przewodu pokarmowego, powikłań naczyniowo-sercowych, nadciśnienia tętniczego i cukrzycy przed czterdziestym rokiem życia.