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Patterns of Gynaecological Malignancies in a Tertiary Care Hospital in North East India

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ABSTRACT
Gynaecological malignancies are among the most common cancers in women. Cancers of the female reproductive system are important causes of significant morbidity and mortality among women worldwide. NCRP 2020 reports cervical cancer as the second highest cancer among females in Manipur after breast cancer. A hospital-based cross-sectional retrospective study was conducted for 2 years in the Department of Radiation Oncology, JNIMS and all the clinical records of gynaecological patients were reviewed for demographic, clinicopathological, stage and its treatment pattern. Out of 130 cases reviewed, cervical malignancy (43.9%) was highest most common age group was between 51-60 years, majority of the cases were from rural areas (68.5%) and the bleeding per vagina was the commonest presenting symptom and the maximum patient presented in locally advance stage. Patients were managed according to the stages with surgery, chemotherapy, radiation or combination therapy. Gynaecological malignancy remains an important public health issue in the developing countries which could be due to lack of cancer awareness and proper screening facilities in the community and also unknown epidemiology and variable pathology. Gynaecological malignancies, ovarian cancer, endometrial cancer, cervical cancer, GTN (Gestational trophoblastic neoplasm), vulval cancer, synchronous gynaecological malignancie.

INTRODUCTION

Cancers of the female reproductive system-namely cancer of the ovaries, corpus uteri, cervix, vulval, vaginal, fallopian tube cancers and choriocarcinoma are important causes of significant morbidity and mortality among women worldwide. There are widespread variability in the incidences and outcomes of these cancers among developed and developing countries. In developing countries, gynaecological cancers account for 25% of all new cancers diagnosed among women aged up to 65 years compared to 16% in the developed world[1]. According to NCRP 2020, cervix uteri and ovarian cancers are among the leading sites of cancer among women in India[2]. A major concern in this area are variable etiopathology, lack of cancer awareness among women and unavailability of proper screening methods, most women report at advanced stages, adversely affecting the prognosis and clinical outcomes[3].

This study was undertaken to shed some light on the varying trends in incidences and clinicopathological patterns of gynaecological malignancies in North East India.

MATERIALS AND METHODS

This hospital-based cross-sectional retrospective study was conducted in the Radiation Oncology Department JNIMS a tertiary care hospital in Imphal, Manipur, India. The study duration was 2 years, from August-September 2021-2023 and covered newly registered patients with gynaecological malignancies attending Department of Radiation Oncology. The clinical records of all the patients were reviewed with factors including age, site of cancer, histological type, stage, socio-economic factors, parity and management. Staging was done according to FIGO and histologic classification was done according to World Health

RESULTS

A total of 130 new cases of gynaecologic malignancies were reported and treated at our centre between August-September 2021-2023. The proportion of cervical malignancy (43.9%) was highest in our study, followed by ovarian malignancy (30.8%). There were 3 synchronous cancer cases (2.3%) which are uterine and cervix, ovary and cervix and uterine and ovary. The age ranges from 12-78 years Table 1 and 4.

DISCUSSIONS

In our study, cervical cancer (43.9%) was the commonest gynaecological malignancy reported in women with the highest incidence in the age group of 51-60 years. Ovarian, uterine and vulval cancers also have the highest incidence in this age group but GTN was highest in women below 30 years. These results

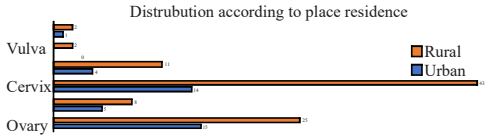

Fig. 1: Distribution of gynaecological malignancies according to place of residence

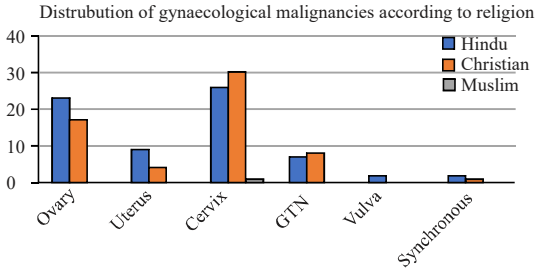

Fig. 2: Distribution of gynaecological malignancies according religion

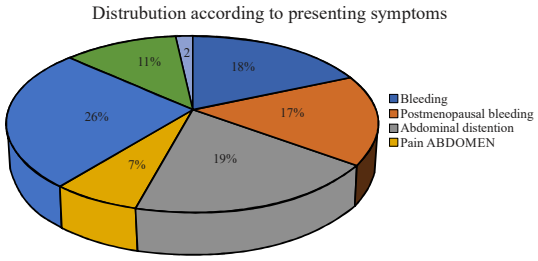

Fig. 3: Distribution of gynaecological malignancies according common presenting symptoms

were more or less consistent with reports from other Indian states. A study from Tamil Nadu reported 73.4% of cervical cancers with highest incidence in 40-49 age group[4]. Another study from NE India also reported cervical cancer as the commonest cancer with peak at 60-64 years of age[5]. Cervical cancer incidence was followed by ovarian and uterine malignancies in all these studies. However in contrast to our study a study from south western Pakistan reported that ovarian cancer (47%) was the most common gynecologic malignancy[6] Fig 1 and 2 .

In this study, majority of the patients (51.5%) were Hindus and reside in rural areas (68.5%). Similar picture was also observed in another study from Kolkata[7]. Twenty three (17.7%) patients had associated medical conditions (hypertension, diabetes mellitus, bronchial asthma, etc.) of which 12.3% were seen in cervical cancers, 2.3% in ovarian malignancy, 1.5% in GTN and 0.8% each in uterine and vulval cancers. Four patients of cervical malignancy (3.0%) were under treatment with ART for HIV positivity. A family history of malignancy was reported in two cases of ovarian

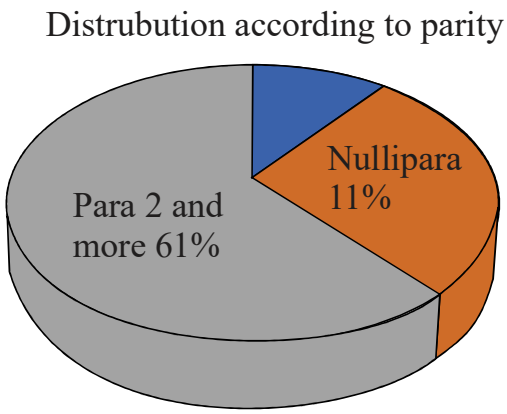

Figure 4. Distribution of gynaecological malignancies according parity

cancer and one case of synchronous cancer. Abdominal distension was the commonest presenting symptom in ovarian cancer (16.9%) post-menopausal bleeding (6.9%) in uterine cancer, vaginal discharge (23.8%) in cervical, menstrual irregularities (7.7%) in GTN and vulval growth (1.5%) in vulval cancers. Priyadarshini in their study reported that almost 90-100% of women with ovarian malignancy presented with abdominal discomfort and distension, 83.3% of women with endometrial cancer with postmenopausal bleeding and 68.75% of women with cervical cancer presented with discharge per vaginum[8]. In this study, majority of the patients 53.0% were multiparous (para 2 or more) in all gynaecological cancer sites. Joseph *et al.*[9] in their study reported cervical cancers to have the maximum parity, however maximum ovarian cancers were seen in nulliparous women. Most ovarian cancer cases were stage III at presentation (14.6%) while uterine cancers were stage I (5.3%) at the time of presentation. Maximum cervical cancers were reported as stage IIB (18.5%) and GTN in stage I (7.7%). Aggarwal *et al.* reported that most ovarian cancer (57.14%) and uterine cancer cases (65.89%) presented in stage I and cervical cancer cases (35.38%) in stage III[10]. Distant metastasis was seen in 14.6% in our study. Fig 2 and 4 A study from Cameroon also ovarian cancer, common metastases seen were to the reported distant metastasis in 15.8% patients. In omentum and malignant pleural effusion. One case of uterine cancer (0.7%) had liver metastasis and 1 cervical cancer case (0.7%) had lung metastasis. In GTN, 3 cases (2.3%) had lung metastasis and 1 case (0.7%) reported with vulval metastasis. Synchronous gynaecological malignancies were reported in 2.3% of our patients. However, in a study on synchronous gynaecological cancers, they represented only 0.45%. The most frequent synchronicity reported was endometrial and cervical (33.3%) followed by ovarian and cervical cancers (27.8%)[11]. Gynaecological cancer management requires a multimodality approach incorporating surgery, chemotherapy,radiotherapy and a combination of these modalities. The basis for therapeutic intervention is derived from results of trials and evidence based approach. In our study, stage wise management was given by multimodality

Table 1: Relative frequencies of gynaecological malignancies

Site of malignancy	No. of patients	Percentage
Ovary	40	30.8
Uterus	13	10.0
Cervix	57	43.9
GTN	15	11.5
Vulva	2	1.5
Synchronous malignancies	3	2.3

Table 2: Distribution of gynaecological malignancies according to age

Age range (Years)	Ovary	Uterus	Cervix	GTN	Vulva	Synchronous	Percentage
≤30	7	2	3	9	0	0	16.2
31-40	6	0	10	4	0	1	16.2
41-50	10	2	14	2	0	1	22.3
51-60	10	6	19	0	2	1	29.1
>60	7	3	11	0	0	0	16.2

Table 3: Histological features

Site	Type of tumour	Histology	No. of patients	Percentage
Ovary	Surface Epithelial	Serous	19	14.6
		Mucinous	11	8.5
		Clear cell	4	3.1
		Brenner	1	0.8
	Sex cord stromal	Granulosa cell	1	0.8
		Leydig cell	1	0.8
	Germ cell	Yolk sac	2	1.5
	Other carcinomas	Carcinoid	1	0.8
Uterus		Endometroid adenocarcinoma	12	9.2
		Serous carcinoma	1	0.8
Cervix		Squamous cell carcinoma	49	37.7
		Adenocarcinoma	6	4.6
		Adenosquamous	2	1.5
GTN		Invasive mole	5	3.8
		Hydatidiform mole	8	6.2
		Choriocarcinoma	2	1.5
Vulva		Squamous cell carcinoma	2	1.5

3 Synchronous malignancies not included

Table 4: Management

Management	No. of Gynaecological malignancies
Surgery	21
CT	11
RT	2
Palliative CT	9
Palliative RT	4
Metronomic CT	4
CTRT	34
NACT ® RT	1
Surgery ®CTRT	3
Surgery ®CT ® debulking surgery	5
NACT ® Surgery ®adjuvant CT	5
Surgery ® CT	21
Surgery ® VBT	1
Surgery ® RT	2
HT	1
Defaulted treatment	6

CT-chemotherapy, RT-radiation therapy, NACT-neoadjuvant chemotherapy, VBT-vaginal brachytherapy, HT-hormonal therapy

approach according to the disease site. Presentation at advanced stages of the cases always results in poor prognosis and clinical outcome and hence treatment is most effective if diagnosed early.

CONCLUSION

All women are at risk for gynaecological cancers, and the risk increases with age. The increasing trend of gynaecological cancers has indicated the need for early identification and treatment to improve the overall outcomes. Since there is no simple and reliable way to screen for any gynaecological cancers except cervical cancer, it is especially important to give awareness among women for prevention and early detection of gynaecological cancer. This is more pertinent in a resource poor setting like North East India including Manipur.

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