**Abstract**

The study involved 401 patients with pathological obesity who underwent sleeve gastrectomy at the Hospital in Wejherowo's Department of General and Oncological Surgery between 2012 and 2017. The patients were separated into two groups: those with diabetes mellitus type 2 (25.4%) and those who were not diagnosed with diabetes mellitus (74.6%).

A comparative evaluation was conducted between the patients with type 2 diabetes mellitus and the patients who were not impacted by DMT2. The following criteria were used to make the comparison:

- one and two years following sleeve gastrectomy, reduction in the loss of excess body weight,
- the surgery's timing,
- duration of hospitalization,
- postoperative complications,
- values of inflammatory parameters in the perioperative period.

Additionally, patients with type 2 diabetes were analysed for:

- changes in glycated haemoglobin and fasting serum glucose values one and two years after the LSG,
- change in type 2 diabetes status and treatment one and two years after the surgery the LSG.

The primary objective of this study was to investigate whether type 2 diabetes affects the outcomes of bariatric surgery for patients undergoing sleeve gastrectomy. Secondary objectives included:

- examining whether the presence of diabetes affects the timing of surgery, duration of hospitalization, and presence of perioperative and postoperative complications,
- investigating whether the weight loss after sleeve gastrectomy affects type 2 diabetes treatment,
- analyses of the relationship between the duration of type 2 diabetes prior to sleeve gastrectomy and the change in diabetes treatment status in the postoperative period.

Patients without type 2 diabetes reduced 75.7% of their excess body weight during a two-year follow-up. This result was statistically higher than the group of patients with

DMT2, where %EWL of 70.3% was observed ($p < 0,05$). The reduction of excess body weight was also influenced by the change in type 2 diabetes status. At a two – year follow – up, patients with diabetes remission had a percentage loss of extra body weight of 75.8%, whereas patients with medication treatment reductions had a percentage loss of 65.6%, and patients with no effect of conservative treatment had a percentage loss of 51.5%. Furthermore, after a multivariate examination of the impact of diabetes and BMI on bariatric outcomes on the day of surgery, diabetes was no longer a significant predictor.

In obese patients, sleeve gastrectomy has an impact on the treatment of type 2 diabetes. Remission of diabetes was reported in 71.3% of patients in the study group, while medication treatment was reduced in 20.8% of patients. There was no effect of sleeve gastrectomy on diabetes treatment in 7.9% of patients.

Although the duration of type 2 diabetes in the preoperative period does not affect bariatric results, it does have an impact on the management of the disease itself. In the preoperative period, patients with diabetic remission had a substantially shorter DMT2 duration than patients with a reduction of drug treatment ($p < 0,05$).

Glycated haemoglobin and fasting glucose levels are normalized after a sleeve gastrectomy, which minimizes the quantity of hypoglycaemic medicine used. In addition, type 2 diabetes lengthens the duration of the procedure but has no bearing on the duration of hospitalization, or the occurrence of postoperative complications.

The findings obtained from the center at Wejherowo are based on a short – term observation. As a result, the study must be continued to learn more about the long – term link between sleeve gastrectomy and type 2 diabetes.