

Post Sleeve Gastrectomy Gall Stones

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Abstract

Background: Sleeve gastrectomy is the most common bariatric procedures done nowadays. The efficacy of sleeve gastrectomy in reducing weight is high with low complications in long term follow up, in comparison with other bariatric procedures.

However, based on long term follow up, formation of gallstones in considerable number of patients subjected to sleeve gastrectomy is observed. This observation is under study and statistical analysis. Reduction in weight by more than 25% in short time is probably the cause for cholelithiasis and gall stone formation whether symptomatic or not. The current review addresses two main research questions: "Is it better to do prophylactic cholecystectomy during sleeve gastrectomy or not?" and "Does the gall bladder harbor stones or not?" These questions are to be answered in the light of what is the best with least complications for the patient.

Conclusion: Sleeve gastrectomy is still the saver with the least late, yet it may result in formation of gall stones which may be silent or symptomatic. Cholecystectomy should not be done prophylactic during sleeve gastrectomy to keep the procedure safer with less hospital stay, less complications and marked reduction in postoperative pain with no biliary complications.

Keywords: *Sleeve Gastrectomy; Gall Stones; Cholecystectomy; Postoperative Pain*

Introduction

The incidence of cholelithiasis has been reported to be 5% in the general population, while it is significantly increased in obese population reaching 45% [1-3].

The risk of developing gallstones in patients with BMI > 40 kg/m² is eightfold higher than in those with a normal BMI [4].

After bariatric surgery, weight loss of more than 25% of the original weight is considered to be the only predictive factor to postoperative gallstone formation [5,6].

The two most common causes of gallstone formation after bariatric surgery are rapid weight loss and the development of cholesterol supersaturation in the bile [7].

Cholesterol gallstones comprise 80% of all gallbladder stones in Western countries [8].

More specifically, obesity related gallstones are predominantly of the cholesterol type and are formed when there is a disproportion in substance composing bile, partly due to the increase in the activity of 3-hydroxy-3-methylglutaryl coenzyme A reductase (HMGCoA), leading to increased secretion of biliary cholesterol [9].

The most recent systematic review and meta-analysis of 42 studies with a cumulative sample size of 729,642 patients was able to show an incidence rate of biliary complications to be 5.54 cases/1000 patient year: SD = ± 6.87. Sleeve gastrectomy had the highest complications rate equal to 5.66 cases/1000 patient year; SD = ± 9.06 compared to all other procedures. The most common biliary complications encountered were biliary colic or biliary dyskinesia with 3.04 cases/1000 patient year: (SD = ± 2.67). Acute cholecystitis made up 1.44 cases/1000 patient year (SD = ± 2.13), acute pancreatitis was 0.11 cases/1000 patient year (SD = ± 0.2), and common bile duct stones showed an incidence of 0.34 cases/1000 patient year (SD = ± 0.53). The complication rate tended to be exponential to the severity of weight loss [10].

Prophylactic cholecystectomy when gallstones are absent is unnecessary. Management of AC at the time of LSG is still debatable [11].

Discussion

In a recent report, Tsirlina and co-workers reported on frequency and timing of cholecystectomies after bariatric surgery. They found a threefold incidence after RYGBP when compared to LSG (10.6 and 3.5%, respectively), but did not report the incidence of asymptomatic gallstones in their cohort. Their conclusion was that for asymptomatic patients (with unknown gallbladder status), routine prophylactic cholecystectomy at the time of bariatric surgery is unwarranted [12].

Observation for asymptomatic gallbladder stones can be done for several reasons. First, cholecystectomy in obese patients may be technically challenging due to body habitus and high intra-abdominal pressure [13].

Second, conventional trocar placement of bariatric surgery and cholecystectomy are different, and this may cause visual and procedural difficulties. Third, the anatomy after LSG allows endoscopic management of bile duct stones when needed. Finally, obesity is reported as a risk factor for conversion to open surgery and bile duct injuries [14,15].

Conclusion

Sleeve gastrectomy is still the saver with the least late, yet it may result in formation of gall stones which may be silent or symptomatic. Cholecystectomy should not be done prophylactic during sleeve gastrectomy to keep the procedure safer with less hospital stay, less complications and marked reduction in postoperative pain with no biliary complications.

In addition, only observation for asymptomatic gallbladder stones in patients who will undergo is saver and required.

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