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## OUTCOME AFTER CONCOMITANT CHOLECYSTECTOMY WITH LAPAROSCOPIC SLEEVE GASTRECTOMY IN THE SAME SITTING ,RISKS AND BENEFITS

**Hassan A. Saad**

Department of Surgery, zagagic university , zagagic, Egypt.MD  
Corresponding author : ebramos\_2010@yahoo.com

**Mohamed Riad**

Surgicalr Department, University, Zagagic, Egypt.MD

**Kamal Rabi Eid**

Surgical Department, MD. AL-Azhar Faculty Of Medicine  
Kamalrabi78@gmail.com

**Mohamed I Farid Md Zagagic**

University Surgical Department  
[mohammad.fareeed55@yahoo.com](mailto:mohammad.fareeed55@yahoo.com)

**Azza A Baz**

**Zagagic University, Surgical Department**  
[Azza.baz55@yahoo.com](mailto:Azza.baz55@yahoo.com)

**Ashraf Abdelmonem Elsayed MD**

Zagagic University Surgical Department  
thesmartestsurgeon@gmail.com

**Mohamed E Eraky**

Department of Surgery, Zagagic University , Zagagic, Egypt.MD

**Background:** Gall bladder stones was widely seen in morbid obese cases is 20-55 % of cases. Also Laparoscopic sleeve gastrectomy (LSG) is widely technique done for morbid obesity now day globally. The patient LGS was benefit from synchronized cholecystectomy or not is the aim of our work because dealing with cholithasis during LSG is still debate.

**Aim:** To judge the efficiency of synchronous cholecystectomy during laparoscopic sleeve.

**Patient and methods:** Between dec 2020 and feb 2022, in zagzagic university surgical surgical department with laparoscopic team. We had 100 cases present with morbid obesity , group **A**; 50 morbid obese with of gall stones group **B**; 50 patients of laparoscopic sleeve patients only .

**Results:** A total of 100 patient were in the study. The mean age of the patients was  $42.58 \pm 10.36$  years. between two groups no visible complications different ( $p = 0.669$ ). but duration of the operation was statistically different between both groups ( $p < 0.001$ ).

**Conclusion:** We advise to do laparoscopic cholecystectomy if the patients were symptomatic and physical fit as no significant difference detected in both

**Keywords;** Cholecystectomy ,Bariatric, Sleeve gastrectomy, , Risks.

### **Introduction:**

Obesity is chronic illness had many comorbidities that affect patients life, increase and many critical situations .such hypertension, diabetes, heart disease, arthritis, cerebrovascular stroke, and gallstones, are the co-morbidities of obesity. All had because increases in Body Mass Index (BMI) and so, increases co-morbid conditions, [1- 4].

Bariatric surgery (BS) were dealing with high BMI 40% or above by many of procedures performed most famous sleeve gastrectomy. That resulting significantly reduce weight and increase life expectancies [6-8].

Laparoscopic (SG) had great popularity over the last years as it is simple physiological good outcome both with surgeons and patients. [6].

Obese ones have significantly suffer from cholecystitis, cholelithiasis, , pancreatitis. The prevalence of cholelithiasis occurred due to increased body mass index (BMI). Moreover, but also, during rapid weight loss increased risk of gallstone formation .In the past, during open was the classic , they were not preferred prophylactic cholecystectomy and was delayed [5].

Some not do in association because of bad physical conditions , while others perform routine prophylactic cholecystectomy ignoring symptomatic or not [6-9].

We will detected the outcome after concomitant SG and laparoscopic cholecystectomy

### **Patients and methods**

All cases subjected to laparoscopic SG alone group B and with concomitant laparoscopic cholecystectomy in one sitting on group B in a surgical department, zagagic university between Dec 2020 and Feb. 2022 w. This study was carried out on 100 consecutive patients underwent surgical laparoscopic sleeve, these were divided to laparoscopic sleeve with cholecystectomy : group (A) and laparoscopic sleeve gastrectomy only : group(B)

### **Inclusion criteria**

- 1-Patients above 20 years and under 60 years.
- 2-Patients physically fit for surgery acceptable ranges. With normal routine investigations
- 3-mentally fitness.

### **Exclusion :**

- 1- cases with history of previous cholecystectomy.
- 2- bad physical fitness.
- 3-cases refuse sharing and consenting.

### **Preoperative care:**

-abdominal US, upper endoscopy and chest X ray. Fir preoperative fitness

-investigation for covid 19 cases.

-Complete routine preoperative lab. were ordered..

### **Technique:**

For both groups (A and B) the same procedure after general anesthesia. The patients were supine position are taken with diverted abducted legs on table antibiotics administered. Approximately 15 cm below the xiphoid 10-mm optical trocar under direct vision and 45-degree angled laparoscope for all abdomen visualization and 3.5 cm to the left of midline. We introduce A 10-mm port 3cm at the flank to left side (at the level of umbilical port), medially is the colone edge ( patient in a supine position) . then along the left subcostal margin 5mm trocar mid point inbetween left flank and xiphoid process. Another two10-mm port is introduced at epigastric region slight at right area . increase no. of porta is according to need. elevation of the liver to attain good visualization of the entire stomach during the SG. 5cc away the pylorus of start vasoligation. short gastric vessels. dissected 3-4 cm from the incisura extending from the Angle of His. gastroscopie see lesser curve of the stomach and first portion of the duodenum ,after complete vasoligation star cutting of the stomach by linear stapler to transect the stomach .

In group A, we performed after that laparoscopic cholecystectomy was carried out in a routine after completion of the SG, is safe . Drains are inserted. Photos are showing the technique.

patients undergo a gastrograffin swallow evaluation first admission day study to evaluate the leakage.. post-operative edema can lead to delayed leakage just edema subside stop leakage and can resolve after few days and negative gastrograffin test. post discharge follow-up one week later, then one month then 6 months to one year for assessment and routine lab., mineral level and BMI affection

Follow at one month, Six months, then one year for check up lab. ,general condition, degree of fat loss Patient characters (age gender, and BMI) and preoperative gall stone all recorded

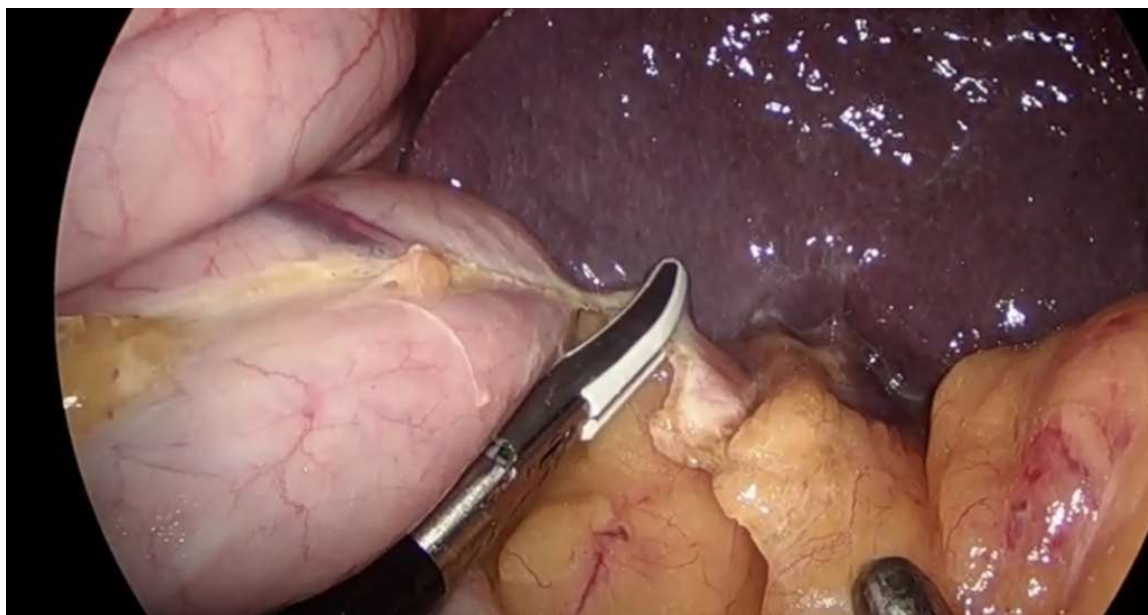


Figure: 1 freeing the stomach from spleen

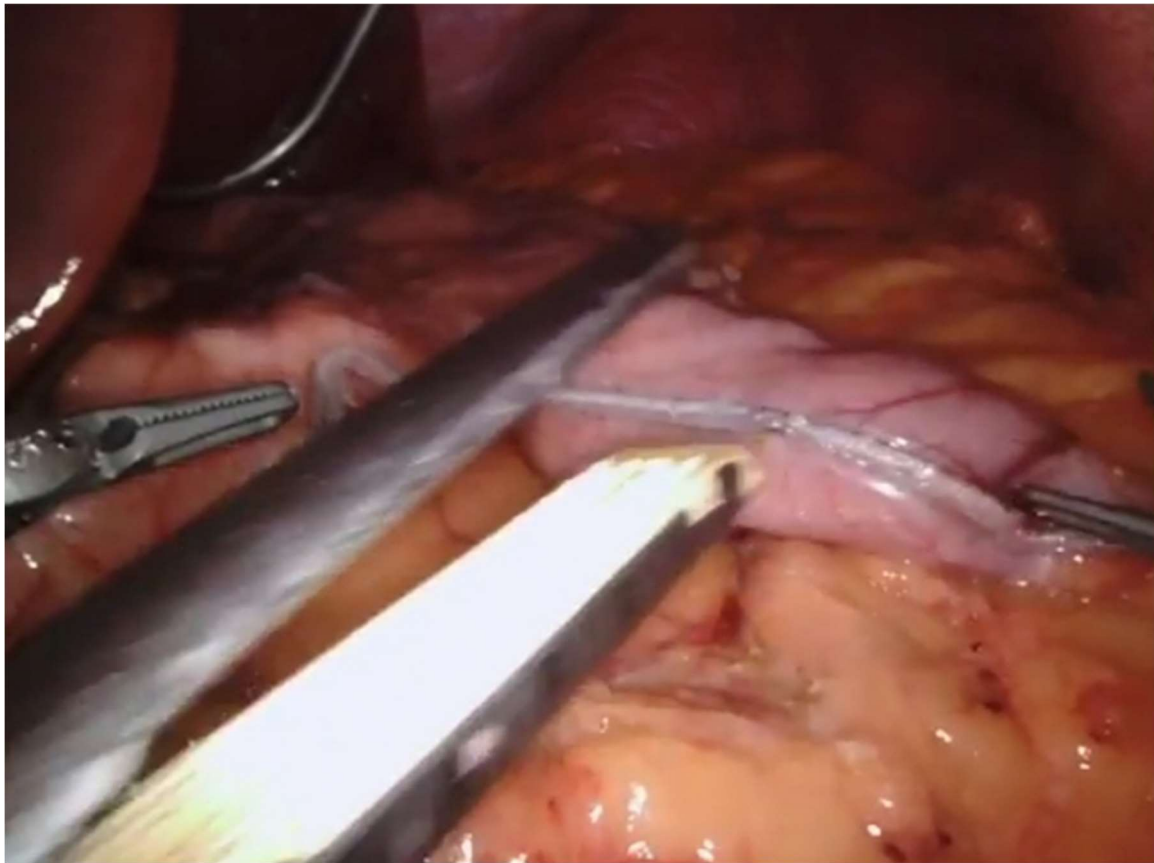


Figure: 2 gastric stapling and resections

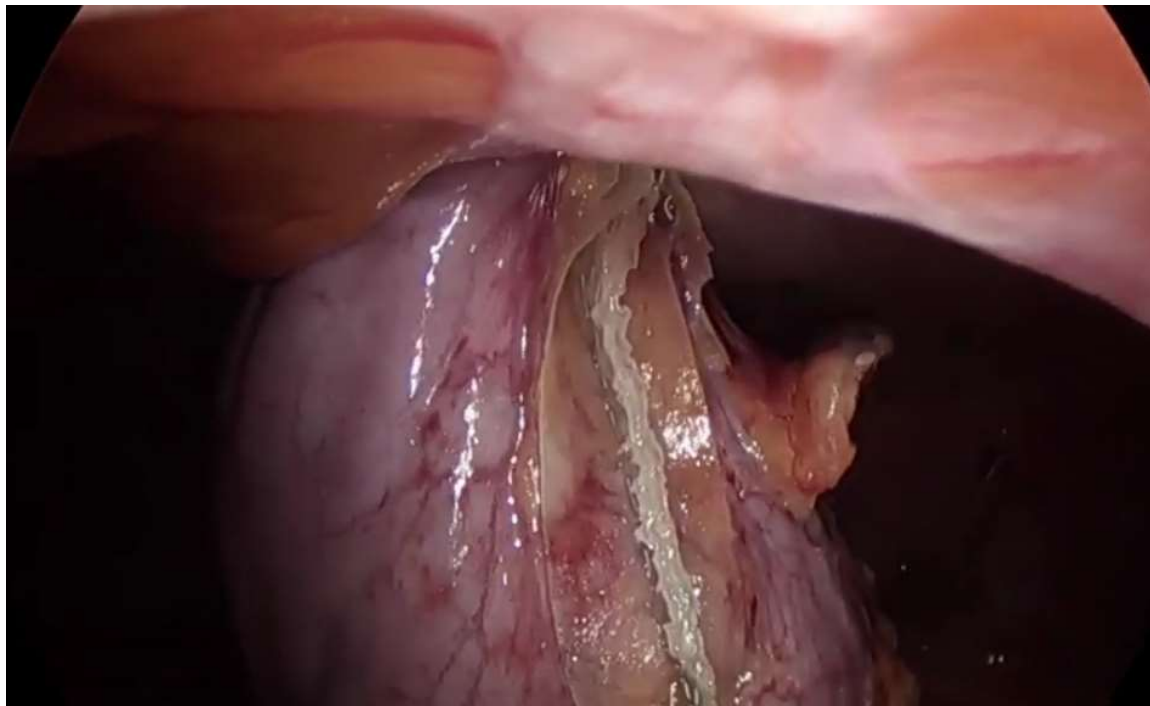


Figure:3 removal of residual stomach tube after gastrectomy

### Statistical analysis

Data were analyzed using Excel and SPSS version 16 Microsoft Windows. The description  $\pm$  SD for quantitative data . The Student t-test was used to compare quantitative data (mean  $\pm$  SD) between two groups. P values less than 0.05 were considered significant. Wexner score was more than 5. Significant improvement in OD or FI was considered as a reduction in Wexner or Pescatori score of at least 25%

### Results

We performed the study on 100 cases morbid obesity, groups group A (laparoscopic sleeve gastrectomy with cholecystectomy), but group B (only laparoscopic sleeve gastrectomy). Most patients were females, mean age 40 years, and mean BMI (kg/m<sup>2</sup>) 43.9 both groups.

Out come of LSG + LC group and SG group near results except hospitalization time and length of operative duration ( $P < 0.001$ ). Complications rates in groups A . were 4 % There was one case of bile leak so, laparotomy conversion with direct repair of the duct. Residual bile leak intervention by drain. Another one case of wound infections.

Surgery duration was prolonged by average+<sub>65</sub> Min. the study group and had no effect on hospitalization time. cholecystectomy, mean length of hospitalization time was 2 days in group A and one day case in group B .

**Table (1):** patients character and postoperative , operative and sequel.

Variables		LSG + CC(n = 50)(A)	LSG(n = 50)(B)	P-value
Age/year		40.7 $\pm$ 8.2	40.5 $\pm$ 11.1	0.913
BMI/kg/m <sup>2</sup>		42.9 (40.8–47.5)	46.8 (44.7–49.2)	0.003
Gender	Male	10 (20%)	5 (10%)	0.025
	Female	40 (80%)	45 (90%)	0.025
Surgery duration [min]		65.7 $\pm$ 8.5	17.1 $\pm$ 8.7	< 0.001
Complications	Gastric leakage	No	No	
	Others infection	Bile leak 1 case 2% 2	No 1	
Hospital stay	Same in both groups	2 days	1 days	

### Discussion

The described frequency of gallstones in morbidly obese patients differs between 40 % in patient has no history of previous cholecystectomy and 25 % of patients had history of did it before bariatric surgery. Our patients population shows similar results. Numerous revisions periodicals ,Tarantino and colleagues found that prophylactic cholecystectomy high risk complications ,long operation time and delayed hospitalization days. , But 16 % only if by pass alone and may required a subsequent cholecystectomy [9-12].

We observe the advantage of both LC and LSG together as, no further patients subjected to risk of further operation. Because SG with LC is had longer operative duration 65min and longer hospitalization 2 days, also the incidence of complications if SG and LC the nearly same as delaying LC after SG. Concomitant LC decrease but not eliminate for further cholecystectomy later in patients with cholithiasis but we found it is indicated in symptomatic patients only.

Our data appear to be interesting of morbidity, from long operation time due to simultaneous LC. But the hospitalization days and length of operation time were not significant changes while 40.7 min difference increasing with concomitant CS and LC (range 20 alone–65 min concomitant LC). Others found increased 35 min. Difference without changes in length of hospitalization days . [7-12].

One more study confirmed that both LC with SG only 0.6% infection and concluded that both techniques together were safe if symptomatic gallstone disease [9-12].

Our results found that both LC with SG the infection rate in group A 2% but in group B is 1% increasing operative duration by 40.7 min which is similar to the literature but the stays was increased due to bile leakage that need conversion.

We recommend begin with SG and then LC if the patient physically fit and also symptomatic cholithiasis , as if we started first with SG is more time consumer with LC than alone SG [10-12].

Others found that LC was safer because results of decreasing in body weight decrease the risk of operation and provide easy operation. But, Papavramidis et al. in their study did not agree with this concept(delayed LC after bariatric surgery) and showed that 6 patients about (17.6%) laparotomy soon started because marked adhesions and difficult lap. vision .also in two patients (5.9%). As severe bleeding from the gallbladder bed. The median operative duration was  $75 \pm 12$  min, and the stay days  $2.8 \pm 1.1$  days. [12].

Finally we recommend the concomitant cholecystectomy with laparoscopic sleeve gastrectomy in morbid obese, symptomatic gall stone patients fit for operation time, so, it's safer , no harm and accepted outcome.

**Conclusion:** It's no visible significant risk on patients with symptomatic gall stones if concomitant laparoscopic cholecystectomy with SG. Done. But no need if not asymptomatic or unfit to waistband long operation time.

### **Authors and Affiliations**

#### **Hassan A. Saad.**

Department of Surgery, Zagagig university , Zagagig, Egypt.MD

Corresponding author : ebramos\_2010@yahoo.com

#### **Mohamed Riad**

Surgicalr Department, University, Zagagig, Egypt.MD

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**Kamal Rabi Eid**

Surgical Department, MD. AL-Azhar Faculty Of Medicine  
Kamalrabi78@gmail.com

**Mohamed I Farid Md Zagagic**

University Surgical Department  
mohammad.fareed55@yahoo.com

**Azza A Baz**

**Zagagic University, Surgical Department**

Azza.baz55@yahoo.com

**Ashraf Abdelmonem Elsayed MD**

Zagagic University Surgical Department  
thesmartestsurgeon@gmail.com

**Mohamed E Eraky**

Department of Surgery, Zagagic University , Zagagic, Egypt.MD

**Hassan A saad : conceptualization, , main writing**

**Mohamed Riad: , inanalysisvestigations editing, : methodology**

**Kamal rabie : Analysis, investigation**

**Moh. Farid: investigations editing,: : methodology**

**Azza A: software, writing, validation**

**Ashraf Abdelmonem Elsayed : software and statistics**

**Mohamed Eraky: , draft, editing, supervision**

**Corresponde to**

**Hassan A Saad,**

**ebramos\_2010@yahoo.com**

**Consenting of authors**

**No conflict interesting with any**

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Ethical committee of the Zagagig university

Consent to participate at the study was released by every patient

**Consent for publication**

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