

Synchronized Cholecystectomy With Laparoscopic Sleeve Gastrectomy Is It Benefit Or Not?

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Abstract : The wide spread of gall bladder stones in morbid obese individuals is about 19–45 % of cases. Laparoscopic sleeve gastrectomy is so famous save operation. When we deal with patients of cholecystitis due to gall stone at the time of Lap. SG, their is controversial options to remove the gallbladder or not . We report our experience with LSG and L.CC at the same sitting.

Aim: To detect the efficiency of synchronous cholecystectomy during laparoscopic sleeve. And is it benefit for the patients or not?

Patient and methods: Between May 2019 and October 2021, in zagzic university surgical department laparoscopic team. We present 50 morbid obese cases, group A; 25 cases of gall stones with morbid obese patients and group B; 25 patients of laparoscopic sleeve patients as a control group.

Results: 50 patients were the total number of our patients study. 40.58 were the mean age of the patients . Without statistically difference between groups in terms of complications ($p = 0.669$). Statistical difference was significant in the duration of the operation ($p < 0.001$) .

Conclusion: It's no significant risk on patients with gall stones to do laparoscopic cholecystectomy during sleeve gastrectomy. We advise to do only if gallstone cholecystitis but, when gallstones are absent, it is unnecessary.

Keywords; Bariatric, Sleeve gastrectomy, Cholecystectomy, benefite or not?

Introduction:

On of the dangerous and famous disease affecting higher percent in the female than male is the obesity that produce more disability and decrease patients life span also if associated with diabetic or heart disease or hypertension leads to high risk of co morbidity and fatality factor . Theirs direct relation between the fatality and co morbidity if associated with diabetic type 2 (1-4), so increase the BMI in diabetic or heart disease patient mean increase the rate of fatality and more comorbidity. The role of Bariatric surgery (BS) has great sharing in the gross updating in the different procedureds to minimize the obesity morbidity and little complications decreasing the weight in obesity related disease or complicated by disease like diabetes ,heart disease and arthritis (6-8).

Sleeve gastrectomy (SG) is simple operation with little complications that make it famous operation in the last years as low risk operation .we must remember the morbid obesity is associated with cholecystitis and its complications [6]. Obesity is ones of disease that associated with high prevalence of cholelithiasis, cholecystitis, and pancreatitis. Nerve forget the gallstone also complicated after trials of body weight loss(regimen) or after SG. theirs is controversial about to remove the gall bladder during LSG or not as prophylactic or not also if patient already had gall stone during LSG we remove or not [5]. So the debate on patients benefit of the concomitant surgery once more still controversial. There is yet no consensus regarding the management of gallbladder cholecystis during SG some advocate and some agree [6-9].

We can judge the efficacy of synchronus LSG and LCC inthe same sitting benefit or not?

Patients and methods

Patients going for laparoscopic SG in our hospital at zagazig university surgical department between May 2019 and October 2021 were included in the study. This a retrospective observational design study was carried out 50 consecutive patients underwent surgical operation morbid obesity with laparoscopic sleeve, these were randomized either to the group (**A** group 25: laparoscopic sleeve with cholecystectomy and group **B 25** :only laparoscopic sleeve gastrectomy).

Inclusion criteria

- 1-Patients who above 18 years and who below 60 years.
- 2-Patients with good organs function so fit for surgery
- 3-All patient who co operative, mentally sable agree for operation

Exclusion

- 1- past history of already cholecystectomy patients
- 2- unfit patients.
- 3- patients refusing to share the research.

Preoperative care

-All patients are routinely searched out by abdominal US, upper endoscopy and chest X ray.

- CT chest was done for covid 19 cases.
- Complete preoperative investigations(routine lab.)

Operative technique

general anesthesia. Operative technique construction was different according to groups groups (A and B). The patients were supine and leg separated we gave antiemetic and antibiotic after induction or at the start of operation .12-mm port is placed in the left lateral flank, medial to the edge of the ascending colon as the patient in a supine position that trocker at the same level as the umbilical port. another trocker introduced under direct vision approximately 15 cm under the xiphoid and 3 cm to the left of the midline. A 45-degree angled laparoscope is introduced through the peritoneal cavity, also theirs another trocker;(5mm) is introduced under the edge of left costal margin between the xiphoid process and the left flank port. Another two trockers one at epigastric region another at mid epigastric area both are (12mm). The last is caudal and medial to the previous port. To attain good visualization to the stomach during the operation we must elevate the liver. Also after visualization of the pylorus we must elevate the stomach . We start to visualize the greater momentum good by A ultrasonic scalpel after entering greater sac .then dissection started is 5 cm from the pylorus to freeing the greater momentum from the stomach ligate the short gastric blood vessels using the laparoscopic ultrasonic scalpel. . the important of gastroscopy angle of His (9.8mm) to visualize the esophagus, stomach ,pylorus and duodenum also bougie dilator also good landmark along the stomach or lesser curve to Perform suitable vertical sleeve gastrectomy .by linear cutting and serials stapling and stomach transection all at the same time but we must put the stomach staying just to the left and lateral to the endoscope. in patient of group A cholecystectomy was carried after completion of the SG, we usually use daring in all patients passing in the stomach bed and gall bladder bed.

gastrograffin swallow study to evaluate for leak or stricture was done in the first postoperative day. . Following gastrograffin swallow some patients had post operative edema that not allow for dye to pass if we let the patient one to two days later the edema will be subside and disappears , if the patient is medically stable was discharged and follow-up 7-10 days later.

Long follow up 1,3,6,12 months come to follow up. Also routine bariatric labs done after 6 months and one year for minerals ,electrolytes ,anemias types and all nutritional deficiency .

Demographic data (gender, age, and BMI) and preoperative cholelithiasis status were compared.

Statistical analysis

Data were analyzed using SPSS (Statistical Package for Social Science, Bristol University, UK ,V16) . data was in the form of t-test was used to compare quantitative data. OD was considered if

Wexner score was more than 5. Significant improvement in OD in Wexner or Pescatori score of at least 25%.



Photo (1): Sleeve gastrectomy female patient 32 years old

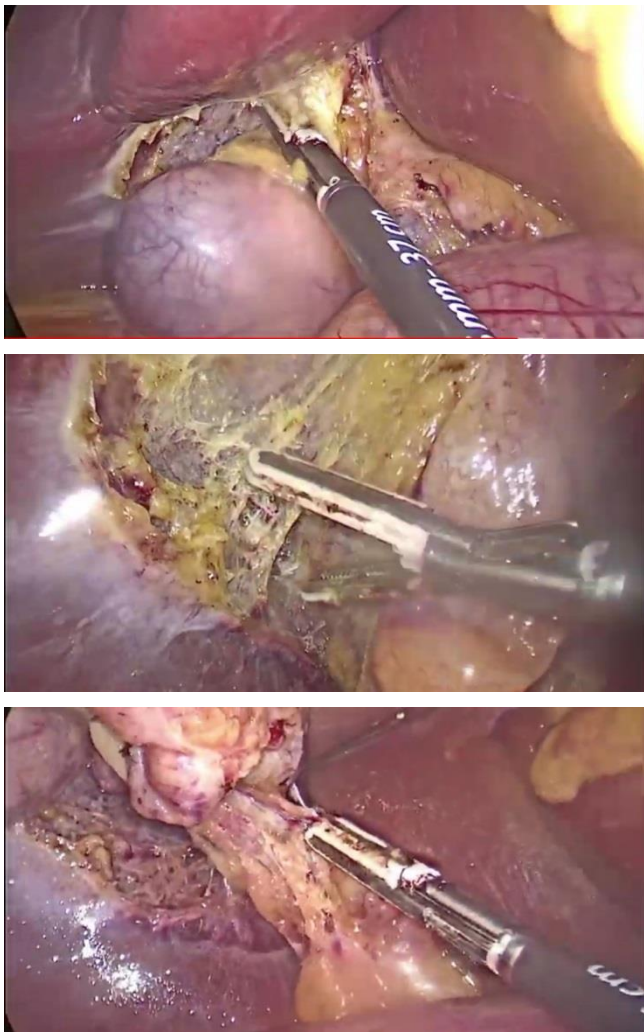


Photo (2): laparoscopic cholecystectomy in female patient 53 years old

Results

We performed the study on 50 cases morbid obese were classified into two groups group A (laparoscopic sleeve gastrectomy with cholecystectomy), group B (only laparoscopic sleeve gastrectomy) as a control group. Data were collected in table (1).

There was no statistically difference between group A and group B except mean operative time and postoperative hospital stay only, which were longer in the group A than in the group B ($P < 0.001$).

Females patients more common in both groups, between 36 and 45 years, mean age (range) 40 in both groups. Mean BMI (kg/m^2) 43.9 43.

We detect the complications rates 4% in both groups in our the study. There was 1 case (4%) of bile leakage in the study group. One was due to inadvertent common hepatic duct injury during sharp dissection in a liver-encased triangle of Callot. The surgery was converted to an open procedure with direct suturing of the duct. Drain used to control bile leak that gradually disappear without further intervention. Surgery duration was prolonged by average +35 min. in the study group and had no effect on hospitalization time. cholecystectomy, Median hospital stay length was 2 days in two groups.

Variables		LSG + CC(n = 50)(A)	LSG(n = 50)(B)	P-value
Age [years]		40.7 \pm 8.2	40.5 \pm 11.1	0.913
BMI [kg/m^2]		42.9 (40.8–47.5)	46.8 (44.7–49.2)	0.003
Gender	Male	5(20%)	3 (12%)	0.025
	Female	20(80%)	22 (88%)	0.025
Surgery duration [min]		65.7 \pm 8.5	57.1 \pm 8.7	< 0.001
Complications	Gastric leakage	No	No	
	Others	Bile leak 1 case 4%	No	
Hospital stay	Same in both groups	2 days	2 days	

Table (1): demographic data and surgery sequel.

Discussion

Morbidly obese patients has different rate in morbidity between 19 and 45% and up to 25% of patients subjected to cholecystectomy before bariatric surgery. Our patients population shows similar scopes (but not in patients number). Numerous revisions periodicals discussion about the results of concomitant LCS with SG during RYGBP prolong the operation time, Tarantino and colleagues also found that increase in hospital stay time if the prophylactic cholecystectomy done (without gallstone) during

RYGBP but not associated with morbid complication or higher risk.[9-12].

The current study depend on LC and LSG are safer in the same sitting. only problem the patient stay one day more because longer operation time. Also the concomitant operation with patients of already gallstone the results found the same complications in patients with Asymptomatic gallbladder.

Our data appear to previous studies focused on operative time, complications and hospital stay that were not increased alone but concomitant LC added 40.7 min (range 15–110 min). Others found increase 36 min. In operation time And one day stay more and one patient had bile leakage, that requiring open operation to conversion hepatico-jejunostomy and the other leak stopped spontaneously and other need stent because of slipped stapler [7-12].

In study we found 0.6% increase in surgical suite infection and concluded that concomitant LC and LSG are safe in gallstone disease but that if the gall stone found before our operation [9-12].

Our series found concomitant LC with SG increasing the operative time by 40.7 min with one more hospital stay . We advise to start SG first as it is time consumer need long time but CS need little time to avoid exhaustion also if we found bile leak and need for conversion we can use right subcostal for incision(not midline)that give good visualization and avoid delayed wound complications. For Tarantino et al., starting with LC then SG so, he avoid exhaustion with good performance [10-12].

However, Papavramidis et al. in their study he found 6 patients had severe adhesion 17.6% and 4 patient suffering from severe bleeding (11.7%.) and mean operation time 75 ± 12 min, and the mean hospital stay was 2.8 so, he not recommend it [12].

Finally we recommend the same sitting laparoscopic cholecystectomy with laparoscopic sleeve gastrectomy in morbid obese gall stone patients, it's safer , no harm and favorable outcome.

Conclusion: It's no significant risk on patients with gall stones to do laparoscopic cholecystectomy during sleeve gastrectomy. We advise to do but when gallstones are absent it is unnecessary.

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