EVALUATION OF STANDERDIZED APPROACH FOR LAPAROSCOPIC CHOLECYSTECTOMY BY EXPOSING THE INNER LAYER OF THE SUBSEROSAL LAYER

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INTRODUCTION

Gallbladder (GB) stones is a very common condition which is affecting the human beings. Laparoscopic cholecystectomy (LC) has long since established itself as the gold standard in the treatment of symptomatic gallbladder stones. The primary cause of vascular and bile duct damage during laparoscopic cholecystectomy is incorrect identification of the anatomical components. (CVS) presented by Strasberg, claimed that skeletonizing the gallbladder neck before splitting the cystic structures and exposing the proximal part of the gallbladder bed are essential precautions against bile duct injuries. Applying a new definition of surgical anatomy in which the gallbladder wall's subserosal (SS) layer is split into two layers, is an essential part of this process.
The proposed technique contains four cardinal steps for safely achieving the (CVS). (1) posterior flapping (2) anterior flapping (3)communicating both anterior and posterior surfaces posterior to the lower part of GB body (4) skeletonization of the cystic duct . all in the same plane between inner and outer SS layer.

AIM OF THE WORK

This prospective study aims to evaluate safety, applicability and efficacy of laparoscopic cholecystectomy (LC) using a standardized approach by exposing the inner layer of the subserosal layer of the gallbladder for achieving CVS in cases of LC operated at Alexandria main university hospital.

PATIENTS AND METHODS

After approval of local ethics committee, informed written consent were taken from all patients included in this study. This study will include 50 patients with symptomatic gallstone disease admitted to the Hepatobiliary-Pancreatic (HBP) Surgical Unit at Alexandria University Main Hospital.
Prospective assessment: thorough history taking, physical examination, routine labs with focusing on serum bilirubin, alkaline phosphatase and liver enzymes and ultrasound abdomen with biliary assessment.

Figure1: Exposing the SS-Inner layer of the lower body at the right hepatic lobe side of the gallbladder.

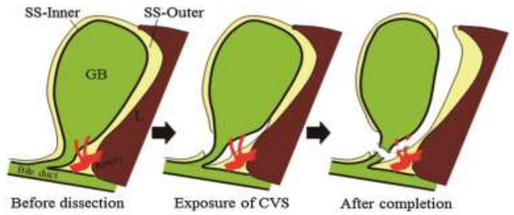

Figure 2: En bloc stripping away of the SS-Outer layer from the SS-Inner layer.

RESULTS

In 50 patients with symptomatic gallstone, 41 cases were successfully done using the technique, 9 cases were failed, 2 cases showed extensive greater omental adhesions, perforated and failed initiation of technique. 7 cases showed failed continuation of technique steps (failed technique) in 5 of them the GB was perforated and failed posterior flapping. 2 cases were not perforated, one of them was failed in anterior flapping and the other was failedin both anterior and posterior flapping.

Table 1: Distribution of the studied cases according to steps of technique (n = 50)

Steps of technique	No.	%
Failed initiation of technique*	2	4.0
Failed technique	7	14.0
Success**	41	82.0

Table 2: Distribution of the studied cases according to the step of technique failure (n = 7)

Steps of technique	No.	%
Post flapping (exposing inner SS layer post)	5	71.4
Ant flapping (exposing inner SS layer ant)	1	15.0
Ant flapping and posterior flapping (exposing inner SS layer ant and post)	1	15.0
Communicating ant and post inner SS layer	0	0
Isolating cystic duct (skeletonization)	0	0

Table 3: Distribution of the studied cases according to the actual cause of failure (n = 9 failed cases)

Intraoperative findings	No.	%	% from Total (n = 50)	% from Yes
Normal anatomy	0	0.0	0.0	0.0
Liver cirrhotic or fatty liver	0	0.0	0.0	0.0
Enlarged lt lobe	0	0.0	0.0	0.0
Subhepatic collection	0	0.0	0.0	0.0
Severe (extensive) Greater omentum adhesion*	2	22.2	4.0	9.1
Phymoticcallot (Severe scaring Changing)**	2	22.2	4.0	15.4
Severe loss of planes Acute attack**	3	33.3	6.0	50.0
Mucocele of GB**	2	22.2	4.0	50.0
Intrahepatic GB	0	0.0	0.0	0.0
Dilated cystic duct	0	0.0	0.0	0.0
Other biliary anomalies	0	0.0	0.0	00.0

CONCLUSION

1. Laparoscopic cholecystectomy by exposing the inner subserosallayer is a safe, applicable and efficient technique and can be used as a standard technique in order to attain the critical view of safety more safely in most of cases of elective laparoscopic cholecystectomy.
2. Care should be taken in order to increase the understanding of the concept of inner subserosal layer especially for the less experienced surgeons.

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