Original Research

Comparative evaluation of ovarian cancers and their manifestations

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ABSTRACT:
Background: Ovarian cancer is presented with varying symptoms and is common in females of reproductive age group. **Aim:** we aimed to determine the manifestations of ovarian cancer in this study. **Materials and methods:** Total 68 patients diagnosed to have were ovarian cancer based on various symptoms were included. The patients were subjected to USG and surgical analysis. Biochemical marker like CA-125 was also estimated. The tumor mass removed was further evaluated histopathologically. **Result:** Malignant tumor was observed in 30.88% of cases while benign in 69.21%. The most common manifestations observed were abdominal discomfort, belching, nausea or vomiting, constipation and dyspnea. **Conclusion:** Most of the abdominal manifestations are of prognostic value in the diagnosis of ovarian cancer.
Key words: Ovary, tumor, CA-125, pathology

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INTRODUCTION

Ovarian cancer generally accepted as the silent killer, comprise almost 4% of total cancer that the women are more susceptible to [1]. Every year 200000 new cases are being diagnosed with survival rate of 80-90% at early stage and 25% at late stage [2]. The symptoms of ovarian cancer may remain unnoticed for several months before the diagnosis. It is also exaggerated as such symptoms sometimes may be developed in women without disease [3-5]. Further awareness about the risk of ovarian cancer and its symptoms is quite low in general population. Since it occupies 3rd place after the cancers of cervix and breast in females, it is important for the clinicians who are possibly the first contact to the patients to be aware of current trends in the development as well as the risk and symptoms of ovarian cancer [6,7. Hence this study s put forth to identify benign and malignant types of ovarian cancer based on different predictive symptoms.

Patients with ovarian cancer have no specific symptoms. Possible symptoms range from diffuse abdominal complaints, newly occurred meteorism, changes in bowel habits, and unexplained weight loss to massive abdominal swelling and usually lead patients to consult a family physician first. As these complaints are fairly nonspecific, early diagnosis is difficult (Case Illustration). In view of this, it is crucial to patients' survival that they undergo surgery according to guidelines, with the aim of achieving the maximum possible reduction in tumor size, followed by combined chemotherapy with carboplatin and paclitaxel. Quality of treatment and compliance with treatment standards varies greatly in Germany. This has severe consequences: If treated according to guidelines, more than 60% of patients are still alive after three years, whereas with "suboptimum" treatment the corresponding figure is only 25%. This difference is significant [8]. Precisely because clinical symptoms are nonspecific, it is vital for patients that ovarian cancer be considered even by physicians other than gynecologists during differential diagnosis. This article is intended to provide family physicians and other interested colleagues with data that are relevant to everyday practice.

Recognition of certain symptoms by patients and clinicians may identify those suffering from ovarian cancer at an early stage [9,10]. Awareness of the ovarian cancer symptoms and risks amongst women in general population is low [11]. Additionally, the predictive value of individual symptom in detection of ovarian cancer remains very low and presenting symptoms of ovarian cancer overlaps with those of more common abdominal disease and gastrointestinal disease. The difficulty for the primary care physicians is to decide which patients to be referred urgently for specialist opinion. Not surprisingly, half of the women with ovarian cancer are not referred directly to the gynaecological cancer clinics [12] thus possibly resulting in a delay in the diagnosis. Thus, it is important that the primary care clinicians, who are the first contact for the patients with possible ovarian cancer, are aware of the current research on changing symptomatology of ovarian cancer as well as the risk factors related to ovarian cancer. The objective of the current survey was to assess the knowledge, perception, and understanding of General Practitioners in South East Essex with regard to ovarian cancers.

MATERIALS AND METHODS

This study was carried out in Department of Surgical oncology, National Institute of Medical Science & Research, Jaipur Rajasthan, from November 2016 to January 2018. all the females patients clinically diagnosed to have ovarian cancer as indicated by abdominal mass on imaging or laparatomy and histopathology was included. The presence of abdominal mass other than ovarian cancer based on

imaging or histopathological analysis were excluded. In total 68 patients were included. The parameters like age, history of cancer, cancer markers (CA125) and histopathological investigations were evaluated. The tumor mass remove was sent for histopathological analysis and all the observations were recorded.

Differentiating criteria of Timmerman *et al* [8] for benign and malignant tumors of ovary based on USG is given below:

Benign (B)	Malignant (M)
B1: Unilocular cyst	M1: Irregular tumor
B2: Solid component having diameter less than 7mm	M2: Ascites present
B3: Acoustic shadows present	M3: Papillary projections present (altleat 4)
B4: Smooth and multicoloured solid tumor having diameter <100 mm	M4: Irregular and multicoloured solid tumor having diameter ≥100 mm
B5: Droppler eaxamination shows no detectable blood flow. Colour score is 1	M5: Doppler examination shows high blood flow. Colour score is 2

Classification of tumor based on criteria

Type	Features
Benign	≥one B features without presence of M features
Malignant	≥one M features without presence of B features
Non classifiable	Bothe B and M features are present or absent

RESULT

Table 1: Age wise categorization of ovarian tumor

Age	Malignant (21)	Benign (47)
20-30	-	5
30-40	2	13
40-50	5	17
>50	14	12

Table 2: Symptoms observed in Benign and malignant ovarian tumors

Symptoms	Benign (%)	Malignant (%)
Abdominal distension	34.2	67.8
Abdominal mass	9.1	43.8
Abdominal pain	91.4	77.5
Belching	40.3	60.07
Constipation	35.6	44.3
Decreased apetite	8.09	15.87
Dysmenorrhoea	18.01	6.6
Dyspnea	18.5	42.78
Increased urine frequency	0.8	25.31
Irritable bowel	46.4	40.8
Lower limb swelling	-	5.2
Nausea or vomiting	39.5	83.7
Weight Loss	-	60.6

Of 68 patients recruited, we observed that malignant ovarian tumor was high in the age group >50 years while benign was in age group 40-50 years. The frequently observed symptoms in benign cases were abdominal pain (91.4%), irritable bowel (46.4%), belching (40.3%), nausea or vomiting (39.5%) and in malignant cases, they were nausea or vomiting (83.7%), abdominal pain (77.5%), abdominal distension (67.8%), belching (60.07%) and weight loss (60.6%). Biochemical parameters like CA-125 were elevated in the patients with ovarian tumor.

DISCUSSION

Ovarian cancer pose a great diagnostic challenge due to its variable symptoms. Women at their reproductive ages are more susceptible to ovarian tumor. In this study the incidences of benign and malignant ovarian tumors were 30.88% and 69.12% respectively. In the study of JH et al [13], the same were 83.9% and 16.1% while Wasim T et al [14] showed it to be 78.7% and 29.3% respectively.

As the age increases, risk of ovarian cancer also increases. There is 12 fold increased risk as the persons age from their 20s to 60s, indicating overall risk of 13% in premenopausal and 45% risk in post menopausal women [15].

The common symptoms of benign tumor were abdominal pain, belching, irritable bowel, nausea or vomiting while those of malignant cases were abdominal distension, abdominal pain, belching, weight loss, nausea or vomiting etc. the main factors inducing pain may be tumor size, endometrial mass, ascites and cysts. As per previous studies, malignant ovarian tumors are sometimes diagnosed based on abdominal symptoms (51%) and pain (76%) [16].

The CA-125 levels, though were elevated, could not differentiate between benign and malignant tumor while it aided in histological grading [17]. More is the grading more elevated is the marker.

On gross examination we found that the most frequent tumors were epithelial tumors followed by tumor of germ cells. The most common form of benign tumor was serouscysticadenoma and mature cystic teratoma. In this study mucinous cystadenoma comprised 12.9% while it was 13.5% in the study of Zubair M et al. about 5% of ovarian carcinomas are clear types but we did not detect them in this study. Likewise Brenner tumor that rarely malignant comprises 2-3% of ovarian carcinomas [18].

The knowledge of symptoms and risk factors of ovarian cancer amongst women in the general population is low [19]; however, it is clear that women with ovarian cancer do experience symptoms and report it to clinicians. A retrospective cohort study of 100 patients from Australia [20] showed that 90% of the patients with early stage disease reported at least one symptom. The challenge for a general practitioner in primary care is to distinguish the symptoms of ovarian cancer from those of other conditions, such as irritable bowel syndrome or other gastrointestinal disease.

It is recommended that any woman with symptoms suggestive of ovarian cancer should have a careful pelvic examination [21]. The National Institute for Health and Clinical Excellence (NICE, UK) Referral guidelines for suspected cancer in 2005 suggested that any woman with a palpable abdominal or pelvic mass on examination that is not obviously uterine fibroids or not of gastrointestinal or urological origin should have an ultrasound scan. If the scan is suggestive of cancer, or if ultrasound is not available, an urgent referral should be made [22]. In our survey, male GPs were more likely ($x2 = 8.5$, $P = 0.01$) to feel uncomfortable suggesting vaginal examination. Similarly, in the pathfinder study , only 68% GPs performed vaginal examination before referring a patient with suspected ovarian cancer. Many clinicians believe that vaginal examination is a dying skill, uncomfortable, helps only little in terms of diagnosis, and less accurate than ultrasound. There is also increasing fear of patient dissatisfaction compounded by the nonavailability of the chaperone at the time of examination. There is an increasing emphasis on the use of chaperone during intimate examinations by the royal colleges [23], the General Medical Council [24], and the defence organisations. Although the detection rate of ovarian cancer by clinical examination is not very high, a fear to carry out vaginal examinations may result in increase in the number of referrals for pelvic ultrasound, with no obvious benefit. In fact, a large US randomized trial found some harm to women who were screened annually with a transvaginal ultrasound exam and a CA-125 blood test compared with a usual care control group [25]. It is important to note that NICE, UK has since updated the guidance for recognition and initial management of ovarian cancer in 2011, which now suggests that those patients identified by examination to have ascites or abdominal or pelvic mass should be referred urgently [26]. As our survey was carried out before publication of the new NICE guidance, it would be of great interest to repeat the survey to assess the change in practice in primary care in light of the new NICE guidance on ovarian cancer. We aim to carry out a repeat survey as soon as the funding becomes available.

CONCLUSION

Ovarian tumors being common in women of reproductive age, they should be screened for the presence of the disease. Since there are variations in the symptoms, careful diagnosis is required.

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