ORIGINAL RESEARCH PAPER

Pathology

INCIDENCE AND PATTERN OF CANCER IN A TERTIARY CARE LEVEL TEACHING HOSPITAL IN SALEM,TAMIL NADU .

KEY WORDS: Malignancies, Prevention ,Tertiary care centre.

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ABSTRACT

Cancer pattern varies in different region and depends on race, lifestyle and diet.

Aim: To generate data on the magnitude and pattern of cancer cases reported in the Medical college hospital and to plan activities for prevention of cancer.

Materials and methods: All newly diagnosed cases from various medical and surgical specialities were included in the study.Confirmed cases of malignancies were classified according to the International Classification of Disease (ICD)-10 given by WHO.

Results: Out of a total of 900 cases of malignancies , females accounted for 478 cases (53%) ,males for 422 cases (47%) and M: F ratio was found to be (0.88:1.0). Maximum number of patients were seen in 60 -70 yrs age group (28.35 %). Most common sites of cancer in males were tumors of Head and neck, among these oral cavity tumors(58%) are more common .In females cervical cancers were more common(49.5%) , follwed by breast carcinoma(15.8%).

Conclusion : The current study mainly summarizes the different pattern of cancer incidence in a tertiary care hospital attached with medical college.Population based epidemiological studies are required to find out the disease burden and its cause in this region.

INTRODUCTION

Malignancies are the 2nd most common disease after cardiovascular disorders for maximum death in the world.At global level, cancer accounted for 14.1 million new cases ,8.2 million cancer deaths and 32.6 million people living with cancer in 2012. It is estimated that during the year 2018, 9.4 lakh new cancer cases occurred in India giving an incidence rate of 98.5 per lakh population. Variable cancer pattern in different geographical region may be dependent on genetic,environmental,dietary, social and other factors .An epidemiological study helps to know the common cancers prevalent in particular segments of the population and the risk factors involved.

AIM:

To determine the magnitude and pattern of cancer cases reported to this tertiary care hospital in Salem District, TamilNadu.

MATERIALS AND METHODS:

This is a retrospective study undertaken in Government Mohan Kumaramangalam Medical College in salem,Tamil nadu.The data were taken from the cancer registry generated in the year 2017 (Jan to Dec). All the malignancies reported either for diagnosis or for treatment (Radiotherapy/ChemotherapyT/Surgery) were included. All these cases were confirmed on the basis of Histopathology. The different sites of cancer were classified according to the International Classification of Disease (ICD-10) given by WHO. Descriptive stastistical analysis were done and the cases were grouped according to the age, sex, and sites of cancer. These findings were compared with similar studies.

OBSERVATION AND RESULTS.

A total of 900 malignancies reported in this tertiary care hospital during the year 2017 (Jan to Dec). Out of which females accounted for 478 cases (53%), males 422 cases (47%). More females reported with malignancies in our study with M: F ratio (0.88: 1.0). There were 255 (28.3%) cases in 60 to 70 yrs age group,240 (26.6%) in 50 to 60 yrs,164 (18.2%) in 40 to 50 yrs,126 (14%) in 30 to 40 yrs.

TABLE 1: Sex wise distribution of cancer cases

Total cases studied	Males	Percentage	Females	Percentage
900	422	47%	478	53%

TABLE 2: Age wise distribution of cancer cases

Age in years	No of cases
10- 20	8
20-30	26
30-40	126
40-50	164
50-60	240
60-70	255
70-80	71
>80	10

In males, more number of cases reported were tumors of head and neck region including oral cavity -245 cases (58%) , followed by GIT - 175 cases (41.46 %). In females, leading sites were cervix 237 cases (49.5 %), followed by breast 76 cases (15.8 %).

DISCUSSION

The pattern and incidence of malignancies vary from country to country and from one region within a large country like India.The burden of cancer is increasing as a result of aging as well as lifestyle changes including smoking, physical activity and westernized diets[4]

In the present study out of a total of 900 malignancies males accounted for 47% ,females 53% with M: F ratio (0.88: 1.0) ,where as studies carried out in Dehradun (1.7: 1), Kashmir (1.5:1),jaipur (1.45:1)[2,13-19] and similar to studies carried out in Kolar (0.7: 1.0),Jabalpur (0.66:1.0) and Ludhiana(1.0:1.09) reported female predominance.

It was found that maximum numbe rof patients were between 60 - 70 yrs - 255 cases (28.3%) on further analysis. The peak age of cancer incidence was found to be between 50-60 yrs - 65 cases(26%) in females followed by 40-50 yrs - 56 cases(22.5%) . The frequency of malignancies are decreased towards both younger and old age groups. This is similar to studies carried out at Ludhiana,Dehradun, Jabalpur,Jammu and Rajasthan[6-8,12,13]

The total malignant cases for males regrouped according to the most common sites of cancers showed that Tumors of Head and neck was the most common site - 245 cases (58%) , followed by GIT 175 cases(41.6 %) . Most of the histological variants of Head and neck tumors including oral cavity were Large cell non keratinizing squamous cell carcinoma. Among GIT cancers colorectal region is the most common site 52 cases(29.7%) followed by stomach 47 cases (20.8%) with the predominance of moderately differentiated

adenocarcinoma and esophagus 43 cases (24.5%) with the majority of moderately differentiated squamous cell ca 35 cases(81.3 %),In female the common sites were cervix 237 cases (49.5%) ,breast 76 cases (15.8 %).Most of the cervical cancers reported were found to be moderately differentiated squamous cell carcinoma.

Globally in 2012 the most common cancers diagnosed were found to be carcinoma of the lungs (13%) of total,breast (11.9%) and large bowel(9.7%) .The most common causes of cancer death were cancer of lung (19.4 % of total), liver(9.1%)and stomach(8.8%)

Leading cancers in Males :

Lung was found to be the most common site in study carried out in Jammu where as malignancies of larynx were more in Ludhiana. Tobacco has been directly related to malignancies of oropharynx, lung and esophagus. In our study among males higher number of carcinomas of mouth, oral cavity and oropharynx. appear to be combined effects of tobacco chewing, smoking and alcohol consumption.similar observations were found in other studies too[7,8]

Leading cancer in females:

Cancer cervix was the most common cancer in females in our study.It is the most common cancer in Indian woman country wide.It is the most common site in Bangalore (27.3%,) Chennai (25.5%) and chandigar (18.4 %).Maximum number of carcinoma cervix malignancies were reported in studies carried out by west Bengal11(35.62 %).Early marriages, infection with Human papilloma virus, multiple partners and lack of genital hygiene are some of the contributory factors for the high incidence of this cancer [15]

Carcinoma breast was the 2nd most common cancer in adult females 76 cases (15.8%) in our study. Among breast ca Infiltrating Ductal Carcinoma(IDC) was the most common predominant histological type 67 cases (88%).Our data was comparable to 20.44% in jaipur, 21.05% in Ludhiana and 19,4 % in Rajasthan[2,7,10,13].Breast ca is common in societies having a western lifestyle,late age at marriage,nulliparity and late menopause have been linked to breast ca due to uninterrupted exposure to estrogen for prolonged period.

TABLE 3: Comparative study of cancer in female population

STUDY	INCIDENCE OF CANCER CERVIX	INCIDENCE OF CANCER BREAST
PRESENT STUDY	49.5 %	15.8%
BHRUGI Y ET AL[17]	19.4 %	22.4%
SEN V ET AL[18]	17.5%	22.7%

Limitations

To determine the magnitude and pattern of cancer in an area, we need a population based study. In this study ,we have included only those cases which have self reported to this hospital for diagnosis and treatments. Patients who failed to recognize their illness or do not afford to get treated in hospital (ie) Orthopaedic and Paediatric cases were not included .

Therefore a population based epidemiological study is required by active trained health workers to find out the true profile of cancer cases in this area.

CONCLUSION

This hospital based study indicates the cancer profile in salem district,Tamil nadu.These studies need to be done to find out the differences in the epidemiological profile of cancers, to find out the incidence of cancer,to study the risk factors associated and to take preventive measures to decrease incidence of cancer in this area.

A number of cancer awareness and health education camps should be organized in rural field practice area by government at state level.

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