

Polish recommendations for bariatric surgery

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Overweight and obesity nowadays are growing at epidemic rates. Surely enough, this concerns our country as well. Studies performed in Poland on a group representative for the whole nation have shown that body mass index (BMI) exceeding 40 kg/m² can be found in approximately 1% of adults. This translates into a population of 300 thousand people [1]. A study performed in adults older than 30 years has shown 1.9% of the population to have BMI > 40 kg/m² [2]. In selected rural populations this number increases to 2.8% and in cities up to 3% [3, 4]. Obesity promotes many accompanying diseases. Studies performed in Poland have shown metabolic syndrome to be present in 53.3% of patients qualified for surgical treatment of morbid obesity [5]. The same studies indicate that metabolic syndrome can be found in 79.5% of patients with BMI > 50 kg/m²!

Due to the ineffectiveness of conservative treatment of morbid obesity, efforts to treat it surgically were undertaken in the 1950s. Contemporary surgical technique allows for reduction of body weight due to induction of changes within the digestive tract, which enforce limitation of food intake or restrict the capability to digest and absorb ingested nutrients. The influence of induced GI tract changes on the brain-gut hormonal axis, which regulates nutrition and metabolism of the body, is increasingly stressed. As a consequence, the bariatric surgeon performs endocrine procedures, and only limitations of contemporary medical knowledge on these regulatory mechanisms downgrade the procedure to strictly anatomical alteration, which

influences solely the amount of ingested food and its absorption from the GI tract.

Progress in the last few decades has resulted in precise indications for this application of this method of obesity treatment. The first analysis was done in 1978, but it was the one from 1991 which played a crucial, groundbreaking role and gave a rationale for patient qualification in the following years [6]. Body mass index > 40 kg/m² (stage 3 obesity) or > 35 kg/m² (stage 2 obesity) with obesity-related co-morbidities were then considered indications for surgical treatment of obesity. This consensus assumed that in a patient seeking help for morbid obesity for the first time, conservative treatment with dietary restrictions, exercise and changes in lifestyle should be tried in the beginning. Surgery could be considered in well-informed and motivated patients. Qualification ought to be performed by a multi-disciplinary team consisting of a surgeon, internist, psychiatrist and dietician. The majority of these principles remain valid today.

The increase in the number of obese people observed in recent decades, development of knowledge on the consequences of obesity and progress in laparoscopic operative technique have led to a dramatic increase in the number of performed bariatric procedures. Laparoscopy has also forced the introduction of new tools and equipment, which have added to further progress in safety of treatment [7]. Laparoscopy, as a minimally invasive technique, has brought about better acceptance of surgical intervention among patients. Perioperative safety

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of treated patients was also improved with prophylaxis of thrombosis, although further studies of this issue to establish therapeutic standards are needed in this group of patients [8].

Subsequent clinical trials became a source of knowledge on surgical treatment of obese children and adolescents, elderly people or patients with BMI < 35 kg/m². They also laid the foundation for another consensus conference, which was held in 2004 under the aegis of the American Society for Bariatric Surgery (ASBS) [9]. In a summary of the conference the following statements were made:

- bariatric surgery is now considered the most effective method of treatment for morbid obesity and causes amelioration or decline of obesity-associated pathologies,
- among recommended methods of surgical treatment are: vertical banded gastroplasty, adjustable gastric banding, gastric bypass and biliopancreatic diversion (what about sleeve gastrectomy?),
- classic and laparoscopic techniques were found equally justified (4 years have passed: did anything change in favour of laparoscopy?),
- patients no longer need to try formal conservative treatment prior to qualification for surgical treatment,
- extensive laboratory and visual studies ought to be performed prior to qualification for surgery; no specialized (cardiological, psychiatric, psychological, etc.) work-up is needed routinely, yet it should be performed whenever necessary,
- surgical treatment of morbid obesity in children should be done solely in specialized centres,
- there is evidence to consider surgical treatment of patients with class I obesity (BMI 30-34.9 kg/m²) and obesity-associated pathologies when body weight reduction brings about their amelioration or resolution,
- the cost of surgery is balanced by diminished drug dosage due to resolution of obesity-related pathologies before the end of the 4th year after surgery,
- bariatric surgery creates opportunities for studying food ingestion regulatory mechanisms, pathophysiology of obesity and other metabolic disturbances.

There are no clearly defined recommendations for application of each operative technique. It is not known which groups of patients would gain the greatest benefit from particular procedures.

The dynamic increase in the number of obese people in Europe and differences between US and European societies caused the European Association for Endoscopic Surgery (EAES) to organize a consensus conference. Recommendations resulting from this conference were published in 2005 in *Surgical Endoscopy* and formed a basis for qualification and surgical treatment of obesity in European countries [10]. Widely discussed also in Polish literature [11], the recommendations can be briefly summarized as follows:

- surgical treatment of obesity should be considered in adults with BMI > 40 or > 35 kg/m² when obesity-related pathology is present,
- the patient should be prepared for surgery by a multi-specialty team,
- pre-operative patient work-up should be supplemented with spirometry, abdominal ultrasound and endoscopy (or upper GI tract radiography),
- other additional studies and consultations (for instance: psychological evaluation, polysomnography) are done when appropriate indications are found,
- recognized operative methods are: adjustable gastric banding, vertical banded gastroplasty, gastric bypass and biliopancreatic diversion,
- it was stressed that these methods give different results and possible complications and treatment options should be chosen individually,
- laparoscopic access is believed to be more beneficial in gastric banding, gastric bypass and biliopancreatic diversion,
- routine use of thrombosis and antibiotic prophylaxis was underlined,
- a schedule of post-operative follow-up was described: control visits should occur 3-8 times during the first year, 1-4 times in the second year, and once or twice in subsequent years,
- assessment of treatment results should contain not only body weight loss and nutritional status, but also influence on accompanying pathologies and quality of life.

Dynamic progress in knowledge of bariatric surgery led to another European publication in the journal *Obesity Surgery* in 2007 [12]. These recommendations were translated into Polish and published in this issue of the journal *Videosurgery and other miniinvasive techniques*. In comparison to the prior edition this one was not prepared solely by surgeons, but by a multi-specialty team of experts

according to the principles of evidence-based medicine. Taking this into account, the Board of the Polish Metabolic and Bariatric Surgery Society of the Association of Polish Surgeons recommends this statement as guidelines for surgical treatment of obesity valid also in our country. They supplement the aforementioned earlier recommendations with some important aspects:

- when indications for surgery are assessed, the patient's highest ever achieved body weight should be considered,
- reduction of body weight accomplished with conservative treatment is not a contraindication for surgical treatment of morbid obesity,
- the situation in which a patient with morbid obesity achieved significant body weight reduction with conservative treatment, yet his body mass starts to increase again, is another indication for surgical treatment of obesity,
- surgical treatment of obesity in children and adolescents is justified, but particular qualification and treatment rules must be strictly followed,
- an individual approach to patients aged over 60 was recommended; it was underlined that a goal of surgery in this age group is to improve quality of life and potential elongation of life expectancy is less significant.

As stated, formulation of these guidelines was possible due to the results of trials assessing the influence of bariatric surgery on body weight reduction, concomitant diseases, quality of life and, most importantly, patients' survival. The last of these issues surely is the most important criterion for the final assessment of bariatric surgery's true value. The influence of bariatric surgery on life expectancy, including in regard to potential complications of the procedure, has been discussed for many years. The authors of the aforementioned analysis were not aware of the results published in the July 2007 issue of the *New England Journal of Medicine*. We refer to the trial conducted by T. Adams [13], and more importantly, the Swedish Obese Subjects study results [14]. The former of the cited studies, including nearly 20,000 patients followed for > 7 years on average showed the risk of death to be 40% higher in patients not treated surgically or treated with gastric bypass. This risk resulted from deaths from ischaemic heart disease, diabetes and – what is particularly interesting – from cancer. The latter study showed that the risk of death after 10 years

of follow-up in patients treated conservatively for obesity was 1.5-fold higher when compared to patients after surgical treatment. The benefit of bariatric surgery for life expectancy results from resolution of concomitant pathologies. Both individual studies and their meta-analysis confirm these observations. In the aforementioned study performed in Poland, resolution of metabolic syndrome was reported in 70.4% of patients subjected to surgery for morbid obesity [5].

Polish studies indicate that although the number of bariatric procedures performed grows steadily every year, it is still insufficient, as less than every hundredth patient with morbid obesity was treated surgically for that condition [15, 16]. Insignificant reimbursement of bariatric surgery, in many cases unequal to the cost of the procedure, is one explanation for the situation. No less significant however are the doubts about this therapeutic method of many physicians, who provide daily care to obese patients for obesity-related diseases.

The results of the studies confirm the role of bariatric surgery. It is not an alternative to conservative treatment (virtually unsuccessful in this group of patients), but the only appropriate management of morbid obesity. It needs to be stressed that according to the results of the aforementioned studies, conservative treatment of morbid obesity increases the risk of patient death and choice of this option should be considered neglect of the proper therapy.

This publication was created with the active participation of members of the Bariatric Surgery Section of the Polish Surgeons' Society: Andrzej Budzyński (Kraków), Jacek Cywiński (Łódź), Włodzimierz Gniłka (Bydgoszcz), Marek Glück (Zabrze), Agata Frask (Wejherowo), Hady Razak Hady (Białystok), Przemysław Janczak (Łódź), Tomasz Jaworski (Lublin), Krzysztof Kaseja (Szczecin), Jan Kazanowski (Wrocław), Krzysztof Kołomecki (Łódź), Tomasz Lewandowski (Ełk), Tomasz Koziarski (Warszawa), Wojciech Lisik (Warszawa), Wojciech Makarewicz (Gdańsk), Marek Najdecki (Warszawa), Michał Nowicki (Łódź), Michał Orłowski (Wejherowo), Rafał Paluszkiwicz (Warszawa), Magdalena Podlecka (Ełk), Wiesław Pešta (Olsztyn), Norbert Sławeta (Kielce), Tomasz Szewczyk (Łódź), Tomasz Szydłowski (Wejherowo), Dariusz Szymański (Łódź), Olga Szyroki-Gniazdowska (Szczecin), Marek Umiński (Szczecin).

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