

Case Report

Laparoscopic Approach to a large torsion Ovarian Fibroma retrieval by colopotomy

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Abstract

Keyword:

Benign ovarian neoplasm; Laparoscopy; Ovarian fibroma; Thecoma.

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Background:

Ovarian fibroma is the most common benign solid tumor of the ovary, which is often difficult to diagnose preoperatively. Ovarian fibromas and fibro-thecomas are uncommon, accounting for 3.3% of ovarian tumors. The choice treatment for ovarian fibroma is usually surgical removal, but discussions for the operative approach, laparoscopic or open, in the literature seem to be scant.

Case Presentation

We presented a case a unique clinical experience of laparoscopic approach to a case of 12 cm unilateral left ovarian fibroma in a 24-year-old patient P 2 +0 previous 2 CS, with a successful and complete resection of the tumor by laparoscopy, in addition to ovarian tissue preservation . The fibroma was retrieval by colopotomy. The case was done in Aswan infertility center (A B C) during October 2022.

Conclusion

In conclusion, we should not forget the role of laparoscopy as a diagnostic and curative procedure even in suspicious cases of ovarian fibroma with solid tumor, ascites, and pleural effusion.

Introduction

The ovarian fibroma, thecoma and fibro-thecoma are a rare benign tumor growing from the connective tissue of the ovarian cortex.

Ovarian fibroma is a solid tumor that belongs to sex-cord stromal cell tumors of the ovary, they are the most common benign solid tumors of the ovary, which account for 1 – 4% of benign ovarian tumors and comprises spindle shape fibroblastic cells and abundant collagen [\(1, 3, 4\)](#).

Ovarian fibroma is often difficult to diagnose preoperatively and usually misdiagnosed as uterine myoma, the early symptoms were pelvic pain and abnormal uterine bleeding because of the solid nature of the mass on examination, and the ultrasonic similarities between the two anomalies.

Patients with large tumors or ascites were admitted with compression symptoms or abdominal distension. Ultrasonography usually showed a solid uniformly hypo-echogenic mass, with very marked sound attenuation. Ascites is occasionally present and is sometimes complicated by plural effusion, which is called Meig's syndrome. Occasionally the serum level of CA125 increases, which may lead to misdiagnosis of endometriosis or malignant tumors of the ovary [\(5, 6\)](#). Ovarian Fibroma occurs generally in elderly patients. In one study, 80.9% of the women were over 40 years old, and 49.0% of the patients were postmenopausal [\(7\)](#). Ovarian fibroma has been reported in young people rarely, in which the possibility of Gorlin syndrome, also known as nevoid basal cell carcinoma syndrome. [\(8–10\)](#). The choice treatment for ovarian fibroma is usually surgical removal, but the operative approach, whether laparoscopic or open has not been discussed sufficiently.

Surgeons are reluctant to use laparoscopic surgical management, as the benign nature of the tumor cannot be definitely diagnosed preoperatively and it might be difficult to laparoscopically resect the tumor safely with preservation of ovarian function, especially in young patients.

Case Presentation

A 24-year-old Gravida 1 Para1 (G₁P₁) lady presented to the Aswan infertility center (ABC) with acute pelvic pain, dominantly located on right lower quadrant of the abdomen. The patient had a history of pelvic discomfort for about one year ago. The patient had no medical or surgical history, except for one Pfannenstiel-Kerr cesarean section about 3 years ago. Primary physical examinations

revealed a mobile solid mass of nearly 12 *cm* in diameter, which couldn't be differentiated from a uterine myoma. Pelvic ultrasonography showed a mixed echo mass of 117×83 *mm* in right adnexa, with very low vascular flow and pressure on posterior wall of the uterus. There was no sign of ascites or plural effusion. Preoperatively, tumor markers were assessed, which were within normal range and patient was scheduled for laparoscopic resection of the lesion.

Operative Notes and procedures

Abdominal access was achieved by primary puncture with a 10 *mm* diameter via umbilical port. Two other 5 *mm* diameter ancillary ports were introduced after creation of pneumoperitoneum by nearly 2.5 *L* of carbon dioxide.

The patient was placed in Trendelenburg position. a rigid video laparoscope was entered via umbilical port and two grasping forceps were introduced via the two ancillary port. During the procedure, The right ovary contained a huge (10×12 *cm*), multiloculated, mobile and well circumscribed mass with laparoscopic features similar to a benign ovarian mass especially an ovarian fibroma or thecoma ([Figure 1](#)).



Figure 1. Primary laparoscopy feature of the tumor in a 24-year-old patient.

Despite the size of the mass, the dense adhesion of the capsule to the ovarian tissue and torsion all adnexa, we apply with a careful dissection and desiccation of the tumor also we could preserve the ovary during complete excision of the fibroma. After the excision of the ovarian fibroma, under direct vision of a 10 *mm* telescope, it was removed through colpotomy.

By using a uterine manipulator inside the cervix and position of assistant middle and index finger through the posterior vaginal fornixes and by the Maryland diathermy we cut and open the vagina and pouch the myoma to vagina and the opening was sutured and closed by 2/0 vicarly through vaginal approach. Pneumoperitoneum was then deflated and ports were removed under direct vision. Finally, the rectus sheath and skin were closed with vicarly 2/0. Operating time from incision to closure was nearly about 40 *min*, with no immediate intraoperative complication. Postsurgical recovery was uneventful and the patient was discharged after 6 hour of surgery. There were also no immediate postoperative complications.

The sample was sent for pathological examination, that reveals proliferation of spindle cells with blended nucleus in stratiform pattern with no pleomorphism or mitotic activity, which confirmed the diagnosis of ovarian fibroma.

Figure 2 laparoscopic procedure of dissection of ovarian capsule



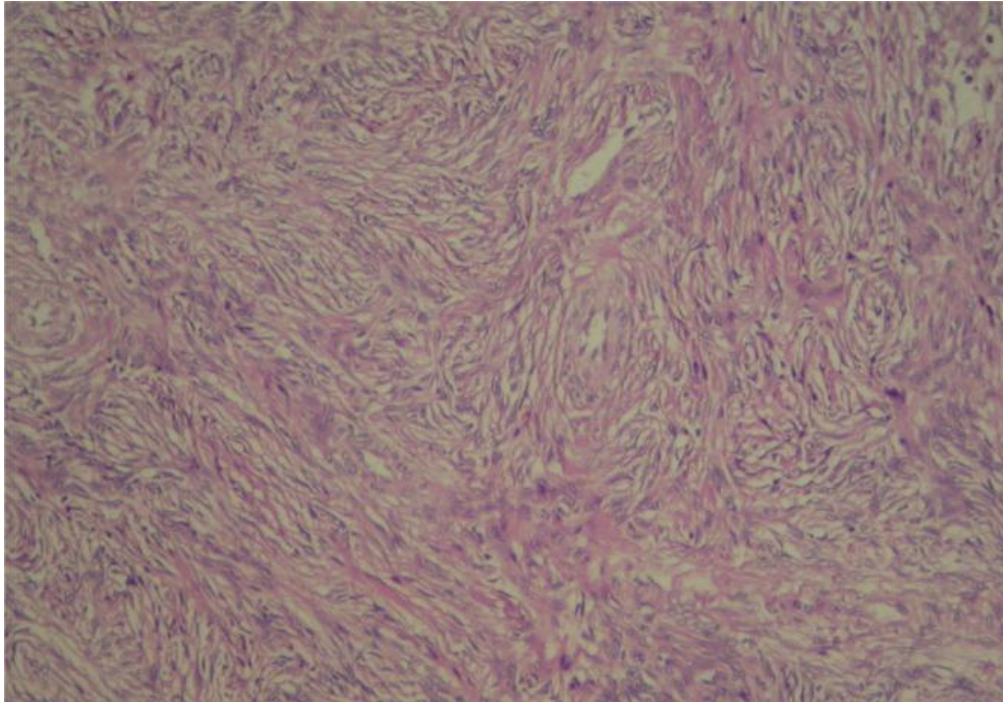
Figure 3 open the posterior fornixes coplotomy and extract the myoma



Figure 4. Removal of the myoma through the colopotomy.



(Figure 5). Histopathologic examination revealed proliferation of spindle cells with blended nucleus in stratiform pattern with no pleomorphism or mitotic activity.



Discussion

Ovarian fibroma is often difficult to diagnose, as occurred in our case, the tumor is not often diagnosed accurately during the time of surgery. There are no specific symptoms or ultrasonographic findings to distinguish accurately ovarian fibroma from uterine myoma or even other types of ovarian mass. It has been reported that 34% of ovarian fibromas were misdiagnosed preoperatively as uterine myoma ([11](#)).but we be expected that were ovarian myoma by the sliding sign of move vaginal probe and see the mass fix to the uterus On the other hand, up to 67% of these patients suffered from ascites, even in a very small-sized tumor. The finding of high levels of serum CA125 in such cases may frequently cause misdiagnosis of malignant ovarian neoplasia ([12](#), [13](#)).

Surgery is the unique treatment for ovarian fibroma. Cases presented in perimenopausal or postmenopausal women, salpingo-oophorectomy could be considered. Youths and young aged cases, cystectomy should be performed.

Non-conservative approach was considered in older ages, especially in laparoscopic surgery ([7](#), [14](#)). Eop Son et al. reported only 5 cases of ovarian cystectomy with laparoscopic approach in a retrospective review on 47 women with confirmed ovarian fibromas. Invasive approaches one the rest of cases, in which the ovary was sacrificed. In this study, the median tumor diameter in laparoscopic group was 7 cm ([7](#)). In other reported series of ovarian fibromas with mean diameter of 12.82 cm, but no ovarian preservation was reported ([14](#)). Son recently reported using single port laproscopic approach in a case of bilateral salpingo-oophorectomy, in a large 10 cm ovarian fibroma, in a 64 year old woman ([7](#)).

Ovarian preservation usually reported in younger patients and accompanied with Gorlin syndrome, which is present with multiple and recurrent fibromas ([8–10](#)). Ball et al. have reported 10 cases removals of ovarian fibromas, ranging from 3 mm to 7 cm in size by laparoscopy ([8](#)). Seracchioli et al. reported laparoscopic removal of nine stony ovarian fibromas with ovarian tissue preservation, in a 22-year-old girl ([10](#)).

We recommend laparoscopy as the method of choice especially in young patients, even in cases of very large ovarian fibromas. Although it was accepted to perform the surgery, either by laparotomy or laparoscopy.

Comparative analysis of the outcomes between the laparoscopy and laparotomy group showed that laparoscopic surgery has several advantages including careful preservation of ovarian tissue, lower rate of adhesion-that is very important in young nulliparous patients (for preventing infertility due to tubal factor), shorter hospital stay, faster normalization of bowel activities, faster return to social life, less morbidity and better cosmetic results ([7](#)).

Although there is a steady evolution towards less invasive techniques, laparoscopic approach to ovarian fibroma, especially in large tumors, may be challenging. However, preservation of normal

ovarian tissue and safely removed the tumor by morcellator through a 10 *mm* trocar could be considered.

In our case report we do colpotomy to shorten time of operation and exposure time to co2 and hospital stay.

In conclusion, the role of laparoscopy as a diagnostic and curative procedure even in suspicious cases of ovarian fibroma with solid tumor, ascites, and plural effusion should be considered.

Conclusion

In these cases, the benefits of using laparoscopy should not be neglected since we are able to change the laparoscopy to laparotomy in large malignant stage1 tumors. And detorsion of the adnexa and save the tube and reserve the right ovary.

Conflict of Interest

The authors declare no conflict of interest.

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