Laparoscopic Cholecystectomy with Abdominoplasty: Description of a Technique

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ABSTRACT

Five patients presented to our hospital with symptomatic gall stones and laxity of abdominal wall following multiple pregnancies. All of them were keen to undergo a cosmetic procedure (abdominoplasty) to reduce the abdominal wall laxity along with cholecystectomy. The ports for laparoscopic cholecystectomy were inserted at their usual sites but after dissection of skin and subcutaneous flap, leaving no scars in the upper abdomen. This has lead to a better cosmetic result with greater patient satisfaction without compromising the ergonomics of a safe cholecystectomy.
Keywords: *Scarless cholecystectomy . Cholecystectomy with abdominoplasty*

INTRODUCTION

Cosmesis after laparoscopic surgery is gaining more attention recently. Many techniques were described either to reduce number or size of ports used. Single incision laparoscopic cholecystectomy (SIL) provides better cosmetic outcome but on the expense of a more technically challenging operation. Natural Orifice (NOTES) cholecystectomy has been performed as well. However, a fading interest in the surgical community towards SIL and NOTES was observed [(1)]

PATIENTS AND METHODS

Between January 2015 and February 2016, we operated on 5 female patients with abdominal wall laxity and symptomatic gall stones. The mean age of the patients was 28 years (range 24–35 years). All of them requested to have a cosmetic procedure together with cholecystectomy. Patients were investigated in the routine way and an informed consent was obtained.

Surgery was done with patient under general anaesthesia and in supine position. Traditional abdominoplasty was done for the the 5 patients using a lower abdominal incision within the Bikini area. We routinely mark the planned incision preoperatively as well as the midline and the new Umbilical site. The skin and subcutaneous flap are dissected from the pubic/inguinal region cephalad at the level of the anterior abdominal wall fascia. Dissection continues cephalad to the lower border of the rib cage laterally and the xyphoid centrally.

Before midline plication, ports are introduced in their usual positions through the fascia sparing the skin. (Figure 1,2) Cholecystectomy is performed in the usual manner without the need to change patient's position or redraping. Gall bladder is extracted through umbilical port with no drain left in the abdominal cavity.

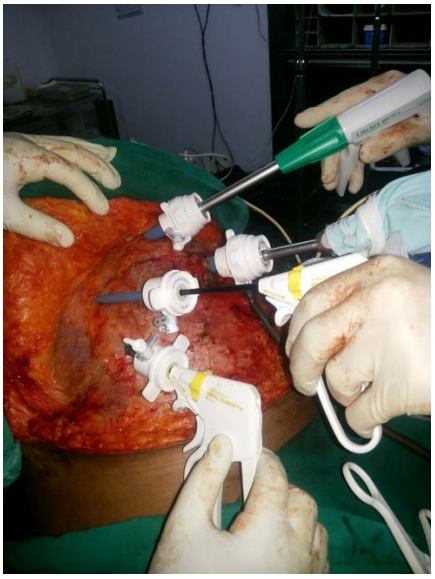

Fig. 1: View from end of operating table (patient's right side)

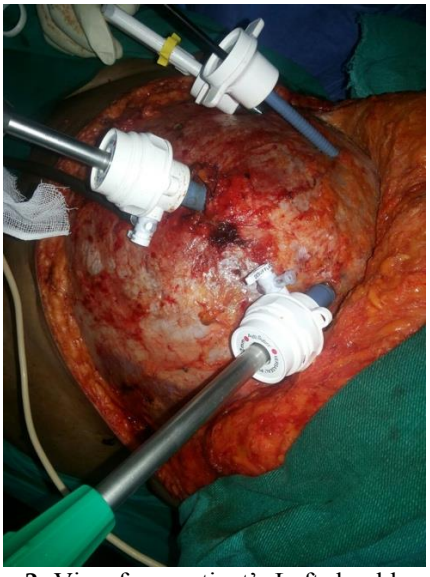

Fig. 2: View from patient's Left shoulder

Abdominoplasty is then resumed after fascial closure of the ports (Rectus plication if diastasis is present, dermolipectomy and neo-omphaloplasty/Umbilical translocation). All our five patients required umbilical translocation and the final scar was an extended Pfannenstiel incision. Abdominoplasty wound was closed in layers with 2 suction drains left in the plane of dissection.

Regular post operative care with all patients discharged from the hospital on the third postoperative day without any complications. Drains were removed between 5th and 7th day.

DISCUSSION

Prevalence of gall stones is estimated to be 20% in adult population. 20% of patients with gall stones will develop symptoms.[(2)] Obesity predispose to gall stone formation [(3)]. Central adiposity is a risk factor for developing symptomatic gall stones[(4)].

Scarless or Invisible cholecystectomy was described using either a natural orifice or a single transumbilical port or a combination of both [(5)(6)(7)].

Cosmetic superiority of SIL Cholecystectomy is challenged by technical difficulty and some reports suggesting a higher biliary injury rate [(8)]. A fading interest in the surgical community towards SIL and NOTES was observed[(1)].

The above techniques however can't be compared to the technique described here which is applicable to only a limited group of patients. However, the emergence of these techniques highlight the interest in improving cosmetic results even in minimally invasive surgery.

A scarless cholecystectomy in combination with abdominoplasty was described as well using a modification of the French technique. The disadvantage in this method is that the ports are placed too far away from the gallbladder.[(9)]

We believe that ,in selected patients who request abdominoplasty with cholecystectomy, the technique described here provides excellent cosmetic results. More importantly, it does not breach any of the ergonomic concepts of safe laparoscopic surgery.

REFERENCES

1. Steinemann DC, Zerz A, Adamina M, Brunner W, Keerl A, Nocito A, et al. Single-Incision and Natural Orifice Translumenal Endoscopic Surgery in Switzerland. World J Surg. 2017 Feb;41(2):449–56.
2. Lammert F, Gurusamy K, Ko CW, Miquel J-F, Méndez-Sánchez N, Portincasa P, et al. Gallstones. Nat Rev Dis Prim. Nature Publishing Group; 2016 Apr;2:16024.
3. Méndez-Sánchez N, Chavez-Tapia NC, Motola-Kuba D, Sanchez-Lara K, Ponciano-Rodríguez G, Baptista H, et al. Metabolic syndrome as a risk factor for gallstone disease. World J Gastroenterol. 2005 Mar;11(11):1653–7.
4. Tsai C-J, Leitzmann MF, Willett WC, Giovannucci EL. Central adiposity, regional fat distribution, and the risk of cholecystectomy in women. Gut. 2006 May;55(5):708–14.
5. Zornig C, Mofid H, Emmermann A, Alm M, Von Waldenfels HA, Felixmüller C. Scarless cholecystectomy with combined transvaginal and transumbilical approach in a series of 20 patients. Surg Endosc Other Interv Tech. 2008;22(6):1427–9.
6. Cuesta MA, Berends F, Veenhof AAFA. The "invisible cholecystectomy": A transumbilical laparoscopic operation without a scar. In: Surgical Endoscopy and Other Interventional Techniques. 2008. p. 1211–3.
7. Iannelli A, Schneck AS, Ioia G, Gugenheim J.

Single incision laparoscopic surgery cholecystectomy: a preliminary experience. Surg Laparosc Endosc Percutan Tech. 2010;20(3):e89-91.
8. Cheah SWL, Yuan S, Mackay S, Grigg M. Single Incision Laparoscopic Cholecystectomy Is Associated With a Higher Bile Duct Injury Rate: A Review and Word of Caution. Ann Surg. 2015;261(2):e54.
9. Prasad MB V, Surapaneni SR, Dabade SS. Scarless cholecystectomy: laparoscopic cholecystectomy with abdominoplasty. Indian J Surg. Springer; 2012 Dec;74(6):486–8.