

ETIOLOGY, CLINICAL SPECTRUM AND OUTCOME OF BENIGN ADNEXAL MASSES: A PROSPECTIVE OBSERVATIONAL STUDY

1st Author- Dr. Anirban Mandal, Associate Professor, Dept of G &O,BSMCH.

2th Author Dr. Biswajit Mahapatra, Assistant professor, Dept of G&O, BSMCH

3rd Author -Dr. Gautam Chaudhuri, Associate Professor, Department of Physiology ,
Jhargram Govt. Medical College & Hospital

Corresponding Author-Dr Chandrima Dutta, Senior Resident, epartment of G&O, NBMC

ABSTRACT

Introduction: Adnexal mass is a common clinical presentation in gynaecologic practice and can be of gynaecologic or non-gynaecologic origin. The term adnexa is derived from the plural form of the Latin word meaning “appendage”. It includes ovaries, fallopian tubes, broad ligament and structures within broad ligament that are developed from the embryonic nests. The term adnexal mass is most often used for masses involving the ovary because of the high propensity of the ovary for neoplasia. Fewer neoplasms occur in the fallopian tubes which are generally involved in inflammatory process.

Aims: To describe the range of clinical features at the time of presentation among the patients suffering from benign adnexal masses, to find out the etiology of benign adnexal masses and to ascertain the outcome of different varieties of benign adnexal masses.

Materials and Methods: The present study was a hospital based prospective observational study. This Study was conducted 18 months at Bankura Sammilani Medical College and Hospital. 104 patients were included in this study.

Result: It is observed that maximum (95.2%) patients are symptomatic. Only 4.8% patients are asymptomatic. Asymptomatic patients are diagnosed incidentally when they are referred from another department. Mostly tiny simple cysts and fimbrial cysts have no specific symptoms.

Conclusion: Ultrasonography (USG) is the primary modality used for detection and characterization of adnexal masses. Sonography including Doppler study is useful to make early and more specific pre- operative diagnosis and evaluation of adnexal mass and to develop individual strategies to avoid unnecessary interventions. Surgical excision is considered in benign adnexal masses >5cm in size and adnexal masses with complications.

Keywords: ultrasonography, ovarian neoplasm, ovarian cancer and Adnexal mass.

INTRODUCTION

Adnexal mass is a common clinical presentation in gynaecologic practice and can be of gynaecologic or non-gynaecologic origin. The term adnexa is derived from the plural form of the Latin word meaning “appendage”. It includes ovaries, fallopian tubes, broad ligament and structures within broad ligament that are developed from the embryonic nests.

The term adnexal mass is most often used for masses involving the ovary because of the high propensity of the ovary for neoplasia. Fewer neoplasms occur in the fallopian tubes which are generally involved in inflammatory process.

Differential diagnosis of adnexal mass is complex and includes functional cysts, benign and malignant ovarian tumors, Para ovarian cysts, tubo ovarian abscesses, hydrosalpinx, ectopic pregnancies, tubal malignancy, broad ligament fibroid, fimbria cysts, sigmoid colon or colon distended with gases or faces, pelvic kidney and pregnancy in bicornate uterus.

These masses pose both a diagnostic and management dilemma. The differential diagnosis is extensive and most masses are benign. Ultrasonography (USG) is the primary modality used for detection and characterization of adnexal masses. Sonographies including Doppler study are useful to make early and more specific pre-operative diagnosis and evaluation of adnexal mass and to develop individual strategies to avoid unnecessary interventions. Many screening algorithms like Risk of Malignancy Algorithm (ROMA) are being actively investigated at the present but there is no sufficient evidence to support the routine use of pelvic ultrasound and CA - 125 to screen for ovarian cancer in the general population.

Histopathology is still taken as gold standard for evaluation of benign and malignant adnexal masses.

The present study is aimed to find out diagnostic value of clinical findings, Ultrasonography and its correlation with histopathological diagnosis in adnexal masses.

AIMS AND OBJECTIVE

General –

To describe etiology, range of clinical spectrum & outcome of benign adnexal masses.

Specific –

1. To describe the range of clinical features at the time of presentation among the patients suffering from benign adnexal masses.
2. To find out the etiology of benign adnexal masses.
3. To ascertain the outcome of different varieties of benign adnexal masses.

MATERIALS AND METHODS

Study Design: It is a hospital based prospective observational study.

Study Setting and Timelines: The study had been conducted in Bankura Sammilani Medical College and Hospital after acceptance of synopsis.

Place of Study: Indoor & OPD, Dept. of Obstetrics & Gynaecology.

Period of Study: 18 months

Study Population: All patients (Adolescents, Reproductive age group, Postmenopausal women) presenting with suspected adnexal mass diagnosed clinically during the period of data collection for the proposed study.

Sampling Design: Data collection for the proposed study had been planned to be carried out for 18months, i.e., 78weeks. It was also planned that data collection to be done on the basis of twice a week schedule. Two days of each week were selected via simple random sampling (SRS) technique using lottery method to be conducted at the beginning of concerned week. As per

record on an average one such case of benign adnexal mass usually attends BSMC&H. On each day of data collection one such eligible case was included.

Inclusion and Exclusion Criteria:

Inclusion Criteria:

1. Female patients (pre pubertal to post-menopausal) of all age group presenting with symptoms like pain, menstrual abnormality, palpable lump.
2. Asymptomatic patients where adnexal mass detected at the time of routine pelvic examination or at the time of ultrasonography (transabdominal and transvaginal sonography) done for other diagnosis.

Exclusion Criteria:

1. Women on ovulation induction drugs.
2. Pregnancy with its complications, ectopic pregnancy, molar pregnancy and post-abortive.
3. Masses arising from urinary tract and gastrointestinal tract.
4. Unwilling to participate.

RESULT AND DISCUSSION

The term adnexa is derived from of the latin word “adnexus” which means “appendage”. The adnexa of the uterus include the ovaries, fallopian tube and the structures of the broad ligament. Adnexal masses refer to the ovarian masses or cysts; however, para tubal cysts, hydrosalpinx and other non-ovarian masses are also included.

In the present study, total 104 patients were diagnosed to have benign adnexal masses. The patient’s age ranged from below 20 years to above 60 years i.e., similar with **Radhamani S, Akhila MV et al¹**. Mean age of presentation for benign adnexal masses in the present study is 37.5 years and majority of the patients are in the age group of 21 to 30 years.

So, it is seen that benign adnexal masses occur maximally in reproductive age group. Thus, the increasing trends of adnexal masses are seen in general population among younger age group.

In the present study, 73 (70.19%) cases are benign ovarian neoplasm. Whereas in **Radhamani S Akhila MV et al¹**, among ovarian neoplasm 90.46% were benign.

It is observed that maximum (95.2%) patients are symptomatic. Only 4.8% patients are asymptomatic. Asymptomatic patients are diagnosed incidentally when they are referred from another department. Mostly tiny simple cysts and fimbrial cysts have no specific symptoms.

Here most common presenting complain is pain abdomen mostly lower abdominal or pelvic pain, which is seen in 87.5% patients i.e. similar to studies by **Radhamani S & Akhila MV et al¹, Das MJ et al², Usmani Y et al³**.

In the present study, abdominal lump was found in 68.3% cases. **Usmani Y et al³** found abdominal lump in 60% cases which is almost similar with the present study. However, **Radhamani S & Akhila MV et al¹** found abdominal lump in 14% cases and **Das MJ et al²** found 22.06% cases with abdominal lump.

Abnormal uterine bleeding was seen in 27.9% cases in the present study. However, menstrual abnormality was seen in 15.17% cases in the study by **Das MJ et al²** and 56% cases seen in the study by **Usmani Y et al³**.

Few patients (2.8%) also presented with white discharge P/V. These patients were diagnosed as PID. After doing Ultrasonography, tubo ovarian masses(i.e abscess) were seen.

Few patients (3.8%) presented with history of infertility. In the study by **Das MJ et al**², 9.6% patients had infertility.

In the present study, 13.5% cases presented with acute abdomen. **Das MJ et al**² found 6.86% cases with acute abdomen. Cases of haemorrhagic corpus luteal cyst (with hemoperitoneum) and torsion of ovarian cyst mainly present with acute abdomen. In the present study, most common origin of the benign adnexal masses is ovary i.e., similar to studies by **Das MJ et al**² and **Usmani Y et al**³.

Although ultrasound is considered the gold standard for ovarian imaging, there are numerous false positive and false negative findings⁸⁹. In the present study, ultrasound scans were found to be reasonably accurate for discriminating benign from malignant and also different types of adnexal masses. A correct diagnosis of benign adnexal mass is relevant to making a suitable therapeutic decision i.e., either conservative or operative management. In the present study, Ultrasound led to the diagnosis of different types of benign adnexal masses as follows: Benign ovarian tumour 68 (65.40%), Endometrioma 7 (6.73%), Fimbrial cyst 2 (1.92%), Haemorrhagic ovarian cyst 10 (9.61%), Hydrosalpinx (3.84%), Simple cyst 3 (2.89%), Tubo ovarian mass 3 (2.89%), Torsion of ovarian cyst 5 (4.8%) and Leiomyoma 2 (1.92%).

Serum CA 125 level is a valuable parameter both for diagnosis and monitoring of epithelial ovarian neoplasm. Also, CA 125 level is frequently elevated in many commonly encountered clinical conditions including uterine leiomyoma, endometriosis, acute or chronic pelvic inflammatory disease, ascites of any etiology and even inflammatory conditions such as systemic lupus erythematosus and inflammatory bowel disease and rarely elevated in germ cell tumour, stromal or mucinous tumour. In the present study, CA 125 was found to be raised (>35 U/ml) in 13.5% cases.

Among the major histological classes, the commonest type of benign adnexal mass seen in the present study is surface epithelial tumours - Serous cyst adenoma 38 (36.53%) followed by Mucinous cyst adenoma 21 (20.19%). Germ cell tumours (GCTs) comprise the second largest group in the present study i.e., 13.46%.

CONCLUSION

Adnexal mass is a common clinical presentation in gynaecologic practice. These masses pose both a diagnostic and management dilemma. The differential diagnosis is extensive and most masses are benign.

Ultrasonography (USG) is the primary modality used for detection and characterisation of adnexal masses. Sonography including Doppler study is useful to make early and more specific pre-operative diagnosis and evaluation of adnexal mass and to develop individual strategies to avoid unnecessary interventions.

Surgical excision is considered in benign adnexal masses >5cm in size and adnexal masses with complications.

Histopathology is still taken as gold standard for final diagnosis of adnexal masses.

REFERENCES

1. Radhamani S,Akhila MV. Evaluation of adnexal masses-Correlation of clinical,sonological and Histopathological Findings in Adnexal Masses.Int j SciStud 2017;4(11):88-92.
2. Das MJ, Phukan P. Adnexal mass: a clinicopathological study at a tertiary care centre in Assam, India. Int J Reprod Contracept Obstet Gynecol 2019;8:1457-62.
3. Usmani Y, Bhartiya P, Shukla MK, et al. Role of USG & MRI in female pelvic masses with histological correlation in post-operative patients. J Evolution Med Dent Sci 2020;9(46):3439- 3443, DOI: 10.14260/jemds/2020/754.

Table: Distribution of study population according to Diagnosis in USG (n = 104)

Diagnosis	Frequency	Percentage
Benign ovarian tumour	68	65.40
Endometrioma	7	6.73
Fimbrial cyst	2	1.92
Haemorrhagic ovarian cyst	10	9.61
Hydrosalpinx	4	3.84
Simple cyst	3	2.89
Tubo ovaian mass	3	2.89
Torsion of ovarian cyst	5	4.80
Leiomyoma	2	1.92
Total	104	100

Table: Distribution of study population according to HPE diagnosis (n= 104)

HPE Diagnosis	Frequency	Percentage
Dermoid cyst	14	13.46
Endometrioma	7	6.73
Haemorrhagic corpus luteal cyst	10	9.6
Leiomyoma	2	1.92
Mucinous cystadenoma	21	20.19
Serous cystadenoma	38	36.53
HPE not done	12	11.53
Total	104	100

Table: Distribution of study population according to size of adnexal mass in USG (n = 104)

Size (as per USG)	Frequency	Percentage
<5 cm	12	11.5
>5 cm	92	88.5
Total	104	100

Table: Distribution of study population according to Treatment modality (n = 104)

Treatment modality	Frequency	Percentage
Surgery	92	88.5
Conservative	12	11.5
Total	104	100

Table: Distribution of study population according to presence of symptoms (n = 104)

	Frequency	Percentage
Asymptomatic	5	4.8
Symptomatic	99	95.2
Total	104	100