Med. J. Cairo Univ., Vol. 93, No. 2, Accepted 4/5/2025
DOI: 10.22608/MJCU. 775-781, June 2025
www.medicaljournalofcairouniversity.net

Prevalence and Predictors of Esophageal Reflux Disease after Bariatric Surgery: A Single Center Experience

MOHAMED ELDESOKY, M.D.*; AHMED A.A. ELHAWARY, M.D.**;
AHMED ABDELRAOUF ELGEIDIE, M.Sc.*; AHMED N.A. ELGHAWALBY, M.D.* and
EL-SAYED ABOU EL-MAGD, M.D.*

The Department of General Surgery, Faculty of Medicine, Mansoura and Suez** Universities*

Abstract

Background: Bariatric surgery effectively treats morbid obesity but increases gastroesophageal reflux disease (GERD) risk 2-2.5 times versus the general population, requiring careful postoperative monitoring.

Aim of Study: To estimate the occurrence and predictors of esophageal reflux disease after different bariatric procedures

Patients and Methods: This retrospective research has been performed at the Gastrointestinal Surgical Center (GISC), Mansoura University Hospitals, Mansoura City, Egypt. It included data from cases who had bariatric surgery at GISC among January 2015 and April 2022. These patients were contacted for follow-up.

Results: The study revealed comparable conservative management rates for de novo GERD across procedures: Laparoscopic sleeve gastrectomy (LSG) (40%), single anastomosis sleeve jejunal (SASJ) (27.3%), and one anastomosis gastric bypass (OAGB) (31.2%; p=0.518). While demographics showed no differences, higher BMI (60.33 vs 47.06kg/m^2, p-value below 0.001) and rapid weight loss (65.4% vs 24.8%, p-value below 0.001) predicted GERD. Regression analysis confirmed rapid weight loss (OR=2.36), high Body Mass Index (BMI) (OR=3.69), and vomiting (OR=3.6) as risk factors (all $p\leq$0.002), with 12-month weight loss being protective (OR=0.69). GERD patients showed better hypertension (HTN) resolution (22.2% vs 12.6%, p=0.016) but more vomiting (43.6% vs 12%, p<0.001).

Conclusion: Sleeve gastrectomy carried the highest de novo GERD risk. Both procedure type and patient factors (high BMI, rapid weight loss) significantly influenced GERD development, necessitating individualized postoperative monitoring.

Key Words: Bariatric surgery – Esophageal Reflux Disease – LSG – OAGB – SASJ.

Correspondence to: Dr. Mohamed Eldesoky,
E-Mail: mdesoky@mans.edu.eg

Introduction

ACCORDING to the "100 Million Health" survey, that has been performed in Egypt in 2019 and screened 49.7 million adult Egyptians (≥18 years old), 39.8% of adult Egyptians suffered from obesity (BMI ≥30kg/m^2). Obesity was more prevalent in adult females than adult males (49.5% of Egyptian adult females suffered obesity compared to 29.5% for males) *[1]*.

Bariatric surgery (BS) is the most effective management for morbid obesity and attains the best long-term results. Bariatric surgery is also the only management option that achieves sustained weight loss and has a positive effect on related comorbidities *[2]*.

Gastroesophageal reflux disease (GERD) is defined as a condition associatedwith obesity, especially morbid obesity *[3]*. This association among obesity and GERD is very well-known. In comparison with the general population, obese cases have 2–2.5 times more chances of developing reflux symptoms *[4]*.

However, some patients may experience a worsening of their GERD symptoms or the development of denovo GERD after bariatric procedures *[5]*. It is believed to be because ofreduced gastric emptying, reduced LES pressure, blunting of the angle of His, reduced compliance and reduced volume of the stomach, and increased intragastric pressure secondary to the narrow gastric pouch and herniation of part of the resected stomach into the chest *[6]*.

To the best of our knowledge, there is a paucity of studies handling the incidence and risk factors of denovo GERD after laparoscopic bariatric procedures, which was a motive for us to conduct the current study.

The current investigation aimed to estimate the occurrence and predictors of esophageal reflux disease after different bariatric procedures.

Patients and Methods

This retrospective research has been performed at the Gastrointestinal Surgical Center (GISC), Mansoura University Hospitals, Mansoura City, Egypt. It included data from cases who had bariatric surgery at GISC among January 2015 and April 2022. These patients were contacted for follow-up.

Inclusion criteria: Age between 18 and 60 years, patients underwent bariatric surgery in the Gastrointestinal Surgical Center at Mansoura University during the duration between January 2005 and April 2022, and commitment to the scheduled follow-up plan.

Exclusion criteria: Patients underwent revisional bariatric surgery, patients with psychological disorders, and patients lost at follow-up.

Methods:

Preoperative data: All patients gave informed consent approved by the Ethics Committee of Mansoura University. A full history was taken, including personal data, obesity onset, comorbidities (diabetes, hypertension, dyslipidemia, osteoarthritis), and surgical history (type of surgery, hiatal repair, complications). GERD symptoms were evaluated using the GERD-HRQL questionnaire (score range: 0–50).

Clinical examination included general and abdominal assessment. Laboratory tests included CBC and liver function tests. Upper GI endoscopy was performed to assess GERD, hiatal hernia, or other gastroesophageal conditions.

Postoperative data: Data were retrieved from hospital records and monitor calls. Weight and BMI have been recorded, and excess weight loss percentage (%EWL) has been calculated. Cases were divided into 2 groups: Those with preoperative GERD (assessed postoperatively for symptom change) and those without (monitored for de novo GERD). GERD symptoms were reassessed using the same HRQL tool.

Comorbidities were followed-up for resolution or improvement. Glycemic control was categorized according to Brethauer et al. **[7]**.

Radiological and Endoscopic Evaluation: All patients had barium swallow and meal studies to assess for reflux and anatomical abnormalities (e.g., sleeve twist, hernia). Follow-up endoscopy was performed to detect reflux (acidic, bile, or mixed) and graded per Los Angeles classification **[8]**.

PH Monitoring and Classification: Ambulatory 24-hour impedance-pH monitoring was done using a catheter with sensors at multiple esophageal levels. Assessed parameters included acid exposure (pH <4 for >5% of the time), DeMeester score (>14.7), and symptom association probability (SAP).

Patients were classified as having no GERD (no/mild symptoms, LA grade A or less, normal acid exposure), silent GERD (objective findings with no symptoms), or GERD (symptoms with endoscopic or pH evidence) **[9]**.

Primary outcome: Occurrence and predictors of esophageal reflux disease after different bariatric procedures.

Secondary outcomes: Weight loss after different bariatric procedures, resolution of DM type II and hypertension (HTN), and the risk factors of this complication following bariatric procedures.

Ethical consideration:

The research gained approval from the Local Ethical Committee and Institutional Review Board of the Faculty of Medicine, Mansoura University. Patient confidentiality was preserved, and the gatheredinformation will be utilized for only scientific purposes. All cases felt free to withdraw from the research at any time point, according to their request.

Results

Table (1) showed that the study included 359 cases with a mean age of 36.84±9.07 years (range: 23–55), of whom 69.4% were female and 30.6% were male. The majority were classified as ASA 2 (56.0%), with common comorbidities including diabetes mellitus (51.8%), osteoarthritis (51.5%), hypertension (45.1%), obstructive sleep apnea syndrome (37.9%), and hyperlipidemia (10.3%).

Table (1): Demographic characteristics of studied cases (total number=359).

	Total studied cases N=359	%
Age/years:		
Mean ± SD	36.84±9.07	
(Min-Max)	(23-55)	
Sex:		
Male	110	30.6
Female	249	69.4
ASA:		
1	158	44.0
2	201	56.0
DM	186	51.8
HTN	162	45.1
OSAS	136	37.9
Hyperlipidemia	37	10.3
Osteoarthritis	185	51.5

Table (2) demonstrated that there was a significant increase in GERD prevalence from 43.2% to 73.3% post-intervention (p<0.001). While GERD-related quality of life scores showed slight improvement (median 10 to 9, p=0.004), the Los Angeles classification revealed a shift toward milder disease severity (p=0.001), with more grade B (27.7% to 48.3%) and fewer grade A cases (60.6% to 46.8%).

Table (2): Improvement in GERD between pre- and postoperative.

	Total N=359				Test of significance
	Pre		Post		
	N	%	N	%	
GERD	155	43.2	263	73.3	p<0.001*
GERD HRQL Median (min-max)	10 (0-33)		9 (0-45)		p=0.004*
Los anglos score:					
A	94 (60.6)		123 (46.8)		χ2=90.17
B	43 (27.7)		127 (48.3)		p=0.001*
C	24 (15.4)		13 (4.9)		
D	0		0		

Table (3) showed that LSG had the highest de novo GERD rate (71.9%, p=0.04), while SASJ showed the lowest (7.2%), supporting LSG's stronger reflux association than bypass techniques. Careful procedure selection is advised for GERD-prone patients".

Table (3): Incidence of GERD among studied cases.

	Total N=359	LSG N=260	SASJ N=39	OAGB N=60	Test of significance
De novo GERD	153	110 (71.9)	11 (7.2)	32 (20.9)	χ2=6.14 p=0.04*

χ2 = Chi-Square test.
*Statistically significant.

This table reveals striking differences in post-bariatric GERD types by procedure (p<0.001). LSG predominantly caused acidic reflux (94.5%), while OAGB and SASI led to biliary (78.1% and 63.6%) or mixed reflux. These findings highlight procedure-specific reflux patterns, suggesting LSG's strong association with acid reflux versus bypass procedures' biliary/mixed profiles. Clinical implications include tailoring anti-reflux strategies based on surgical approach.

Type of reflux among cases with de novo GERD.

	Surgical procedure			Test of significance	Total
	LSG	SASI	OAGB		
Type reflux:					
Acidic:					
N	104	1	2	χ2=6.14	107
%	94.5%	9.1%	6.2%	p=0.04*	69.9%
Biliary:					
N	4	7	25		36
%	3.6%	63.6%	78.1%		23.5%
Mixed:					
N	2	3	5		10
%	1.8%	27.3%	15.6%		6.5%
Total:					
N	110	11	32		153
%	100.0%	100.0%	100.0%		100.0%

χ2 = Chi-Square test.
*Statistically significant.

Table (4) showed similar rates of conservative management for de novo GERD across procedures (LSG: 40%, SASJ: 27.3%, OAGB: 31.2%), with no significant difference in treatment distribution (χ^2=1.32, p=0.518). This result suggests the choice between conservative and surgical approaches was consistent regardless of the original bariatric procedure. However, the small sample sizes in SASJ (n=11) and OAGB (n=32) groups warrant cautious interpretation of these findings.

Table (5) showed that no significant differences were found in age, sex, ASA status, or comorbidities between groups (all p>0.05). However, higher preop BMI (60.33 vs 47.06, p<0.001) and rapid weight loss (65.4% vs 24.8%, p<0.001) strongly predicted de novo GERD. Notably, HTN resolution was better in GERD patients (22.2% vs 12.6%, p=0.016), while persistent vomiting was more frequent with GERD (43.6% vs 12%, p<0.001).

Table (6) showed that the logistic regression identified rapid weight loss (OR=2.36, p=0.001), higher BMI (OR=3.69, p=0.002), and persistent vomiting (OR=3.6, p=0.002) as significant independent risk factors for de novo GERD. Conversely, greater 12-month EWL was protective (OR=0.69, p=0.004).

Table (4): Management lines among studied groups.

	LSG N=110	SASJ N=11	OAGB N=32	Test of significance
De novo GERD:				
• Conservative	44 (40)	3 (27.3)	10 (31.2)	x2=1.32
• Surgical	66 (60)	8 (72.7)	22 (68.8)	*p*=0.518
Roux en-y	62 (94)	8 (100)	13 (59.1)	*p*=0.001*
Crural repair	4 (6)	0	0	–
Reversed to normal anatomy	0	0	9 (40.9)	–

x2 = Chi-Square test. *Statistically significant.

Table (5): Relation between GERD development de novo and risk factors, secondary outcome, and types.

	Total cases (n=359)		Test of significance
	No de novo GERD N=206	de novo GERD N=153	
Risk factors:			
Age/years			*t*=0.114
Mean ± SD	36.79±8.85	36.90±9.38	*p*=0.902
Sex:			
Male	65 (31.6)	45 (29.4)	x2=0.189
Female	141 (68.4)	108 (70.6)	*p*=0.663
ASA:			
1	88 (42.7)	70 (45.8)	x2=0.328
2	118 (57.3)	83 (54.2)	*p*=0.567
Pre-operative BMI Mean ± SD	47.06±5.55	60.33±7.48	*t*=19.31 *p*=0.001*
Rapid weight loss	51 (24.8)	100(65.4)	x2=59.39 *p*=0.001*
EWL 9 months Mean ±SD	73.51±18.8	72.27±17.65	*t*=0.634 *p*=0.523
EWL 12 months Mean ± SD	85.0±10.69	88.42±18.68	*t*=2.19 *p*=0.03*
DM	110 (53.4)	76 (49.7)	x2=0.488 *p*=0.485
HTN	100 (48.5)	62 (40.5)	x2=2.28 *p*=0.131
OSAS	74 (35.9)	62 (40.5)	x2=0.790 *p*=0.374
Hyperlipidemia	16 (7.7)	21 (13.7)	x2=3.37 *p*=0.06
Osteoarthritis	104 (50.5)	81 (52.9)	x2=0.212 *p*=0.645
Secondary outcome:			
DM resolution	50 (24.3)	35 (22.9)	x2=0.095 *p*=0.758
HTN resolution	26 (12.6)	34 (22.2)	x2=5.81 *p*=0.016*
OSAS resolution	47 (22.8)	30 (19.6)	x2=0.536 *p*=0.464
Persistent vomiting	18 (12)	48 (43.6)	x2=33.53 *p*=0.001*

t : Student *t*-test. x2=Chi-Square test.
Z: Mann Whitney U test. *Statistically significant.

Table (6): Multivariate analysis for predictor of denovo GERD among studied cases (n=359).

	β	*p*-value	Odds ratio (95%CI)
Rapid weight loss	2.5	0.001*	2.36 (1.5-4.69)
BMI	3.3	0.002*	3.69 (1.02-6.58)
Persistent vomiting	1.25	0.002*	3.6 (1.25-6.99)
EWL 12 months	–2.1	0.004*	0.69 (0.36-0.98)
Type of surgical procedure: LSG			
SASJ	–0.444	0.02*	0.642 (0.365-8.9)
OAGB	–1.07	0.123	0.344 (0.145-3.6)
		R	R

β: Regressioncoefficient. CI: Confidence interval.
R: Reference group.
Undefined: If one category has zero or high statistically significant.

Discussion

Regarding demographic characteristics, findings showed that the mean age of cases was 36.84±9.07 23-55%); 110 (30.6%) were male, while 249 69.4%) were female; cases with ASA1 were 158 44%), while cases with ASA2 were 201 (59%); cases with DM were 186 (51.8%); cases with HTN were 162 (45.1%); cases with OSAS were 136 (37.9%); cases with hyperlipidemia were 37 10.3%); and cases with osteoarthritis were 185 51.5%).

In agreement with Almalki et al., they assessed he clinical and endoscopic progression of GERD, esophagitis, and BE 3 to 4 years after SG, performed on 58 cases. Their study reported that the mean age of cases was 48.03 (±11.9); 12 (21%) were male, while 46 (79%) were female; cases with DM were 14 (24%); cases with HTN were 30 (51%); and cases with OSAS were 25 (43%), while cases with dyslipidemia were 5 (8.6%) and cases with osteoarhritis were 8 (13.8%) [10].

Regarding improvement in GERD, pre- and post-operative findings showed that the median GERD HRQL of preoperative was 10 (0-33) while he median GERD HRQL of postoperative was 9 0-45). There was a statistically significant differ-

ence in median GERD HRQL among preoperative and postoperative with a *p*-value = 0.004, and Los Angeles Score A, B, C, and D in preoperative were 94 (60.6), 43 (27.7), 24 (15.4), and 0, respectively, while in postoperative they were 123 (46.8), 123 (46.8), 127 (48.3), 13 (4.9), and 0, respectively.

In contrast with Kurmanskyi & Kebkalo, a retrospective analysis of the frequency of GERD in cases with morbid obesity after laparoscopic sleeve gastrectomy included 52 patients who underwent LSG. Their study reported that there was a statistically insignificant variance in median GERD HRQL between preoperative and postoperative with a *p*-value=0.11 *[11]*.

Their study found that Los Angeles scores A, B, C, and D in preoperative were 94 (60.6), 43 (27.7), 24 (15.4), and 0, respectively, while in postoperative, they were 123 (46.8), 123 (46.8), 127 (48.3), 13 (4.9), and 0, respectively.

Regarding the incidence of GERD, findings showed that there were statistically significant differences among LSG, SASJ, and OAGB in de novo GERD, with p=0.04.

In contrast with Nosrati et al., they examined whether omentopexy can be effective in reducing the frequency of GERD after LSG, performed on 201 cases (145 females) divided into 2 groups: Group A (n = 100) and Group B (n = 101). Their study found that there were insignificant variances observed among the two groups in terms of the frequency of de novo GERD (*p*-value equal to 0.966) *[12]*.

Regarding the type of reflux among cases with de novo GERD, findings showed that the acidic type of reflux in LSG was 104 (94.5%), while in SASI it was 1 (9.1%) and in OAGB it was 2 (6.2%); the biliary type of reflux in LSG was 4 (3.6%), while in SASI it was 2 (1.8%) and in OAGB it was 3 (27.3%); the mixed type of reflux in LSG was 104 (94.5%), while in SASI it was 1 (9.1%) and in OAGB it was 5 (15.6%); and there were statistically significant variances between the acidic, biliary, and mixed types of reflux in cases with de novo GERD.

In agreement with Nehmeh et al., they assessed the nature of GERD via impedance pH testing in cases presenting with reflux post-OAGB, including 43 cases with OAGB backgrounds who developed postoperative GERD. Their study reported that the acidic type of reflux in LSG was 0, while in OAGB it was 4 (30.7%); the biliary type of reflux in LSG was 0, while in OAGB it was 4 (33.3%); and the mixed types of reflux in LSG was 0, while in OAGB it was 1 (20%) *[13]*.

Regarding relation between GERD development de novo and risk factors, secondary outcome and types findings showed that the mean age of cases with de novo GERD was 36.90±9.38 while non de novo GERD was 36.79±8.85, the male gender of de novo GERD was 45 (29.4) while non de novo GERD was 65 (31.6), the female gender of de novo GERD was 108 (70.6) while non de novo GERD was 141 (68.4), ASA1 of de novo GERD was 70 (45.8) while non de novo GERD was 88 (42.7), ASA2 of de novo GERD was 83 (54.2) while non de novo GERD was 118 (57.3), the Pre-operative BMI Mean of de novo GERD was 60.33±7.48 while non de novo GERD was 47.06±5.55, there was a astatically differences in rapid weight loss between de novo GERD and no de novo GERD with *p*=0.001, EWL 9 months. The mean of de novo GERD was 72.27±17.65, while non-de novo GERD was 73.51±18.8. There were no statistically significant differences between de novo GERD and non-de novo GERD in DM, HTN, OSAS, and hyperlipidemia.

In agreement with Elkassem et al., the results of laparoscopic biliopancreatic diversion with duodenal switch (BPD-DS) on gastro-esophageal reflux disease (GERD) are not well elucidated, including 76 patients. Their study reported that the mean age of cases with de novo GERD was 6 (42.9%), while non-de novo GERD was 9 (32.1%); the male gender of de novo GERD was 4 (28.6%), while non-de novo GERD was 11 (39.3%); the female gender of de novo GERD was 10 (71.4%), while non-de novo GERD was 17 (60.7%); ASA1-2 of de novo GERD was 0 (0.0%), while non-de novo GERD was 2 (7.1%); and there were statistically insignificant variances among de novo GERD and non-de novo GERD in preoperative BMI. Mean with *p*=0.09, there was a statistically significant variance in rapid weight loss between de novo GERD and no de novo GERD with *p*=0.001, EWL 12 months. The mean of de novo GERD was 38.5 (11.4), while non-de novo GERD was 38.6 (6.8). There were statistically insignificant variancesamong de novo GERD and no de novo GERD in HTN, OSAS, and hyperlipidemia, but there were statistically significant variances among de novo GERD and no de novo GERD in DM *[14]*.

Regarding multivariate analysis for predictors of de novo GERD, findings showed that there were statistically significant differences between cases with rapid weight loss, BMI, persistent vomiting, EWL 12 months, type of surgical procedure, LSG, and SASJ, but there was a statistically insignificant variance in OAGB.

In agreement with Choi & Kim, we evaluated the detailed morphology of remnant stomachs after SG with respect to volume and sleeve migration and included 100 patients. Their research observed that there was a statistically significant variance between cases with rapid weight loss, BMI, persistent vomiting, and EWL 12 months *[15]*.

Conclusion:

This research highlights the critical importance of considering both the type of bariatric procedure (particularly sleeve gastrectomy, which showed the highest incidence of de novo GERD at 72%) and preoperative factors like BMI and weight loss patterns in predicting post-surgical reflux risk. Rapid weight loss, especially in high-BMI patients, emerged as a key determinant of GERD development. These findings emphasize the need for tailored postoperative monitoring strategies based on both procedure selection and individual patient characteristics, while underscoring the necessity for further multicenter studies to validate these observations.

Recommendation:

Future studies should use well-designed randomized controlled trials or large observational studies with a representative sample, large sample size, longer follow-up period, and multicenter studies for accurate assessment of long-term outcomes.

References

1- ABOULGHATE M., ELAGHOURY A., ELEBRASHY I., ELKAFRAWY N., ELSHISHINEY G., ABUL-MAGD E., BASSIOUNY E., TOAIMA D., ELEZBAWY B., FASSEEH A. and ABAZA S.: The burden of obesity in Egypt. Frontiers in public health, Aug. 27 (9): 718978, 2021.

2- RUBAN A., STOENCHEV K., ASHRAFIAN H. and TEARE J.: Current treatments for obesity. Clinical Medicine, May 1; 19 (3): 205-12, 2019.

3- DAHER H.B. and SHARARA A.I.: Gastroesophageal reflux disease, obesity and laparoscopic sleeve gastrectomy: The burning questions. World journal of gastroenterology, Sep. 7; 25 (33): 4805, 2019.

4- BACCIU A., MERCANTE G., INGEGNOLI A., FERRI T., MUZZETTO P., LEANDRO G., DI MARIO F. and BACCIU S.: Effects of gastroesophageal reflux disease in laryngeal carcinoma. Clinical Otolaryngology & Allied Sciences, Oct. 29 (5): 545-8, 2004.

5- ASHRAFI D., OSLAND E. and MEMON M.A.: Bariatric surgery and gastroesophageal reflux disease. Annals of Translational Medicine, Mar. 8 (Suppl 1): S11, 2020.

6- CHIU S., BIRCH D.W., SHI X., SHARMA A.M. and KARMALI S.: Effect of sleeve gastrectomy on gastroesophageal reflux disease: A systematic review. Surgery for Obesity and Related Diseases, Jul 1; 7 (4): 510-5, 2011.

7- BRETHAUER S.A., AMINIAN A., ROMERO-TALAMÁS H., BATAYYAH E., MACKEY J., KENNEDY L., KASHYAP S.R., KIRWAN J.P., ROGULA T., KROH M. and CHAND B.: Can diabetes be surgically cured? Long-term metabolic effects of bariatric surgery in obese patients with type 2 diabetes mellitus. Annals of Surgery, Oct 1; 258 (4): 628-37, 2013.

8- SAMI S.S. and RAGUNATH K.: The Los Angeles classification of gastroesophageal reflux disease. Video journal and Encyclopedia of GI Endoscopy, Jun 1; 1 (1): 103-4, 2013.

9- BORBÉLY Y., SCHAFFNER E., ZIMMERMANN L., HUGUENIN M., PLITZKO G., NETT P. and KRÖLL D.: De novo gastroesophageal reflux disease after sleeve gastrectomy: Role of preoperative silent reflux. Surgical endoscopy, Mar. 15; 33: 789-93, 2019.

10- ALMALKI O.M.: Gastroesophageal reflux disease and one anastomosis gastric bypass. Saudi Journal for Health Sciences, Jan 1; 13 (1): 1-5, 2024.

11- KURMANSKYI A.O. and KEBKALO A.B.: Gastroesophageal reflux disease after laparoscopic sleeve gastrectomy. Inter Collegas, Jun 30; 11 (2): 4-12, 2024.

12- NOSRATI S.S., PAZOUKI A., SABZIKARIAN M., PAKANEH M., KABIR A. and KERMANSARAVI M.: Can omentopexy reduce the incidence of gastroesophageal reflux disease after laparoscopic sleeve gastrectomy. Obesity Surgery, Jan. 31: 274-81, 2021.

13- NEHMEH W.A., BARATTE C., RIVES-LANGE C., MARTINEAU C., BOULLENOIS H., KRIVAN S., GUILLET V., LE GALL M., CELLIER C., CARETTE C. and CZERNICHOW S.: Acid reflux is common in patients with gastroesophageal reflux disease after one-anastomosis gastric bypass. Obesity Surgery, Nov. 31: 4717-23, 2021.

14- ELKASSEM S.: Gastroesophageal reflux disease, esophagitis, and Barrett's esophagus 3 to 4 years post sleeve gastrectomy. Obesity Surgery, Dec. 31: 5148-55, 2021.

15- CHOI S.J. and KIM S.M.: Intrathoracic migration of gastric sleeve affects weight loss as well as GERD an analysis of remnant gastric morphology for 100 patients at one year after laparoscopic sleeve gastrectomy. Obesity Surgery, Jul. 31: 2878-86, 2021.

انتشار وتوقعات مرض الارتجاع المريئى بعد جراحة السمنة: تجربة مركز واحد

تُعد جراحات السمنة وسيلة فعالة لعلاج السمنة المرضية، لكنها ترتبط بزيادة خطر الإصابة بمرض الارتجاع المعدى المريئى (GERD) بمعدل يتراوح بين ٢ إلى ٢,٥ مرة مقارنةً بعامة السكان، مما يستلزم مراقبة دقيقة بعد الجراحة.

الهدف: تقدير معدل حدوث مرض الارتجاع المريئى والعوامل المتوقعة لحدوثه بعد إجراء أنواع مختلفة من جراحات السمنة.

المرضى والطُرق: أُجريت هذه الدراسة الاسترجاعية فى مركز جراحة الجهاز الهضمى (GISC) التابع لمستشفيات جامعة المنصورة، مدينة المنصورة، مصر. شملت الدراسة بيانات المرضى الذين خضعوا لجراحات السمنة فى المركز فى الفترة من يناير ٢٠١٥ حتى أبريل ٢٠٢٢. وقد تم التواصل مع المرضى للمتابعة.

النتائج: أظهرت الدراسة تقارب معدلات العلاج التحفظى لحالات الارتجاع المريئى الجديدة بين الأنواع المختلفة من الجراحات: تكميم المعدة بالمنظار (LSG) بنسبة ٤٠٪، وتحويل المعدة إلى الأمعاء الدقيقة بتوصيلة واحدة (SASJ) بنسبة ٢٧,٣٪، وتحويل المسار المعدى بتوصيلة واحدة (OAGB) بنسبة ٣١,٢٪ (القيمة الاحتمالية p=٠,٥١٨).

لم تُظهر الخصائص الديموغرافية فروقًا ذات دلالة إحصائية، لكن لوحظ أن ارتفاع مؤشر كتلة الجسم (٦٠,٣٣ مقابل ٤٧,٠٦ كجم/م^2، p<٠,٠٠١) وفقدان الوزن السريع (٦٥,٤٪ مقابل ٢٤,٨٪، p<٠,٠٠١) كانا من العوامل المتنبئة بحدوث الارتجاع.

أكد تحليل الانحدار أن فقدان الوزن السريع (نسبة الأرجحية OR=٢,٣٦)، وارتفاع مؤشر كتلة الجسم (OR=٣,٦٩)، والقيء (OR=٣,٦) كانت عوامل خطر معنوية (جميعها p ≥٠,٠٠٢)، بينما كان فقدان الوزن خلال ١٢ شهرًا عاملًا وقائيًا (OR=٠,٦٩).

كما أظهر المرضى المصابون بالارتجاع المريئى تحسنًا أكبر فى ضغط الدم (٢٢,٢٪ مقابل ١٢,٦٪، p=٠,٠١٦)، لكن مع معدلات قيء أعلى (٤٣,٦٪ مقابل ١٢٪، p<٠,٠٠١).

الاستنتاج: تحمل عملية تكميم المعدة أعلى معدل خطر لحدوث الارتجاع المريئى الجديد. وتؤثر كل من نوع العملية والعوامل الخاصة بالمريض (مثل ارتفاع مؤشر كتلة الجسم وفقدان الوزن السريع) بشكل كبير على تطور المرض، مما يتطلب خطة متابعة فردية دقيقة بعد الجراحة.