

Laparoscopic Management of a Large Ovarian Cyst: Depicting Recent Advances in Minimally Invasive Technique

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ABSTRACT

Ovarian cystadenomas are common, but the occurrence of a large ovarian cyst is a rare clinical finding. There is no well-established methodology for treating huge ovarian masses. Dealing with a huge ovarian cyst poses unique challenges in deciding the mode of surgery. Laparoscopy, being the minimally invasive approach, can be used in removing huge ovarian cysts, requiring only surgical expertise, with its unique benefit of shorter hospital stay, reduced blood loss, and early return to daily routine. The authors hereby report a case of a large biloculated ovarian cyst (36 × 40 cm) removed laparoscopically, with the patient having a smooth postoperative recovery. The authors aim to highlight the emerging expertise in laparoscopic surgeries, providing a safe, effective, and minimally invasive approach for such complex and rare cases.

Key Words: Huge cyst, Biloculated, Minimally invasive, Laparoscopy, Ovarian cyst.

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INTRODUCTION

Benign ovarian cysts are common and can develop at any age.¹ These are common gynaecological findings that are typically detected on ultrasonography done for other purposes. If persistent, ovarian cysts are likely to require surgical treatment. Ovarian cystectomy is preferred over cyst ablation or sclerotherapy, as it allows for a pathological diagnosis, alleviates symptoms, and reduces the risk of recurrence.² Traditionally, benign ovarian cysts were treated with open surgery.^{3,4} However, with the development of laparoscopic techniques, these tumours can now be successfully treated with a minimally invasive approach. Surgical removal may be required for persistent simple ovarian cysts that measure 10 cm or larger, as well as for complex cysts. Laparotomy and laparoscopy are two main surgical approaches.⁵ For benign cases, the laparoscopic method is recommended. Laparoscopy is the preferred method due to its technical feasibility and safety, as well as its advantages over laparotomy, includes shorter hospital stays, faster recovery times, less pain, and reduced blood loss.⁶

Herein, the authors report a case of a large biloculated ovarian cyst measuring 36 × 40 cm, which was removed successfully using the laparoscopic method.

CASE REPORT

A 31-year P1+0 (spontaneous vaginal delivery), whose last childbirth was 18 years ago and widowed for the past 17 years, was referred from medical outpatient department with complaints of gradual abdominal distension for 2-3 years and abdominal pain for a few months. There were no associated symptoms such as weight loss, palpitations, chest pain, cough, or bleeding from any orifice. She had not sought any medical help previously.



Figure 1: Pre-procedure.

On arrival, she was a thin, lean, cachectic-looking middle-aged female, well oriented to time, place, and person, with no pallor, jaundice, cyanosis, koilonychia, or lymphadenopathy. Chest auscultation revealed bilateral equal air entry. On cardiovas-

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cular examination, the first and second heart sounds were audible, with no added sounds. The abdomen was grossly distended with the umbilicus centrally placed. No visible pulsations were seen. The abdomen showed a shiny appearance (Figure 1). The patient was admitted. Tumour markers were done, showing cancer antigen (CA)-125 of 13.7 IU/ml, carcinoembryonic antigen (CEA) of 1.45 mg/dl, α -fetoprotein (AFP) level of 1.3 ng/ml, lactate dehydrogenase (LDH) level of 163 U/l, and β -human chorionic gonadotropin (β -HCG) level of 2.30 mIU/ml. CT scan of the abdomen and pelvis with non-ionic contrast enhancement showed a huge thin-walled unilocular cystic lesion extending from the pelvis up to the upper abdomen, displacing and compressing the bowel loops peripherally. It was likely of left ovarian origin, measuring 43.7 × 39.2 × 34.2 cm in dimensions. No ascites or pelvic or para-aortic lymphadenopathy were noted.

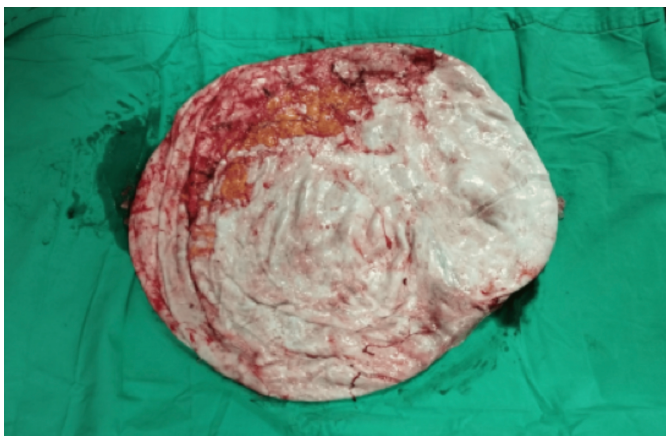


Figure 2: Cyst wall measured 36th 40 cm in size.

The multidisciplinary team approach was taken. The patient was kept nil per oral from midnight and scheduled first on the operating list. The attendant was counselled. Informed consent was taken regarding long operative time, general anaesthesia, chances of visceral injury including bowel injury, and conversion to open surgery. On the day of surgery, a senior anaesthetist was available. An arterial line was passed. Under general anaesthesia with endotracheal intubation, and following all aseptic precautions, abdominal access was achieved using the open Hasson technique through a vertical supraumbilical incision measuring 2.0–2.5 cm. A 4-channel access port, consisting of two 10-mm and two 5 mm channels, was then inserted into the peritoneal cavity. Pneumoperitoneum was created. A huge ovarian cyst adherent to the abdominal wall was found, whose margins were not clearly seen. Straw-coloured fluid of about 35000 cc was drained and sent for cytology. After decompression, the cyst wall was separated from the abdominal wall. The cyst had small feeding vessels from the peritoneum. The cyst wall was adherent posteriorly to the omentum with feeding vessels. Adhesiolysis was performed. The left ovarian cyst was tortured thrice on the pedicle, which was detorted, and the left salpingo-oophorectomy was performed. A right ovarian follicular cyst measuring 3 × 2 cm was noted; it was aspirated, yielding clear fluid. The uterus was normal in size. The right tube and ovary were healthy and normal-looking. Ovarian cyst wall

retrieval was performed by extending the 10 mm port. The cyst wall measured 36 × 40 cm in size (Figure 2). The specimen was sent for histopathological examination. The patient had a smooth recovery postoperatively with a return to routine life within one week. Cytology showed clear fluid with histiocytes, and histopathological examination showed mucinous cystadenoma.

DISCUSSION

Large ovarian cysts are uncommon in clinical practice, as they are mostly detected and managed at an earlier stage. Traditionally, large ovarian cysts have been treated with laparotomy due to concerns about limited operative space, risk of spillage, and technical difficulties in laparoscopic management. However, with advances in surgical expertise and minimally invasive techniques, laparoscopy has increasingly been reported as a feasible and safe alternative even for giant cysts.

Several studies have demonstrated successful laparoscopic excision of the large ovarian cysts, with outcomes comparable to or better than conventional open surgery. For example, one study reported the laparoscopic management of an ovarian cyst exceeding 30 cm, highlighting advantages such as minimal blood loss, shorter hospital stay, and rapid recovery.⁶ Similarly, another study described the safe laparoscopic removal of giant mucinous cystadenomas, emphasising the role of careful cyst decompression and specimen retrieval to prevent intraabdominal spillage.⁷

Laparoscopy is an emerging surgical technique with a minimally invasive approach and surprisingly amazing results. It requires expertise and has opened new doors in the management of patients with huge ovarian cysts.

In this case, the biloculated mucinous cystadenoma measured approximately 36 × 40 cm, and was managed laparoscopically using an external drainage followed by complete excision of the cyst wall. This approach is consistent with recent literature, where controlled aspiration and meticulous dissection have been shown to minimise intraoperative complications and ensure complete removal of the cyst. Importantly, this patient experienced a smooth postoperative recovery, reinforcing the growing evidence that laparoscopy is not only technically possible but is also advantageous in managing such complex cases.

Thus, this report adds to the expanding literature supporting the laparoscopy as a safe, effective, and minimally invasive option for large ovarian cysts when performed by experienced surgeons. It underscores the need for a broader adoption of minimally invasive techniques in gynaecological practice, particularly in cases traditionally reserved for laparotomy.

PATIENT'S CONSENT:

Written informed consent was obtained from the patient.

COMPETING INTEREST:

The authors declared no competing interest.

AUTHORS' CONTRIBUTION:

DS: Literature reviewing and manuscript writing.

AB: Idea conception and plan.

Both authors approved the final version of the manuscript to be published.

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