

LAPAROSCOPIC MANAGEMENT OF ADNEXAL MASSES IN THE REPRODUCTIVE AGE GROUP

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ABSTRACT :

Background: Laparoscopy has become an accepted and standard approach in the management of adnexal masses.

Material and Methods: We performed a retrospective record based cross sectional study over a 4 year period of 90 cases of adnexal masses which were managed laparoscopically.

Aim of the study: To evaluate the safety and effectiveness of laparoscopy in management of adnexal masses.

Results: In 88 cases, procedure was completed safely with minimum morbidity. In 2 cases laparotomy was done to complete the procedure. In 48 cases cystectomy was done, 15 cases required oophorectomy, 10 required salpingo oophorectomy and 9 required salpingectomy. Histologic evaluation revealed 46 functional cysts, 6 endometriotic cysts, 6 dermoid cysts, 9 serous cystadenomas, 3 mucinous cystadenomas, 10 paraovarian cysts, 2 cases of hydrosalpinx and 7 cases of ectopic pregnancy..

Conclusion: Adnexal masses thought to be benign pre operatively were successfully managed laparoscopically. Laparoscopy helped to reduce post operative morbidity, hospital stay, blood loss, cost and adhesion formation thus improving quality of life.

Key words: Laparoscopy, Adnexal mass

Introduction:

An adnexal mass (mass of the ovary, fallopian tube or surrounding connective tissue) is a common gynaecological problem found in females of all ages, fetuses to elderly.

The great majority of adnexal masses occur in reproductive age patients and most of these are benign. This is because the pathogenesis of many benign adnexal masses are associated with the menstrual cycle or reproductive hormones (Follicular cysts, Endometriomas).

Ovarian or fallopian tube cancer is less likely in premenopausal than in post menopausal women, but the possibility of malignancy should be considered in all patients (Eg: 1.8 to 2.2 per 1 lakh women of age 20-29 versus 9.0 to 15.2 per 1 lakh women of age 40 to 49).

Over the last 2 decades advances in laparoscopic techniques have led to increased use of laparoscopy in gynaecologic surgery. As the technology improved, low complication rates for operative laparoscopy in such procedures as adnexectomy have been reported.⁽¹⁾

Recently scientific data have supported the concept, and the laparoscopic approach for treating adnexal masses is now considered the preferred treatment.

There is growing body evidence in the literature (2-4) supporting the advantages of laparoscopy over laparotomy, because it is associated with the following: less *denovo* adhesion formation, decreased febrile morbidity, less post operative pain, less analgesic requirements, shorter length of hospital stay, faster recovery, better cosmetic results, reduced overall cost on the gynaecologic health care of women.

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 tumor seeding.

Material and Methods:

This retrospective record based cross sectional study was done to evaluate 90 patients with adnexal masses treated laparoscopically in Obstetrics and Gynaecology Department of Prathima Institute of Medical Sciences, Nagunoor, Telangana, between January 2013 to December 2016. Case records of all these patients were obtained from medical records section. The aim of the study was to establish the role of laparoscopy and the treatment of these lesions, to evaluate the technique of laparoscopic removal of adnexal masses and to encourage the laparoscopy for treatment of adnexal masses.

These patients were evaluated by history, Abdominal and Bimanual examination, transvaginal Ultrasonography and serum markers like CA125 levels. Adnexal masses with Ultrasonographic features of irregular borders, papillae, solid areas, ascites and matted bowel were excluded from the study. Cyst of size less than 6 cm which are persistent inspite of hormonal therapy were included in this study.

After written informed consent, these patients were posted for laparoscopy under general anaesthesia. Conventional closed method of laparoscopy was performed with veress needle insufflation. A 10mm bladed trocar is placed at the base of umbilicus. Location and number of additional ports is dictated by the clinical situation. Intra operative evaluation included

examination of pelvis and upper abdomen, cyst contents were aspirated except in cases of diagnosed dermoid cyst.

Once the capsule was opened, the inner surface of the capsule was examined, capsule was stripped from the ovarian stroma using two graspers for traction and counter traction. The bleeding vessels at the base of the capsule were coagulated with bipolar forceps, edges of the capsule were left to heal without suturing.

In endometriomas, after aspirating the dark coloured fluids, bipolar coagulation of cyst wall was done.

Ectopic pregnancies, hydrosalpinx, were treated by salpingectomy. Dermoids after excision were placed in pouch of douglas, posterior colpotomy was done, and all the sebaceous material and hair was drained transvaginally.

Adhesiolysis done where ever required. Salpingo oophorectomy was done in whom ovary and tube could not be conserved as in torsion ovarian cyst.

For removal of smaller adnexal masses one of the accessory port was converted to 10mm. Tissue was held with grasper under vision and pulled out along with canula. For larger adnexal masses tissues were removed by posterior colpotomy.

Results:

- The mean age of the patients treated laparoscopically was 25.4 yrs (range from 18yrs to 35yrs).
- The average operating time was 90 mins (range from 45mins to 120mins).
- Average blood loss was 150 ml (75ml to 300ml).
- Average size of the mass was 7.2 cm (range from 4cm to 11cm).

Table-I: OperativeProcedure

OPERATIVE PROCEDURE	NUMBER
Cystectomy	48
Salpingo Oophorectomy	10
Salpingectomy	09
Oophorectomy	15
Cyst Puncture	06
Laparotomy	02

Out of 90 cases, in 6 cases only cyst puncture was done. Cystectomy was the commonly performed surgery (48 cases). Due to dense adhesions, two cases were converted to laparotomy. In 9 cases salpingectomy was done, 7 for ectopic pregnancy and 2 for hydrosalpinx. Adhesiolysis was needed in 15 patients.

TABLE II: Specimen Retrieval

PROCEDURE	NO. OF CASES
Removal Through Port	70
Colpotomy	09
Endo Bag Removal	03

In this study specimen retrieval was done by enlarging one of the secondary port in 70 cases. Colpotomy was done in 9 cases to retrieve the adnexal masses. One case of excision of non communicating rudimentary horn was done.

In this study there were no major intra operative complications. Only two cases had frozen pelvis and dense adhesions for which laparoscopy has been converted to laparotomy. Hemorrhage no intra operative bowel or bladder injury. No major post operative complications. Minor post operative complications like fever was seen in 4 cases and vomiting in 2 cases. Average hospital stay was 4 days.

Histopathology of these adnexal masses show:

Table-III: Histopathology

TYPES OF ADNEXAL MASS	NUMBER
Functional Cyst	46
Endometriotic Cyst	06
Dermoid Cyst	06
Serous Cystadenoma	09
Mucinous Cystadenoma	03
Para Ovarian Cyst	10
Hydrosalpinx	02
Ectopic Pregnancy	07

Majority of the cysts were functional cysts including 38 follicular cysts and 8 corpus luteum cysts. There were 6 endometriotic cysts. There were 6 dermoid cysts, out of which two cases were ruptured during dissection. All the contents sucked immediately and thorough lavage with warm saline was done.

Discussion:

This study tried to assess the laparoscopic approach in primarily benign ovarian masses and other adnexal masses. Our evaluation to exclude malignancy was similar to other authors.[5, 6] Transvaginal ultrasonography and tumour markers like CA-125 helped us to decide the feasibility of laparoscopic approach.

Nezhat and Co-workers [7] evaluated 1011 cases with these tests (transvaginal ultrasound, CA-125) and found only 4 unsuspected malignancies. In another study by Hulka Jf, only 53 malignancies were reported among 13,739 laparoscopic procedures, an incidence of 0.4%.[8]

Some patients with a history of recurrent painful ovarian cysts were managed with hormonal contraceptives to inhibit ovulation. This prevents formation of new physiologic ovarian cysts. Oral contraceptives do not decrease the size of existing cysts.[9-18]

Aspiration of cyst contents is not recommended because no tissue is obtained for histopathology, cytology of cyst fluid is not reliable for exclusion of malignancy, cystectomy is preferable choice. No matter how large the cyst, it is always possible to save ovarian cortex and hormonal function. After cystectomy, we prefer to leave wound edges open, although some prefer suturing. Adhesion barrier can be applied to prevent post-op adhesions.[19, 20, and 21] In cases of endometriomas, when enucleation was not possible, bipolar coagulation of cyst lining was done.

A disadvantage of minimally invasive surgery, oophorectomy/cystectomy is the potential for spill of cancer cells if the mass is malignant. Unfortunately, neither pre operative clinical and sonographic evaluation nor the laparoscopic appearance of ovary can reliably predict malignancy.

Conclusion:

- Enucleation of the ovarian cyst and attempts to save ovarian tissue in women of reproductive age are preferred.
- Laparoscopy is an effective tool in the evaluation and management of adnexal masses, it also allieviate coexisting factors.
- Laparoscopy helped to reduce post operativemorbidity, hospitalstay, bloodloss, cost and adhesion formation thus improving quality of life.

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