

ABSTRACT

The diploma thesis deals the problematics of weight reduction with the using of bariatric-metabolic surgery and focuses on the changing risk components of the metabolic syndrome during one year long observation of 45 probands who have undergone Partial Jejunum-Ileal Diversion, Laparoscopic Sleeve Gastrectomy or Laparoscopic Gastric Plication. The main aim of the diploma thesis is to evaluate the changing risk components of the metabolic syndrome during weight reduction after undergoing bariatric surgery. The thesis shows that in the studied sample of bariatric patients it is an effective method of weight reduction (in PJID the success rate was 48 % EWL, in LGCP 51 % EWL and the most successful was LSG with 76 % EWL) with metabolic effect such as for example observed positive changes in risk components of the metabolic syndrome – reduction of morning glucose levels, increase of HDL cholesterol and decrease of triacylglycerols in the blood, decrease of waist circumferences and decrease of blood pressure or elimination of metabolic syndrome. Up to 68.9 % of the monitored probands showed signs of metabolic syndrome when evaluating the initial measurement before bariatric surgery, the remaining 22.2 % of the probands showed the signs after the year's observation. As part of the risk assessment for the development of cardiovascular diseases according to the VAT area at entry, densitometric measurements showed up a high risk for cardiovascular diseases with 87.7 % of probands, after one year of the follow-up 40 % of probands still showed signs of this risk. It was also found that their amount of visceral fat correlates very well with the mentioned risk components of the metabolic syndrome. Indeed, when the amount of visceral fat was reduced, the overall risk of developing metabolic syndrome was reduced as well. Another important result of the thesis is for example a significant difference between the sex, because women have a higher proportion of fat in the body composition than men and they can also observe more frequent fat deposition in the gynoid area, while men have more frequent fat storage in android area, which is connected with larger quantities of visceral fat.

Key words: metabolic syndrome, visceral fat, adipose tissue, measurement of body composition, bariatric-metabolic surgery, bariatric patient