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Gastroscopy Results before Obesity Surgery and Its Effects on Surgery

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Abstract **Original Research Article**

Obesity is defined by the World Health Organization (WHO) as excessive weight gain in the body to the extent that it disrupts a person's physical and psychological daily life. Although the factors that cause the development of obesity cannot be fully explained, excessive and improper nutrition and lack of physical activity caused by the metropolitan lifestyle are considered the most important causes of obesity. Obesity can lead to health problems such as heart diseases, diabetes, hypertension, obstructive respiratory diseases and some types of cancer. Diet, exercise therapy, behavior change, medical treatment and surgical treatment methods are used in the approach to obesity patients. Since the surgical treatment method carries high risks in itself, evaluation with esophagogastroduodenoscopy before the procedure has an important place.

Keywords: Obesity, Metropolitain Lifestyle, Health Problems, Surgical Treatment, Esophagogastroduodenoscopy.

INTRODUCTION

Obesity is still an important health problem today. Its prevalence is increasing day by day and has reached up to 1/3 of the adult population in the United States [1]. Morbidly obese people have body mass indexes greater than 40 kg/m2. The results of medical treatment in morbid obesity are not satisfactory. Losing weight through exercise or diet is also very difficult for morbidly obese patients. The only effective treatment for this group of patients is surgical approach. Surgical methods are not only applied to lose weight, but also to reduce comorbidities such as diabetes, obstructive sleep apnea or hyperlipidemia [2].

The use of endoscopy in the treatment of morbid obesity is gradually expanding. Routine preoperative esophagogastroduodenoscopy (p-EGD) screening in patients undergoing bariatric surgery is controversial (1). Some authors recommend routine p-EGD screening to detect suspicious gastric lesions/signs, although in such cases it may be advantageous to modify management to eliminate the potential for future development of gastric pathology [2]. Endoscopic methods have begun to be used more frequently in the preoperative evaluation of patients who are candidates for bariatric surgery, in reducing peri-operative complications, and in managing post-operative problems [3]. Although there are many studies on surgical technique and laparoscopic sleeve gastrectomy results in the literature, few studies have demonstrated the necessity of preoperative upper gastrointestinal (GI) endoscopy, endoscopic biopsy and histopathological examination of all laparoscopic sleeve gastrectomy samples [4-6].

In this study, we aimed to examine the preoperative esophagogastroscopies of patients who underwent obesity surgery in our clinic and to investigate the effects of surgery.

METHOD

This study was conducted retrospectively, based on the data of patients who underwent obesity surgery at the Malatya Training and Research Hospital General Surgery clinic between January 2024 and December 2024. Data were obtained from the computer records of the hospital information system and the endoscopy unit of the general surgery clinic. The demographic data and gastroscopy findings of the patients were evaluated. Patients whose data could not be fully accessed were excluded from the study. All patients were operated on in the same center and an informed consent form was obtained from the patients. Numerical values are expressed as mean ± standard deviation (minimum - maximum values).

Inflammation of the gastric mucosa is defined as gastritis. Therefore, it is a histological diagnosis. However, during gastroscopy, diffuse macroscopic

changes in the gastric mucosa, hyperemic and edematous appearance are interpreted as gastritis. In our gastroscopy, their presence was evaluated as gastritis. Cardiac failure, esophagitis, ulcer or additional pathologies were evaluated according to endoscopy criteria.

FINDINGS

A total of 45 patients underwent obesity surgery in our clinic during a one-year period. Since the data of 2 of these patients could not be fully accessed, 43 patients were included in the study. 28 of the patients were women (65%) and 15 were men (35%). The average age of female patients was 34.67±12.69 years and the age range varied between 19-64 years. The average age of male patients was 33.4±12.86 years and the age range varied between 19-52 years. The average age of all patients was 34.34±12.57 and the age range varied between 19-64.

When the esophagogastroscopies of the patients were examined, gastritis was detected in 34 patients, cardia insufficiency in 6 patients, esophagitis in 6 patients, ulcer in 3 patients, polyp in 1 patient, and hiatal hernia in 1 patient, while normal findings were found in 3 patients. The findings of the patients are given in Table 1.

Table 1

	WOMAN (28)	MAN (15)
Normal	2	1
Gastritis	24	10
Cardia Insuffiency	4	2
Esophagitis	4	2
Ulcer	2	0
Polyp	1	0
Hiatal Hernia	1	0

DİSCUSSİON

Many original studies have stated that preoperative endoscopy for a patient who will undergo obesity surgery, with or without symptoms, has a high rate of detection of disorders such as hiatal hernia, gastritis or esophagitis, as high as 62-67% [4]. These studies concluded that preoperative endoscopy is an important tool in the preoperative evaluation of bariatric patients. Malignant findings detected in upper GI endoscopy and biopsy are not common in obese patients [8-10].

Wolter *et al*., in a series of 801 patients who underwent bariatric surgery, it was reported that two patients had early-stage distal adenocarcinoma of the esophagus, one patient had NET of the duodenum, and one patient had GIST [4]. In our article, although the number of patients was small, no malignancy was found. In another study, Humphreys *et al*., reported two cases of distal adenocarcinoma in the esophagus during preoperative endoscopy in 371 patients who underwent gastric banding [11]. In the study of Fernandes *et al*., no malignant lesions were observed during upper GI endoscopy in 613 bariatric surgery patients. However, they reported that they diagnosed a case of low-grade gastric MALT-lymphoma after histopathological evaluation of tissue biopsies [10].

Wolter recommends routine endoscopy before bariatric surgery to prevent malignant lesions that may be missed in his study [4]. Mihmanli *et al*., reported that in their series of 157 cases, the operation was changed in 1 case as a result of preoperative endoscopic examination [5]. On the other hand, Gómez *et al*., They found that endoscopy performed before a routine bariatric operation changed the type of surgical procedure by 1.7% [6].

A recent meta-analysis of 12,261 patients in 48 different papers presented similar information. The authors reported that surgeons changed in 0.4% of their total surgical procedures [7]. Upper GI endoscopy is the most frequently used technique in clinical practice before bariatric surgery to detect upper gastrointestinal pathologies with a low complication rate (0.22%) (12). A wide variation in endoscopic findings (ranging from 10% to 88%) has been reported in the literature [13, 14].

CONCLUSİON

We recommend routine upper gastrointestinal endoscopy before surgery. In addition to showing the anatomy of the stomach, H. pylori, esophagitis, hiatal hernia, tumors, etc. It can detect diseases such as and in addition, it offers the opportunity to examine the stomach before and after surgery. Before performing this procedure, medico-social consent should be obtained from the patient and pH monitoring should be performed in those with GERD complaints.

REFERENCES

1. Crémieux, P. Y., Buchwald, H., Shikora, S. A., Ghosh, A., Yang, H. E., & Buessing, M. (2008). A study on the economic impact of bariatric surgery. *American Journal of Managed Care*, *14*(9).
2. Buchwald, H., Avidor, Y., Braunwald, E., Jensen, M. D., Pories, W., Fahrbach, K., & Schoelles, K. (2004). Bariatric surgery: a systematic review and meta-analysis. *Jama*, *292*(14), 1724-1737.
3. Anderson, M. A., Gan, S. I., Fanelli, R. D., Baron, T. H., Banerjee, S., Cash, B. D., ... & Stewart, L. E. (2008). Role of endoscopy in the bariatric surgery patient. *Gastrointestinal endoscopy*, *68*(1), 1-10.
4. Wolter, S., Duprée, A., Miro, J., Schroeder, C., Jansen, M. I., Schulze-zur-Wiesch, C., ... & Busch, P. (2017). Upper gastrointestinal endoscopy prior to bariatric surgery-mandatory or expendable? An analysis of 801 cases. *Obesity Surgery*, *27*, 1938-1943.
5. Mihmanli, M., Yazici, P., Isil, G., & Tanik, C. (2016). Should we perform preoperative endoscopy routinely in obese patients undergoing bariatric

surgery?. *Bariatric Surgical Practice and Patient Care*, *11*(2), 73-77.

6. Gómez, V., Bhalla, R., Heckman, M. G., Florit, P. T. K., Diehl, N. N., Rawal, B., ... & Loeb, D. S. (2014). Routine screening endoscopy before bariatric surgery: is it necessary?. *Bariatric surgical practice and patient care*, *9*(4), 143-149.
7. Bennett, S., Gostimir, M., Shorr, R., Mallick, R., Mamazza, J., & Neville, A. (2016). The role of routine preoperative upper endoscopy in bariatric surgery: a systematic review and meta-analysis. *Surgery for Obesity and Related Diseases*, *12*(5), 1116-1125.
8. Abd Ellatif, M. E., Alfalah, H., Asker, W. A., El Nakeeb, A. E., Magdy, A., Thabet, W., ... & Gamal, M. A. (2016). Place of upper endoscopy before and after bariatric surgery: a multicenter experience with 3219 patients. *World Journal of Gastrointestinal Endoscopy*, *8*(10), 409.
9. Praveenraj, P., Gomes, R. M., Kumar, S., Senthilnathan, P., Parathasarathi, R., Rajapandian, S., & Palanivelu, C. (2015). Diagnostic yield and clinical implications of preoperative upper gastrointestinal endoscopy in morbidly obese patients undergoing bariatric surgery. *Journal of Laparoendoscopic & Advanced Surgical Techniques*, *25*(6), 465-469.
10. Fernandes, S. R., Meireles, L. C., Carrilho-Ribeiro, L., & Velosa, J. (2016). The role of routine upper gastrointestinal endoscopy before bariatric surgery. *Obesity surgery*, *26*, 2105-2110.
11. Humphreys, L. M., Meredith, H., Morgan, J., & Norton, S. (2012). Detection of asymptomatic adenocarcinoma at endoscopy prior to gastric banding justifies routine endoscopy. *Obesity surgery*, *22*, 594-596.
12. Fornari, F., Gurski, R. R., Navarini, D., Thiesen, V., Mestriner, L. H. B., & Madalosso, C. A. S. (2010). Clinical utility of endoscopy and barium swallow X-ray in the diagnosis of sliding hiatal hernia in morbidly obese patients: a study before and after gastric bypass. *Obesity surgery*, *20*, 702-708.
13. Wong, H. M., Yang, W., Yang, J., & Wang, C. (2015). The value of routine gastroscopy before laparoscopic Roux-en-Y gastric bypass surgery in Chinese patients. *Surgery for Obesity and Related Diseases*, *11*(2), 303-307.
14. Korenkov, M., Sauerland, S., Shah, S., & Junginger, T. (2006). Is routine preoperative upper endoscopy in gastric banding patients really necessary?. *Obesity surgery*, *16*(1), 45-47.