

Frequency and Management Outcome in Gynecological Malignancies

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Abstract

Objective: The study was done to find out the frequency of different gynaecological malignancies, histological types and management outcome of these malignancies.

Material and Methods: This study was conducted in unit III of Obstetrics and Gynecology Department, Jinnah Hospital, Lahore. Duration of study was 2 years from January 2018 to December 2019 and sample size was 81. All the cases presented with gynaecological cancer was analysed retrospectively by reviewing record. Complete data was evaluated in term of frequency of malignancies and their percentages.

Results: The most common site of gynaecological malignancy was cervical 35 cases (43.2%) followed by ovarian 30 cases (37%). Uterine was the 3rd most common tumour with 13 cases (16%). The vulval and vaginal cancers were found to be lowest with 01 case each (1.2%). There was one case of choriocarcinoma (1.2%).

Conclusion: Cervical cancer was the commonest cancer with squamous cell histological type (80%) followed by ovarian cancer of epithelial origin (73.3%).

Keywords: Gynecological Malignancy, Frequency, Cervical Cancer, Ovarian Cancer.

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Introduction

The gynaecological malignancy is the unbounded growth of abnormal cells that derive from the reproductive organs and spread to the surrounding tissues. In United State every six minutes a new case of gynaecological malignancy is diagnosed. Out of every 400 persons (per 100,000 population) who diagnosed with any of more than 100 types of malignancies, 12% have female reproductive organ associated malignancy.¹

Female genital tract malignancies are one of the common sites of malignancies in women. The diagnosis of malignancy is always disastrous for the patient and family in term distress that it brings but also morbidity and mortality associated with it. The different types of female genital tract lesions are affected by a number of factors such as parity age hormonal status socio-physical activities and diverse pattern of geographical distribution.²

Gynaecological tumours produce a significant health issue in females as it is associated with high cancer related mortality. These tumours considered around 40% of all cancer incidence and about 30% of all cancer mortality in the world due to an approximate incidence of greater than 3.6 million and mortality more than 1.3 million.³

Frequency of gynaecological cancers is different in different countries which depends on different factors as life style, socioeconomic status, background and genetic likelihood. Cervical tumour is the 4th most frequent tumour in women worldwide with approximately 604000 new cases and 342000 mortalities in world in low and middle socio-economic countries.⁴ In developed countries with the initiation of advanced screening program and management facilities of pre-malignant cervical lesions there is significant reduction in mortality related to cervical cancer.

Ovarian cancer is most fatal among all gynaecological malignancies. This is due to its insidious presentation along with histological and molecular variance. In England ovarian cancer is the second commonest tumour after uterine malignancy but it leads to more deaths than all other malignancies taken together.⁵

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Endometrial malignancy accounts for the major gynaecological malignancy of developed countries where prevalence is four times higher than in developing countries.⁶ This increase is associated with obesity, increase life expectancy and use of tamoxifen for breast cancer.

Material and Methods

This retrospective study was carried out for two (2) years from January 2018 to December 2019 in Obstetrics and gynaecology Unit III Jinnah Hospital, Lahore. All the patients with confirmed diagnosis of malignancy by histopathology were incorporated in this study. All the patients who have taken medical treatment. The cases with benign tumors. Treated breast cancer patients on medical treatment. During the study period a total of 1548 patients were admitted in gynaecology ward. Quantitative method was used for sampling. Patients were thoroughly evaluated by detailed history, general physical examination and systemic examination. Baseline investigations and ultrasound was done in all patients. Tumour markers, CT scan MRI imaging and IV urogram was done in patients where needed. Surgery was carried out on 1241 patients taking informed consent for surgical procedure, explaining need for surgery and permission was taken to use data for scientific research. Staging was done clinically, pre-operatively and histologically according to FIGO guidelines.

Results

During the period of two (2) years 81 cases of genital tract tumours were recorded. The proportion of cervical tumours was the highest 35 (43.2%) among these with ovarian 30 (37%) and uterine cancer 13 (16%) being second and third respectively. The mean age of cervical cancer cases was 54 years. Most patients presented with irregular vaginal bleeding, vaginal discharge and post-coital bleeding. All patients were underwent examination under anaesthesia and cervical biopsy was taken for staging and histopathological diagnosis. Most of the patients were presented in advanced stage as 42.8% presented with stage 3 followed by 37.1% with stage-2, stage 1 in 14.2% and stage 4 in 11.4% cases. Histologically 80% tumours were squamous cell carcinoma and 20% were adenocarcinoma. Only 5 patients with stage-1 (14.2%) were underwent radical surgery. Patients with disease beyond stage-1 were managed with radio chemotherapy. Ovarian cancer was the 2nd commonest tumour. The mean age of cases with ovarian cancer was 43 years. Ovarian cancer mostly presented with abdominal distension and mass abdomen. Patients with ovarian cancer

presented in advanced stage (FIGO stage 3 & 4). Histologically 73.33% were epithelial 16.66% germ cell and 6.66% were sex cord stromal tumour. Out of 22 patients with epithelial ovarian tumour, in 16 patients exploratory laparotomy was done and had TAH / BSO and omentectomy. Tumour debulking surgery was done in remaining cases. Patients with germ cell tumours were young so fertility sparing surgery (unilateral oophorectomy and omentectomy) was done and postoperatively chemotherapy was given to these patients. The mean age at presentation was 50 years in patients with endometrial cancer. It was seen in 13 patients. Main presenting symptom was abnormal vaginal bleeding. 10 patients (76.92%) were presented with stage 1 and 2. Histologically 84.61% were adenocarcinoma and there was one case of leiomyosarcoma & fibrosarcoma each. Early stage tumour was treated with radical surgery followed by radiotherapy. Advanced stage (stage 3 & 4) patients were managed with radiotherapy. Cancer of vulva was seen in one case aged 62 years with stage 2 non-keratinized squamous cell carcinoma. Patient was presented with itching on the vulva. Vaginal cancer was found in one patient at 55 years as stage 3 squamous cell carcinoma. She had complaint of vaginal bleeding and frequency of micturition on presentation. There was one patient of choriocarcinoma presented with intractable bleeding so hysterectomy was done to save the life of patient.

Table 1: There was one case each of cancer vulva vagina and choriocarcinoma.

Malignancy	Patient No	Percentage
Cervical	35	43.2
Ovarian	30	37
Endometrial	13	16
Vulva	1	1.2
Vagina	1	1.2
Choriocarcinoma	1	1.2

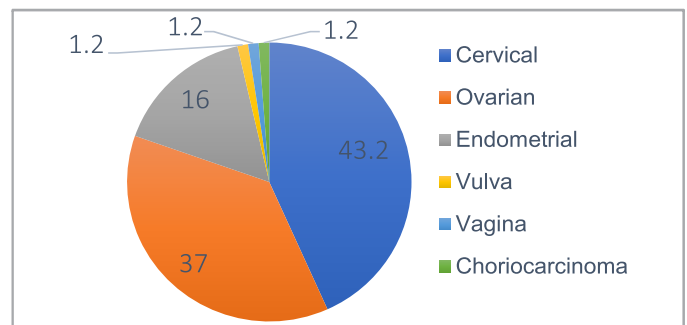


Fig-1: Frequency of malignant tumors of different organs of female reproductive tract

Table 2: *The histological subtypes are shown.*

Site	Histological Types	N (%)
Cervical	Squamous cell carcinoma	28(34.5)
	Adenocarcinoma	7(8.6)
Ovarian	Epithelial tumors	22(27.1)
	Germ cell tumors	5(6.1)
	Sex Cord Stromal tumors	2(2.4)
Uterine	Adenocarcinoma	11(13.7)
	Leiomyosarcoma	1(1.2)
	Fibrosarcoma	1(1.2)
Vaginal	Squamous Cell Carcinoma	1(1.2)
Vulval	Squamous Cell Carcinoma	1(1.2)
GTT	Choriocarcinoma	1(1.2)

Table 3: *Mean Age Distribution of Malignant Tumors.*

Malignancy	Mean Age (Years)
Cervical	54
Ovarian	43
Endometrial	50
Vulva	62
Vagina	54
Choriocarcinoma	22

Discussion

Gynecological malignancies are associated with significant female morbidity and mortality worldwide. Absence of proper data about population is main issue in developing countries like Pakistan that why accurate incidences cannot be calculated. In these situations relative frequencies are used as a tool to measure tumour incidence. There is high frequency of genital tract malignancies in Pakistan but awareness about this subject is lacking in population. Almost half of general population consist of female so the frequency of cancer pattern of their reproductive organs was analysed with incidence, preventive and treatment measures to aware gynaecologist.⁷

Cervical cancer is the most common malignancy of the female reproductive tract in this study. Worldwide cervical cancer is the 2nd commonest cancer and the 3rd major cause of death among women. Globally about 500,000 new cases of invasive cervical cancer are diagnosed per year with 270,000 women deaths. Around 80% of deaths associated with cervical cancer occur in developing countries like Pakistan.⁸

Cervical cancer is the commonest in this study which is consistent with Global Cancer Observatory⁹ a study conducted in Nigeria¹⁰ and among women in India and adjacent countries.¹¹ It is the most common tumour in

United State too but the 2nd commonest in Europe.¹² In contrast Institutional data from Pakistan has shown that ovarian tumour is the most prevalent tumour among gynaecological malignancies.¹³

Squamous cell carcinoma was the commonest histological finding in most of cases which is consistent with a study conducted in Karachi.¹⁴ The mean age at presentation of cervical carcinoma was 54 years in this study which is similar to the findings mentioned in Benin (51.5 years).¹⁵ Cervical cancer constitute 43.3% of female genital tract malignancies in this study which is consistent with results from a similar study Kano (48.6%) (Yakasai et al., 2013).¹⁶ Cervical cancer incidence is more in underdeveloped countries and around 50% of patients were reported in late stage of malignancy with poorly and moderately differentiated types. Most of the patients with cervical cancer presented with some form of bleeding as irregular vaginal bleeding, heavy menstrual bleeding, intermenstrual bleeding or postcoital bleeding. Preinvasive disease is usually asymptomatic and early invasive disease may or may not be associated with symptoms. So with the early detection of disease by cytology smear screening test, cervical carcinoma can be prevented and survival can improve when compare with other female reproductive organ malignancies.¹⁷ Ovarian tumour was the 2nd commonest cancer in this study. This study was in accordance with study by Jeph et al.,¹¹ showing ovarian the 2nd commonest tumour. Most ovarian tumours arise from surface epithelium. Epithelial tumours is most common histological subtype in our study which is consistent with a study conducted in Peshawar.¹⁸ In present study ovarian cancer was seen in 37% cases against 48% found by Manzoor H et al in a study conducted in Pakistan.¹⁹ Over the last decade dietary habits of our population have extremely changed in combination with decreased physical activity leading to weight gain in our female population. Obesity is associated with increasing risk of ovarian cancer.²⁰ Ovarian tumour has poor prognosis of all tumours of female genital tract tumour due to non-specific symptoms in early stage and deep seated location of ovaries. It leads to late presentation of patient to the hospital and diagnosis is delayed. However, reduction in its incidence by the use of oral contraceptive pills have been reported in some studies.²¹ The incidence of endometrial cancer is higher in developed countries and reported less in Asia and Africa.²¹ It accounted for 16% and third most common gynaecological tumour in this study but lower frequency reported in some other studies and commonest histological subtype found was adenocarcinoma in

endometrial cancer.²² The vaginal carcinoma is usually rare and included one case in this study. Histologically, it was found as squamous cell carcinoma. In extreme age groups with two peak incidence, irregular vaginal bleeding is significant feature.²³ Carcinoma of vulva is a disease of old age and only one case was reported in our study. Its commonest complication is pruritus vulvae²⁴. Incidence of both these is low in our local population and it may be due to better hygiene of local area practiced according to religion.

Conclusion

The retrospective study of female reproductive organ malignancies revealed that cervical carcinoma was the commonest malignancy followed by ovarian cancer. Endometrial cancer was the 3rd most common cancer in this study. Late presentation was seen in majority of all cancers.

Conflict of Interest *None*

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Authors Contribution

SN: Conceptualization of Project

SFB: Data Collection

NG: Literature Search

BB: Statistical Analysis

SN, BB, NG: Drafting, Revision

SN, BB, SFB: Writing of Manuscript