

ORIGINAL RESEARCH

Relative proportions of various malignancies among patients attending a tertiary care centre in Central India

Dr. Ankit Agarwal¹, Dr. Aniket Goenka², Dr. Ajay Goenka³, Dr. Desh Deepak Ladia⁴

¹Assistant professor, Department of Radiation Oncology, Chirayu Medical College & Hospital, Bhopal (M.P.)

²Senior Resident. Department of Medical Oncology, Mahatma Gandhi Medical College, Jaipur

³Consultant Physician, Chirayu Medical College & Hospital, Bhopal (M.P.)

⁴Assistant professor, Department of Radiation Oncology, Chirayu Medical College & Hospital, Bhopal (M.P.)

Corresponding Author:

Dr. Desh Deepak Ladia

Assistant professor, Department of Radiation Oncology, Chirayu Medical College & Hospital, Bhopal (M.P.)

Received: 12-05-2023

Accepted: 27-06-2023

ABSTRACT

Background: Cancer is emerging as an important global disease burden among various other non-communicable diseases. It is of prime importance to study the pattern of occurrence of these cancers so that adequate steps could be taken to manage and prevent these malignancies

Aim: relative proportion of various cancers among patients attending a tertiary care cancer hospital in Madhya pradesh, India.

Materials and Methods: this retrospective study was done in a tertiary care hospital in Bhopal, Madhya pradesh, India. A total of 3631 cancer patients with pathologically confirmed malignancy were included in this study. All such patients with proven malignancy registered from January 2020 till December 2022 were included.

Results: The sex distribution male to female was 0.98:1. Among men the commonest malignancy was head and neck cancers, followed by lung and gastrointestinal malignancies. Among females cancer cervix was found to be the commonest malignancy followed by carcinoma breast.

Conclusion: our study data coincided with the national data which also shows that head and neck cancer is the commonest cancer among males and cervix cancer is the commonest cancer among females. Overall, head and neck cancers were the commonest malignancy among both males and females combined. Appropriate strategies thus have to be formulated for management and prevention of these cancers accordingly.

Keywords: Cancer, breast cancer, lung cancer, hospital based cancer study.

This is an open access journal, and articles are distributed under the terms of the Creative Commons Attribution-Non Commercial- Share Alike 4.0 License, which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.

INTRODUCTION

Among various non-communicable diseases cancer has become one of the major contributors to the global disease burden and has become the leading cause of death worldwide[1]. Out of all these deaths, almost two thirds occur in developing countries. Cancer accounts for 12% of total deaths worldwide due to any cause [2].

Globally, around 22 million people live with cancer at any given point of time [3]. Among men, the common cancers reported are head and neck, lung and among

women, most common cancers include cervix, breast and head and neck [4].

This retrospective study was undertaken to understand the pattern of cancers among the patients attending our tertiary care hospital's oncology opd to plan appropriate strategies for management and preventive actions.

OBJECTIVES

To understand the patterns of cancers among the patients attending our tertiary care hospital's oncology OPD, to enable the formulation of appropriate management and prevention strategies.

MATERIALS AND METHODS

This study was undertaken in a tertiary care hospital in Madhya Pradesh, central India. The period of data collection was for the years 2020, 2021 and 2022. A total of 3631 cases were included in our study. These included all the new cases registered in our hospital during the three years of study which were diagnosed to be confirmed cancer cases through cytology or histopathological examination. The parameters recorded were cytological or histological confirmed diagnosis. The data analysis was done by using the NCRP software and Microsoft excel.

RESULTS

In our study, we registered a total of 3631 cases that attended our opd and had a confirmed malignancy. Out of these, 1798 were males and 1833 were females, accounting for 49.5% and 50.5% respectively. Male to female ratio was 0.98:1.

Among males, the most common malignancy was carcinoma head and neck which constituted 40.4% of total cases in males. Lung cancer and gastrointestinal cancers were found to be second most common cancers in male with each accounting for 6.7%.

Among females, cervix cancer was the commonest malignancy amounting to 30.4%. The second most common cancer among the females was breast cancer which was 17.9% of total malignant cases in females.

Overall, head and neck cancers were the the most common among all malignancies in males and females combined and constituted 24.8%. Second commonest malignancy overall was gastrointestinal malignancy (5.1%) and the thirist commonest malignancy overall was bronchogenic/lung carcinoma, which was 4.4% of total cases overall.

TABLE 1

SITES	2020	M	F	2021	M	F	2022	M	F
Head & Neck	228	190	38	259	211	48	415	325	90
Cervix Cancer	93	0	93	192	0	192	273	0	273
Breast Cancer	79	4	75	118	6	112	147	5	142
Lung	28	19	9	51	38	13	84	64	20
G.I	60	36	24	42	28	14	85	57	28
Lymphoma	8	6	2	13	8	5	25	21	4
Leukaemia	12	6	6	6	2	4	20	14	6
Urinary Tract	12	10	2	9	7	2	36	27	9
Testis	0	0	0	1	1	0	2	2	0
Ovary	29	0	29	22	0	22	42	0	42
Bone Tumor	7	4	3	4	3	1	15	8	7
Soft Tissue sarcoma	3	3	0	7	6	1	3	2	1
Skin	6	5	1	7	7	0	20	18	2
Prostate	3	3	0	16	16	0	22	22	0
Thyroid	25	9	16	28	3	25	64	15	49
Gall bladder	16	10	6	26	10	16	74	32	42
Pancreas	4	4	0	8	6	2	13	7	6
Colon	5	1	4	7	6	1	16	11	5
Liver	7	5	2	12	10	2	32	27	5
Endometrium	12	0	12	9	0	9	9	0	9
Penis	5	5	0	1	1	0	7	7	0
Myeloma	8	3	5	4	3	1	8	6	2
Others	114	70	44	269	157	112	344	206	138
Total	764	393	371	1111	529	582	1756	876	880

Cases registered with proven malignancies during the study period.

DISCUSSION

In India, the national data suggests that cervix is the commonest malignancy among females [4]. HBCR: 2004-2006 report shows that the oral cancer followed by lung cancer was the leading sites of cancer among men, and among women cervix and breast cancer are

leading site of cancer [5-9] in India. Our observation in our tertiary care centre coincides with this national data. In our study we also found that among males, head and neck cancers followed by lung cancer were the commonest malignancies. However in our study, among males, gastrointestinal cancers also were found to be equal to the lung cancers. In our study, females

had carcinoma cervix as the most common malignancy. However, in the developed countries breast cancer is the leading cancer in women [10],[11]. Our data matches with the national incidence.

CONCLUSION

It is very important to understand the proportion of various cancers occurring in our country to formulate appropriate infrastructure and strategies for the management and prevention of these diseases. It is important to focus on the common malignancies more so that everyone gets adequate care. Also, since female patients outnumbered males in cancer cases, we need to find out reasons for this observation and strategize to reduce the incidence of malignancies.

CONFLICT OF INTEREST

Authors state no conflict of interest.

REFERENCES

1. [National cancer control programmes policies and managerial guidelines 2nd edition](#), WHO-Geneva. 2002.
2. The World Health Report 2001- Mental Health: New Understanding, New Hope WHO, Geneva.
3. Ferlay J, Bray F, Parkin DM, Pisani P. [Cancer incidence and mortality worldwide: sources, methods and major patterns in GLOBOCAN 2012](#). Int J Cancer. 2015; 136(5): 359-386. doi: 10.1002/ijc.29210
4. [National cancer registry program \(NCRP\)](#). NCRP Three year report of the PBCRs incidence and distribution of cancer. 2009-2011.
5. Rebecca S, Naishadham D, Ahmedin JV. [Cancer statistic, 2012](#). CA Cancer J Clin. 2012; 62(1): 10-29. doi: 10.3322/caac.20138
6. Miller BA, Chu KC, Hankey BF, Ries Lynn AG. [Cancer incidence and mortality patterns among specific Asian and Pacific Islander populations in the U.S.](#) Cancer Causes Control. 2008; 19(3): 227-256. doi: 10.1007/s10552-007-9088-3
7. Parkin DM, Bray F, Ferlay J, Pisani P. Descriptive epidemiology unit, international agency for research on cancer, lyon, france. int. j. Cancer. 2001; 94: 153-156.
8. Hussain MA, Pati S, Swail S, Prusty M, Kadam S, Nayak S. [Pattern and trends of cancer in odisha, India: a retrospective study](#). Asian Pac J Cancer Prev. 2012; 13(12); 6333-6336.
9. Binu V, et al. [Cancer pattern in Western Nepal: a hospital based retrospective study](#). Asian Pac J Cancer Prev. 2007; 8(2): 183-186.
10. Stewart BW, Kleihues P, Strong KL, Bonita R. World Cancer Report, IARC. 2003.
11. Reddy KR. DEPARTMENT OF EPIDEMIOLOGY AND BIostatISTICS, [KIDWAI memorial institute of oncology](#).