Single Incision Laparoscopy Using Sitraccport for Large Adnexal Mass Excision and Cholecystectomy: A Case Report

Marina Fistarol1, Paola Gaston Giostri1, Maurício Bechara Noviello2, Admário Silva Santos Filho1, Marcos Campos Wanderley Reis2, and Augusto Henrique Fulgêncio Brandão1,3*

1Médicos ginecologistas Hospital da Baleia, Fundação Benjamim Guimarães, Brazil
2Médico cirurgião geral Hospital da Baleia, Fundação Benjamim Guimarães, Brazil
3Professor convidado do programa de pós-graduação em Saúde da Mulher, Universidade Federal de Minas Gerais, Brazil

Abstract

Single incision laparoscopy (SIL) is the last breakthrough in the field of minimally invasive surgery. It is considered as a promising technique for the approach of abdominal and pelvic cavities, and emerges as an alternative to open surgery or multiple incisions laparoscopy (MIL). Recent studies have hypothesized that SIL might provide better scars and less parietal trauma if compared to MIL. In this article, we report a case of adnexectomy and cholecystectomy, accomplished through SIL in a synchronous surgical time, using SITRACC (for “single trocar access”; Edlo, Porto Alegre, Brazil) port.

INTRODUCTION

In the last years, laparoscopic surgery has been proved as a safe and efficient method for treatment of abdominal and pelvic diseases [1]. Its advantages when compared with open surgery include better cosmetic results, less postoperative pain, and shorter recovery time [1,2]. Recent advances in laparoscopic surgery instruments made it possible to perform a pelvic or intra-abdominal surgery through a single incision, which scar will be hidden in the umbilicus [1,3].

Single-incision laparoscopic surgery (SIL) was developed with the aim of reducing the invasiveness of conventional laparoscopy (MIL, from “multiple incision laparoscopy”), ranging from 3 to 5 incisions. This is a promising alternative to multiple ports surgery, as an effort to promote further advance in minimally invasive techniques. Such approach targets to mitigate patient post operative pain, reduce hospital stay, promote earlier recovery from disease and better cosmetic results. It is also hypothesized that once a single but larger incision is necessary, for the insertion of a larger device, masses with considerable volumes can be extracted in an easier way if compared to MIL [1,3,4].

A comprehensive search of the PubMed database was performed in April of 2014 using medical subject heading “minimally invasive surgery”; “single incision laparoscopy”; “adnexal mass”; “cholecystectomy”.

CASE REPORT

A 46 year old woman presented to our surgical gynecology clinic with a transvaginal echography showing a cystic mass in the right adnexal topography. The mass had regular thin walls, subtle echoes in suspension, and measured 167 x 125 x 88mm (974 cc). Tumor markers (bHCG, lactic desidrogenasis, alfafetoprotein, carcino-embrionary antigen, CA 125 and CA 19-9) were negative.

During the pre-operative procedures, the patient was diagnosed with symptomatic cholelithiasis. After evaluation by the general surgery team, a cholecystectomy was indicated. She had no other diseases. The gynecology and general surgery departments agreed to a synchronous procedure: the approach to the pelvic lesion as well as the cholecystectomy.

A SIL was performed using a SITRACC device (Figure 1), with successful removal of the right ovary, and cholecystectomy. SITRACC was inserted through a longitudinal 2.5cm incision in the umbilicus. We identified a large, cystic lesion, compromising the entire surface of the right ovary, occupying a significant amount of pelvic cavity. The first step of the procedure was the suction of the liquid in the cystic lesion, reducing its size, in order to...
allow its extraction through the umbilical incision. We performed the ligation of the right pelvic infundibulum, as well as the right tube and ovarian ligament with bipolar cautery. Hereafter, the general surgeon proceeded to the cholecystectomy: a flexible grasper retracted the gallbladder. A Calot section was performed using a left-hand grasper, bipolar cautery and scissors. Cystic artery and duct were ligated. At last, both the right ovary and the gallbladder were extracted through the umbilical incision. The final result after suture of the umbilical scar is showed in (Figure 2).

The post operative course was uneventful. The patient was discharged from the hospital the day after surgery. The length of hospital stay was about 24 hours. In postoperative visits, she had no complaints and reported feeling satisfied about the treatment. The scar was small, cosmetic, hidden in the umbilicus. Histology results revealed a serous cistadenoma of the ovarium.

DISCUSSION

To the best of our knowledge, this was the first time an oophorectomy and a cholecystectomy were performed in the same surgical time through SIL. There are innumerable advantages that affect directly the patient’s quality of life with synchronous approach.

The first description of SIL in gynecology was published in 1969, when wheelless reported tubal ligation through one port, using a 12mm optic [5]. In 1991, the first laparoscopic single port hysterectomy was performed by Pelosi [6]. Since the 1997, several procedures in general surgery have been accomplished through the SIL technique [7]. In gynecology, a range of procedures has been described using SIL: oophorectomy, salpingectomy, tubal sterilization, ovarian cystectomy, assessment of ectopic pregnancy and even hysterectomy [4,8,9].

In spite of its emerging popularity, this technique is still underused in Brazil. In this text, we describe a synchronous approach of adnexal lesion and cholecystectomy by SIL, using SITRACC device. We found no such report in the literature yet.

SIL has the same indications as the MIL. The only contraindication to this technique is previous umbilical hernia repair with mesh [10,11].

The single incision provides less abdominal wall trauma than multiple incision laparoscopy (MIL), which might result in a better post operative course, and more cosmetic scar [1,3]. The expected cosmetic benefit is a small scar hidden in the umbilicus, instead of the multiple scars subsequent to a MIL [3].

Since the incision is larger when laparoscopy is made through one port, it allows excision of larger tumor, without rupture, and with less parietal trauma associated with extraction [1,4]. This feature was particularly important in the present case due to the volume of the serous cistadenoma.

Some authors state that the limitations of the SIL technique are the sharp angle between the instruments and the optic, creating a “movement difficulty”, extending the learning curve. SIL execution requires specific training, which is still uncommon in the gynecology residency programs in Brazil. When evaluating the learning curve, Fader and cols reported a reduced surgical time after the surgeon accomplished 10 procedures, and an improved technical skill after 20 cases [12]. This study recruited only professionals initially familiarized with MIL technique.

With the purpose of simplifying the technique, new ports and even “homemade” ports have been created [1].

Despite the increasing number of studies assessing SIL, most have small sample sizes, and show various outcomes, providing only limited evidence in literature about the benefits of SIL [3,13-15].

CONCLUSION

This report demonstrates the feasibility of approaching abdominal and pelvic lesions with SIL, providing a safe procedure and achieving successful post-operative results.

REFERENCES

3. Yim GW, Lee M, Nam EJ, Kim S, Kim YT, Kim SW. Is single-port access...


