ORIGINAL ARTICLE

Frequency and Pattern of Gynecological Malignancies at Bolan Medical Complex Hospital Quetta

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ABSTRACT

Objective: To determine the pattern and relative frequencies of gynecological malignancies at Bolan Medical Complex Hospital Quetta.

Study Design: Retrospective observational study.

Place and Duration of Study: Department of Obstetrics and Gynecology Unit-2, Bolan Medical Complex Hospital, Quetta, from 1st January 2017 to 31st December 2021.

Materials and Methods: This retrospective study included review of clinical records of all patients presented with gynecological malignancies. The data was collected from ward admission registers, case sheets and operation theater registers. Simple descriptive statistics were used to obtain the results in terms of frequency and percentage.

Results: During the study period of five years**,** there were 154 cases of genital tract malignancies out of 1565 major gynecological operations, giving a frequency of 9.8%. Most common site of malignancy was ovarian (63%), followed by endometrial carcinoma (17.6%), and cervical cancer (12.4%) being on third most common. Ca vulva and choriocarcinoma were 3.2% both and there was only one case of fallopian tube carcinoma (0.6%). The majority of cancers (35.6%) were in 41 to 50 age group. Ovarian carcinoma was most common in nullipara and low parity while Ca endometrium and Ca cervix were more common among grand multiparas.

Conclusion: The most frequent gynecological cancer was ovarian cancer, which was followed by endometrial and cervical cancer. In most cases of cancer, late presentation with an advanced stage was observed. There is need for public awareness of about the symptoms of ovarian cancer and cervical screening by pap smear. So, early diagnosis can reduce the morbidity and mortality from gynecological cancers in females.

Key Words*: Cervical Cancer, Endometrial Cancer, Grand Multipara, Low Parity, Morbidity, Ovarian Cancer.*

Introduction

Gynecological malignancies comprise carcinomas of cervix, uterus, ovaries, vulva, vagina, and gestational trophoblastic diseases. All over the world, there is a significant contribution of gynecological malignancies to morbidity and mortality of female causing a major health problem.[1] Genital cancer prevalence varies in different regions. In North America, it is as low as 12.7% to 13.4%, whereas in sub-Saharan Africa, it is as high as 31.6% to 35%. and it is much higher in developing countries of Asia.[2] After the breast cancer (46.3%), carcinoma cervix (13.6%) is the second most common cancer in woman, while endometrial cancer (8.4%), ovarian cancer (6.6%) and ca vulva (0.9%) are less common .[2] The gynecological malignancies has different frequencies between countries due to various factors like socioeconomic background, life style and genetic tendency.[3]

The number of women seeking cancer treatment has been increased in past years, due to this it has become one of major public health issues.[4,5] The risk of death is higher in cancer patients who cannot afford the treatment. According to WHO, in majority of the countries, cancer ranks as the second most common cause of death for women under 70.[1]The incidence of cervical cancer has been increased in developing countries and 80% cases are now reported in these countries as they have no proper cervical cancer screening programs[6] Ovarian cancer is also diagnosed at very late stage III, or stage IV. Although the Gold standard test is histopathology but in the diagnosis of malignant ovarian neoplasm, the doppler ultrasound method is a trustworthy and

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Received: October 19, 2023; Revised: March 06, 2024
Accepted: March 12, 2024

https://doi.org/10.57234/jiimc.march24.1866

dependable one. So, it can be used as screening of ovarian tumors. Due to lack of proper cancer registry, gynecological malignancies are under reported in Pakistan.[7] For estimation of the burden of disease there is need of a population-based data and a high-quality cancer registry.[8]

We reviewed the data of five years in Bolan medical complex hospital, Quetta to produce local data about the risk factors, frequency, and pattern of presentation of various female genital tract cancers. Bolan Medical Complex Hospital is a leading tertiary care hospital of Baluchistan and has a large number of patients suffering from various kinds of cancers from all over the province as well as from neighboring countries Afghanistan and Iran border. This is the first analysis of five years' worth of gynecological cancer data from our hospital. Thus, we anticipate that this data will be useful to us as we develop and implement comprehensive cancer prevention and treatment strategies. Additionally, it will support the development of policies for prompt management, early diagnosis, and program prioritization for cancer control.

Materials and Methods

A five-year retrospective study from 1st Jan 2017 to 31st Dec 2021 was conducted in gynae unit -2 of Bolan Medical Complex Hospital Quetta. The clinical record of patients admitted for genital tract malignancy were retrieved from ward admission registers, case sheets and operation theater record registers. All the patients operated for any gynecological malignancy was included in the study and patients operated for obstetrical reasons were excluded. Local ethical review committee approval was taken for the study, (Ref no: GD/30/23) dated 22/07/2023. Simple descriptive statistics were used to calculate the results in terms of percentage and frequency, and Microsoft Excel 13 was used for analysis.

Results

During the study period 1565 major gynecological operations were performed in which 154 cases were of genital tract cancers. Thus, 9.8% of total gynecological operations were due to malignancies. Commonest site of cancer was ovarian 63% (97/154) followed by endometrial carcinoma 17.6% (27/154) and cervical cancer 12.4% (19/154). Ca vulva and choriocarcinoma account for 3.2% each (5/154) while there was only one case of fallopian tube carcinoma giving the frequency of 0.6% as shown in table -1.

The majority of cancers (35.6%) were in the 41 to 50 age group. The ovarian cancer was commonest in all age groups being most common in 4th decade. Endometrium carcinoma was most common after 50 years of age. (table 2). No cases of cancer of vagina were seen during the study period. Table III shows that gynecological malignancies are more common in grand multiparas. Endometrial ca (85%) and cervical ca (89%) were more common in grand multiparas whereas ovarian cancer was seen mostly in nullipara and women with low parity (64%).

Table I: Site Distribution of Female Genital Tract Malignant Tumors

Site of tumor	No of cases	Percentage
Ovary	97	63%
Endometrium	27	17.6%
Choriocarcinoma	5	3.2%
Cervix	19	12.4%
Vulva	5	3.2%
Fallopian tubes	1	0.6%
Total	154	100%

Table II: Age Distribution of Carcinomas n=154

Age	Ovarian	Endometrial	Cervical	Vulva	Tube	Choriocarcinoma	No (%)
21-30	20	0	0	0	0	1	21(13.6%)
31-40	25	0	1	0	1	2	29(18.8%)
41-50	33	10	7	3	0	2	55(35.7%)
51-60	13	11	5	1	0	0	30(19.5%)
61-70	6	6	5	1	0	0	18(11.7%)
>70	0	0	1	0	0	0	1(0.6%)

Discussion

Gynecological cancer is increasing worldwide and especially in developing countries. Every year, about five million new cases of cancer are diagnosed. This increase is due to many factors, for example change in lifestyle, excessive radiation exposure and there is an increase in detection rate of cancers by different screening methods. The prevalence of gynecological

https://doi.org/10.57234/jiimc.march24.1866

Table III: Parity of Patients with Gynecological Malignancies. n =154

Parity	ovarian	endometrial	cervix	vulva	tubal	choriocarcinoma	No %
Nullipara	28	1	0	1	1	1	32(21%)
P1-2	14	0	0	0	0	0	14(9%)
P3-4	20	3	2	0	0	1	26(17%)
≥P5	35	23	17	4	0	3	82(53%)
Total	97	23	19	5	1	5	154(100%)

malignancies is 9.8% in our study while it is observed in Asian population, approximately 11% of cases that were admitted had gynecological issues. The prevalence is different worldwide ranging between 2.8% to 17% of the cases.[8] Ovarian carcinoma is the commonest malignancy in our study (63%) which is comparable with the studies from other parts of Pakistan. These study which were conducted in Lahore,[9] Quetta,[10] and Karachi[11] had 53.5%, 49.32% and 47% of ovarian cancers respectively. Ovarian cancer was most common in age of 41 to 50 years (35.7%) in our study while ovarian cancer's peak age was found to be between 50 and 59 years old in other studies.[12,13] Ovarian cancers was more common in nullipara and low parity women (64%) in our study. This shows that there has been a lifestyle change in developing countries like late conception, small families and lack of breast feeding. Change in dietary habits and reduced physical activity has contributed to weight gain which has increased the risk of poly cystic ovarian disease and ovarian cancer.[14] Due to non-significant symptoms, the diagnosis of ovarian ca is delayed, and patients seek treatment in very late stage. Early detection of gynecological cancers can be possible by creating various screening techniques, such as tumor markers like CA125, serial transvaginal scans, and risk factor stratification. But these screening test still have not evidenced to be helpful.[15,16]

Endometrial cancer was the second most common malignancy in our study, which was also observed in a study at Liaqat National Hospital Karachi[11]. According to Global Cancer Observatory[3], cancer of endometrium is second number after cervical cancer. Endometrial carcinomas were more common after 50 years. The characteristic feature of uterine cancer is abnormal bleeding and assessing this symptom as soon as possible can increase the chance of early detection and appropriate treatment within safe time limits.[17]

Ca cervix is the commonest cancer in the United States and Europe[10], and it is on third number in occurrence in our study (12.4%). Other local studies also found cervical cancer to be 3rd most common cancer in women.[11] In a Turkish study[18] the most common gynecological cancer was uterine cancer, which was followed by ovarian cancer and cancer of cervix. In the study of Shaukat et al[19]at Rahim Yar Khan, cervical cancer was on the top of all gynecological cancers with 53.2% which is an alarming situation. In our study cervical cancer was most common after 40 years of age and in grand multipara (89%) Which is comparable with other studies.[11,19] There is no structured screening program for cervical cancer in our country.[20] Even educated people do not know about Pap smear for screening of cervical cancers and human papilloma virus (HPV) vaccination availability. HPV infection is the main cause of ca cervix in our country, so due to lack of awareness about HPV vaccination, pap smear screening and follow up, the women present in late stage with high mortality rate.

In the UK, vulvar and vaginal cancer comprise 7% of gynecological cancers .[21] while we found ca vulva and choriocarcinoma 3.2% each. In our study, one case of cancer of fallopian tube was identified, which accounts for 0.1% to 1.8% of all genital malignancies and is an uncommon tumor of the female genital tract.[22]

Conclusion

Carcinoma of the ovary is the most common gynecological malignancy in our setup. The mortality is high due to late presentation with advanced stage of cancer. There is need of public awareness of about the symptoms of ovarian cancer and cervical screening by pap smear and vaccination for cervical cancer. So, early diagnosis can reduce the morbidity and mortality from gynecological cancers in females.

Limitations of Study

As this study is retrospective and conducted only in

one unit of tertiary care hospital, this is underestimation of the gynecological cancers in our province.

Recommendations

There should be public awareness programs about all gynecological cancers using social media, by conducting workshops at educational institutes. Cervical cancer screening should be mandatory in reproductive age of all women and vaccination for cervical cancer should be included in Government vaccination schedules for teen age girls.

REFERENCES

1. Ferlay J, Colombet M, Soerjomataram I, Mathers C, Parkin DM, Piñeros M, et al. Estimating the global cancer incidence and mortality in 2018: GLOBOCAN sources and methods. *Int J Cancer*. 2019;144(8):1941-1953.
2. Globocan Observatory W. Cancer Today - World. Int Agency Res Cancer [Internet]. 2019; 876:2018–2019.
3. Ferlay J, Ervik M, Lam F, et al. Global Cancer Observatory: Cancer Today. Lyon, France: International Agency for Research on Cancer. Available at: https://gco.iarc.fr/today.
4. Shirali E, Yarandi F, Ghaemi M, Montazeri A. Quality of Life in Patients with Gynecological Cancers: A Web-Based Study. Asian Pac J Cancer Prev. 2020 Jul 1;21(7):1969-1975.
5. Gebretsadik A, Bogale N, Dulla D. Descriptive epidemiology of gynaecological cancers in southern Ethiopia: retrospective cross-sectional review. *BMJ Open* 2022;12: e062633.
6. Sultana R, Hafeez M, Shafiq S. Awareness about cervical cancer in Pakistani women. *Pak Armed Forces Med J*. 2019;69(1):21-25.
7. Gaona-Luviano P, Medina-Gaona LA, Magaña-Pérez K. Epidemiology of ovarian cancer. *Chin Clin Oncol*. 2020; cco-20-34.
8. Sung H, Ferlay J, Siegel RL, *et al.* Global cancer statistics 2020: GLOBOCAN estimates of incidence and mortality worldwide for 36 cancers in 185 countries. *CA Cancer J Clin* 2021; 71:209-49.
9. Wasim T, Mushtaq J, Wasim AZ, Raana GE. Gynecological malignancies at tertiary care hospital, Pakistan: A five-year review. *Pak J Med Sci*. 2021 May-Jun;37(3):621-627.
10. Manzoor H, Naheed H, Ahmad K, Ifthikhar S, Asif M, Shuja J, et al. Pattern of gynecological malignancies in southwestern region of Pakistan: An overview of 12 years. *Bio Med Rep*. 2017; 7:487-491.
11. Afridi KH, Zahid AN. Frequency of Gynecological Malignancies in a Tertiary Care Centre in Karachi, Pakistan. Liaquat National Journal of Cancer Care 2021; 3(1): 3-6.
12. Afroz S, Ara G, Sultana F. Pattern of Gynaeco-logical Malignancies in a Tertiary Care Hospital. *Open J Obstet Gynecol* 2019; 9: 449- 57.
13. Tabassum S, Masood AI, Khakwani M. Pattern of gynecological malignancies in south Punjab Region of Pakistan: An overview of 5 years. *Professional Med J* 2021; 28(1): 90-5.
4. Shetty C, Rizvi S, Sharaf J, et al. (April 07, 2023) Risk of Gynecological Cancers in Women with Polycystic Ovary Syndrome and the Pathophysiology of Association. *Cureus* 15(4): e37266.
15. Henderson JT, Webber EM, Sawaya GF. Screening for ovarian cancer: updated evidence reports and systematic review for the US preventive services task force. *Jama*. 2018 Feb 13; 319(6):595-606.
16. Denschlag D, Ulrich U. Uterine carcinosarcomas - diagnosis and management. *Oncol Res Treat* 2018; 41: 675-9.
17. Raglan O, Kalliala I, Markozannes G, et al. Risk factors for endometrial cancer: an umbrella review of the literature. *Int J Cancer*. 2019;145(7):1719–1730.
18. Gultekin M, Kucukyildiz I, Karaca MZ, et al. Trends of Gynecological Cancers in Turkey: Toward Europe or Asia? *Int J Gynecol Cancer* 2017; 27: 1525-33.
19. Shoukat HU, Aslam U, Jamil F et al. Frequency of Different Gynecological Cancers in Suspected Cases of Gynecological Cancers Presenting at Sheikh Zayed Hospital, Rahim Yar Khan. *P J M H* 2021;(15) 2: 399-401.
20. Khokhar MA, Ali MM, Liaqat S, Moin A, Sarwar HA, Sarwar MZ. A review of access to cancer facilities in Punjab, Pakistan. *Cancer Rep*. 2020;3(3):1-7.
21. Tidy J, Seckl M, Hancock BW, on behalf of Royal College of Obstetrics and Gynaecology. Management of Gestational Trophoblastic Diseases. *JOG* 2021;128: e1-e27.
22. Rexhepi M, Trajkovska E, Ismaili H, Besimi F, Rufati N. Primary Fallopian Tube Carcinoma: A Case Report and Literature Review. *Maced J Med Sci*. 2017 May 20;5(3):344-348.

CONFLICT OF INTEREST

Authors declared no conflicts of Interest.

GRANT SUPPORT AND FINANCIAL DISCLOSURE

Authors have declared no specific grant for this research from any funding agency in public, commercial or nonprofit sector.

DATA SHARING STATMENT

The data that support the findings of this study are available from the corresponding author upon request.