Exploring the spectrum: A Retrospective Study on the Frequency, Variation, and Clinical Profile of Gynecological Tumors.

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ABSTRACT:
Objective: The objective of this retrospective study was to determine the frequency, grade, stage and risk factors of gynecological tumors in our setup.
Methodology: This retrospective study was conducted during October 2023 to March 2024. Data was retrieved from Department of Gynecology and Obstetrics, Muhammad Medical College after getting gate keeper permission from Medical Superintendent Muhammad Medical College Hospital. Hospital Mirpurkhas.
Results: During study period 8451 patients were admitted, 19 patients presented with different gynaecological malignancies. Ovarian tumours (47%) outnumbered other malignancies.
Conclusion: Ovarian carcinoma is predominant among women aged 21 to 30 years, while cervical carcinoma is more common in postmenopausal women.

Key words: Genital Neoplasms, Fallopian Tube Neoplasms, Ovarian Neoplasms, Carcinoma, Endometrioid Carcinoma, Ovarian Epithelial

Introduction:

Malignancies classified as gynecological involve the reproductive organs and include cancers of the ovary, cervix, uterus, vulva, vagina, as well as gestational trophoblastic malignancies. These types of cancer are among the leading causes of death due to cancer.[1] Cervical cancer is one of the leading cancers affecting women, second only to breast cancer. In developing countries, carcinoma cervix is the predominant gynecological malignancy, whereas in developed countries, ovarian cancer is the most common. It is estimated that about 80% of cervical cancer cases occur in developing nations.[2]

In studies conducted in Africa and India, cervical cancer is identified as the second most frequent cancer among women, following breast cancer.[3,4] In North America, the rates of incidence and mortality for cervical cancer have reduced by two-thirds over the last 50 years, positioning it as the eighth leading cause of cancer mortality, a result attributed to effective cervical screening initiatives and the management of precancerous cervical conditions.[5]

Unfortunately ovarian cancer exhibits the highest mortality rate in developing nations, as two-thirds of cases are diagnosed at an advanced stage.[6] Endometrial cancer ranks as the sixth most prevalent cancer among women globally and is the leading genital malignancy in the United States and other developed countries.[7] Women with a high number of pregnancies have a comparatively lower risk of developing endometrial and ovarian cancers, whereas having multiple pregnancies is linked to a heightened risk of cervical cancer.[8] Cervical cancer is linked to the human papillomavirus (HPV), which is spread through sexual contact. The likelihood of HPV transmission increases with the early onset of sexual activity, having numerous sexual partners, and involvement with high-risk partners.[9] In underdeveloped countries, the prevalence of genital tract cancer is notably high due to insufficient awareness, hazardous sexual behaviors, and the lack of comprehensive screening initiatives for cervical cancer.[10]

Although some female genital tumors are frequently observed in our country, there is a scarcity of literature addressing this issue. Furthermore, the incidence of gynecological cancers varies by geographical location, influenced by environmental factors, lifestyle, genetic makeup, and socioeconomic conditions.[11] As a result, this study was initiated to gather insights into the patterns of gynecological malignancies. The outcomes could significantly support the development of strategies for effective screening, early diagnosis, and timely intervention to lower the morbidity and mortality rates linked to these cancers

Objective:

To determine the frequency, grade, stage and risk factors of gynecological tumors in our setup.

Methodology:

This retrospective study was conducted during October 2023 to March 2024. Data was retrieved from Department of Gynecology and Obstetrics, Muhammad Medical College after getting gate keeper permission from Medical superintendent Muhammad Medical College Hospital. Mirpurkhas. This study included all patients diagnosed with gynecological malignancies that includes cervical, ovarian, and endometrial cancers, as confirmed by histopathology. Retrospective data collection was performed from the medical records of patients with gynecological tumors throughout the study period. The collected data encompassed age, parity, types of gynecological tumors, family history, and symptoms including menorrhagia, irregular menstruation, post-coital bleeding, lower abdominal pain, vaginal discharge, weight loss, gastrointestinal disturbances, and any other relevant symptoms, all documented on a standardized form. The data presented as frequencies and percentages.

Results:

During period of current study, there were a total of 8,451

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admissions. Among these, 19 patients were diagnosed with gynecological malignancies, representing 0.22% of the total admissions. Ovarian malignancies constituted the largest proportion of these cases, accounting for 9 out of 19 (47%), followed by cervical carcinoma with 5 out of 19 (26%), and uterine malignancy with 4 out of 19 (21%).

Table 1: Age distribution of patients with gynecological malignancies.

Age Years	Cervical carcinoma	Endometrial carcinoma	Ovarian carcinoma	Any other	Total
<40	0	0	1	0	1
40-49	1	0	0	0	1
50-59	3	2	2	0	7
>60	1	3	6	0	10
Total	5	4	9	0	19

Table 2. Clinical presentation of patients with gynecological malignancy.

Presentation	Uterus	Ovaries	Cervix
Mass in abdomen	0	6(66%)	0
Postcoital bleeding	0	0	4(80%)
HMB	3(75%)	0	0
Irregular vaginal bleeding	2(50%)	5(55%)	3(60%)
Vaginal discharge	0	0	4(80%)
Lower abdominal pain	2(50%)	4(44%)	0
Weight loss	0	4(44&)	2(40%)
Gastrointestinal upset	0	3(33%)	0

Notably, no cases of malignancies involving the fallopian tubes, vulva, or vagina were identified during the study. The majority of malignancies were observed in the age group of 50-60 years and older, with ovarian tumors predominantly found in individuals aged 50 and above, comprising 8 out of 19 (88%), while cervical carcinoma was most prevalent in the 50-60 years age group, accounting for 3 out of 5 (60%). Uterine malignancy was also observed in women aged 60 years and older, representing 3 out of 4 (75%).

Table 2 outlines the common symptoms observed in patients diagnosed with malignancies. The majority of these malignancies were associated with multiple symptoms. In cases of uterine malignancy, the most prevalent symptom was heavy menstrual bleeding (HMB) reported by 3 patients (75%), followed by irregular vaginal bleeding and lower abdominal pain, each noted by 2 patients (50%). For ovarian cancers, 6 patients (66%) presented with a mass in the lower abdomen, while 5 patients (55%) experienced irregular vaginal bleeding and weight loss, and 3 patients (33%) reported lower abdominal pain. Additionally, gastrointestinal symptoms were observed in 3 patients (33%). In cases of cervical carcinoma, postcoital bleeding and vaginal discharge were the primary symptoms, each reported by 4 patients (80%), followed by irregular vaginal bleeding noted by 3 patients (60%).

Discussion:

Gynecological cancers are a major cause of ill- ness and death among women globally. Countries with lower socioeconomic status experience a higher prevalence of these cancers compared to their developed counterparts. In our research, ovarian cancer was the most frequently observed gynecological malignancy, consistent with findings from other studies.[12-14] Cervical cancer ranked as the second most prevalent malignancy in our analysis, although research by Hanif M Zaidi et al.[15] indicates a high- er prevalence of cervical cancers in their findings. Additionally, certain studies conducted in Africa report the highest rates of cervical cancer. The implementation of cervical cancer screening programs and the introduction of human papillomavirus vaccinations have led to a notable decrease in cervical cancer rates in developed nations, while the incidence of uterine malignancies remains elevated in these regions.[16,17]

Our study indicates a higher incidence of cervical carcinomas, which may be attributed to inadequate screening for cervical cancer, limited access to vaccination, a lack of awareness regarding the disease's pathophysiology, and low socioeconomic conditions. Surface epithelial tumors constitute the majority of ovarian tumors, accounting for 80 to 90%. Other research corroborates that tumor's primarily originate from the surface epithelium of the ovaries, as observed in studies by Sumaira Yasmin et al.[18] Serous cystadenocarcinoma, both well-differentiated and poorly differentiated, was the predominant finding in our research, consistent with numerous other studies.[19] The majority of malignancies were identified in individuals aged 50 and above, with 14 out of 19 cases, as reported in the research conducted by Briggs[20] and other colleagues.[21] During current study, cervical cancer was observed predominantly in the 50 to 55 age range, highlighting the necessity for regular screening and early detection of precancerous conditions. Mohyuddin S et al.[22] indicate that cervical carcinoma typically occurs between the ages of 45 and 47. Our findings suggest that the diagnosis of cervical carcinoma is often delayed, potentially due to insufficient screening for cervical cancer. It is crucial to seize every opportunity to identify precancerous conditions and malignancies at earlier stages, which includes routine examinations of the ovaries via ultrasounds, obtaining cervical smears, and assessing the endometrium in older patients experiencing abnormal menstrual bleeding. A significant number of patients presented with advanced disease, particularly cervical and ovarian carcinoma, likely due to the slow and asymptomatic nature of dis- ease progression. In our study, ovarian carcinoma was noted in individuals aged 50 to 60, consistent with findings from other studies.[23]

Conclusion:

Tumor predominantly found in middle aged, multiparous women, with uterine leiomyoma being the most common type.

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