

## Laparoscopic Management Of Adnexal Mass

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**Abstract:** Background: Laparoscopy is a widely used procedure in gynecological cases both for diagnostic and operative procedures. It is recommended due to lesser hospital stay, less post operative pain and better panoramic vision. Aim of the study is to assess the effectiveness of laparoscopic intervention of adnexal masses with benign pathology in recent series of consecutive patient. The focus is on pathology findings, length of stay, operating time, complications and laparotomy conversion rate. Material And Methods: This was a prospective observational study conducted at tertiary care hospital in Department of Obstetrics & Gynaecology during period of 1<sup>st</sup> August 2018 to 31<sup>st</sup> July 2020. This study consists of 70 patients, who presented with symptoms like pain in abdomen, bleeding per vaginum, irregular menses, excessive white discharge, distension of abdomen, infertility visiting outdoor patient department either diagnosed clinically (sign and symptoms) or by ultrasonography of adnexal masses. Result: Maximum patients in this study were in age group 21-30 years. Maximum patients (21.42%) were having simple cyst. Among laparoscopic procedure most common procedure was left ovarian cystectomy (38.57%). Mean operative duration was 40.78 min and average duration of hospital stay was 3 days. There were minimal peri-operative complications; commonest being postoperative fever. Conclusion: Adequate surgical skill, case selection, multi disciplinary team approach and expert laproscopic surgical team are imperative for good patient outcome. This study gives an overview of experience in favour of laproscopic management of benign adnexal mass. [Patel H Natl J Integr Res Med, 2022; 13(2): 47-51, Published on Dated: 10/02/2022]

**Key Words:** Adnexal Masses, Laparoscopy, Ovarian Cystectomy

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**Introduction:** Over the years, laparoscopy evolved from tubal ligation to major surgery for many gynecological problems. Recently, laparoscopy is common for many gynecological surgical procedures. Minimal post op pain, fast recovery, shorter hospital stay with magnified view is the main advantages. Thus, laparoscopy is the gold standard method of gynecological problem.

Adnexal masses may be found in females of all ages and there is wide variety & types of masses, average incidence is 5-10%<sup>1</sup>. Adnexal masses may arise from different structures like ovaries, fallopian tubes or surrounding connective tissues and can represent benign, borderline or malignant neoplasm, metastasis from distant site, or non-neoplastic<sup>2</sup>.

Adnexal masses frequently diagnosed in reproductive age group are functional cyst. Majority of these masses are benign (80-85%). Presenting symptoms are acute or chronic abdominal pain, bleeding per vaginum, menstrual irregularity, infertility, dysmenorrhea, or

incidentally diagnosed during clinical examination or ultrasounds. Adnexal masses are diagnosed by detailed history, clinical examination, various blood investigation like hematocrits, serum biomarkers and bio-marker panels<sup>3-4</sup>. Serum biomarkers are used to assess the likelihood of malignancy in women having adnexal masses, It includes CA-125, HE-4, CEA, LDH, AFP, BETA-HCG, CA 19-9. Other investigations include ultrasound (both TAS & TVS), MRI and CT scan<sup>5</sup>.

MRI has high accuracy in differentiating benign from malignant masses, endometriomas, teratomas, simple cyst, fibromas, exophytic or extrauterine fibroids and hydro salpinges with high specificity.

Adnexal masses with high risk (RMI>200) require onco-gynecological review. Adnexal masses with low and intermediate risk are managed surgically.

The management of adnexal mass depends upon type of masses, urgency of presentation and degree of suspicion that the mass is malignant and status of menopause<sup>6</sup>.

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**Material & Methods:** This was a prospective observational study conducted at tertiary care Hospital in Department of obstetrics & gynaecology during period of 1<sup>st</sup> august 2018 to 31<sup>st</sup> July 2020.

This study consists 70 patients, who presented with symptoms like pain in abdomen, bleeding per vaginum, irregular menses, excessive white discharge, distension of abdomen visiting outdoor patient department diagnosed clinically (sign and symptoms) and with help of ultrasonography findings having benign adnexal masses.

**Inclusion Criteria:** ovarian mass >7 cm in size. Ovarian mass with normal tumor marker. Patients presented with hydrosalpinx and pyosalpinx. Patients presented with chronic ectopic pregnancy with stable vitals.

**Exclusion Criteria:** acute ectopic pregnancy with unstable vitals. Abnormal tumor marker. Abnormal findings in USG suggestive of malignancy.

**Methodology:** All these patients admitted in ward after proper history taking, general examination, and systemic examination. Patients underwent routine blood investigations, ultrasound and tumor markers. If suspicious malignant mass was suspected then MRI/CT SCAN was done.

Detailed history was taken and general examination was carried out in each patient. Per abdominal and per vaginal examination was done in all patient except in unmarried women.

After pre-operative workup and diagnosis of benign adnexal mass. Written informed consent was taken for laparoscopic surgery. Preoperative bowel preparation done.

Assessment of intraoperative findings includes size, shape and texture of mass, intra operative blood loss, intra operative duration. Various interventions done during procedures were carefully analyzed.

Operating time was noted from skin incision to dressing the wound after closure of incision.

In some cases, large specimen was taken out by posterior colpotomy. When specimen size was

smaller, it was taken out through one of side ports or main port (via rail road or endo-bag technique.)

All the specimens were sent for histopathological examinations postoperatively.

All the patients received single dose of injectable antibiotics like Cefotaxime and Metronidazole preoperatively and 3 days oral antibiotics (200 mg cefixime) post operatively.

In complicated cases, individualized antibiotics protocol was started.

Post operatively patients were observed for severity and duration of pain, duration of hospital stay, occurrence of fever and wound related complications. Patients were followed up with histopathological report.

**Statistical Analysis:** Done by Microsoft excel.

**Results:** In this study 70 cases of adnexal masses were operated via Laparoscopic route are included. The results of this study are as follows:

**Table 1: Distribution Of Patients According To Age Group**

| Age Group (Years) | No. Of Cases | Percentage | Pillai SS et al <sup>46</sup> |
|-------------------|--------------|------------|-------------------------------|
| 11-20             | 03           | 4.28%      | -                             |
| 21-30             | 30           | 42.85%     | 7.01%                         |
| 31-40             | 21           | 30%        | 22.80%                        |
| 41-50             | 11           | 15.71%     | 48.24%                        |
| >50               | 05           | 7.14%      | 1.96%                         |
| Total             | 70           | 100%       |                               |

**Table 2: Distribution According To Menstrual Status Of Patient**

| Menstrual Status                   | Number Of Patients | Percentage |
|------------------------------------|--------------------|------------|
| Reproductive Age Group Nonpregnant | 52                 | 74.28%     |
| Pregnant                           | 12                 | 17.14%     |
| Post-Menopausal                    | 06                 | 8.57%      |
| Total                              | 70                 | 100%       |

**Table 3: Distribution According To Chief Complaints At The Time Of Presentation**

| Presenting Symptoms        | Number Of Patients | Percentage |
|----------------------------|--------------------|------------|
| Abdominal Pain             | 20                 | 28.91 %    |
| Abdominal Lump/Mass        | 2                  | 2.85%      |
| Menstrual Irregularity     | 10                 | 14.28%     |
| Bleeding Per Vaginum       | 8                  | 11.42%     |
| Discharge Per Vaginum      | 3                  | 4.28%      |
| Infertility                | 23                 | 32.55      |
| Incidental Findings In USG | 4                  | 5.71%      |
| Postmenopausal Bleeding    | 0                  | -          |
| Total                      | 70                 | 100%       |

**Table 4: Distribution Of Adnexal Mass On The Basis Of Ultrasonography**

| USG Finding             |                      | No Of Pt | Percentage |
|-------------------------|----------------------|----------|------------|
| Adnexal                 | Ectopic Mass         | 12       | 17.14%     |
|                         | Hydrosalpinx         | 3        | 4.28%      |
|                         | Total                | 15       | 21.42%     |
| Ovarian<br>(Functional) | Simple Cyst          | 15       | 21.42%     |
|                         | Complex Cyst         | 13       | 18.57%     |
|                         | Haemorrhagic Cyst    | 06       | 8.57%      |
|                         | Dermoid              | 11       | 15.71%     |
|                         | Endometrioma         | 08       | 11.42%     |
|                         | Mucinouscyst Adenoma | 1        | 1.42%      |
|                         | Serouscyst Adenoma   | 1        | 1.42%      |
|                         | Total                | 55       | 78.57%     |
| Total                   | 70                   | 100      |            |

**Table 5: Distribution Of Patients According To Site Of The Lesions**

| Site Of Lesion | No. Of Patients | Percentage |
|----------------|-----------------|------------|
| Non-Ovarian    | 13              | 18.57%     |
| Ovarian        | 57              | 81.42%     |

**Table 6: Distribution According To Type Of Laparoscopic Procedure Done**

| Surgery                        | Number | Percentage |
|--------------------------------|--------|------------|
| Left Ovarian Cystectomy        | 27     | 38.57%     |
| Right Ovarian Cystectomy       | 26     | 37.14%     |
| Left Side Salpingectomy        | 9      | 12.85%     |
| Right Salpingectomy            | 5      | 7.14%      |
| Left Side Salpingostomy        | 1      | 1.42%      |
| Right Side Salpingoophorectomy | 1      | 1.42%      |
| Left Side Salpingoophorectomy  | 1      | 1.42%      |
| Total                          | 70     | 100%       |

**Table 7: Distribution According To Intraoperative Parameter**

| Intraoperative Parameter               | Mean  | Range  |
|--|-------|--------|
| Operative Duration (Mins)              | 40.78 | 55-100 |
| Duration Of Postop Hospital Stay(Days) | 3     | 1-4    |
| Conversion To Laparotomy               | -     | 1      |
| Cyst Diameter(Cm)                      | 8     | 7-12   |

**Table 8: Distribution According To Perioperative Complication**

| Perioperative Complication  | Number Of Pt | Percentage |
|-----------------------------|--------------|------------|
| Fever                       | 2            | 2.85%      |
| Wound Infection (Discharge) | 1            | 1.42%      |
| Vomiting                    | 3            | 4.28%      |
| Paralytic Ileus             | 1            | 1.42%      |
| Urinary Retention           | -            | -          |
| Bowel Injury                | -            | -          |
| Bladder Injury              | -            | -          |
| Total                       | 9            | 9.97%      |

**Table 9: Distribution According To Histopathological Diagnosis**

| Histopathological Report | Number | Percentage |
|--------------------------|--------|------------|
| Simple Cyst              | 15     | 21.42%     |
| Haemorrhagic Cyst        | 11     | 15.71%     |
| Dermoid Cyst             | 16     | 22.85%     |
| Hydrosalpinx             | 1      | 1.42%      |
| Endometrioma             | 11     | 15.71%     |
| Mucinous Cystadenoma     | 1      | 1.42%      |
| Serous Cystadenoma       | 1      | 1.42%      |
| Ectopic Mass             | 12     | 17.14%     |
| Total                    | 68     | 97.14%     |

**Discussion:** Laparoscopic surgery is considered as a treatment of choice in small to moderate sized adnexal masses. In present study, maximum cases (42.85%) were in age group of 21-30 years, compared to the study done by Baker et al<sup>7</sup> where most benign masses occurred in 21-30 years of age group.

Most patients amongst reproductive age group were not pregnant (74.28%) and rest were pregnant. Only 8.57% were post- menopausal.

According to a study done by Biswajyoti et al<sup>8</sup>, 32% patients were post- menopausal, where as 68% patients were in reproductive age group.

The most common complaint of patients enrolled in this study was abdominal pain (20 cases) followed by menstrual irregularity.

According to another study done by Manivasaka J et al<sup>9</sup> maximum patients presented with abdominal pain followed by menstrual irregularity.

In present study maximum patients were having simple ovarian cyst (15 cases) followed by complex cyst<sup>13</sup>. Compared to study done by Dhakal R et al<sup>10</sup>, maximum lesion was ovarian and follicular cyst. According to another study, Akaba co et al<sup>11</sup>, ectopic pregnancy was 6.85% of all

adnexal masses, which is found to be lower than the present study. In another study by Maharajan et al<sup>12</sup>, Hemorrhagic cysts were the commonest ovarian lesion.

As per this study 37 cases (81.42%) having ovarian origin and 13 cases (18.57%) having Non Ovarian origin masses.

Most common surgery done was ovarian cystectomy followed by salpingectomy. Study done by Bhattacharjee S et al<sup>13</sup> most common surgery carried out was ovarian cystectomy (41.2%). Mean time of surgery was 40.78 mins and mean time of post operative hospital stay was 3 days.

All cases were completed laparoscopically and there was no conversion to laparotomy.

According to Talwar P et al<sup>14</sup> study mean post operative hospital stay was 2.8 days with 51.55 minutes mean operative time. Mean cyst size was around 10 cm. Most common complication were post operative fever (2.85%).

In present study all patients were managed by laparoscopy. Masses were removed and sent for HPE. Among these maximum masses were dermoid cyst followed by simple cyst. In another study Talwar P et al<sup>14</sup> study most commonly

found cases were serous cystadenoma and dermoid cyst.

**Conclusion:** Adnexal masses are a common gynecological problem, amongst them functional ovarian cyst and ectopic masses are common.

Whenever surgical management is required, laparoscopic approach is preferred. Proper pre operative evaluation, adequate training and experience of the laparoscopic surgeon are the most crucial parameters which determine the long-term success of endoscopic approach.

Laparoscopic management of adnexal masses offers safe and effective minimal invasive surgery. Laparoscopic intervention of tubo-ovarian masses has shorter hospital stay, faster recovery rate, fewer peri-operative complications (sepsis, wound related complication), improved quality of life and cosmetic benefit.

#### References:

1. Modern gynecology, Ajit Virkud, 3rd edition, chapter 38, adnexal mass, 346-349.
2. Rauh-Hain JA, Melamed A, Baskwolfie A, Schorge JO. Adnexal mass in the postmenopausal patient, Clin Obstet Gynecol. 2015;58(1):53-65. doi:10.1097/GRF.
3. Mage G, Canis M, Manhes H, Pouiy JC, wattiez A, Bruhat MA. Laparoscopic management of adnexal cystic masses. J Gynecol surg 1990; 6:71-9.
4. Parker W, Berek J. Laparoscopic management of the adnexal mass. Obstetgynecol clin north Am 1994; 21:79-92.
5. AJIT GUBBI, DO F COOG, Adnexal mass workup and management: surgical or conservative?. American college of osteopathic obstetrician & Gynaecologist, 86th Annual conference March 24. 2019. New orleans.
6. Escobar PF, Starks, fader AN, catenacci M, Falcone. t. laproendoscopic single site and natural orifice surgery in gynecology Fertil Stail-2010 94:2497-509.
7. Baker TR, Piver MS, Etiology, biology and epidemiology of ovarian tumour. Semin Surg Oncol 1994;10; 224.
8. Biswajyoti Guha, Ultrasonographic Evaluation of Gynecological Pelvic Masses - An Observational Study, Sch. J. App. Med. Sci., Nov 2017; 5(11C):4519-4527.
9. Manivasakan J et al. int J Reprod. contracept obstet Gynaecol. 2012 Dec; 1(1):12-16.

10. Dhakal R, Makaju R, Bastakoti R. Clinicopathological spectrum of ovarian cystic lesion. Kathmandu Uni Med J. 2016;53(1);13-6.
11. Akaba GO, Ectopic pregnancy in Nigeria's federal capital territory: A six year review. Niger J Med. 2012 Apr-Jun;21(2):241-5.
12. Susna Maharajan, Clinico morphological study of ovarian lesions. A journal of Chitwan medical college. 2013;3(6):17-24.
13. Bhattacharjee S. et al. Int J Reprod contracept obstetric and gynecology 2018 Apr; 7(4): 1427-1430.
14. Talwar P et al. Int J Reprod Contacept Obstet Gynecol. 2019 Apr; 8(4)1431-1435.

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