IS CONCOMITANT LAPAROSCOPIC CHOLECYSTECTOMY AND SLEEVE GASTRECTOMY A FEASIBLE AND SAFE PROCEDURE? A CASE CONTROL STUDY

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Introduction

Obesity has become an epidemic worldwide condition. The mainstay of management for morbid obesity is bariatric surgery (BS)..The most popular one is sleeve gastrectomy (LSG) as it simple operation, maintaining of normal food pathway through the digestive tract with a lack of a mal-absorptive component , absence of anastomoses and the short and mid-term weight loss results are promising .The prevalence of gallbladder disease and stone-related complications increases with obesity. Laparoscopic cholecystectomy (LC) during bariatric surgeries may be technically challenging due to suboptimal port insertion and difficult body habitus. Regarding the management of GB during bariatric surgery, there are several approaches including selective concomitant cholecystectomy only for GB pathologies detected pre- or intra-operatively. Some surgeons prefer performing prophylactic cholecystectomy for all obese patients. Others prefer conventional cholecystectomy only for symptomatic gallstones developed after the bariatric surgery. [7]some surgeons claim that concomitant cholecystectomy is associated with longer operation time, prolonged hospital stay and higher complication rates.

Aim of the work

The aim of this prospective case control study is to evaluate the feasibility and safety of concomitant Laparoscopic Cholecystectomy and Sleeve Gastrectomy for morbidly obese patients with chronic calcular cholecystitis.

Subjects and methods

After approval of the local ethical committee, all the patients were informed about the procedure and signed an informed concent before carring out the procedure. The present study included 60 obese patients with a BMI ≥ 40 kg/m² and chronic calcular cholecystitis ,30 patients underwent concomitant Laparoscopic Cholecystectomy and Sleeve Gastrectomy(LSG-LC group) while the remaining 30 patients underwent laparoscopic cholecystectomy only(LC group).this study were conducted at the Hepato-biliary-pancreatic surgical unit of the Alexandria main university hospital.

Preoperative assessment : thoroughly history taking ,physical examination ,routine laboratory investigations, serum bilirubin and alkaline phosphatase level , ultrasound abdomen and pelvis and MRCP OR CT in selected cases.

Results

In the current study, All patients in the LSG-LC group underwent their surgery with 6 trocars(the standard 5 trocars and one additional trocar on the right mid-clavicular line below the costal margin for traction on the GB hatmann pouch to expose the calot's triangle to complete cholecystectomy during LSG).A slight modification in the position of the epigastric trocar was done. In this study, the operative time which was the time elapsed from the beginning of the dissection of the callot triangle till the separation of the gallbladder from the bed.The mean duration was 16.83 ± 3.99minutes for the LC group , while the mean duration was 18.50 ± 4.61min for the LSG-LC group .Although the operative time was slightly longer for the LSG-LC group, there was no statistically significant difference between both groups.

Table (1): Comparison between the two studied groups according to Intraoperative mishaps

	LC Group (n=30)		LSG - LC Group (n=30)		c2	P
	No.	%	No.	%		
Complications related to cholecystectomy:						
GB perforation	5	16.7	1	3.3	2.963	FEp=0.195
GB bed bleeding	2	6.7	2	6.7	0.000	FEp=1.000
Cystic A bleeding	1	3.3	0	0.0	1.017	FEp=1.000
Biliary injury	0	0.0	0	0.0	–	–
Visceral injury	0	0.0	0	0.0	–	–
Conversion to open	0	0.0	0	0.0	–	–
Complications related to sleeve:						
Stappler line bleeding	-	-	0	0.0	-	-
Splenic injury	-	-	0	0.0	-	-
Major vessels injury	-	-	0	0.0	-	-
Biliary injury	-	-	0	0.0	-	-
Visceral injury	-	-	0	0.0	-	-

Regarding postoperative pain , the pain The pain was much more in the LSG-LC group compared to the LC group , due to the more dissection and stappling of the stomach and due to more trocars insertion and was managed by more analgesics. The hospital stay was slightly increased in the LSG-LC group compared to the LC group as all the patients in the LSG-LC group was discharged in day 1 after the operation , but in the LC group 8 patients was discharged in the same day of the operation and 22 patients was discharged in the day 1 after the operation.However there was statistically significant difference between both groups.

Table (2): Comparison between the two studied groups according to postoperative morbidity

late postoperative morbidity	LC Group (n=30)		LSG - LC Group (n=30)		c2	p
	No.	%	No.	%		
Fever	2	6.7	0	0.0	2.069	FEp=0.492
Bile leakage	0	0.0	0	0.0	-	-
Biliary stricture	0	0.0	0	0.0	-	-
Biliary injury	0	0.0	0	0.0	-	-
Wound infection	2	6.7	0	0.0	2.069	FEp=0.492
Jaundice	0	0.0	0	0.0	-	-
Hemorrhage	0	0.0	0	0.0	-	-
DVT	0	0.0	0	0.0	-	-
Intra abdominal Collection	0	0.0	0	0.0	-	-
Chest infection	0	0.0	0	0.0	-	-
Visceral injury	0	0.0	0	0.0	-	-

Conclusion

Although a slight increase in postoperative pain and hospital stay may occure, Concomitant cholecystectomy can be performed during LSG without an increase in morbidity and with slight and insignificant increase in the operative time. So concomitant cholecystectomy during LSG is safe and feasible, it can be applied to patients with proven GB pathology.