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INTRODUCTION

Bariatric surgery is emerging as a definitive therapeutic alternative for obesity and has proven to be the most effective long-term treatment for sustained weight loss and improvement of comorbidities in obese and morbidly obese patients¹. Bariatric surgery is broadly classified into restrictive and bypass procedures. One of the limits is surgery laparoscopic sleeve gastrectomy (LSG) is a relatively new procedure for weight loss with low operative risk, especially suitable for patients with increased risk for surgery, either because of their comorbidities or their weight².

LSG is being studied as a separate viable surgical option for the treatment of morbid obesity, is being considered as the first step in the process stage patients with super heavy / high risk because you lost weight before a laparoscopic Roux-en-Y gastric bypass or biliopancreatic diversion-duodenal switch procedure^{3,4}.

Benefits include low levels of LSG problems, prevent foreign material (bands), maintenance

SLEEVE GASTRECTOMY;

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ABSTRACT... Objective:-The aim of our work is to present Experience of Sleeve Gastrectomy at Centre of Bariatric Surgery of Dow University of Health Sciences. **Methods:** All patients were assessed multidisciplinary team before operation. Indications for LSG were BMI 35kg/m² with comorbidities and BMI >40kg/m² without comorbidities. Standard surgical technique adapted. Gastric division by a cutting stapler. The whole staple line was observed for bleeding and tested for leak. **Results:** Total 10 patients were studied of which were four males and six females, Median age of was 40 years. Pre-operative median BMI was 52.2kg/m² (range from 46 to 61kg/m²). Median post-operative BMI of 9 months was 34.33kg/m² (range from 28 to 40). Out of 10 patients, observed complications of bleeding was seen in one case and wound infection occurred in 2 cases. **Conclusions:** Considerable weight loss observed in LSG.

Key words: Bariatric Surgery, Morbid Obesity, Sleeve Gastrectomy, Obesity, Weight loss

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of normal gastrointestinal forward, the absence of malabsorption, a lower incidence of dumping syndrome and reduced ghrelin mass production of hormone, which represents the height limits of bariatric surgery procedures. The aim of this work is to present Experience of Sleeve Gastrectomy at the Centre of Bariatric Surgery of Dow University of Health Sciences.

MATERIAL AND METHODS

Centre of Bariatric surgery started in October 2012 from April 2013 to January 2014, 10 patients were operated and the laparoscopic sleeve gastrectomy (LSG) is like the process of primary morbid obesity. All patients were observed preoperatively with a multidisciplinary team work along with Bariatric Surgeon, endocrinology, cardiology, psychiatry and anesthesiology. Indications for LSG were BMI 35kg/m² with comorbidity (diabetes mellitus, hypertension, joint pain, sleep apnea) and BMI >40kg/m² without comorbidity. Every patient underwent upperGI endoscopy to access stomach. Three patient were found to have helicobacter pylori, complete eradication therapy

was done before putting them in the inclusion criteria. Patient were in detail counselled about the possible advantages, probable complications and adverse effects of LSG before offering him bariatric surgery. Standard surgical technique was adapted. The operating table used for surgery that could bear 200 to 300Kg of weight. Position of patient was supine with right hand on the side of patient while left was extended in abduction. Feet were supported at the end of table, so not to let the obese patient to slide down while tilting in reverse trendelenburg position. Two belts were fasten one at gluteal region and other at the knee area. Intermittent compression stocking were applied to avoid DVT, in addition to prophylactic subcutaneous enoxaparin injection. Pneumoperitoneum was created by Verese needle (Palmer's technique). Pressure of pnemoperitoneum kept between 16mmhg and 18mmhg. 5 trocars were placed. 10mm trocar 18cm-20cm below umbilicus just 2cm left of midline, 12mm trocar 3cm below to left costal margin, 5mm trocar just left of xiphoid process for liver retraction, 5mm trocar along midclavicular line below left costal margin and last 5mm along anterior axillary line below the costal margin. One of patient diagnosed with gastroesophageal reflux pre-op on endoscopy was treated by laparoscopic crural repair before proceeding with sleeve gastrectomy. In LSG particular attention is paid to mobilization of fundus. Posteriorly stomach is completely separated. Gastroesophageal (GE) junction and the left crus of the diaphragm were identified to facilitate complete resection of the gastric fundus, no chance of redundant posterior wall. Frorogastric tube integrated into the pylorus with a small curvature. This helped to measure the size of the sleeve in the stomach and provide a uniform way to the abdomen. Stomach for a cut in the basic starting point 3 cm proximal to the pylorus, the antrum was saved. The stapler was fired consecutively along the length of the orogastric tube until the angle of His was reached. First fire was of green staple as initial part of stomach wall is thick. Rest of fire with blue staple. Particular attention was on gastric angle to avoid gastric stenosis.

The whole staple area was observed for bleeding and tested for leak by infusing methylene blue into the remaining stomach. Latter the staple line was reinforced by running sutures. The resected stomach was extracted through 12mm port. A gastrografin swallow was performed on the 1st postoperative day and clear liquidswere started. Patient is allowed liquid diet for next week. Patients were discharged on an average 4 to 5 days. Patient followed up for every two weeks in first months then monthly for two months then three monthly for first year.

RESULTS

Total 10 patients were studied of which were four males and six females, Median age of was 40 years. Pre-operative median BMI was 52.2kg/m² (range from 46 to 61kg/m²). Follow-up was at 1, 3, 6 and 9 months. Median Excess Weight loss 20.64% (after 1 month of surgery), 42.07%(after 3 month of surgery), 52.46% after 6 month of surgery & 62.25% (after 9 month of surgery). Median post-operative BMI of 9 months was 34.33kg/m² (range from 28 to 40). Median post-operative hospital stay was 6 days (4 to 8 days). Operative time ranged from 180 min to 240 min (average 210 min). Out of 10 patients we observed complications of bleeding in one case and wound infection occurred in 2 cases.

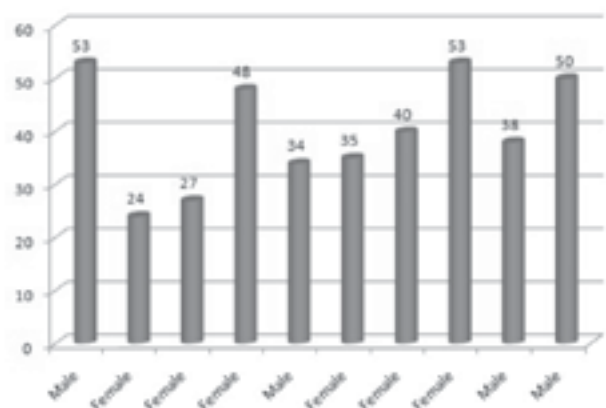


Fig-1. Age of Patients

DISCUSSION

In Pakistan the prevalence of obesity is on rise, 1/4th population of Pakistan is overweight or

Patient No	Sex	Age	Pre-op BMI	Postoperative Excessive Weight Loss (%)			
				1month	3month	6month	9month
1	Male	53	47	15%	24.61%	30.7%	43.07%
2	Female	24	46	19%	31.11%	37.7%	55.55%
3	Female	27	50	33%	51.11%	64.4%	62.22%
4	Female	48	46	15%	52.51%	70%	-
5	Male	34	61	18.6%	42.05%	60%	-
6	Female	35	60	19.48%	32.46%	51.94%	-
7	Female	40	50	17.30%	55.76%	-	-
8	Female	53	40	23.80%	47.61%	-	-
9	Male	38	60	23.08%	48.71%	-	-
10	Male	50	61	22.20%	34.59%	-	-

Table-I. Pre and Postoperative BMI

obese according to Indo-Asian- BMI cutoff⁶. Obese people have an increased risk of different of health problems like dyslipidemia, type II diabetes, coronary artery disease, hypertension, osteoarthritis, stroke and certain form of cancers. Increase health risks translate into increase pressure on health⁷. LSG is innovative procedure for management of obesity. It was originally developed as first stage bariatric procedure to reduce surgical risk in morbidly obese patients to permit some weight loss before performing extensive laparoscopic procedure, Roux-en-y Gastric by-pass, or biliopancreatic diversion⁸.

Benefits of LSG to others (Gastric banding, Roux-en-y Gastric by-pass, or biliopancreatic diversion) are that it has no foreign material, no anastomosis, pylorus retaining, no dumping, no malabsorption, less likely to cause internal hernias and intact gastrointestinal continuity to explore by upper GI endoscopy⁹.

Our study included ten patients, six females & four males with a median age of 40 ± 2.3 years. However the study of Gentileschi P reported 8 patients, 5 were women and 3 were men, with a mean age of 44.4 years¹⁰.

In our case series, out of ten patients two developed wound infections at 12 mm port site through which resected stomach was extracted. One case of bleeding was reported from staple line at time of surgery which was controlled by clips

and reinforced by running sutures. Six hours after the operation patient drain showed 700ml blood, hemoglobin dropped from 15gm/dl to 10gm/dl, two units of whole blood were transfused which brought Hb to 12gm/dl and no further drop. Study of 200 cases revealed few patients bleeding, few of wound infection and two cases of leak (same paper). In our study no leak from staple line was reported.

There is no standardization for size of orogastric tube. Initial size of orogastric tube was up to 60 Fr considering LSG as part of two stage procedure with only 30% excess weight loss in 11 months. Since then surgeons began using smaller-sized orogastric tube with greater % EWL (60%), small size also avoids stretch of stomach. Our case series % EWL (62.25%) is near to study which shows (60%). In another series EWL was 64.4% in 28.2-month follow-up (Same paper). Long-term effect of LSG will appear when number of Bariatric surgeons document their experience with primary LSG of more than 10 years period. Up till now we can say that LSG is a stand-alone weight loss operation in the short and mid-term period with comorbids resolution.

There is a debate that LSG is a process limits versus the combination of restrictions / procedures hormone. Literature reveals that most LSG also involved in ghrelin levels and hunger.

CONCLUSIONS

Considerable weight loss observed in LSG procedure with a low rate of problem, plus a beneficial effect on comorbidities. His success in the short term in terms of weight loss seems reasonable; Further studies are needed to examine the possibility that the future of our population.

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REFERENCES

1. Abdelbaki TN, Huang CK, Ramos A, Neto MG, Talebpour M, Saber AA. **Gktric plication for morbid obesity: a systematic review.** *Obes Surg.* 2012 Oct;22(10):1633-9.
2. Alami RS, Morton JM, Schuster R, Lie J, Sanchez BR, Peters A. **Is there a benefit to preoperative weight loss in gastric bypass patients? A prospective randomized trial.** *SurgObesRelat Dis.* 2007;3(2):141-5.
3. Iannelli A, Dainese R, Piche T, Facchiano E, Gugenheim J. **Laparoscopic sleeve gastrectomy for morbid obesity.** *World J Gastroenterol* 2008;14(6):821-7.
4. Gumbs A, Gagner M, Dakin G. **Sleeve gastrectomy for morbid obesity.** *Obes Sur* 2007;17:962-9.
5. Jafar TH, Chaturvedi N. **Prevalence of overweight and obesity and their association with hypertension and diabetes mellitus in an Indo-Asian population.** *CMAJ* 2006;175(9):23-9.
6. Karmali S, Schauer P, Birch D, Shanna AM, Sherman V. **Laparoscopic sleeve gastrectomy: an innovative new tool in the battle against the obesity epidemic in Canada .** *Can J Surg. Apr* 2010; 53(2): 126-132.
7. Milone L, Strong V, Gagner M. **Laparoscopic sleeve gastrectomy is superior to endoscopic intragastric balloon as a first stage procedure for super-obese patients (BMI > or =50).** *ObesSurg* 2005;15:612-7.
8. Baltasar A, Serra C, Perez N. **Laparoscopic sleeve gastrectomy: a multi-purpose bariatric operation.** *ObesSurg* 2005;15:1124-8.
9. **American Society for Metabolic and Bariatric Surgery. Position statement on sleeve gastrectomy as a bariatric procedure.** Available: www.asbs.org/Newsite07/resources/sleeve_statement.pdf (accessed 2010 Feb. 1).
10. Gentileschi P, Camperchioli I, Benavoli D, Di Lorenzo N, Sica G, Gaspari AL. **Laparoscopic single-port sleeve gastrectomy for morbid obesity: preliminary series.** *SurgObesRelat Dis.* 2010 Nov-Dec;6(6):665-9.



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and a sleepy conscience:
this is the ideal life.

Mark Twin

