SPECIFIC FEATURES OF POST BARIATRIC MALABSORPTION SYNDROME

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Bariatric surgery is an important means of weight loss in people with severe obesity. Currently, this is the most effective long-term weight loss method that reduces obesity-related diseases. Nevertheless, it leads to significant pathological consequences that can lead to gastrointestinal complications and micronutrient deficiencies. Clinical phenomena that negatively affect status after gastroectomy include: damping syndrome, kidney stones, alterod bile acid availability in the intestine, intestinal obstruction, gastric ulcer, gastroesophageal reflux, bacterial proliferation, and malabsorption syndrome.

In 2022, more than 1 billion people worldwide are obese - 650 million of them are adults, 340 million are adolescents, and 39 million are children. The prevalence of obesity has the highest growth rates in North America, Europe, the Middle East, and Central Asia (Ng et al., 2014). Uzbekistan is no exception to this trend - in 2022, 17-20% of adults exceeded the obesity threshold (WHO, 2023).

Materials and methods of study: Patients with malabsorption syndrome developed between 3 months and 1 year after various bariatric surgeries were selected for this study. The patients were mainly studied in the surgical departments of the "Surgemed" and "KhVKTTM" clinics of the Khorezm region, including 300 patients who underwent inpatient treatment and were under outpatient observation from 2023 to 2026. The patients selected as the material of the scientific study were analyzed based on the results of preoperative and 3-month to 1-year anamnesis, laboratory analyses (UTT spread, coagulogram, general blood biochemical analysis, general urine, general stool analysis, as well as ultrasound (abdominal cavity), ECG, EGDS examinations.

Analysis and results. The study analyzed 330 patients who underwent bariatric surgery using the "Laparoscopic longitudinal gastric resection" method. The majority of patients were diagnosed with grade II-III obesity and metabolic disorders: 193 (64.3%) patients with type 2 diabetes mellitus (T2DM), 253 (84.3%) patients with fatty liver disease, and 47 (15.6%) patients with other liver pathologies (liver cirrhosis, chronic viral hepatitis). Particular attention was paid to patients who

underwent surgery with complications such as comorbid diseases: hypertension, coronary heart disease, nephrotic syndrome, and lymphastasis. Of the 300 patients selected for this study, 11 (18.3%) were men and 49 (81.7%) were women. The age of the patients ranged from 20 to 58 years (median 37.94±11.1). A detailed demographic description is provided in Table 1.

During the observation period, clinical signs of malabsorption syndrome manifested to varying degrees in patients between 3 and 12 months after surgery. The main clinical symptoms were as follows. Early clinical signs: chronic diarrhea, flatulence and abdominal pain, rapid fatigue and general weakness, excessive weight loss, hair loss and skin dryness, muscle weakness. The reasons for this are: a sharp decrease in food volume, a decrease in gastric acid secretion, changes in intestinal hormones, and insufficient intake of products rich in proteins and vitamins.

A decrease in alpha-amylase activity can serve as an early laboratory sign of carbohydrate digestion disorders. This allows for the detection of malabsorption before the onset of clinical symptoms. In the analyses, alpha-amylase was 19.6±4.2 (U/L), albumin was 31.2±3.8 (g/L), and total protein was 58.4±6.1 (g/L). Decreased alpha-amylase was strongly correlated with diarrhea and steatorrhea

($r = -0.62; p<0.01$).

Based on the above data, if regular laboratory monitoring is not conducted in the postoperative period after bariatric surgery, late diagnosis of malabsorption and the development of severe complications are observed.

CONCLUSION

1. After bariatric surgery, a proportional increase in malabsorption syndrome was observed in patients between 3 and 12 months.
2. Regular clinical and laboratory monitoring is necessary for the early diagnosis of malabsorption syndrome, starting from the first 3 months after surgery.
3. A decrease in alpha-amylase activity is a reliable early biomarker of malabsorption syndrome.
4. An individual nutritional plan and constant vitamin-mineral support should be an integral part of the treatment.

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