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Original Article

Clinico-demographic Profile of Ovarian Cancer in Kashmir

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Abstract

Introduction: Ovarian cancer is the fourth most common cause of cancer deaths world wide and also the commonest cause of death among all gynecological cancers.

Aims and Objectives: To study the clinico demographic profile and treatment patterns of Ovarian Ca in our population.

Material and Methods: We conducted an analytical, non-randomized, cross-sectional study on the Clinico-Demographic profile of 731` patients with Ovarian Carcinoma who reported to our OPD between 2008 to 2015.

Results: The mean age of patients was 45±1. 49 years. Most common age group of our patients at presentation was 46-60 years. Majority of patients 70% in our study were from rural area. The major clinical presentation of ovarian in our study was pelvic pain (36%) followed by abdominal distention (34%) and ascites (22%). Most common type of ovarian cancer was of surface epithelial type (94%) followed by sex cord stromal tumor (3%) and germ cell tumour (1. 6%). Most of the cases 61% in the present study had presentation at advanced stages (stage III & IV) while as only 39% cases had presented at early stages (stage I & II). Majority of the patients having ovarian tumors underwent surgical staging with surgery in 88% cases. Chemotherapy was the most common adjuvant therapy in 38% patients who had malignant ovarian pathology and had advanced stage of diseases. while as 7 patients (1%) received radiotherapy for brain and bone mets.

Conclusion: Majority of patients were from rural background with pelvic pain as most common presenting symptom Most of our cases presented in late stages of disease. Greater awareness among our community is needed to reduce the morbidity and mortality associated with Ovarian Ca.

Key words: Ovarian Ca, Kashmiri population, Metastatic

INTRODUCTION

Ovarian cancer is the fourth most common cause of cancer deaths world wide and also the commonest cause of death among all gynecological cancers. [1-4]

A global report by the International Federation of Gynecology and Obstetrics (FIGO) has noted that the highest incidence of ovarian cancer was moving towards a younger age group, although the majority of patients with epithelial cancer were more than 50 years of age. The reasons for the increased occurrence of epithelial ovarian cancer in younger women are controversial. For ovarian cancer, the trends vary according to geographic region – with decreasing rates in the United States and Northern Europe but increasing rates in a few Southern and Eastern European countries and in Asian countries including Japan, China and Hong Kong. [5-7] In India, during the period 2004-2005, proportion of ovarian cancer vaqried from 1. 7% to 8. 7% of all female cancers in various urban and rural population based registries operating under the network of the National Cancer Registry programme (NCRP) of Indian Council Medical Research.

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Risk factors mentioned include an increase in ovulation induction in assisted reproduction techniques, nulliparity and late onset of childbearing due to increasing number of females in the workforce. [8,9]

The presenting symptoms of ovarian cancer are not specific and are often accepted by women as normal changes associated with ageing, menopause and previous pregnancies. [10]

The common investigations used for diagnosis of ovarian cancers are USG (trans vaginal, trans abdominal), colour Doppler USG, CT, MRI and serum assay of tumour markers (CA-125). [11-13]

The staging classification scheme for ovarian cancer is a surgical pathologic system modified by the International Federation of Gynecology and Obstetrics. In very general terms, stage I disease is limited to the ovaries, stage II disease is limited to the pelvis, stage III disease is limited to the peritoneal cavity, and stage IV disease is hematogenous (liver parenchymal) disease or has spread beyond the abdomen.

Staging laparotomy includes abdominal hysterectomy, bilateral salpingo-oophorectomy, omentectomy, random peritoneal biopsy, and lymph node biopsy. The treatment of women with ovarian cancer has traditionally included initial surgical staging and aggressive cytoreductive surgery followed by cisplatinum-containing adjuvant chemotherapy. [14,15] Patients with stage Ia or Ib ovarian cancer can be followed up without further therapy after definitive surgery, whereas patients with more advanced disease require postoperative chemotherapy. [16,17] There is very scant data on clinic demographic profile of ovarian CA in our community, this study was intended to study the clinicodemographic profile of Ovarian Ca in our population.

Aims and Objectives

To study the clinico demographic profile and treatment patterns of Ovarian Ca in our population.

MATERIAL AND METHODS

This study was conducted in the at Regional Cancer Centre of SKIMS, Srinagar from Jan 2008 to Dec 2015. Due to lack of a population based cancer registry data was retrieved from the departmental cancer registry. A total of 731 patients who had histological documentation of Ovarian Ca were analysed. Included in this study were patients who were either operated, were eligible for neo adjuvant treatment or inoperable & metastatic at presentation. Data was then analysed for clinico-demographic information and treatment profiles.

RESULTS

The present study included 731 Ovarian cancer patients registered at Regional Cancer Centre of SKIMS, Srinagar from Jan 2008 to Dec 2015. The mean age of patients was 45±1.49 years. Most common age group of our patients at presentation was 46-60 years as shown in Table 1. In our study most (70%) of the patients belonged to rural Districts. Most common symptom at presentation in our study was pelvic pain. The different sign and symptoms is shown in Table 2. The various risk factors associated with ovarian Ca are shown in Table 3. 94% of our patients had surface epithelial tumors. Among them most were malignant. sex cord stromal tumors were 2% and germ cell tumors were only 1% as shown in Table 4. In malignant ovarian cancers CA 125 was >35 IU/ml at presentation in our patients, where as it was <35 IU/ml in most of benign and borderline ovarian pathologies. Most of our patients

Table 1: Age distribution

Age interval (years)	Number (%)
≤15	11 (1.5)
16 - 30	124 (17.0)
31 - 45	244 (33.4)
46 - 60	248 (33.9)
61 - 75	95 (13.0)
76+	9 (1.2)
Total	731 (100.0)
Mean age±SD	45±1. 49 years

Table 2: Distribution of ovarian cancer patients according to their symptoms and signs

S.No.	Symptom and Signs	Status	Number (%)
1.	Pelvic pain	Present	263 (36)
		Absent	468 (64)
		Total	731 (100)
2.	Abdominal distension	Present	247 (34)
		Absent	484 (66)
		Total	731 (100)
3.	Vaginal bleeding	Present	82 (11)
		Absent	649 (89)
		Total	731 (100)
4.	Urinary symptoms	Present	30 (4)
		Absent	701 (96)
		Total	731 (100)
5.	Gi symptoms	Present	37 (5)
		Absent	694 (95)
		Total	731 (100)
6.	Ascities	Present	161 (22)
		Absent	570 (78)
		Total	731 (100)
7.	Leg edema	Present	90 (12)
		Absent	641 (88)
		Total	731 (100)

Table 3: Distribution of ovarian cancer cases according to their history

S.No.	History	Status	Number (%)
1.	Family history	Present	6 (1)
		Absent	725 (99)
		Total	731 (100)
2.	Smoking history	Absent	726 (99)
		Present	5 (1)
		Total	731 (100)
3.	Age at menarche	<10	81 (11)
		10-15	592 (81)
		>15	58 (8)
		Total	731 (100)
4.	Marital history	Married	641 (88)
		Unmarried	90 (12)
		Total	731 (100)
5.	Age at marriage	<20	49 (8)
		21-30	581 (91)
		>30	11 (2)
		Total	641 (100)
6.	Contraceptive practice	Present	92 (13)
		Absent	639 (87)
		Total	731 (100)
7.	Sexual partner	1	549 (75)
		2	92 (13)
		Total	641 (100)
8.	Para	Nullpara	78 (12. 3)
		Unipara	80 (12. 4)
		Multipara	483 (75. 2)
		Total	641 (100)
9.	Age at menopause	40-45	50 (10)
		46-50	395 (79)
		>51	55 (11)
		Total	500 (100)

Table 4: Distribution of ovarian cancers according to histopathological types

Histopathological types			
Surface epithelial tumors			
S. No.	**Tumor**	**Group**	***n* (%)**
1a.	Serous tumors	Benign	137 (20)
		Boderline	13 (2)
		Malignant	243 (35)
1b.	Mucinous tumors	Benign	119 (17)
		Boderline	3 (0)
		Malignant	160 (23)
1c.	Endometroid		11 (2)
1d.	Clear cell ca		4 (1)
	Total		690 (94)
2.	Lipoid cell tumor		0 (0)
3.	Sex cord stromal tumor	Granulosa cell tumor	11 (50)
		Sertoli leydig cell tumor	6 (27)
		Thecoma	2 (9)
		Fibroma	3 (14)
		Total	22 (100)
4.	Germ cell tumor	Dysgerminoma	8 (67)
		Yolk sac tumor	0 (0)
		Teratoma	4 (33)
		Total	12 (100)
5.	Miscellanous: Soft tissue tumor	Miscellanous: Soft tissue	7 (0. 95)

had stage III diseases at presentation. Stage 1 was present in 23%, Stage 2 in 16%, Stage 3 in 34% and Stage 4 in 27% of patients. 643 (88%)of our patients were operated and 280 (38%)received chemotherapy. Chemo was given to patients who had malignant ovarian pathology and had advanced stage of disease. 12% were not operated because they were not fit for surgery. Radiation was given as palliation in those patients (1%) who had brain or bone metastasis.

DISCUSSION

The present study included 731 Ovarian cancer patients registered at Regional Cancer Centre of SKIMS, Srinagar from Jan 2008 to Dec 2015. The most common age group affected by ovarian cancer in the present study was 46-60 years (33.9%), followed by 31-45 years (33.4%). Least cases were reported in age group of ≤16 years (1.5%) followed by age group of above 76 years (1. 2%). Similar scenario has been reported by Murthy *et al.* in 2009 from all over India where in they concluded that incidence of ovarian cancer starts to rise from 35 years and peaks at 55-64 years. Furthermore they also reported that ovarian cancer does not occur at a very young age. [18] In the present study mean age of presentation for ovarian cancer was 45±1.49 years. This finding corroborates with study of Nkyekyer *et al.* (2000)[19] who reported that mean age of presentation of ovarian cancer as 49 years at a tertiary care hospital in Ghana. Majority of patients 70% in our study were from rural area as majority of population of Kashmir valley is from rural background. The presenting symptoms of ovarian cancer are not specific and are often accepted by women as normal changes associated with ageing, menopause and previous pregnancies. As a result, ovarian cancer is often referred to as the 'silent killer' and it is commonly believed that no symptoms are evident. The major clinical presentation of ovarian in our study was pelvic pain (36%) followed by abdominal distention (34%) and ascites (22%). head *et al.* (2008) reported that major clinical feature of ovarian cancer was abdominal distention. Other less encountered clinical features where leg edema (12%), vaginal bleeding (11%), urinary and GI symptoms in 4% patients. Regarding GI and urinary symptoms which was experienced in about 4% patients in the present study, a recent consensus statement by American Cancer Society. Ovarian Cancer Symptoms Consensus Statement (2007)[20] concluded that women do have symptoms, primarily gastrointestinal and urinary, for several months prior to diagnosis of ovarian cancer. In our study 87% of patients with ovarian cancer had never taken contraceptives. This finding is in concurrence with study of Beral *et al.*, (2008)[21] who have reported that contraceptives have protective effect on ovarian cancer. In the present study USG abdomen/pelvis, CT abdomen/

pelvis and serum CA-125 level where undertaken for diagnosis and to assess extent of disease in 96%, 97% and 92% patients respectively. In our study most common type of ovarian cancer was of surface epithelial type (94%) followed by sex cord stromal tumor (3%) and germ cell tumour (1. 6%). These findings are similar to findings of Goodman & Howe, (2003)[22] who reported that 91. 9% of ovarian tumors were epithelial, 1. 2% were sex cord-stromal, and 1. 9% were germ cell. In the present study CA 125 was >35 IU/ml in malignant ovarian cancers at presentation, where as it was <35 IU/ml in most of benign and borderline ovarian pathologies. These are in corroboration to study by Zurawski *et al.* (1988) in which they concluded that elevations of serum CA 125 levels occurred in cases eventually diagnosed with localized or advanced cancer, and with borderline or obviously malignant disease. Most of the cases 61% in the present study had presentation at advanced stages (stage III & IV) while as only 39% cases had presented at early stages (stage I & II). These findings are in accordance with report by FIGO (2006)[1] which states that majority of ovarian cancers about 2/3rd had late stage presentation. Majority of the patients having ovarian tumors underwent surgical staging with surgery in 88% cases. However remaining 12% cases did not underwent surgery as they where medically unfit for surgery. Chemotherapy was the most common adjuvant therapy in 38% patients who had malignant ovarian pathology and had advanced stage of diseases. while as 7 patients (1%) received radiotherapy for brain and bone mets. These findings corroborates with findings of Hiremath *et al.* (2012)[23] from India who also reported that majority of ovarian cancer patients had undergone surgery and adjuvant chemotherapy.

CONCLUSION

Majority of patients were from rural background with pelvic pain as most common presenting symptom Most of our cases presented in late stages of disease. Greater awareness among our community is needed to reduce the morbidity and mortality associated with Ovarian Ca.

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