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Original Research Article

Evaluation of Pelvic Organ by Laparoscopy among Patients with Adnexal Mass Attending Bangabandhu Sheikh Mujib Medical University

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Abstract

Introduction: Adnexal masses consist of anomalies which can be noticed in any age of women. These abnormalities determine different features during reproductive age, entail surgical treatment, and are monitored with clinical and laboratory findings. Adnexal masses may result from benign or malignant lesions of ovarian, tubal, and para tubal origin, as well as pregnancy-related causes such as ectopic pregnancy. The study intends to evaluate the adnexal masses by laparoscopy among patients admitted to Bangabandhu Sheikh Mujib Medical University from March 2016 to August 2016. ***Methods:*** This cross-sectional study was carried out at Bangabandhu Sheikh Mujib Medical University, Dhaka. The sample was collected by the purposive consecutive sampling method. Subjects were selected by appropriate inclusion criteria. Data were collected after appropriate verbal consent from the guardian of patients and the result was subjected to standard statistical evaluation and was analyzed by the SPSS programme. ***Result:*** This study shows the average age was 27.82 years. Regarding parity majority (31, 62.0%) were nulliparous women and the majority (31, 62.0%) were from a lower-middle-class families. The primary complaints in the study group (27, 54.0%) were dysmenorrhoea followed by infertility (21, 42%). Eighteen women (18, 36.0%) complained of dyspareunia. Twenty-six patients (26, 52.0%) had tender mass. Size of the uterus, twenty-two (22, 44%) patients had an enlarged uterus. The commonest finding was tubo-ovarian mass in thirteen (13, 26.0%) patients followed by an endometriotic cyst in twelve patients (12, 24%). The findings of diagnostic laparoscopy, maximum (22, 44.0%) were enlarged uterus followed by fourteen patients (14, 28.0%) who had ovarian cysts. ***Conclusion:*** This study observed laparoscopic findings are far way better than ultrasonography. As a result, laparoscopy is a gold standard for the estimation of patients with pelvic adnexal masses.

Keywords: Adnexal Mass, Ultrasonography, Laparoscopy, Pelvic Organ, etc.

INTRODUCTION

Adnexal mass is a lump in tissue near the uterus. An adnexal mass forms near the uterus, in the ovaries, fallopian tubes or surrounding pelvic structure. Many adnexal masses go away, but some need treatment. Adnexal masses are commonly encountered in gynecologic practice and often present both diagnostic and management challenges, especially at reproductive age [1]. These adnexal masses can be functional cysts to malignant masses like ovarian cancer which can also be caused by pelvic infection. Adnexal masses are usually identified either through clinical examination or through USG examination of the pelvis for symptoms caused by the mass or incidentally [2, 3]. People who underwent fertility treatments had some common lesions, such as; simple cysts, hemorrhagic cysts, leiomyoma, and hyper-stimulated ovaries. There are a few symptoms of an adnexal mass, such as; pelvic pain, difficulty in urinating, bleeding near the mass,

frequent urination, bloating, irregular periods, constipation, and gastrointestinal disorders [4]. An adnexal mass related to pain contains ovarian torsion and ectopic pregnancy. During pregnancy adnexal mass is not rare and the prevalence of adnexal masses in pregnancy ranges from 2% to 10% [5, 6]. The overall incidence of malignancy in an adnexal mass noted in pregnancy is 1-8%. However, masses that persist into the second trimester are at risk for torsion, rupture, or labour obstruction [7-9]. Ultrasonography has been extensively used as a front-line investigation for ovarian masses showing benefits like reasonable and simply available but the precision of ultrasonography is extremely based on the spectator's experience and outcomes may vary from surgeon to surgeon [10]. American College of Radiology illustrated that for women with a false pregnancy test in whom a gynecologic aetiology for pelvic pain is suspected, ultrasonography is the recommended primary imaging modality [11]. The laparoscopic operation has been gradually unified into standard adnexal mass care in the past years [12]. Considering benign adnexal masses, laparoscopically has become the tumble of care, managing suspected or known malignancies laparoscopically is an area with many challenging alarms [13, 14]. Laparoscopic diagnosis of adnexal masses suspicious at ultrasound prevents many laparotomies for the treatment of benign masses and delivers an improved inspection of the upper abdomen [15]. Laparoscopic detection of malignancy tumours is trustable after a cautious pre-operative evaluation has been accomplished. Moreover, national surveys have disclosed that doubtful laparoscopic determinations, many malignant masses were considered benign at the outset. 80% of different cases were treated by laparoscopy [16]. Without any doubt, laparoscopy is way to better findings than ultrasonography. Today laparoscopy is preferred for the assessment of pelvic organs in a patient with adnexal mass when an ultrasonogram is not enough to diagnose the particular cause. The study aims to evaluate the adnexal masses by laparoscopy among patients.

OBJECTIVES

General Objective

To evaluate the adnexal masses by laparoscopy.

Specific Objective

To observe the incidence of adnexal mass in different ages.

To detect the clinical presentation of adnexal mass.

To study the evaluation of other pelvic pathology of patients with adnexal mass by laparoscopy.

METHODS

A prospective comparative study was carried out in the Department of Obstetrics and Gynaecology, Bangabandhu Sheikh Mujib Medical University, Dhaka from March 2016 to August 2016. A total of 50 patients (N=50) enrolled in this study following the inclusive criteria. All the physical and biochemical parameters were recorded in the data sheet. Verbal consent was taken before recruiting the study population. Ethical clearance was taken from each of the patients. The respondents were remaining entirely free to withdraw their participation at any stage or at any time of the study. The information was kept confidential only to be used for the study purpose.

Inclusion Criteria

Patients with clinically suspected, ultrasound detected adnexal mass.

Exclusion Criteria

Patient's active genital infection

Patients with cardiac or pulmonary disease, coagulopathy, and multiple abdominal surgeries.

Patients who showed unwillingness to participate in the study

DATA ANALYSIS

The study coordinators performed random checks to verify data collection processes. Completed data forms were reviewed, edited, and processed for computer data entry. Frequencies, percentages, and cross-tabulations were used for descriptive analysis. The data analysis was performed using Statistical Package for the Social Sciences (SPSS) for Windows Version.

RESULT

Among the study population (N=50), the mean age of the patients was 27.82±5.37, the majority of the patients' (17, 34.0%) age ranged from twenty-six to thirty and only four patients (4, 8.0%) age was more than forty. Around three-fourths of the study population (36, 72.0%) was married and regarding parity, most of the patients (31, 62.0%) were nulliparous, and around three-fifths of the study population (31, 62.0%) came from lower economic class [Table 1]. The primary complaints in more than half of the study population (27, 54.0%) were dysmenorrhea, around two-fifth of the patients (21, 42%) had infertility and fourteen patients (14, 28.0%) had abnormal uterine bleeding [Table 2]. About half of the study population (26, 52.0%) experienced tender mass, based on the relationship of mass with the uterus, around three-fifths of the patients (30, 60.0%) had uterus fixed. According to uterus size, the majority of the patients' (30, 60.0%) uterus was normal and twenty-two patients (22, 44.0%) uterus was enlarged in size. Cul-de-sac, was free to about half of

the study population (24, 48.0%), was obliterated in twenty-two patients (22, 44.0%) and nodularity was present in four patients (4, 8.0%) [Table 3]. Based on ultrasonography findings, eight patients (8, 16.0%) had an ovarian cyst, the majority of patients (13, 26.0%) had tubo-ovarian mass, followed by endometriosis cyst found in twelve patients (12, 24.0%) and three patients (3, 6.0%) had hydrosalpinx tube [Table 4]. Based on laparoscopic findings, most of the patients (22, 44.0%) had enlarged uterus, around one-third of the patients (14, 28.0%) had an ovarian cyst, and six patients had periovarian adhesions, and seven patients (7, 14.0%) had endometriosis cyst [Table 5].

Table 1: Distribution of study population based on Socio-demographic characteristics (N=50)

Characteristics	(N, %)
Age **Mean age:** 27.82±5.37	
≤20	4,8.0%
21-25	10,20.0%
26-30	17,34.0%
31-35	9,18.0%
36-40	5,10.0%
>40	4,8%
Marital status	
Unmarried	14,28.0%
Married	36,72.0%
Parity	
Nulliparity	31,62.0%
1-2	11,22.0%
.>2	8,16.0%
Socio-economic status	
Lower class >7000	17,34.0%
Lower middle class 7000-27000	31,62%
Upper middle class >27000	2,4%

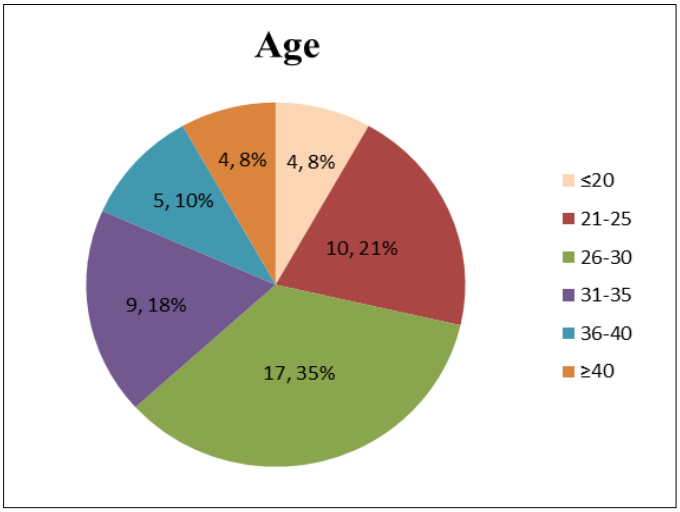

Figure 1: Pie chart showing the Age of the patients.

Table 2: Distribution of study population based on presenting symptoms (N=50)

Symptoms	(N,%)
Dysmenorrhea	27,54.0%
Dyspareunia	18,36.0%
Pelvic pain	16,32.0%
Infertility	21,42.0%
Primary	5,10.0%
Secondary	16,32.0%
Abnormal uterine bleeding	14,28.0%
Backache	10,20
Discharge per vaginum	9,18.0%
Lump abdomen	2,4.0%

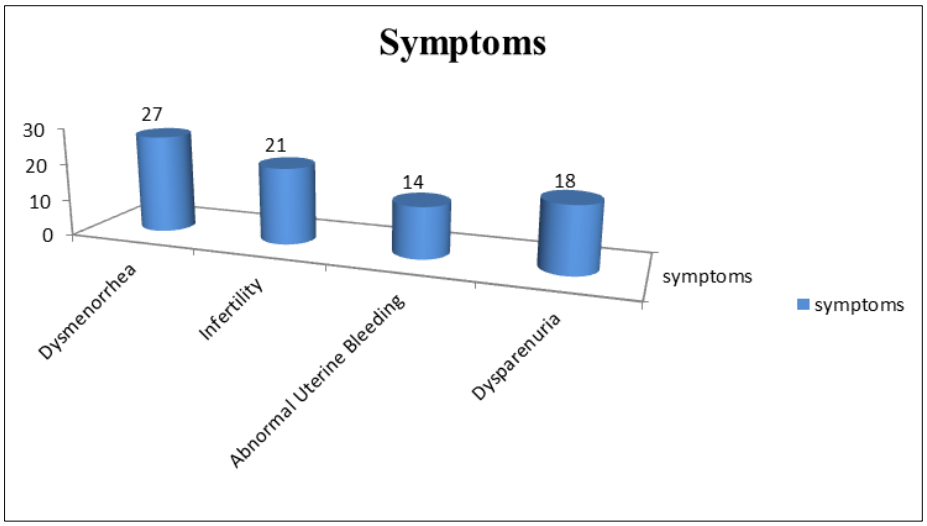

Figure 2: Column chart showing Symptoms of the study population

Table 3: Distribution of study population based on Bimanual examinations (N=50)

Clinical Findings	**(N,%)**
Mass	
Tender	26,52.0%
Non-tender	24,48.0%
Relationship of mass with uterus	
Fixed	30,60%
Free	20,40.0%
Size of uterus	
Normal	28,54.0%
Enlarged	22,44.0%
Cul De Sac	
Free	24,48.0%
Obliterated	22,44.0%
Nodularity	4,8.0%

Table 4: Distribution of study population based on Ultrasonography findings (N=50)

Findings	**(N,%)**
Ovarian Cyst	8,16.0%
Endometriosis Cyst	12,24.0%
Tubo-Ovarian Mass	13,26.0%
Free Fluid pod	8,16.0%
Hydrosalpinx tube	3,6.0%
Broad ligament fibroid	1,2.0%
Enlarged uterus	1,2.0%

Table 5: Distribution of study population based on Laparoscopic findings (N=50)

Structure	**(N,%)**
Endometriosis Cyst	7,14.0%
Tuboovarian Mass	6,12.0%
Ovarian Cyst	14,28.0%
Hydrosalpinx tubes	5,10.0%
Dermoid cyst	5,10.0%
Periovarian Adhesions	6,12.0%
Adhesions Omentum	5,10.0%
Broad ligament cyst	2,4.0%
Enlarged uterus	22,44.0%
Free Fluid In Pod	11,22.0%

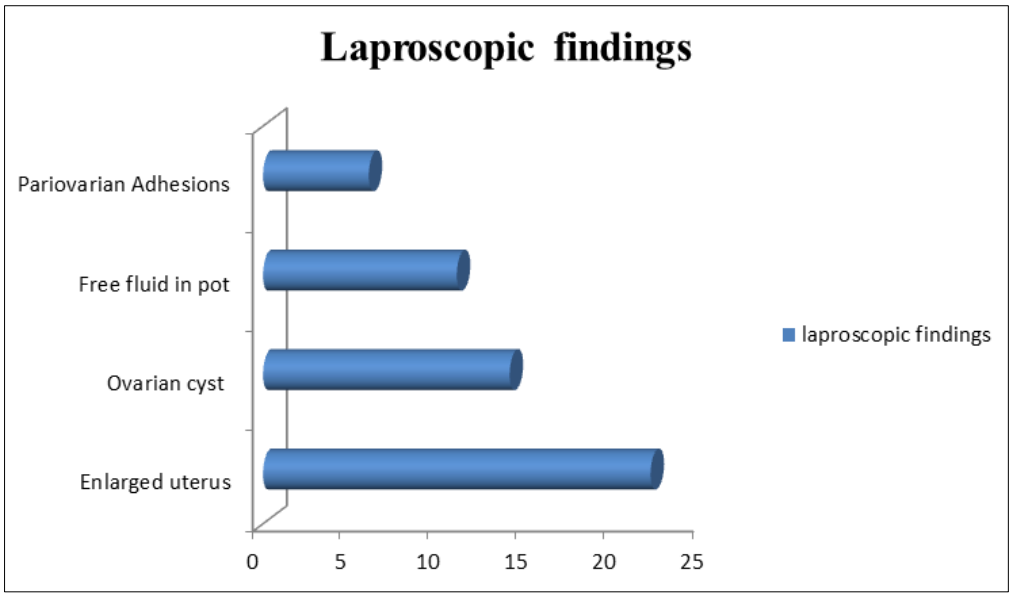

Figure 3: Bar chart showing laparoscopic findings of patients.

DISCUSSION

In a cross-sectional study participated by fifty people who had adnexal masses were admitted to a tertiary care hospital. The laparoscopic process is advantageous and suitable for women with benign adnexal masses. There are some benefits of laparoscopic supervision of adnexal masses such as lessening of operative blood loss, rarer postoperative complications, less pain and quick recovery [17]. Most specialists rely on that laparoscopy has the potential to examine entirely and efficaciously both benign and malignant adnexal masses and reduced pointless morbidity [18]. In this current study, the majority of the patients' age was between 26-30 and the mean age was 27.82±5.37. A comparable study conducted in Haryana, India found that most of the patients belonged to the age group of 30 to 35 years of age who underwent surgery for adnexal masses [19]. Another opposing study was conducted with adolescents, aged 18 years or younger with benign ovarian masses who experienced surgery [20]. A study was also carried out with adolescents where the mean age was 13.5±SD and experienced surgical treatment for adnexal masses [21]. In our study, the majority of the patients (31, 62.0%) belonged to the lower middle class. Another similar study was conducted in a tertiary care hospital in Dhaka, enlightening that 56% of patients were from the middle class [22]. In our study, the author showed some symptoms, such as; dysmenorrhea (27, 54.0%), pelvic pain (16, 32.0%), infertility (21, 42.0%), abnormal uterine bleeding (14, 28.0%) etc. Another study revealed almost similar symptoms, like lower abdominal or pelvic pain, abnormal uterine bleeding, dysmenorrhea, vaginal discharge, fever and vomiting etc [23]. Based on ultrasonographic findings, this current content revealed that the commonest outcome was tubo ovarian mass (13, 26.0%), and the second communal outcome was an endometriotic cyst (12, 24.0%). Other commonest findings were ovarian cyst (8, 16.0%), free fluid pod (8, 16.0%), hydrosalpinx tube (3,6.0%), broad ligament fibroid (1,2.0%) and enlarged uterus (1,2.0%). Similar results were reported in some related articles [24-26]. Another contradictory study revealed more tubo ovarian mass compared to ovarian cyst [27]. Based on laparoscopic findings, this present study showed that the commonest diagnosis was enlarged uterus (22, 44.0%), ovarian cyst (14, 28.0%), free fluid in a pod (11, 22.0%), endometriotic cyst (7, 14.0%), tubo ovarian mass (6, 12.0%), periovarian adhesions (6, 12.0%), hydrosalpinx tube (5, 10.0%), dermoid cyst (5, 10.0%), adhesions omentum (5, 10.0%). The findings have been collaborated by the alternative article [24, 26, 28]. The Royal College of Obstetricians and Gynaecologists stated that; 'Simple, unilateral, unilocular, ovarian cysts less than 5 cm in diameter have a low risk of malignancy [29]. There is no doubt that the achievements of laparoscopic surgery are mainly dependent on the skill and expertise of the operating doctors and preoperative diagnosis [30]. Laparoscopy has a vital part of the diagnosis of both acute and chronic abdominal pain. Laparoscopy is an improved diagnostic tool than both clinical examination and ultrasonography for the diagnosis of tubo ovarian mass. Thus proving that laparoscopy is a superior diagnostic apparatus compared to clinical examination and ultrasonography for the diagnosis of hydrosalpinx.

CONCLUSION

The precision of clinical inspection is inadequate in the presence of neutral physical signs and symptoms. Ultrasonography can be of capable value in the evaluation of pelvic adnexal masses. However, needs training and practice for the methods to increase sensitivity. Thus laparoscopy is more complex than clinical examination and ultrasonography for finding adnexal masses. It also founds the ultimate diagnosis

and treatment to be done in the same session and therefore it can be suggested as the utmost diagnostic modality for the evaluation of patients with pelvic adnexal masses.

RECOMMENDATIONS

There is a requirement to set a screening docket to cover all age groups for initial detection and treatment of adnexal mass cases. Furthermore, approaches should be executed to accelerate Government programs to raise consciousness among people. Outdoor physical activities should be highlighted. The problem of long-term morbidity due to adnexal masses should be put to the notice of the fretful authorities. To get robust data, multicenter studies are in great need of policymakers to interpret the demonstrable scenario and to take essential steps towards mitigating this problem. Further research is also needed to detect the burden of adnexal masses which can be cancerous in an attempt to lessen the difficulties and ease the prognosis of such condition.

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CONFLICT OF INTEREST

None declared

ETHICAL APPROVAL

The study was approved by the Institutional Ethics Committee

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