www.jmscr.igmpublication.org
Impact Factor 5.84
Index Copernicus Value: 83.27
ISSN (e)-2347-176x ISSN (p) 2455-0450
crossref DOI: https://dx.doi.org/10.18535/jmscr/v5i5.112

IGM Publication
Journal Of Medical Science And Clinical Research
An Official Publication Of IGM Publication

Tumors of Female Genital Tract: A Tertiary Care Hospital Based Comparative Analysis

Authors
Aradhna Sharma[1], Puneet Garg[2], Ramesh Kundal[3]
[1]Senior Resident, Department of Pathology, GMC, Patiala
[2]Junior Resident, Department of Pathology, GMC, Patiala
[3]Prof & Head, Department of Pathology, GMC, Patiala
Corresponding Author
Dr Aradhna Sharma
Email: *aradhna1312@gmail.com*

ABSTRACT

Introduction: *The female genital tract is the site of large number of tumors of considerable diversity, some very common and some extremely uncommon. The embryology of the female genital tract is relevant to the histogenesis of various tumors arising in this region. This study is conducted to analyze the changing trends of female genital tract tumors in Government Medical College & Rajindra hospital, Patiala over a period of decade and compare it with national/international data.*

Methods: *This study was carried out on total 400 cases of female genital tract tumors, out of which, 200 consecutive cases of female genital tract tumors were from 2015 and results were compared with data taken from exactly similar study done in the department almost a decade ago to see emerging trends in frequency rates of tumors by the histological type within the site of origin. The tumors were classified according to WHO classification.*

Results: *A total of 400 cases were studied (biopsies & hysterectomy specimens) and histopathological results were analyzed. Out of 200 cases from 2015, 42 were malignant and 158 were benign. This was in comparison to 28 malignant tumors and 172 benign, out of 200 cases from 2005. Squamous cell carcinoma of cervix was most common invasive malignancy followed by ovarian carcinoma in both the groups. The major burden of benign disease was contributed by uterine lesion, leiomyoma in both the groups.*

Conclusion: *There has been increase in frequency rate of malignancy in female genital tract tumors in local region. Cervical carcinoma was the commonest female genital tract malignancy followed by ovarian cancer and endometrial cancer.*

Keywords: *Benign, Female genital tract, Malignant, Tumors.*

Introduction

Female genital tract is the most common site for tumors in females. Female genital tract morbidity has been a neglected area of interest by the researchers, policy makers and all concerned personal in developing countries.[1] Tumors constitute a small (4%) but most imperative portion of total female reproductive tract pathology.

Tumors of female genital tract have dissimilar pattern of distribution worldwide, with ethnic, environmental and geographical variations. Moreover their presentation varies from area to area. The most common type of female genital tract malignancies are cervical cancer, ovarian cancer and endometrial cancer. The other less common gynecological malignancies are vaginal carcinoma, vulval carcinoma, and fallopian tube cancer. As a group, they constitute the second commonest malignancy among females after the breast cancer.[2] Carcinoma cervix is the most common genital tract cancer followed by ovarian and endometrial malignancies in most countries.[3,4]

The present study reveals the relative frequencies of various benign tumors and cancers of female genital tract and also uncovers the changing trends in their frequencies in region over the decade.

Material and Methods

The study was conducted at the Department of Pathology, GMC, Patiala. Total 200 cases of female genital tract tumors received in 2015 (Group 1), were studied and results were compared with exactly similar study of 200 cases done in the department in 2005(Group 2), to see emerging trends in frequency rates. World Health Organization (WHO) classification was used to do histopathological typing of the tumors. Data was entered in SPSS version 21 for sorting and analysis. Data was sorted for type of lesion (benign, malignant), different histopathological diagnosis and site of lesion.

Results

In the present study, out of 200 cases from year 2015, 158(79%) were benign and 42 (21%)were malignant in contrast to 172(86%) benign and 28(14%) malignant tumors in 200 cases from 2005. The most common site of benign tumors observed in the study was uterine corpus in both the groups, accounting for 150cases in year 2005 and 138 cases in 2015. Leiomyoma was the commonest benign tumor in both the groups. Most common site for malignant tumor was cervix followed by ovary and endometrium in both the groups (Table 1). Carcinoma cervix was the most common malignancy in both the groups accounting for 10(5%) cases in 2005 and 21(10.5%) cases in 2015. In both the groups, ovarian carcinoma was second most common malignancy accounting for 9(4.5%) and 12(6%) cases respectively. There was significant rise in frequency rate of malignant tumors over the period of ten years.

Squamous cell carcinoma was the most common type of cervical carcinoma and serous cyst adenocarcinoma was the commonest ovarian cancer in both the groups.

Table 1 Site wise distribution of malignant tumors of female genital tract

Site of tumor	No of cases (Group1) Year 2005	% of cases (Group1) Year 2005	No of cases (Group2) Year 2015	% of cases (Group2) Year 2015
Cervix	10	35	21	50
Ovary	09	32	12	28.5
Uterus corpus	06	21	08	19
Fallopian tubes	01	3.5	-	-
Vagina	01	3.5	01	2.5
Vulva	01	3.5	-	-
Total	28	100	42	100

Table 2 Distribution of tumors of female genital tract for year 2005 (Group 1)

Site	Nature of tumor	HistologicalTyping	No of cases	Percentage
Cervix	Benign	Cervical leiomyoma	02	1
	Malignant	Squamous cell carcinoma	10	5
Ovary	Benign	Serous cystadenoma	06	3
		Mucinous cystadenoma	05	2.5
		Brenner tumor	01	0.5
		Dermoid cyst	03	1.5
		Fibrothecoma	01	0.5
	Malignant	Serous cystadenocarcinoma	04	2
		Mucinous cystadenocarcinoma	02	1
		Clear cell adenocarcinoma	01	0.5
		Malignant Brenner	01	0.5
		Dysgerminoma	01	0.5
Uterus corpus	Benign	Leiomyoma	147	73.5
		H.Mole	03	1.5
	Malignant	Adenocarcinoma	02	1
		Leiomyosarcoma	01	0.5
		Malignant mixed mesodermal tumor	01	0.5
		Endometrial stromal sarcoma	01	0.5
		Choriocarcinoma	01	0.5
Fallopian Tube	Benign	Hydatids of Morgagni	03	1.5
	Malignant	Adenocarcinoma	01	0.5
Vagina	Benign	-	-	-
	Malignant	Squamous cell carcinoma	01	0.5
Vulva	Benign	Intradermal nevus	01	0.5
	Malignant	Squamous cell carcinoma	01	0.5
Total			200	100

Table 3 Distribution of tumors of female genital tract for year 2015 (Group 2)

Site	Nature of lesion	Histological typing	No of cases	Percentage
Cervix	Benign	Leiomyoma	01	0.5
	Malignant	Squamous cell carcinoma	21	10.5
Ovary	Benign	Serous cystadenoma	09	4.5
		Mucinous cystadenoma	04	2
		Dermoid cyst	06	3
	Malignant	Serous cystadenocarcinoma	07	3.5
		Mucinous cystadenocarcinoma	02	1
		Granulosa cell tumor	02	1
		Mixed germ cell tumor	01	0.5
Uterus corpus	Benign	Leiomyoma	136	68
		H.Mole	02	1
	Malignnt	Adenocarcinoma	07	3.5
		Choriocarcinoma	01	0.5
Fallopian tube	Benign	-	-	-
	Malignant	-	-	-
Vagina	Benign	-	-	-
	Malignant	Squamous cell carcinoma	01	0.5
Vulva	Benign	-	-	-
	Malignant	-	-	-
Total			200	100

Discussion

The female genital tract comprises a complex structure with respect to embryology, histology and the potential for malignancy. The reported incidence of different types of tumors varies widely. Several studies on female genital tract tumors were done in the previous years to know incidence and prevalence of various tumors.[5-9] Majority of the tumors are benign, but the malignant tumors are on the rise with the passage of time.[10]

About 3/4th of the benign tumor burden was contributed by the uterine lesions in both the study groups. Most common of which was leiomyoma in both the groups. Second most common site for benign tumors was ovary in both the groups, accounting for 8 % in Group 1 and 9.5 % in Group 2. Serous cyst adenoma was the commonest benign tumor in both the groups. These findings were consistent with similar studies.[11-12]

In our study, cervical carcinoma was the commonest malignancy in both the groups. There were 10 cases (5%) in group 1 and 21 cases (10.5%) in group 2. Most common type of cervical cancer was squamous cell carcinoma in both the groups. Our study shows significant increase in the frequency of carcinoma cervix over a period of ten years but there was no change in pattern of common histological type. A study done by Nasreen F [13] showed similar results.

Cervical cancer incidence is high and is increasing in women of Malwa region. Therefore the importance of established and accessible screening programs and awareness campaigns need more emphasis than it is being given currently. Over the past 50 years, organized screening programs in developed countries have contributed significantly to the decline in incidence and mortality from cancer of cervix. In contrast, largely due to lack of such programs in most parts of developing countries, cervical cancer remains one of the major killers of women in these countries.[15,16]

In our study, ovarian cancer was the second common genital tract malignancy accounting for 9 cases in group 1 and 12cases in group 2. This result was in accordance with studies done by other authors.[16-17] Papillary serous cyst adenocarcinoma was the commonest type of ovarian carcinoma in both the groups (Table 2 & 3). Ovarian cancer is reported to be the second major cause of death in women among female genital tract malignancies. About 70% of the patients with ovarian cancer present with the advanced stages of the disease due to non-specific symptoms of the disease and failure to detect the tumors early and absence of screening programs in our country.

Conclusion

Benign tumors are more common tumors of the female genital tract and are responsible for burden of gynaecological morbidity, and malignant tumors are on the rise with passage of time. Carcinoma cervix is the most common female genital tract cancer, followed by ovarian malignancy and endometrial carcinoma. The frequency of cervical and ovarian cancers among local population increased over the period of ten years. The frequencies of vulval, vaginal and fallopian tubes remained almost unchanged over the study period. Pattern and type of common cancers also remained unchanged.

The data presented in this study cannot be said to accurately represent community prevalence rates as cancer statistics go beyond hospital based data. However, it is recommended that policymakers view the menace of female genital tract cancers with special concern and appropriate screening and treatment methods are provided.

References

1. Graha W, Berer M, Price J, et al. Raising awareness about reproductive morbidity. Ann Trop Med Parasitol 1992; 86 (suppl 1): 11-18.
2. Ejeckam GC, Abdullah F, EJ Sakka M, Dauleh W, Haseeb F. Gynaecological malignancies in Qatar. East Aft Med J 1994; 71 (12): 777.
3. Gershenson D, Luna G, Malpica A, Kackar U, Whitaker L, Johnson E, Mitchell M. Ovarian intra epithelial neop-lasia. Gynaecological cancer prevention in obstetrics and gynaecology clinics of north America 1996;23(2) : 475.
4. Nwosu SO, Anya SE. Malignancies of the female genital tract at the University of Port Harcourt Teaching Hospital : A ten

year review1990-1999. Niger Postgrad Med J 2004; 11: 107-109.
5. Watt WF, Kimbrough RA. Hysterectomy analysis of 1000 consective operations. ObstetGynecol 1956; 7(5): 483-493.
6. Rajshree, Rushed, Mahantappa S, Pattankar VA. A clinicopathologic study of ovarian tumors. Indian J Pathol Micribiol 1997;11(2):239.
7. Naik VS, Rege JD, Jashani KD. Pathology of genital tract in postmenopausal bleeding. Bombay Hosp J 2005; 47(3): 10-14.
8. Dalsaniya M, Chosi TS, Shrivastav A, Agnihotri AS. Retrospective and prospective histopathological study of tumors and tumor like lesions of femalegenital tract. Int J Med Sci Public Health 2015;4:1602-1604.
9. Dhakal HP, Pradhan M. Histological patterns of gynaecological cancers. J Nepal Med Assoc.2009; 5(2):93-96.
10. The Global Burden of Disease: 2004 Update. Geneva: World Health Organization;2008.
11. Arya A, Narula R, Singh S, Narula K. Benign and malignant tumors of cervix: 10 years study. Int J Med Health Sci.April 2015, 4;186-189.
12. Kamal F, Farrukh R, Khalid AW,Ghazal S, Naheed F, Afsar A. Pattern and frequency of various Uterine Tumors: A retrospective study over a period of 26 months. Biomedica 2003; 19: 36-39.
13. Nasreen F. Pattern of gynaecological malignancies in tertiary Hospital. J Post Grad Med Inst 2002;16(2): 215-220.
14. Kyari O, Ngadda H, Mairiga A. Malignant tumors of the female genital tract in North-Eastern Nigeria. East Afr Med J. 2004;81: 42-45.
15. Franco EL, Franco ED, Ferenczy A. Cervical Cancer: epidemiology, prevention and the role of human papilloma virus infection. Canadian Med Ass J.2001;164:1017-1025.
16. VijenderJeph, Adreena, Prem K Garg, KiraMahabole. Incidence of different malignancies in female genital tract study in 504 women in rural population. International Journal of Contemporary Medical Research. 2017,4(1):284-286.
17. Nkyekyer K. Pattern of gynaecological cancers in Ghana. East Afr Med J2000; 77:534-538.
18. Mohammed A, Ahmed SA, Oluwole OP, Avidine S. Malignant tumors of the female genital tract in Zaria: Analysis of 513 cases. Ann Afr Med.2006;5:93-96.