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Research article

EVALUATION OF TRENDS IN THE PROFILE OF GYNAECOLOGIC MALIGNANCIES AT A TERTIARY CARE HOSPITAL IN KARNATAKA, SOUTH INDIA

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ABSTRACT

Objective: Comprehensive estimates of the incidence of gynecological malignancies reported from India are very limited due to limitation in record maintenance. Auditing of the results on the incidence rates provided by the Population Based Cancer Registries has shown variation in the patterns of gynecologic malignancies. The present study was undertaken to establish the profile of gynecologic malignancies reported in our centre, with reference to incidence, histological subtypes and frequency of involvement at various sites. Another objective was also to compare the procured data with those from other national and international centers. **Materials and Methods:** In this descriptive study, the records pertaining to all the pathological specimens categorized as ovarian, uterine corpus and uterine cervical cancers from January 2003 to December 2012 at our tertiary center were studied and compared with the available international data. **Results:** Cervical malignancies were the commonest at our center, as compared to the uterine malignancies, which were commoner as per the data available from Surveillance Epidemiology and End Result (SEER) programme of the United States and the European Union.

Keywords: Gynecological malignancy; South India; Cervical Malignancy.

INTRODUCTION

The cancer has already emerged as one of the most important health problems with an alarming rate of over 800,000 new cases occurring every year.¹ According to the data collected the Cancer Registries, it has been noted that >70% of the cancers in women according occurs in middle aged women ranging from 35 to 64 years, thereby suggesting the impact of cancer as a major public health issue in the most productive age group of women. Data from the population

bases registries under the National Cancer Registry Program indicate that the leading sited of cancer among women are the cervix, uterus, breast and oral cavity.²

70% of women present at an advanced stage of the disease, which results in poor survival and high mortality rates.² India, being one of the developing countries, need to take active measures to decrease the rate of gynecological malignancies, thereby decreasing the rate of

morbidity in women. The first step in this process is to assess the incidence and prevalence of cancers. It is of utmost importance in our country to detect the cancers early and take active treatment measure. But illiteracy, lack of awareness about the symptoms of the underlying grave disease and lack of access to health centers with treatment and prevention facilities, prevalence of poverty, results in failure to elicit the expected response and results in Indian women.

Regional variability in cancer incidence, the mean age at which women present with gynecological symptoms, stage at presentation, the common sites of occurrence is noted from the data available from the a good number of centers worldwide. Studies regarding these issues are available in registries from developed countries but reliable data from developing countries, such as India, is lacking. Keeping this need in view, the present study was designed to determine the relative frequency of the malignant tumors of the female genital tract to study the various histological types and characteristics of these tumors among the patients at our center. An attempt has also been made to compare our data with those available from cancer registries in India and across the world.

MATERIAL AND METHODS

Detailed relevant information regarding the clinical history and findings such as patient age, site of affliction, histopathological diagnosis and subtypes were collected. The 475 cases included in the study had a definite histological diagnosis, made either on biopsy or resection specimens. Cancer diagnosed by aspiration and cervical scrape smears but not followed by histopathological confirmation were excluded from the study.

The data was analyzed using Microsoft Excel Software and SSPS 16. For the purpose of comparison of incidence, our data was curtailed to the corresponding periods, for which the international data was also available.

RESULTS

A total of 475 cases of gynecologic malignancies were reported and treated at our centre, in between January 2003 to December 2012. The age ranged from 7 to 85 years (Median age = 47). The sites of involvement in the order of prevalence of occurrence included Cervix (358), Ovary (73), Corpus Uteri (27), Vagina (9) and Vulva (8).

Out of the total number of 475 cases, the cervix was a common site affected (Median age = 48 years). Patients between 25 years and 35 years of age constituted the commonest age group affected. 8.4% of the cervical cancers occurred in women <30 years of age.

Ovarian malignancies constituted 14.94% of all the gynecological malignancies reported, with a median age of 45 years. The histological subtypes encountered in the study are as shown in the table. Uterus was the primary site of involvement in 5.6% of cases. Nine malignancies of vaginal origin and 8 malignancies of the vulval origin were identified. Two cases of bilateral Krukenberg tumor of the ovary were encountered.

Table 1: Histologic distribution of gynecologic malignancies

Histologic types	No. of cases	%
Uterine cervix	358	75.36
Squamous cell carcinoma	339	71.36
Adenoma	16	3.36
Others	3	0.36
Ovary	71	14.94
Epithelial	36	11.78
Germ cell	7	1.47
Stromal	8	1.68
Uterus	27	5.68
Epithelial	24	5.05
Mesenchymal	3	0.63
Vagina	9	1.89
Vulva	8	1.68
Secondary tumors	2	0.42

DISCUSSION

Gynecological malignancies form a huge burden, contributing significantly to the morbidity and mortality around the world. Studies based on cancer incidence in India revealed that the incidence is >70 per 100,000 population.^{1,3}

Nearly 70% of the Indian population lives in rural areas where the socioeconomic living standards are low and the quality of health care is limited. Owing to these factors, women in India are more vulnerable to most of the risk factors for cervical cancer such as early marriage, early childbirth, multiparity and chronic infections with genital disease, mostly transmitted sexually.^{3,4} In the cohort of patients in our study, cervix was the commonest site of affection among the gynecologic malignancies. Other registries in India and South Asia also reported similar observation.^{5,6}

Cervical cancer remains the commonest gynecologic cancer and the second most common cancer among females, first being the breast cancer as recorded in the consolidated report from the National Cancer Registry Programme.^{7,8} The small number of cases of vulval and vaginal cancer in our study is not suitable for making statistical comparison or estimated due to their small numbers.

Ovary was the second commonest site amongst gynecologic malignancies at our center. The age specific incidence rate of ovarian cancer revealed that, the disease increases from 35 years of age and reaches a peak between the ages of 55 to 64 years.⁹ Western data from the GLOBOCAN 2002 reveals a higher number of cases of ovarian malignancies recorded as compared to the data recorded in our study, and also the NRCP and other cancer registries in India.^{7,8,10}

Uterine malignancies were the commonest ones reported as per the SEER programme of United States and European Union which was significantly higher in their population as compared to those reported at our center.^{11,12} It was also noted that all the gynecological

malignancies except those involving the cervix affected the younger age group in our study as compared to the studies done in United States and other developed countries.

Table 2: Leading sites of cancers in females, pooled AAR/100,000 in India³

SITE	AAR
Breast	25.1
Cervix	21.2
Ovary	6.7
Oral cavity	6.4
Esophagus	5.5
Stomach	3.4
Gall bladder	3.2
Leukemia	2.9
Lung	2.7
Corpus uteri	2.5

CONCLUSION

The present study includes an extensive data of gynecologic malignancies. Although the comparative study with the population based international registries like Seer and Globocan may not offer a totally accepted comparison, considering the vast socio-economic and cultural differences, it nevertheless provides a comprehensive understanding of the current scenario of gynecological malignancies in India. In our country, lack of widespread population based data has led to a greater reliance on hospital based registries for the epidemiological information. The need of the hour is more studies on gynecologic cancer to help formulate better cancer detection strategies towards specific age groups and risk factors.

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REFERENCES

1. Consolidated report of hospital based cancer registries 2001-3, national cancer registry program. New Delhi; Indian Council of Medical Research; 2007.
2. Uma Devi K. Current status of gynecological cancer care in India. *Journal of Gynecologic Oncology*.2009; 20(2), 77-80.
3. Agarwal S, Malhotra KP, Sinha S, Rajaram S. Profile of gynecologic malignancies reported at a tertiary care center in India over the past decade: Comparative evaluation with international data. *Indian journal of cancer*. 2012;49(3); 298.
4. Momtahn S, Kadivar M, Kazzazi AS, Gholipour F. Assessment of gynecologic malignancies: A multi-center study in Tehran. *Indian journal of cancer*.2009; 46(3): 226.
5. Nandakumar A, Ramnath T, Chaturvedi M. The magnitude of cancer cervix in India.2009;
6. Moore MA, Ariyaratne Y, Badar F, Bhurgri Y, Datta K, Mathew A et al. Cancer epidemiology in South Asia-past, present and future. *Asian Pac J Cancer Prev*.2010;11(2), 49-66.
7. Indian Council of Medical Research (homepage on the internet). Bangalore: National Cancer Registry Programme – 2007. Consolidated Report of Hospital Based Cancer Registries 2001-2003. Available from: www.icmr.nic.in/ncrp/report.
8. Chhabra S, Sonak M, Prem V, Sharma S. Gynaecological malignancies in a rural institute in India. *Journal of Obstetrics & Gynaecology*. 2002;22(4), 426-29.
9. Murthy NS, Shalini S, Suman G, Pruthvish S, Mathew A. Changing trends in incidence of ovarian cancer-the Indian scenario. *Asian Pac J Cancer Prev*. 2009;10:1025-30.
10. Ferlay J, Bray F, Pisani P, Parkin DM. *Global Cancer Incidence, Mortality and Prevalence Worldwide*. Lyon, France: IARC Press; 2004.
11. seer.cancer.gov (homepage on the internet). Bethesda, Maryland: North American Association of Central Cancer Registries; c2000. SEER Cancer statistics review 1975-2007. Available from: <http://www.seer.cancer.gov/resources>
12. Boyle P, Ferlay J. Cancer incidence and mortality in Europe, 2004. *Annals of oncology*.2005;16(3), 481-488.