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A Retrospective Study of Demographic & Histopathological Data of Ovarian Tumors from Department of Surgical Oncology in Central India

KEYWORDS: Ovarian tumor, surface epithelial tumors, Demography, Benign

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ABSTRACT *To study the Demography and various Histopathological patterns of ovarian tumors from single institute from central India. Materials and Methods: It is a retrospective observational study. The study is done by reviewing the records of patients who came in Department Of Surgical Oncology from Ocober.2013 to April2016. Various variables included were Patient's age at diagnosis, clinical features, parity of patients, histological types ,CA125, Federation of Gynecology and Obstetrics stage, and overall Morbidity data were collected and analyzed. Results: A total of 35 cases of ovarian tumors were operated in oncosurgery unit and were analyzed. The patients that were taken for study were 20 to 80 years of age. 2 patients were nulliparous at the time of presentation. The most common presenting complaints were pain and distention of the abdomen (68%) irrespective of the nature of the ovarian tumor. The size of the tumor was variable, ranging from 5cm to 25 cams. Pain and discomfort was directly proportional to the size of the tumor .Optimal cytoreduction or complete staging was done in 20 patients out of 21 malignant cases & rest 14 cases of benign cystadenomas were managed with either oopherectomy for the involved side or TAH+BSO. The surface epithelial tumors were the most common ovarian tumor operated ,constituting 17 cases (48.7%), followed by 14 cases of benign ovarian tumors(40%), 3 cases of sex cord stromal tumors & 1case of Germ cell tumor (2.8%).. Right and left sides were almost equally affected among unilateral tumors. Combination of Taxane and Platinum29, 30 was most commonly used as first line of chemptherapy. Conclusions: We found that epithelial ovarian cancer are most common malignancy in all the cases .The most common stage at presentation was IIIb /IIIc.*

Optimum cytoreduction is achievable by carefully selecting the patient.

INTRODUCTION

Ovarian tumors are a group of diverse neoplasm with 3% of all cancers in women and account for 52% death caused by female genitalia cancers as per SEER data 2012[1]. Peak age of incidence is between 55 to 65 yr for epithelial variant of carcinoma of ovary.

Obesity, old age, nulliparity ,fertility drugs, estrogen alone hormone replacement therapy for more than 6 months ,family history and smoking are various risk factors[2-6], while some studies showed protective role of OCPs[3] .Incidence varies from 0.9 to 8.4/10[5] population year among various registries .

Nonspecific symptoms[9] make it difficult to diagnose early. Due to poor anatomical barrier early dissemination in peritoneal[7,8] cavity usually occurs .If diagnosed early the disease have high survival rate upto 85% , but due to nonspecific biomarkers and vague symptoms there is late detection and thus the survival rate is reduced to 30%.

CA125& Transvaginal USG are nonspecific screening [10, 11] tools so that their diagnostic relevance remains controversial. Lack of precise system of screening makes it difficult to diagnose in early stage & therefore is cause of high mortality among all malignancies of female genital.

Standard treatment[12-19] options are staging followed by adjuvant treatment in early stages or neoadjvuant followed by cytoreduction & adjuvant therapy in advanced stages. We are presenting here Demography and Histopathology data of ovarian tumors operated in our institute in central India.

MATERIAL AND METHOD

A retrospective data was collected for ovarian tumor cases operated in Oncosurgery unit at SAIMS (Indore) from October 2013 To April 2016. Inclusion criteria included-Age 20-80yr, Complex cyst in radiology, Elevated CA125 (>35U/ml), previously diagnosed case of ca ovary. Exclusion criteria-<20yr or >80yr, poor performance status.

Final histopathology was obtained from department of pathology, which decided further chemotherapy regimens. Various Variables are Patient's age at diagnosis, clinical features, parity of patients, histological type, Federation of Gynecology and Obstetrics staging, chemotherapy regimens, and overall Morbidity data.

RESULT

35 patients of ovarian tumors were operated in Department of Surgical Oncology. Malignancy was found in 21(60%) cases & 14 (40%) cases were found to be benign. For epithelial tumors mean age at diagnosis was 56.4±9.4, in continuation as per FIGO staging mean age group for stage I (51±8.9), for stage III (54.85±4.3) {TABLE-1}.Most patients presented with complaints of pain in abdomen & fullness in lower abdomen (63.7%) while 36% patients presented with postprandial fullness, loss of appetite & irregular menses who later on were diagnosed with malignant ovarian tumors. [TABLE3}.One case of sex cord tumor presented with symptoms of virilization.

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5(14.28%) patients presented with high risk factors (Nulliparous, fertility drugs, estrogen alone hormone replacement therapy for 6 month &family history Ovarian malignancy, smoking) [2-6].

Cystadenoma[20] was the most common benign histopathology which comprised 22.8% of all ovarian tumors. In one case fertility preserving surgery[31] was done who had borderline tumor on frozen section. On gross examination the size of the tumor varied from 5 cm to 25 cms. Paclitaxel[29, 30] & Carboplatin regimen was used as first line neoadjuvant chemotherapy in epithelial variants with extensive diseases radiologically .

20 patients (95.2%) were cytoreduced optimally or completely staged while 1 patient underwent suboptimal cytoreduction due to extensive disease. Patients of Stage III had high morbidity in post operative period.

TABLE-1 TOTAL PATIENTS OF OVARIAN MASS ADMITTED IN DEPARTMENT OF SURGICAL ONCOLOGY SAIMS INDORE 2013-2016
AGE DISTRIBUTION

AGE GROUPS	I	II	III	IV	BENIGN	TOTAL NO.	PERCENTAGE
20 YR.					2	2	5.7%
21-40 YR.			1		3	4	11.4%
41-60 YR.	4	1	11		8	24	68.51%
61-80 YR.	1		2	1	1	5	14.28%
TOTAL NO.	5	1	14	1	14	35	100%
PERCENTAGE	11.4%	2.8%	40%	2.8%	40%	100%	

N= 35 patients were operated in Department Of Surgical Oncology including all malignant (2) and benign (14) in final histopathology.

Most cases registered were stage III (40%), followed by stage I (11.4%). Benign cases comprises 40%

TABLE-2 PATHOLOGICAL PROFILE OF OVARIAN LUMP

PARAMETER	N=35	PERCENTAGE
HISTOPATHOLOGY		
EPITHELIAL VARIANTS	17	48.5%
GERM CELL TUMORS	1	2.8%
SEX CORD STROMAL TUMORS	3	8.5%
BENIGN (MOSTLY : CYSTADENOMA)	14	40%
FIGO STAGING	TOTAL NO.	MEAN AGE
I	5	51 YR.
II	1	NA
III	14	54.85 YR.
IV	1	NA
SITE	TOTAL NO.	PERCENTAGE
UNILATERAL	29	82.8%
BILATERAL	6	17.1%

N=35PATIENTS were operated in department of surgical oncology .in 48.5% patients final histopathology were epithelial variants ,2.8% have germ cell & 8.5% were diagnosed as sex cord tumor. Most patients were in stage III, with mean age was 54.8 yr followed by stage I with mean age was 51 yr .Most epithelial tumors were well differentiated .6 cases present were bilateral.

TABLE-3 PARITY &SYMPTOMS

PARITY		PERCENTAGE
0	2	5.7%
1-2	18	51.4%
3-4	10	19.6%
>4	5	14.2%
CHIEF COMPLAITS	TOTAL NO.	PERCENTAGE
ABDOMINAL LUMP &PAIN	26	63.7%
NONSPECIFIC COMPLAINTS	9	36.3%

5.7% Patients were nulliparous. Abdominal lump and pain was the most common presenting symptoms while 9 patients presented with non specific symptoms.

TABLE -4 DIFFERENT SURGICAL OPTIONS & RESULT

PARAMETER	N	PERCENTAGE
STAGING LAPARATOMY FOLLOWED BY ADJUVANT	4	19.0%
NEOADJUVANT FOLLOWED BY CYTOREDUCTION	17	80.9%
RESULTS OF SURGERY	TOTAL NO.	PERCENTAGE
OPTIMAL CYTOREDUCTION OR COMPLETE STAGING	20	95.2%
SUBOPTIMAL CYTOREDUCTION	1	4.76%
Mortality	1	2.8%

N=20 were completely cytoreduced and staged, one case was found inoperable and expired in post operative period

DISCUSSION

In our study ovarian malignancy is more common in mean age group of 53±9.04 years, in similar to Globocon 2012[21] in which ovarian malignancy was common in 5th & 6th decade. In the study of Vora &Bhargav[22] the benign & borderline tumors were more common in younger age group ,similar to our study in which mean age for benign tumors is 41 years .Sex cord tumors in our study are common in mean age group of 54 years similar to study conducted by Harron et all[23] reported , that sex cord tumors were common in age group between 45 to 50 years .In our study ovarian cancer constituted 69% of all female genital malignancies similar to verdict given in the study of S Momtahen & M kadivar et all [24]that carcinoma ovary was the leading cancer among all female genital malignancies . In our study 5.7% of cases were nulliparaous, who developed ovarian tumors, similarly Gleicher et all[25] reported that nulliparity is associated with an increased risk for certain reproductive malignancies, including breast, ovarian and uterine cancers. In our study most patients were managed by optimal cytoreduction or complete staging

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(95.2%). In one case suboptimal cytoreduction was done, due to extensive disease (4.7%), similarly the study conducted by vergote et all in which showed that clinic-radiological selection of patients for surgery was very important for good result. D´Angelo &Prat J[26] observed serous variant of adenocarcinoma was most common in all epithelial types of carcinoma ovary ,similar to our study in which serous variant of epithelial tumors were most common histopathological type(88.8%) .In our study 71.5% cases were diagonosed as FIGO stage III &IV as compared to the study conducted by Bhuvanesh et al[28] . In our study 19% of the tumors were bilateral similar to the study done by Francesca micci who stated that the incidence of bilateral tumors in their study was roughly around 25%[27].

CONCLUSION:

we found that epithelial ovarian cancer are most common malignancy in all cases .most common stage at presentation was IIIb/IIIc.Optimum cytoreduction is achievable by carefully selecting the patient. Strict follow up with 3 month interval will be helpful to diagnose early recurrence and Treat accordingly. Primary care physician should be trained for suspicion of ovarian lump in high risk group.

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