Original Article

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Clinical Manifestation and Laparotomy Findings among the Patients of Malignant Ovarian Tumor in Chittagong Medical College Hospital

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ABSTRACT

Background: *Ovarian cancer is a significant cause of morbidity and mortality worldwide, with challenging early detection due to nonspecific symptoms. Understanding the clinical presentation and laparotomy findings is crucial for timely diagnosis and management. This observational study aimed to characterize the clinical features and laparotomy findings in patients with malignant ovarian tumors attending at the Department of Gynaecology and Obstetrics, Chittagong Medical College Hospital.*

Materials and methods: *Data were collected from patient records, including demographics, clinical symptoms and pathological findings. Descriptive statistics were used to analyze the data.*

Results: *Total 50 patients were included, with mean age of 49.90 years. The majority were married (72%) and multiparous (46%). Common symptoms included pain (80%), anorexia (74%), weight loss (64%) and palpable mass (54%). Most patients (66%) presented with symptoms for less than 3 months. On examination, 70% had an abdominal mass, with sizes ranging from <6 cm to >10 cm. Ascites was present in 46% of cases. Pathologically, serous cyst adenocarcinoma (54%) and mucinous cyst adenocarcinoma (32%) were the most common histological subtypes.*

Conclusion: *Patients with malignant ovarian tumors often present with nonspecific symptoms, highlighting the need for a high index of suspicion. Imaging and tumor markers like CA-125 are valuable tools for diagnosis. This study provides insights into clinical and pathological characteristics of ovarian tumors, emphasizing the importance of early detection and multidisciplinary management.*

Key words: Ascites; Clinical features; Cystadenocarcinoma; Ovarian cancer.

Introduction

Ovarian cancer is a significant health challenge globally, with approximately 239,000 new cases diagnosed worldwide in 2012.[1] It is the seventh most common cancer in women and a leading cause of cancer-related mortality among women. The incidence and mortality rates of ovarian cancer vary among different racial and ethnic groups. For example, in the United States, ovarian cancer incidence rates are highest among white women, followed by black, Asian/Pacific Islander and American Indian/Alaska Native women.[2] Despite advances in cancer research and treatment, the overall 5-year survival rate for ovarian cancer is only 45%, compared to up to 89% for breast cancer.[3]The etiology of ovarian cancer is complex and multifactorial. Several risk factors have been identified, including genetic factors, reproductive history, hormonal factors and environmental factors.[4] Women with a family history of ovarian cancer have an increased risk of developing the disease, with genetic mutations such as BRCA1 and BRCA2 significantly increasing the risk. Other risk factors include nulliparity, early age at menarche, late age at menopause and the use of hormone replacement therapy.[5]

Ovarian cancer is often referred to as the "Silent killer" because symptoms are often vague and nonspecific, leading to late-stage diagnosis.[6] The most common symptoms of ovarian cancer include abdominal bloating, difficulty in eating and pelvic pressure. However, these symptoms are also commonly seen in

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other conditions, challenging early diagnosis. Most women with ovarian cancer are not diagnosed until the disease has spread, leading to poor prognosis.[7] Diagnosis of ovarian cancer typically involves a combination of history, physical examination, imaging study and tumor markers. Imaging studies such as ultrasound and Computed Tomography (CT) scan can help identify ovarian masses and assess the extent of disease spread.[8] Tumor markers such as CA-125 can be useful in monitoring disease progression and response to treatment. But they are not specific for ovarian cancer and can be elevated in other conditions. A definitive diagnosis of ovarian cancer requires a tissue biopsy, usually obtained during surgery.

Treatment for ovarian cancer typically involves surgery, chemotherapy and occasionally, radiotherapy. The goal of surgery is to remove the tumor and any affected surrounding tissue. Chemotherapy is often used after surgery to target any remaining cancer cells.[9] The prognosis for ovarian cancer depends on several factors, including the stage of the disease at diagnosis, the extent of surgical resection and the response to treatment. Despite advances in treatment modalities, the prognosis for ovarian cancer remains poor, particularly for patients with advancedstage disease.Routine screening for ovarian cancer is not recommended for the general population, as current screening tests such as ultrasound and CA-125 have not been shown to reduce mortality.[10] However, women with a strong family history of ovarian cancer or those with genetic mutations such as BRCA1 and BRCA2 may benefit from regular screening and risk-reducing strategies. Prevention strategies for ovarian cancer include oral contraceptive use, tubal ligation and prophylactic oophorectomy in high-risk individuals.[11]

The purpose of the study is to illustrate the clinical presentation and laparotomy findings of patients with malignant ovarian tumors attending in the Department of Gynaecology and Obstetrics of Chittagong Medical College Hospital.

Materials and methods

This observational study utilized a retrospective cohort design to characterize the clinical presentation and laparotomy findings in patients with malignant ovarian tumors. Data were collected from patient records at the Department of Gynaecology and Obstetrics, Chittagong Medical College Hospital during the period from January to December 2012. Demographic information, clinical symptoms, physical examination findings and histological subtypes of tumors were analyzed descriptively.

Inclusion criteria

- Patients diagnosed with malignant ovarian tumors.
- Patients attending the Department of Gynaecology and Obstetrics for treatment at Chittagong Medical College Hospital.
- Patients with available medical records containing demographic information, clinical symptoms, physical examination findings and histological reports.

Exclusion criteria

- Patients with benign ovarian tumors or other types of ovarian masses.
- Patients with incomplete medical records.
- Patients with a history of previous ovarian cancer treatment.
- Patients who underwent laparotomy for reasons other than ovarian tumors.
- Patients with non-malignant conditions affecting the ovaries.

Data were collected from medical records of patients diagnosed as malignant ovarian tumors at the Department of Gynaecology and Obstetrics, Chittagong Medical College Hospital. Information on demographic characteristics, clinical symptoms, duration of symptoms, physical examination findings (Including the presence of abdominal mass and ascites) and histological subtypes of tumors were extracted. Data were collected retrospectivelyduring January 2012 to December 2012 and analyzed descriptively to characterize these patients' clinical presentation and laparotomy findings.

Data were analyzed using IBM SPSS Statistics version 26. Descriptive statistics such as frequencies, percentages, means, and standard deviations were calculated to summarize demographic characteristics, clinical symptoms and laparotomy findings. Chi-square tests or Fisher's exact tests assessed associations between categorical variables. Continuous variables were compared using t-tests. Results were presented in tables and charts to illustrate the clinical presentation and laparotomy findings in patients with malignant ovarian tumors.

Ethical approval for this study was obtained from the Institutional Review Board (IRB) of Chittagong Medical College Hospital. Patient confidentiality was maintained throughout the study and data were anonymized before analysis. Informed consent was waived due to the study's retrospective nature and the use of anonymized data. The study adhered to the principles outlined in the Declaration of Helsinki regarding the ethical conduct of research involving human subjects.

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Results

Table I Demographic characteristics of the respondent patients (n=50)

Variable	Number (n)	Percentage (%)
Age (Years)		
15-30	6	12
31-45	6	12
46-60	31	62
>60	7	14
Residence		
Urban	14	28
Rural	36	72
Marital status		
Married		
Nullipara	1	2
Nulligravida	2	4
Multipara	23	46
Grandmultipara	10	20
Unmarried	1	2
Widow	13	26

The Table illustrates the demographic profile of the participants, highlighting age distribution, residential and marital status. The majority 31 (62%) fall within the 46-60 age group. Rural residents constitute 72% of the sample, contrasting with 28% urban. Considering marital statuses, multiparas are the most common 23(46%), followed by widows 13(26%), grandmultiparas 10 (20%) and other categories like nullipara and unmarried (Each 2%).

Table II Clinical presentation of patients with malignant ovarian tumors (n=50)

Clinical Symptom	Yes		No	
	Frequency	Percentage	Frequency	Percentage
Abdominal pain	40	80	10	20
Anorexia	37	74	13	26
Weight loss	32	64	18	36
Abdominal lump	27	54	23	46

The Table outlines clinical symptoms reported by patients, indicating the presence or absence of each symptom. Of the 50 participants, 40 (80%) experienced abdominal pain, while 10 (20%) did not. 37 (74%) participants reported anorexia and absent in 13 (26%). Weight loss was noted in 32 (64%) participants and not present in 18 (36%). Abdominal lumps were found in 27 (54%) participants and absent in 23 (46%) cases.

Table III Duration of symptoms (Abdominal pain and anorexia) (n=50)

Duration	Abdominal pain		Anorexia	
	Frequency	Percentage	Frequency	Percentage
<3 Months	33	66	27	54
3-6 Months	08	16	09	18
>6 Months	01	02	01	02

The Table shows the duration and prevalence of abdominal pain and anorexia among participants. Most experienced abdominal pain and anorexia for <3 months (66% and 54%, respectively). Fewer had symptoms for 3-6 months (16% and 18%) or >6 months (2% each).

Table IV Different signs among the respondent patients (n=50)

Generalexaminationfindings	Frequency	Percentage
Anemia		
Absent	2	4
Mild	28	56
Moderate	16	32
Severe	4	8
Body built		
Normal	32	64
Cachectic	16	32
Obese	2	4
Lymphnodes		
Not palpable	48	96
Palpable	2	4

From the Table regarding bodybuilt, 32(64%) were normal, 16(32%)cachetic and 4% obese. Out of 50 patients 28(56%) had mild cases for anemia, 16 (32%) moderate and 4(8%) severe. Regarding lymph nodes, only 3(6%) were palpable.

Table V Laparotomy findings among patients (n=50)

LaparotomyFindings	Frequency	Percentage
Ascites		
Present	33	66
Absent	17	34
Ascitic Fluid Colour		
Clear	5	10
Haemorrhagic	17	34
Straw	11	22
Involvement of Ovary		
Unilateral	25	50
Bilateral	25	50
Consistency of Ovary		
Cystic	15	30
Solidocystic	35	70
Capsule of Tumour		
Broken	36	32
Intact	14	28
Adhesion		
Present	31	62
Absent	19	38

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The Table summarizes laparotomy findings, detailing frequencies and percentages. Ascites was present in 33 (66%) cases and absent in 17 (34%). Ascitic fluid was clear in 5 (10%), haemorrhagic in 17 (34%), and straw-colored in 11 (22%). Ovarian involvement was unilateral in 25 (50%) and bilateral in 25 (50%). Ovarian consistency was cystic in 15 (30%) and solidocystic in 35 (70%). Tumour capsule was broken in 36 (72%) and intact in 14 (28%). Adhesions were present in 31 (62%) and absent in 19 (38%) cases.

Table VI Histological subtypes of malignant ovarian tumors (n=50)

Histological Subtype	Number	Percentage (%)
Serous Cyst Adenocarcinoma	27	54
Mucinous Cyst Adenocarcinoma	16	32
Other Subtypes	7	14

The above Table depicts that out of total cases, 27 (54%) were serous cyst adenocarcinoma and 16 (32%) were mucinous cystadenocarcinoma.

Discussion

Ovarian cancer is a significant health problem worldwide, with a high mortality rate and challenging early detection.[12] This study aimed to evaluate the clinical presentation, laparotomy findings and sociodemographic variables in ovarian cancer patients, shedding light on the disease characteristics in this population.The age distribution of patients in this study showed a peak in the age group of 46-60 years, which is consistent with the typical age range for ovarian cancer diagnosis. This finding reported a mean age of 52.6 years for ovarian cancer patients. The high incidence of ovarian cancer in this age group may be attributed to hormonal changes and prolonged exposure to reproductive factors, such as nulliparity and late menopause.[13]

Socioeconomic status has been linked to ovarian cancer incidence, with higher rates observed in more affluent societies. However, in this study, most patients came from a lower socioeconomic background, which may reflect limited access to healthcare and late-stage presentation. This finding contrasts with studies from industrialized countries, where ovarian cancer is more prevalent among middle and upper-class women.[14] Marital status and parity were also important factors in this study. Most patients were married and multiparous, which is contrary to the notion that nulliparous and unmarried women are at higher risk. This discrepancy may be attributed to cultural differences, as early marriage and high parity are common in this population. The association between parity and ovarian cancer risk is well-established, with nulliparity being a known risk factor.[15]

The clinical presentation of ovarian cancer is often nonspecific, leading to delays in diagnosis. In this study, common symptoms included pain, anorexia, weight loss and palpable mass, which is consistent with previous findings.[16] Delayed presentation, with 66% of patients having symptoms for less than 3 months, underscores the need for increased awareness and early detection strategies.Laparotomy findings revealed ascites in 66% of cases, with varying fluid characteristics. Ovarian involvement was bilateral in 50% of cases, with adhesions to surrounding structures observed in 62%. These findings highlight the advanced stage at which ovarian cancer is often diagnosed, contributing to the poor prognosis associated with the disease.[17] Histopathological analysis showed serous cystadenocarcinoma as the most common subtype, followed by mucinous cystadenocarcinoma. These findings are consistent with previous studies reporting serous tumors as the most prevalent histological subtype. Thehistological subtypes is important for treatment planning and prognosis assessment, as different subtypes respond differently to therapy.[18]

Anemia was present in 48% of cases, which is in line with previous studies linking anemia to ovarian cancer. Chronic inflammation and increased oxidative stress associated with cancer progression can lead to anemia.[19] Additionally, metastases were found in 52% of cases, highlighting the aggressive nature of ovarian cancer and the need for comprehensive staging and treatment approaches.In this study provides valuable insights into the clinical presentation, laparotomy findings, and sociodemographic characteristics of ovarian cancer patients in this population.[20] The findings underscore the challenges of late-stage diagnosis and the importance of early detection strategies. Future research should focus on developing targeted interventions to improve outcomes for ovarian cancer patients in this setting.

Conclusion

This study highlights the prevalence of malignant ovarian tumors in women of different ages, emphasizing that ovarian cancer can affect women of all ages. Postmenopausal women are particularly susceptible. The findings suggest a potential link between ovarian cancer incidence and socioeconomic status and parity. Symptoms such as abdominal lumps, weight loss, anorexia and abdominal pain were common. Serous and mucinous cyst adenocarcinomas were the most frequent histological types. Early detection through detailed history, clinical examination and CA125 measurement is crucial for improved outcomes. There is a need for heightened awareness among patients and healthcare providers to facilitate early diagnosis and intervention, ultimately improving prognosis.

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Recommendations

- Enhance public and healthcare provider awareness of the subtle symptoms of ovarian cancer to facilitate early detection.
- Implement strategies to improve access to screening modalities such as ultrasound and CA-125 testing for high-risk women.
- Promote multidisciplinary collaboration among healthcare providers to ensure timely and comprehensive management of ovarian cancer patients.

Disclosure

The authors declare no conflict of interest.

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