

ANALYSIS OF GENITAL TRACT MALIGNANCIES IN POSTMENOPAUSAL FEMALES – A HOSPITAL-BASED STUDY

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ABSTRACT

Objective: Female genital tract malignancy is common carcinoma. In the developed countries, ovarian cancer is the most common cancer and in developing countries, carcinoma cervix is the most common malignancy. Menopause does not cause cancer, but the risk of developing cancer increases as women ages. Therefore, women who have been through natural menopause are more likely to develop cancer because they are older. A woman who experiences menopause after age 55 has increased risk of ovarian, breast, and uterine cancers. The risk is greater if women also began menstruating before age 12. This is because a woman who menstruates longer than normal during her lifetime is exposed to more estrogen and has more ovulation. Hence, aims and objectives of our study are: (1) To determine the incidence of different genital malignancies in postmenopausal females and (2) to analyze diagnosis and treatment of genital malignancies in postmenopausal females.

Methods: 1. Data were collected using predesigned proforma; consent was taken from every participant, 2. After collection of data, it was tabulated. Statistical calculation and subsequent analysis was made has been presented in the form of Tables and graphs.

Results: A total of 401 cases reported to the institute during a period of 1 year. Out of which, 107 patients were that of genital carcinoma. Incidence of female genital tract carcinoma was 26.68%. Approximately 73.87% (82 patients) of cases were that of cervical cancer.

Conclusion: Hence, from above study, the most of the patients were diagnosed in advanced stage of malignancy. Carcinoma cervix was the most common female genital tract cancer with ovarian cancer taking the second rank. This is unfortunate as cancer cervix is preventable to a large extent as it takes a decade or more to progress from pre-invasive to invasive lesion, there are various screening modalities to diagnosed the cervix in pre-invasive age, that is, when it still curable.

Keywords: Menopause, Postmenopausal women, Genital malignancies, Cervical cancer.

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INTRODUCTION

Female genital tract malignancy is the most common carcinoma. In the developed countries, ovarian cancer is the most common cancer and in developing countries, carcinoma cervix is the most common malignancy. Menopause does not cause cancer, but the risk of developing cancer increase as women ages. Therefore, women who have been through natural menopause are more likely to develop cancer because they are older. A woman who experiences menopause after age 55 has increased risk of ovarian, breast, and uterine cancers. The risk is greater if women also began menstruating before age 12. This is because a woman who menstruates longer than normal during her lifetime is exposed to more estrogen and has more ovulation. A longer expose to estrogen increases a woman's risk of uterine cancer, and having more ovulation than normal increase a woman's risk of ovarian cancer.

Cervical cancer –Carcinoma of cervix is the most common malignancy in women in India with an incidence of 9–44%/100,000 women. In an India, the most patient present with advance stage and the prognosis is directly related to stage at the time of presentation.

It is a cancer arising from the cervix. It is due to abnormal growth of all that have the ability to invade or spared to other parts of the body. Early on there is typically no symptoms, later symptoms may include abnormal vaginal bleeding, pelvis pain, or pain during sexual

intercourse, bleeding after sex may be not serious, however, may also be due to cervical cancer [1].

Human papilloma virus (HPV) infection appears to be involved in the development of more than 90% case [2] most people who have had HPV infection, however, do not develop cervical cancer [3]; other risk factor includes: Smoking, a weak immune system birth control pills.

The risk of ovarian cancer increases in people who ovulate more, thus those who have never had children are at increased risk as are those who begin ovulation at a younger age or reach menopause at an older age, other risk factor includes hormone therapy after menopause, fertility medication, and obesity.

Hence aims and objectives of our study are: (1) To determine the incidence of different genital malignancies in postmenopausal females and (2) to analyze diagnosis and treatment of genital malignancies in postmenopausal females.

METHODS

Study design

This is hospital-based, prospective, and observational study of the postmenopausal females admitted in Sultania Zanana Hospital, Bhopal. Permission was taken from the Institutional Ethics Committee.

Duration of study

The duration of the study was 1 year – July 01, 2014–June 30, 2015.

Study setting

The study was conducted at the Department of Obstetrics and Gynaecology, Sultania Zanana Hospital and Gandhi Medical College, Bhopal.

Data collection

Data were collected using predesigned proforma; consent was taken from every participant.

Data analysis

After collection of data, it was tabulated. Statistical calculation and subsequent analysis was made and has been presented in the form of Tables and graphs.

Inclusion criteria

All postmenopausal females presenting with genital tract malignancies were included in the study.

Exclusion criteria

All postmenopausal female presenting with breast carcinoma and other benign disorders were excluded from the study.

Methodology

Patient sociodemographic and obstetrics and gynecology history were recorded, including age and type of menopause, followed by clinical examination was performed in each case. Laboratory investigation including complete hemogram, blood biochemistry, urine examination pap smear, pelvic ultrasonography, electrocardiography, X-ray, and computer tomography was done. Resected tissues were examined histopathologically, detail of all gynecological problem was recorded using predesigned proforma.

RESULTS

A total of 401 cases reported to the institute during a period of 1 year. Out of which, 107 patients were that of genital carcinoma. Incidence of female genital tract carcinoma was 26.68%. Approximately 73.87% (82 patients) of cases were that of cervical cancer.

About 21% of women <60 years having genital tract malignancy while 34.75% of women ≥60 years having genital tract malignancy.

Result shows that malignancy is increase with age advance. Results are statistically significant ($p < 0.05$).

Maximum number of women having carcinoma of cervix (73.8%) followed by carcinoma of ovary (13.5%).

Maximum number of women having carcinoma of cervix Stage IIB (60.9%) followed by Stage IV (13.4%)

Most common surgery performs for gynecological malignancy was staging laprotomy (TAH with BHO with ometectomy) 60.5%, followed by Wertheim's hysterectomy (29%).

All the cases of ovarian malignancy (n=15) were treated with staging laprotomy (total abdominal hysterectomy with bilateral salpingo-oophrectomy f/b infratolic omentectomy).

In our study, out of eight patient with endometrial carcinoma, three had early Stage (IA) and hence TAH (extra facial) with bilateral salpingo-oophorectomy and rest of them (five) had advanced stage carcinoma as a result of that Type 2 radical hysterectomy or Wertheim's hysterectomy was done.

Six patient of Stage I and five patient of Stage IIA carcinoma cervix undergone Wertheim's hysterectomy, rest of case of cervical carcinoma

(n=70) were advance cancer, they all undergone radiotherapy and chemotherapy.

About 92% case of Ca cervix present in female having parity (>3) while only 66% of Ca overy present with high parity (>3) and 75% of Ca endometrium present in female having high parity (>3).

DISCUSSION

In our study, frequency of malignancy was 26.6% in postmenopausal women which is high, as the study is carried out in tertiary care center.

About 21% of women <60 years having genital tract gynecological malignancy while 34.75% of women >60 years having genital tract malignancy. Result shows that malignancy is increase with age advance. Results are statistically significant ($p < 0.05$).

Maximum number of women having carcinoma of cervix (73.8%) followed by carcinoma of ovary (13.5%).

In a study by Okeke *et al.*, 66.3% patients constituted that of cervical cancer among female genital tract cancer [4].

Somalwar *et al.* in 2013 reported that frequency of malignancy in postmenopausal women was 27.5%. Cervical carcinoma was found in (54.54%), majority of carcinoma cervix (96%) were in advance stage. Women with advance stage were referred for radiotherapy while one women with early stage underwent Wertheim's hysterectomy [5]. Farkunda *et al.* in 2010 reported carcinoma cervix as 62.28% in postmenopausal women [6].

Naik *et al.* in 2005 reported that frequency of carcinoma cervix is 39.72% in postmenopausal women [7]. Incidence of cervical cancer has shown a dramatic decline because of detection of disease at preinvasive lesion after introduction of cervical screening program in developed nation. A significant reduce incidence was reported in Finland, Iceland, and Sweden. About 80% of all case of cervical cancer annually occurs in developing countries where only 5% of female population has Pap smear within 5 years.

Ovarian carcinoma was the second most malignancy found in our study with frequency of 13%. Ovarian cancer was most common cause of cancer death in Western world. Endometrial carcinoma contributed to 7.2% of women in our study which closely correlated with study by Naik *et al.* in 2005 was found endometrial carcinoma in 9.09% of postmenopausal women [7].

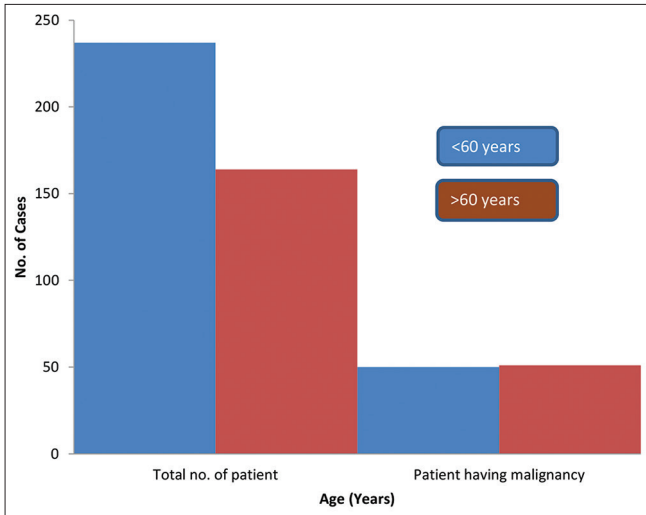
Somalwar *et al.* in 2013 conduct a cross-sectional study on 200 postmenopausal women, malignancy was confirmed in 27.5% women. Carcinoma endometrium was found in 9.09% of total malignancy. All these women underwent surgery, out of these, 60% received chemotherapy postoperatively [5].

Ferkunda *et al.* in 2010 was found endometrial carcinoma in 11.76% of postmenopausal women [6]. Endometrial carcinoma is most common malignancy in women in Western world where the life time risk of women to develop endometrial carcinoma is 2% postmenopausal. The frequency of this malignancy with postmenopausal bleeding is reported to be 20.5%. The peak age of endometrial carcinoma is 56–65 years in our study; carcinoma endometrium was seen between 55 and 70 years.

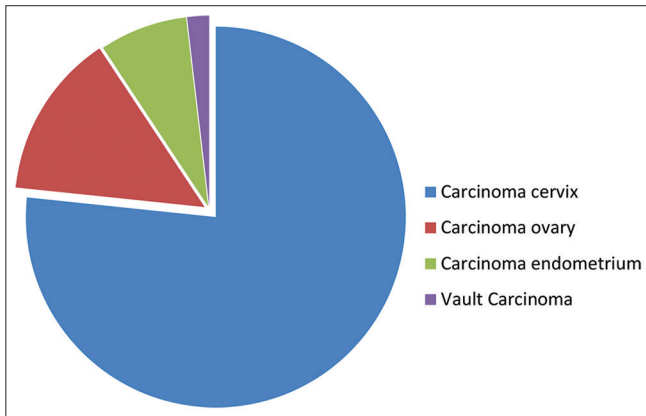
Type of surgeries perform in gynecological malignancy (n=38)

Most common surgery perform for gynecological malignancy was staging laprotomy (TAH with BHO with ometectomy) (60.5%) followed by Wertheim's hysterectomy (29%).

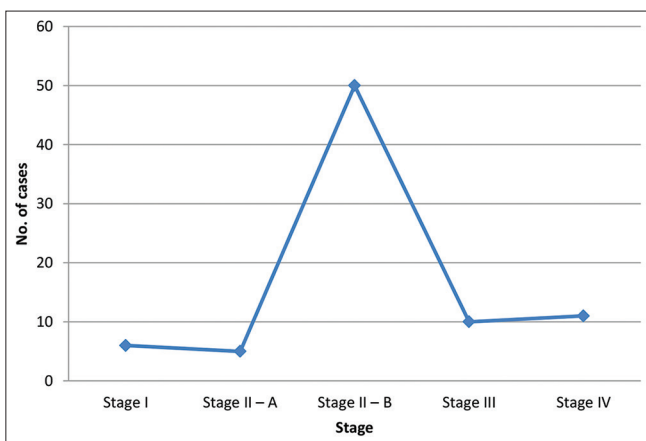
All the cases of ovarian malignancy (n=15) were treated with staging laprotomy (total abdominal hysterectomy with bilateral salpingo-oophrectomy f/b infratolic omentectomy).



Graph 1: Age-wise distribution of patients having malignancy



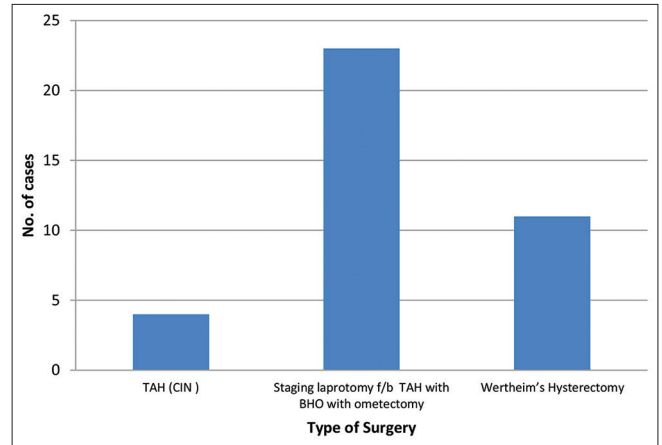
Graph 2: Malignant disorder of genital tract (n=107)



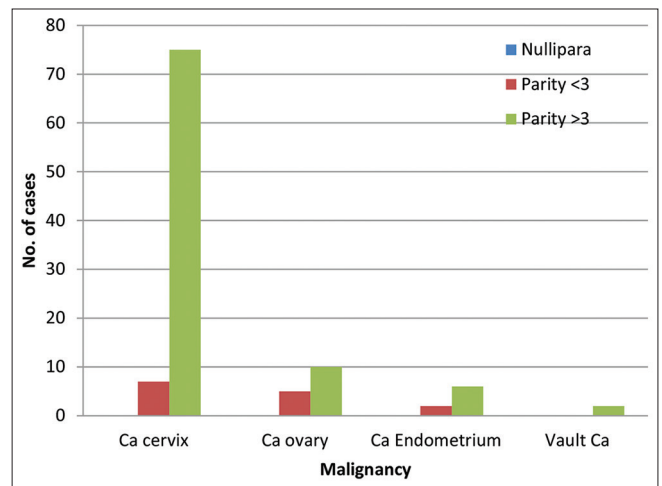
Graph 3: Carcinoma cervix stage (n=82)

A retrospective observational study conducted by Dey *et al.* (2012) in female aged >60 years. About 26.67% women having genital tract malignancy. Among the gynecological malignancies, ovarian carcinoma was the most common (50%) followed by endometrial carcinoma (33.3%). All patient of malignancy treated surgically [8].

In our study, out of eight patient with endometrial carcinoma, three had early stage (IA) and hence TAH (extra facial) with bilateral salpingo-oophorectomy and rest of them (five) had advanced stage carcinoma as a



Graph 4: Type of surgeries perform in gynecological malignancy (n=38)



Graph 5: Relationship of parity with type of malignancy

Table 1: Age-wise distribution of patients having malignancy

Age (years)	Total no. of patient (n=401)	Patient having malignancy	% of total malignancy
<60	237	50	21.1
≥60	164	57	34.75

Table 2: Malignant disorder of genital tract (n=107)

S. No.	Site of cancer	No.	Percentage
1	Carcinoma cervix	82	73.87
2	Carcinoma ovary	15	13.51
3	Carcinoma endometrium	8	7.2
4	Vault Carcinoma	2	1.8
5	Total	107	100

result of that Type 2 radical hysterectomy or Wertheim's hysterectomy were done.

Somalwar *et al.* in 2013 reported on postmenopausal women that malignancy was confirmed in 27.5% women. Carcinoma endometrium was found in 9.09% of total malignancy. All these women underwent surgery. Out of these, 60% received chemotherapy postoperatively [5].

Table 3: Carcinoma cervix stage (n=82)

Stage	No.	Percentage
Stage I	6	7.31
Stage II-A	5	6.09
Stage II-B	50	60.97
Stage III	10	12.19
Stage IV	11	13.41

Table 4: Type of surgeries perform in gynecological malignancy (n=38)

S. No.	Type of surgery	No.	Percentage
1	Staging laprotomy (TAH with BHO with ometectomy)	23	60.5
2	Wertheim's Hysterectomy	11	29
3	TAH (CIN)	4	10.5
4	Total	38	100

Table 5: Relationship of parity with type of malignancy

Malignancy	Nullipara	Parity <3 (%)	Parity >3 (%)
Ca cervix	0	7 (8)	75 (92)
Ca ovary	0	5 (33)	10 (66)
Ca endometrium	0	2 (25)	6 (75)
Vault Ca	0	0	2 (100)

Six patients of Stage I and five patients of Stage IIA carcinoma cervix undergone Wertheim's hysterectomy rest of case of cervical carcinoma (n=70) were advance cancer, they all undergone radiotherapy and chemotherapy.

In a study by Okeke *et al.*, 66.3% patients constituted that of cervical cancer among female genital tract cancer [4].

CONCLUSION

Hence, from above study, the most of the patients were diagnosed in advanced stage of malignancy due to low level of awareness and education among the females.

There is also limited number of screening programs in our country which could also be responsible for advanced stages.

Carcinoma cervix was the most common female genital tract, cancer with ovarian cancer was second most common cancer.

This is unfortunate as cancer cervix is preventable to a large extent as it takes a decade or more to progress from pre-invasive to invasive lesion, there are various screening modalities to diagnosed the cervix in pre-invasive age, that is, when it still curable.

With the aid of proper screening and medical therapies, appropriate and timely treatment should be provided to prevent the disease progressing to advanced stage.

AUTHORS CONTRIBUTIONS

1. Priyanka Tiwari, contributing in data collection and data analysis
2. Bharti Parihar contributing as research guide and drafting article
3. Ravikant Arjariya contributing in data analysis and as corresponding author.

CONFLICT OF INTEREST

Nil.

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Self.

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