



A retrospective study of female genital tract malignancies

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Abstract

The objective is to study the pattern of various genital tract malignancies. The study includes two hundred and seventy seven cases. All histological diagnosed cancer were studied information regarding the site of cancer, age at presentation, stage of the disease, follow up, parity, year wise distribution were taken from the case record file. Study was retrospective observational type. In 277 cases of genital cancer of age group 10-84 years, the cancer cervix was the most frequent comprising 64.25%, followed by ovarian cancer 28.51%, cancer body uterus, cancer vulva and vagina were accounting 4.69%, 1.80% and 0.72% respectively. Most of the cases reported at advance stage of the disease with high parity except for some ovarian and uterine cancers which were also present in nulliparous and low parity women. We conclude from this study that cervical cancer is commonest malignancy as reported in other studies also. So the effective screening programmes are needed to detect early stage of the disease which can help to reduce morbidity and mortality.

Key words: female, genital tract malignancy, cancer cervix

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Introduction

Female genital tract tumors have a varied worldwide distribution. The most common malignancy of genital tract in India is cancer cervix [1]. India has the burden of having largest number of women with cervical cancer contributing to 18% [2] of world's total number. The main causative agent for cervical cancer is Human Papilloma Virus (HPV) [3]. In India

most patients present in advanced stages and prognosis is directly related to the stage at presentation. 5yr survival rates are 65% in stage IIB, 40 % in IIIB & <20% in stage IVA [4]. Ovarian cancer is the most lethal gynecological malignancy and it is the major cause of death from gynecological malignancies because most patients present at an advanced stage. About 75% of patients with the entity present with advanced disease as a result of failure to detect the tumour early [5]. In western world ovarian cancer is the fifth leading cause of cancer death among women [6]. Incidence rates are highest among developed countries with rates exceeding 9 per 100,000[7]. In contrast the ovarian cancer rate in Bombay, India is 7.2 per 100,000 per year [8]. Despite the high frequency of some malignant female genital tumour in our environment there is paucity of literature on the subject. Therefore this study is done to increase knowledge on the subject in our population and compare it with other national/international studies. These findings could have a significant

implication on health planning and clinical practice.

Table 1: Site distribution of genital tract malignancies

Site of tumour	Number of cases	(%)
Cervix	178	64.25%
Squamous cell carcinoma	153	
Adeno-squamous	07	
Adeno	03	
Unknown	15	
Ovary	79	28.51%
Uterus	13	4.69%
Vagina	02	0.72%
Vulva	05	1.80%

Method

The study included all histologically diagnosed malignant tumours of female genital tract from Jan 2003 to Dec 2010. During the study period total two hundred and seventy seven cases were registered in the Department of Radiotherapy JNMCH, AMU, Aligarh. Information regarding site of cancer, age at presentation, stage of the disease, parity and year wise distribution and follow up was extracted from case files. Study was retrospective observational type and statistical test was not applicable for this study.

Table 2: Age distribution of genital tract malignancies

Site of tumour	Age in years			
	0-20	>20-40	>40-60	> 60
Cervix	-	22	119	37
Ovary	3	17	46	13
Uterus	-	-	10	3
Vagina	-	-	1	1
Vulva	-	-	4	1

Results

During the 8 years period 277 cases of genital cancers were registered the age range was 10-84 years. Cancer cervix was the most frequent comprising 64.25% of all gynecological malignancies, squamous cell cancer was the most common approximately 85.95% followed by adenosquamous cancer 3.93% and adenocarcinoma 1.68%(table I). Peak incidence was found in 40-60 age groups (Table II). Most of the cases were presented in advanced stage (table III) with high parity (table IV). The frequency of carcinoma cervix increased sharply during the period of study except for few periods of decline (table V). Ovarian tumours are second most frequent comprising of 28.51 %(Table I) majority of cases were found in 40-60% age group but it is also found in younger age group specially in paediatric age (Table II).

Site of tumour	STAGE OF DISEASE					Not- Known
	0	I	II	III	IV	
Cervix	-	43	58	39	11	27
Ovary	-	4	17	33	21	4
Uterus	-	5	2	-	2	4
Vagina	-	1	-	-	-	1
Vulva	1	-	-	1	2	1

Table 3: Stage wise distribution of genital tract malignancies

Site of tumour	Nulligravida	Low Parity (1-3)	High Parity (4or >4)	Not Known
Cervix	-	32	116	30
Ovary	10	24	39	6
Uterus	1	4	7	1
Vagina	-	-	2	-
Vulva	-	2	3	-

Table 4: Parity wise distribution of genital tract malignancies

Site of tumour	2003	2004	2005	2006	2007	2008	2009	2010
Cervix	28	30	12	-	7	44	32	25
Ovary	-	3	-	1	13	32	11	19
Uterus	-	1	-	-	5	1	-	6
Vagina	1	-	-	-	-	1	-	-
Vulva	-	-	-	1	1	3	-	-

Table 5: Year wise distribution of genital tract malignancies

Surface epithelial tumour was the commonest but germ cell tumour and embryonic yolk sac tumour were also found. Most of the tumours were found in advanced stage (Table III) with high parity but it is also seen in nulliparous and low parity females (Table IV). The frequency of tumours has a increasing trend with passing years (Table V) Uterine, vulvar and vaginal tumours were rare 4.69%, 1.80% and 0.72% respectively (Table I). Peak incidence was found in 40-60 yrs (Table II). Cancer body uterus and cancer vulva was found in low as well as high parity but vaginal cancer was found in high parity group (Table IV).

Discussion

Although cancer breast is the most common cancer affecting women worldwide but cancer cervix is the most common in developing countries [9]. In a study done by Chhabra S et al cancer cervix comprised 80% [1]. In our study it comprised 64.25%. The incidence is higher in developing countries due to less effective screening program, increase in unprotected

sexual activities. Epidemiological studies have consistently indicated that the risk of cervical cancer is strongly influenced by sexual activity [10]. Human Papilloma Virus DNA is found in 99.7% of cervical cancers.[11] Upto 80% of sexually active women will become infected with HPV sometime during life, the risk of persistent infection increases with age. HPV infection occurs frequently in young sexually active women, the incidence of cervical cancer is higher in women but more than 35 years, suggesting slow progress of viral infection to cancer. Other factors include high parity, long term use of OCP's, lack of food containing carotene and vitamin C. The risk of cervical intraepithelial neoplasia (CIN) in HIV sero-positive women is at least 5 fold higher than their sero-negative counterparts [12].

In present study incidence of cervical cancer is increasing during the period of observation but patients had long term follow-ups as they have larger survival rates after cancer therapy. Squamous cell carcinoma was the main histological type that we observed in 85.95% of cases. Adenocarcinoma cases are said

to be increasing and upto 20-25% have already been reported [13, 14]. The second most common were ovarian tumours which accounted for 28.51%. It is the most common malignancy occurring in the UK [15]. We found ovarian cancer in younger age group, similar to our study. O. Kyori found ovarian tumours were most common in teenage group in north east Nigeria [16]. Next in the rate of occurrence was uterine cancer 4.69%, the incidence of this malignancy is higher in the developed countries & lower in Africa & Asia [17].

Conclusion

From this study it can be concluded that cervical cancer is commonest malignancy. This has also been reported in other studies done in developing countries including India. Over all gynecological malignancies are common in 40-60 years of age but ovarian tumours are also seen in younger population. As effective screening programs are not implemented so many patients reported in advance stage of the disease. Hence it is necessary to implement effective screening program for early detection of disease.

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