

Original Research Article

Management of benign ovarian cysts in a semiurban hospital: a retrospective study

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ABSTRACT

Background: Benign ovarian cysts are one of the most common cause of surgery. Most of these cysts are asymptomatic and are accidentally found when undergoing a pelvic examination. We conducted a study on the types of benign ovarian cysts in our setup and their surgical management.

Methods: 156 patients who were clinically diagnosed and operated on benign ovarian cysts were included into the study. Transvaginal ultrasound was performed in all the patients to assess the size of cysts and other characteristics of the mass and to exclude malignancy. All the cysts were laparoscopically treated.

Results: Out of 156 patients, most of the patients (27.9%) had come to the hospital with chronic pelvic pain. 25.3% of the patients were asymptomatic and 14.3% had complaints of pelvic mass. Endometrioma which was seen in more than 50% of the cases followed by dermoid cysts seen in 24.3% of the cases. The most common type of surgery performed on the patients was cystectomy in 85.3% followed by oophorectomy in 10.9% of the cases and in 3.8%, a complete laparoscopic salpingo-oophorectomy was performed. Complications was observed in 1.3% of the cases.

Conclusions: Laparoscopic surgery for the removal of benign ovarian cysts the most preferred type of surgery, with cystectomy being the most common type and that with salpingo-oophorectomy being fairly uncommon. As, this is not without complications, careful patient selection and proper surgical experience is required to ensure a safe laparoscopy.

Keywords: Benign, Cystectomy, Laparoscopy, Ovarian cysts

INTRODUCTION

Benign ovarian cysts are one of the most common cause of surgery in the department of gynecology. They affect females of all ages. It is estimated that 25% of all ovarian neoplasms consist of benign cystic teratomas¹. Most of these cysts are asymptomatic and are accidentally found when undergoing a pelvic examination or any other radiological examinations.² 10% of all the female population is suspected to undergo surgery for them during their lifetime. Over the years, there has been a shift from abdominal laparotomy to laparoscopic surgery

for most of the gynecological cases. Today, laparoscopy is considered to be the gold standard technique for the management of benign ovarian cysts.³ This is mainly due to the improved quality of life after surgery, less pain, and lower postoperative complications thereby leading to a shorter hospital stay. Moreover, it is more beneficial to a patient who is yet to complete her child bearing and thus, would like to preserve her ovaries. However, there are a few challenges associated with this type of surgery to the surgeons. In case of large ovarian cysts, which extend to the umbilicus are difficult to operate as there is a risk of cyst rupture as well as small working space.^{4,5} In

case of malignancy also, problems can occur due to the spin risk of the cyst, making laparotomy a procedure of choice in such cases. The lower rate of complications with laparoscopy chiefly depends on the expertise of the attending surgeon. More complications are observed when the surgery is performed by trainees, most likely due to their inexperience.⁶

We conducted a study on the types of benign ovarian cysts in our setup and their surgical management.

METHODS

This retrospective study was conducted by the departments of gynecology and surgery Bhaskar Medical college from May 2016 to Oct 2017 .156 patients who were clinically diagnosed and operated on benign ovarian cysts were included into the study.

All the patients initially came to the gynecological department. Demographic details were taken from all of them along with the regular blood tests. During the gynecological examination, when the cystic mass was detected, transvaginal ultrasound was performed to assess the size and other characteristics of the mass and to exclude malignancy.

The mass with a typical and distinct border, with no evidence of irregularities, thick septa or ascites were considered as benign and included into the study. All the patients with malignant cysts were excluded from the study. Serum CA levels were done for postmenopausal patients. In case of cysts less than 5cm or; less were reexamined after 3 months.

The surgery was performed after a repeat scan to assess the position of the cyst. The day before the procedure, the patients had bowel preparation. Antibiotic prophylaxis with Augmentin was given to all the patients. The surgery was performed under general anesthesia and endotracheal intubation. Open laparoscopy was done for the patients who had undergone an earlier laparoscopy or had a large ovarian cyst so as to avoid complications and risk of cyst perforation with umbilical incision.

A 10 mm trocar which was inserted between the umbilicus and the xiphoid process had the video laparoscope. After the pneumoperitoneum was generated, the other two trocars were inserted. The pneumoperitoneum pressure was maintained at 10-12mmHg. The cyst was exposed by incising the ovarian wall and stripped and excised. Care was taken to avoid the cyst rupture and spillage of the contents. The specimen was then extracted and bagged through the umbilical trocar.

The patients were advised to resume the normal diet after fully regaining consciousness and were discharged when there was no fever and their mobility was restored. A follow up was done for all the patients after 7-8 weeks.

RESULTS

Out of 156 patients, most of the patients (27.9%) had come to the hospital with chronic pelvic pain. 25.3% of the patients were asymptomatic and 14.3% had complaints of pelvic mass (Figure 1).

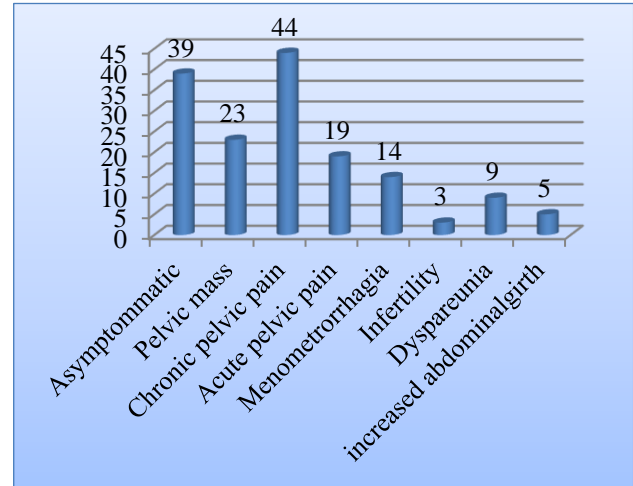


Figure 1: Patients' symptoms.

The most common type of cyst observed among the patient was endometrioma which was seen in more than 50% of the cases. The second most common type of cysts were the dermoid cysts seen in 24.3% of the cases. Others such as hemorrhagic, Para ovarian and simple cysts were seen in less than 10% each (Figure 2).

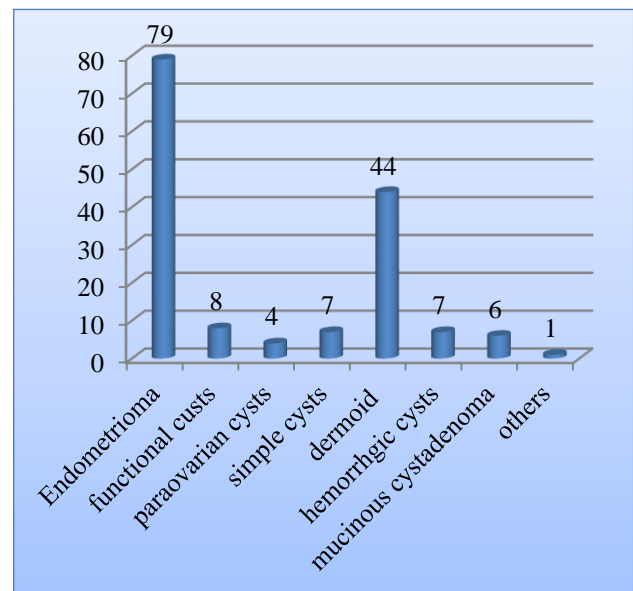


Figure 2: Type of cysts observed among the patients.

The most common type of surgery performed on the patients was cystectomy without removing the ovaries (85.3%). However, the ovaries were removed in 10.9% of the cases and in 3.8%, a complete laparoscopic salpingo-oophorectomy was performed (Figure 3).

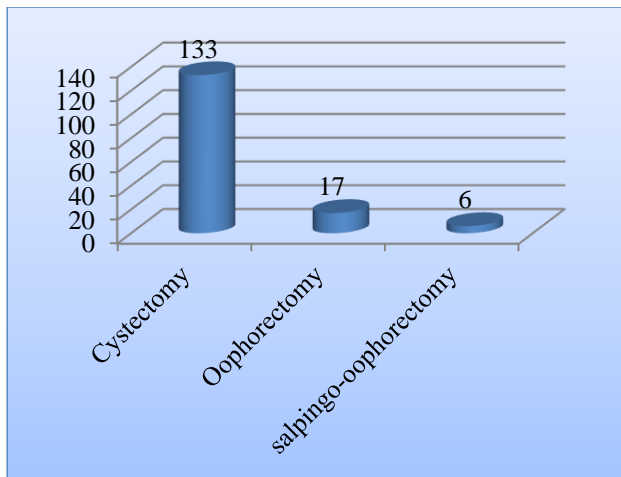


Figure 3: Type of laparoscopic surgery.

More than half the number of women had undergone a previous surgery, such as either caesarian, or tubectomy or due to any other non-gynecological reasons such as appendectomy.

Table 1: Surgery statistics.

Parameter	Mean/number
Complications (n)	2 (1.3%)
Operating time (mins)	110±65.0
Blood loss (ml)	56.1±44.8
Cyst diameter (cm)	7.2±2.9
Hospital stay (days)	1.1±0.8
Bilateral	9 (5.8%)
Prior surgery (n)	93 (59.6%)

The mean operating time in the present study was 110±65.0 mins, while the estimated blood loss was 56.1±44.8ml. Only in 2 patients (1.3%), there were complications (Table 1).

DISCUSSION

Laparoscopic surgery has more or less replaced laparotomy and is now considered to be the gold standard for the treatment of benign ovarian cysts. Some of the cases such as those due to malignancy and technical difficulties are still treated with laparotomy. It is a matter of record that laparoscopy for the removal of the ovarian cysts is not only safe but also results in less blood loss during surgery, lesser complications, shorter hospitalization and better quality of life.⁷

In most cases, benign cysts less than 10cm in size is operated on by laparoscopy.⁸⁻¹⁰ Only few surgeons operate by this method on very large ovarian cysts, especially those that come above the umbilicus.¹¹⁻¹⁶

In the present study, the most common symptom presented by the patients was chronic pelvic pain (28.2%). Many of them were asymptomatic (25%). The

other common symptoms were presence of pelvic mass (14.7%) and acute pelvic pain (12.2%). In another study by Sidhmalaswamy et al, abdominal pain was observed in 70% of the cases and discomfort in 30%.¹⁷ In a study by Vishwanath et al, one third of the patients alone had pain in the abdomen while around two thirds had only discomfort.¹⁸

In yet another similar study, pelvic mass presence was the most common symptom (28.6%), while chronic pelvic pain was the second most common one seen in around 25% of the case.⁶

Among the types of cysts present among the patients presented with benign ovarian cysts at our hospital, the most common ones were endometrioma (50.6%) and dermoid (24.3%). Functional cysts (6.6%), paraovarian cysts (3.7%), simple cysts (2.2%) were not common.

This was corroborated by Lok et al in a similar study, where also endometrioma and dermoid cysts were the predominant ones compared to the other types.⁶ Though presence of functional cysts is fairly common, since <50mm sized ones can get resolved after 3-4 cycles, usually there is no need for surgical management of this type of cysts.

In contrast, in a study by Guglielmina et al, the number of functional cysts and serous cystadenomas treated by them was more common than endometriomas and dermoid cysts.¹⁹ Serous cystadenomas were the most common type of cysts in yet another study by Vishwanath et al.¹⁸

The most common lap surgery performed in this study was cystectomy, but in 17 cases, oophorectomy also was done. Salpingo-oophorectomy was performed in addition to the cystectomy in 6 cases. This was corroborated by a study by Lok et al Sidhmalaswamy et al.¹⁶⁻¹⁷

The complications in present study was 1.3% due to laceration of the epigastric vessels. This was comparable to a study by Sidhmalaswamy et al. and Vasque et al.^{17,20}

These lacerations occurred in present study, due to the insertion of the canula at an oblique angle, especially, with a large number of pelvis adhesion masses, which obscured the vision. The bleeding was however soon cauterized and controlled.

CONCLUSION

Laparoscopic surgery for the removal of benign ovarian cysts is in common practice and comparatively the preferred one. However, it is not without complications, which are mainly avoidable.

So, more care must be taken during the procedure, especially during the incision of the canula, which can lead to severe bleeding due to laceration of the epigastric vessels. Awareness of these risks will create more careful

procedural precautions, further reducing the unwanted complications.

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Ethical approval: The study was approved by the Institutional Ethics Committee

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