International Journal of Reproduction, Contraception, Obstetrics and Gynecology
Champawat C et al. Int J Reprod Contracept Obstet Gynecol. 2017 Dec;6(12):5540-5543
www.ijrcog.org
pISSN 2320-1770 | eISSN 2320-1789

DOI: http://dx.doi.org/10.18203/2320-1770.ijrcog20175277

Original Research Article

Management of adnexal masses: save the ovaries

Chitra Champawat*, Reena Jatin Wani

Department of Obstetrics and Gynecology, Hindu Hrudya Samrat Balasaheb Thackeray Medical College and Dr. R. N. Cooper Hospital, Mumbai, Maharashtra, India

Received: 06 October 2017
Accepted: 04 November 2017

***Correspondence:**
Dr. Chitra Champawat,
E-mail: chitrachampawat@gmail.com

ABSTRACT

Background: Adnexal mass is a common presenting complaint in gynaecology. Total 1318 cases were operated over two and a half years (January 2015-June 2017), out of which 195 (14.7%), were for adnexal mass.
Methods: To review cases of adnexal masses who underwent surgery over the period of two and a half year in a tertiary care hospital with respect to presentation, aetiology, type of surgeries and fertility preservation.
Results: There were totally 195 patients, mostly of age group 26-45 years affected by adnexal mass. Most common presentation was pain abdomen (70 cases i.e. 79.5%). Ectopic pregnancy (115 cases i.e. 58.9%) was the most common diagnosis, followed by ovarian cyst (71 cases i.e. 36.4%). Most cases were treated by open surgery. Laparoscopic management was done for 33 cases (17.9%). Except in unavoidable situations active effort were made to conserve ovaries. Oophorectomy was done in 22 cases (11.2%) and in 173 cases (i.e. 88.8%) fertility preservation was done. Malignancy was seen in 4 (2%), which were managed by open surgery.
Conclusions: Ectopic pregnancy was the most common aetiology of adnexal mass, and laparoscopy and its known benefits to patients is the best approach if available. For cases with suspected malignancy, open surgery will remain a safer option.

Keywords: Adnexal masses, Laparoscopy, Save ovaries

INTRODUCTION

Adnexal masses represent a spectrum of conditions from gynaecologic and non-gynaecologic sources. The prevalence of adnexal masses is 0.17% to 5.9% in asymptomatic and 7.1% to 12% in symptomatic patients. 5-10% women undergo surgery for ovarian mass in their lifespan. 13% to 21% of these women suffer from malignancy.[1] Adnexal mass refers not only to ovarian abnormalities but also to masses originating in the fallopian tube, uterus, bowel, urinary system, and retroperitoneum. The most serious concern when an adnexal mass is discovered is to rule out the possibility of a malignancy. There is a growing body of evidence in the literature supporting the advantages of laparoscopy over laparotomy.[2-4] Despite the advantages of using laparoscopy to manage adnexal masses, there remains the fear of encountering cancer and performing inadequate staging or, worse yet, upstaging of the disease by tumour seeding. Careful patient selection for the appropriate use of laparoscopy in the management of adnexal masses is a critical issue.

METHODS

Ours is a peripheral referral hospital and all patient records with DSM coding are kept in the medical records section. The operation registers also have detailed records of major and minor surgeries performed month wise.

As a retrospective observational study, on reviewing the registers, gynecology ward admission record and the

indoor admission papers we had total of 195 cases of adnexal masses which were operated during January 2015 to June 2017. The data were collected from hospital records and patients' files, descriptively. Each case was analysed with respect to age of patient, clinical presentation and provisional diagnosis before operation. The final etiology, association between clinical diagnosis and final diagnosis was categorized. Different surgical approaches and management offered was studied.

Inclusion criteria

- All women undergoing surgery for adnexal mass in Gynecology Department
- Complete data available including histopathology, when appropriate
- Full treatment availed at our hospital.

Exclusion criteria

Incomplete data available from case records, four such cases were excluded from the study.

Statistical analysis

Due to confounding factors statistical analytical methods could not be applied.

RESULTS

During the study period there were total of 1318 gynaecological patients which were operated. Out of these 195 (14.5%) patients were operated for adnexal mass, these were included in the present study.

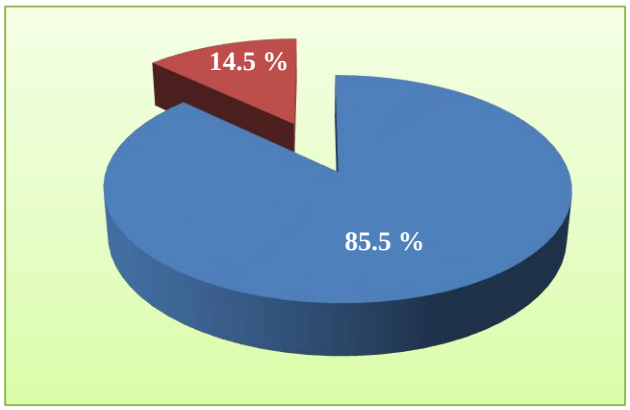

Figure 1: Percentage of surgeries for adnexal mass

Adnexal masses requiring surgery were found to affect an entire spectrum from age 15 years (youngest) to 68 years (eldest). However, in sexually active women of the reproductive age group, majority of adnexal masses were seen between 26-45 years of age.

The abdomen being a Pandora's box can have varied clinical symptoms, not necessarily correlating with the final diagnosis. Most women presented with abdominal distension and pain (91 i.e. 46.6 %).

Table 1: Age distribution.

Age (years)	Number of patients	Percentage
<16	3	1.5
17-25	52	26.6
26-45	126	64.6
>45	16	8.2
Total	195	100

Vague abdominal pain not specifically localised was the second commonest presentation. Associated infertility was seen in 12 cases (6.1%) and menorrhagia in 8 cases (4.1%).

Table 2: Clinical presentation of adnexal mass.

Symptom	Number of cases	Percentage
Pain abdomen	87	44.6
Abdominal distension + pain abdomen	91	46.6
Infertility	12	6.1
Menorrhagia	8	4.1

As most of our women were in the reproductive age group, not surprisingly the commonest diagnosis in the adnexal masses were ectopic pregnancy, all of which were located in the tube in this series.

However, the ovary was the source of benign cystic masses in 36.4% underwent torsion in 2.2% and was a source of cancer in only 4 cases (2%).

Table 3: Clinical diagnosis.

Diagnosis	Number of cases	Percentages
Ovarian cyst	71	36.4
Ectopic pregnancy	115	57.9
Torsion	5	2.2
Malignancy	4	2
Total	195	100

As discussed in Table 2, symptoms in adnexal masses are neither specific, nor suggestive of final diagnosis, in quite a few cases. Hence, any complaint of abdominal pain or bloating should be taken seriously and investigated at least by an ultrasound.

Most cases i.e. 46 (63.3%), of ovarian cysts presented with pain abdomen, cases of ectopic pregnancy presented more commonly with pain abdomen and abdominal distension (59.8%), Infertility was seen in 7 cases of ovarian cyst. In modern surgical practice, minimally invasive surgery (laparoscopic approach) is to be preferred due to its obvious advantages.

Table 4: Association between clinical presentation and diagnosis.

Diagnosis	Pain abdomen	Pain abdomen +abdominal distension	Infertility	Menorrhagia
Ovarian cyst	45	14	7	5
Ectopic pregnancy	38	72	5	
Torsion	3	2		
Malignancy	1	3		3

Table 5: Operative management.

Diagnosis	Number of cases	Laparoscopy	Laparotomy
Ovarian cyst	71	19	52
Ectopic pregnancy	115	14	101
Torsion	5		5
Malignancy	4		4
Total	195	33	162

As most of the cases presented in emergency, the surgeries had to be done by open approach (83.1%) due to either non-availability of equipment, after routine hours, or experienced operator, or patient being haemo-dynamically unstable in ectopic pregnancy. Laparoscopic approach was used in 33 cases (16.9%). Of these 14 were ectopic, and 8 were endometriosis. With preoperative suspicion of malignancy, all cases were directly taken for exploratory laparotomy. We did not have unexpected malignancy found in cases operated laparoscopically.

Table 6: Types of surgery.

Surgery	Laparoscopy	Laparotomy	%
Cystectomy/cyst drainage	28	27	28.9
Oophorectomy		7	3.5
Hysterectomy with oophorectomy		15	7.6
Salpingectomy	5	112	60
Total	33	162	100

For each clinical diagnosis, different surgical options are available. Different types of surgeries which were performed were cystectomy/cyst drainage (28.7%), oophorectomy (3.5%), hysterectomy with oophorectomy (7.6%) and salpingectomy (60%). 22 were oophorectomies and in remaining 173, ovarian preservation was done. The important point to note was that there was a consorted effort to preserve the ovaries in all cases of tubal pathology and in maximum cases of ovarian origin. The ovaries were removed in situations like malignancy, torsion with irreversible changes, or if the patient was already in the menopausal age range.

DISCUSSION

During the study period there were total of 1318 gynecological patients which were operated. Out of these 195 patients were operated for adnexal mass, these were included in our study. The incidence of adnexal mass being operated in this study was 14.6%. The international incidence for women undergoing surgery for ovarian mass in their lifespan is 5-10%. 13% to 21% of these women suffer from malignancy.[1] The incidence of malignancy in our study was 2%. The most common age group affected with adnexal mass in the present study was between 25-45 years.

Pain abdomen associated with abdominal distension was the most common clinical presentation seen in 91 i.e. 46.6%. Menorrhagia was the least common presentation seen in 8 i.e. 4% of cases. Infertility was seen in 12 i.e. 6% of cases. Infertility was found to be associated with ovarian cysts, with endometriosis being one of the common finding along with ectopic pregnancy. According to International data, most common symptoms reported by women with ovarian cancer are pelvic or abdominal pain, increased abdominal size, bloating, urinary urgency, frequency, or incontinence, difficulty eating and weight loss. Abdominal fullness and pressure; back pain; and lack of energy may also be prominent symptoms.[5-7]

Ectopic pregnancy was the most common clinical diagnosis (115 cases i.e. 58.9%) followed by ovarian cysts 71 cases (36.9%). Malignancy in 4 cases (2%). Other aetiologies were Torsion/rupture of cyst. Endometriosis was seen in 8 (4.1%) cases.

All cases were operated either by Open technique or Laparoscopy. Due to unavailability of laparoscopic surgeries outside the routine hours because of logistic issues, open surgery was resorted to. Laparotomy was done in 162 i.e. 83.1%. Laparoscopy was done in 33 i.e. 16.9%. All cases which were operated by Laparoscopy, fertility preservation was done. Over the last decade, advances in laparoscopic techniques have led to increased use of laparoscopy in gynecologic surgery. As the technology improved, low complication rates for operative laparoscopy in such procedures as adnexectomy have been reported.[8]

Oophorectomy was done in 22 i.e. 11.2% of cases, and in the remaining of the cases i.e. 173 (88.8%) ovarian preservation was done. In all cases of ectopic pregnancies fertility preservation was done.

Oophorectomy was done in 2 out of 5 cases of Torsion and in 16 cases of ovarian cysts and all 4 cases of

malignancy. In cases of torsion adnexal conservation should be prioritized because, in most cases, the residual ovary will remain viable and regain perfusion.[9]

CONCLUSION

It should be a priority to try to preserve ovaries while operating on a patient with adnexal mass, which if kept in mind is not a daunting task. We were able to achieve this in most cases. Laparoscopic surgery should be made available in emergency, so that most patients can avail its benefits. Ectopic pregnancy is the most common presentation of adnexal mass in reproductive age group and the trend is in favour of laparoscopic surgery whenever available with its benefits. Laparoscopic surgery should be encouraged for as a surgical mode in young patients.

ACKNOWLEDGMENTS

Authors would like to thank the Dean and Medical Superintendent of HBTMC and Dr. R. N. Cooper Hospital, Mumbai, Maharashtra to allow them to use the hospital data.

Funding: No funding sources
Conflict of interest: None declared
Ethical approval: The study was approved by the Institutional Ethics Committee

REFERENCES

1. Pejovic T, Nezhat F. Laparoscopic management of adnexal masses: the opportunities and the risks. Ann NY Acad Sci. 2001;943:255-68.
2. Padilla LA, Radosevich DM, Milad MP. Accuracy of the pelvic examination in detecting adnexal masses. Obstet Gynecol. 2000;96:593-8.
3. Medeiros LR, Rosa DD, Bozzetti MC, Fachel MG, Furness S, Garry R, et al. Laparoscopy versus laparotomy for benign ovarian tumours. Cochrane Database Syst Rev. 2005;20(3):CD004751.
4. Deckardt R, Saks M, Graeff H. Comparison of minimally invasive surgery and laparotomy in the treatment of adnexal masses. J Am Assoc Gynecol Laparosc. 1994;1:338-9.
5. Stenchever MA. Comprehensive gynecology. 4th ed. St. Louis, Mo. Mosby; 2001.
6. Goff BA, Mandel L, Muntz HG, Meancon CH. Ovarian carcinoma diagnosis. Cancer. 2000:89(10):2068-75.
7. Friedman GD, Skilling JS, Udaltsova NV, Smith LH. Early symptoms of ovarian cancer: a case-control study without recall bias. Fam Pract. 2005:22(5):548-53.
8. Semm K, Mettler L. Technical progress in pelvic surgery via operative laparoscopy. Am J Obstet Gynecol. 1980;138:121-7.
9. Tsafrir Z, Hasson J, Levin I, Solomon E, Lessing JB, Azem F. Adnexal torsion: cystectomy and ovarian fixation are equally important in preventing recurrence. Eur J Obstet Gynecol Reprod Biol. 2012;162(2):203-5.

Cite this article as: Champawat C, Wani RJ. Management of adnexal masses: save the ovaries. Int J Reprod Contracept Obstet Gynecol 2017;6:5540-3.