(e) ISSN Online: 2321-9599
(p) ISSN Print: 2348-6805

ORIGINAL ARTICLE

A STUDY OF PREVALENCE OF CANCER IN FEMALE SEX POPULATION IN REWA REGION (M.P. STATE)

Arun Maity[1] Santosh Meena[1], K.S. Likhar[2], U. R. Singh[3], P.K. Pradhan[4]

[1]Asst. Prof. , [2]Professor and H.O.D. Dept. of Pathology, R.K.D.F. Medical College Bhopal (M.P.), [3]Professor and H.O.D. , Ex- Professor and H.O.D., Dept. of Pathology, S.S. Medical College Rewa (M.P.)

ABSTRACT:
The present study entitled was undertaken to evaluate the incidence and pattern of cancer in female population in Rewa region in Madhya Pradesh State. For this purpose, the records available in the Histopathology Section of the department of Pathology, S.S. Medical College, Rewa, during the period from 1980 to 1989, were analysed. Inspite of various sources of error and limitations, the frequency data determined from hospital records were found to be useful to have an idea of incidence of site pattern of cancer prevalent in Rewa region which would be useful for further studies. Appropriate steps should be taken to detect cancer of the uterine cervix, breast and oral in women sex population in the early stages and to provide facilities for an effective cure. Further, an attempt may be made for uplifting the socio-economic condition and general health awareness among the people of Rewa region, so that the frequency of cancer of cervix, breast and oral in female sex population to may be brought down. Improved health services and adequate health statistics will allow better prediction of risk of cancer among the population of Rewa Region.
Key words: Incidence, Female, Cancer, Cervix, Breast, Oral, Socio-Economic Condition, Improved Health Services.

Corresponding author: Dr. Arun Maity (M.D.), Asst. Prof., Dept. of Pathology, R.K.D.F. Medical College, Bhopal (M.P.).

This article may be cited as: Maity A, Meena S, Likhar KS, Singh UR, Pradhan PK. A study of prevalence of cancer in female sex population in rewa region (M.P. State). J Adv Med Dent Scie Res 2017;5(1):116-119.

Access this article online	
Quick Response Code	Website: www.jamdsr.com
	DOI: 10.21276/jamdsr.2017.5.1.25

INTRODUCTION

Cancer is the common term for all- malignant tumors. It is derived from the latin for crab; 'Cancer'- presumably because a cancer adheres to any part that it seizes upon in an obstinate manner like crab.

To call present era a cancer age is not inappropriate. Cancer is a global problem and is the dreaded disease throughout the world. In the west, cancer is the leading cause of mortality after cardio-vascular diseases, with one out of every five deaths due to cancer. In India, it has become one of the ten top killers of the adult population and about 5 lakhs people develop cancer every year in India. It has been estimated that the annual numbers of new cancer cases are about 5.9 million in the world, of which 2.9 million cases occur in the developed countries and 3 million in the developing countries.

Epidemiology is defined as the study of laws and factors governing the occurrence and distribution of disease and disorder in a population. These factors include the characteristics of the population, the causative agencies and the biological, social and physical environment.

Study of hospital records, biopsy material and post-mortem findings are used to formulate etiological hypothesis. Population based registries are most reliable source of information at this stage of knowledge.

Incidence of cases at specific sites may provide clues for the possible etiology by demonstrating trends of increase or decrease over time and contrast between one geographical area and another or difference between section of communities.

A population based cancer registry combines complete reporting of all cases diagnosed in a defined population with effective follow-up on all reported cases and calculation of survival rates following different types of treatment.

Unfortunately, cancer registries which provide reliable mortality and morbidity statistics are not covering the major parts of the country.

Government Medical Institutes form a system of the health care facilities which as an easy asses to a large proportion of population. Therefore the material received in pathology department of medical institutes can be presumed to be representative of a real incidence".

Cancer registry is not existing in Rewa. There are no previous reports available on the incidence and types of cancer occurring in the Rewa region. Hence keeping in view the growing public health importance of cancer, an attempt has been made in this study to find out the frequency pattern and the spectrum of cancer lesions encountered in Rewa Region.

Rewa, the "land of white Tigers" is one of the main cities of Madhya Pradesh - the heart of the our country India

Rewa region covers an area of 6314 sq. km, the major

fraction of which are grazing lands and forests. The Rewa region has an estimated population of fifteen lakhs, having male to female ratio of 1:0.93 and population density of 246 per km^2. About 80% of the population resides in rural areas who are mostly poor in socio-economic conditions. The literacy rate in this region is about 33%.

The medical facilities in the Rewa region are limited. There is a medical college hospital present in the Rewa city which does not has facility for Cobalt therapy.

The present study is based on the histo-pathological reports of malignant tumours, collected from the records of the pathology department over a period of ten years from 1980 to 1989. This institution caters to the needs of the whole of the Rewa region and the data thus is fairly representative of the overall incidence of cancer in Rewa region. As Incidence Of Leukemia is very less in Rewa Region, Leukemia has not been included in the present study.

AIM & OBJECTIVES

The present work includes following aims and objects: -

1. To know the incidence and trend of cancer in Rewa region.
2. To know the difference in the incidence of cancer in different parts of body.
3. To know the age wise distribution of cancer in Females.

MATERIAL AND METHODS:

The present study comprises of a retrospective study of malignant tumours reported during the years 1980 to 1989 in the department of pathology, S.S.Medical College, Rewa. The diagnosis of malignant lesions were made on the histopathological grounds. Analysis of the data was done to find out the relative frequency of cancer lesions encountered in respective of age, sex and site of the cancer lesion of the patients. The Medical College Hospital being the biggest and the only centre having histopathology facilities in the Rewa Division ultimately remains the main referral centre of the region. Thus it also drains bulk of cancer cases from adjoining parts of the Rewa city. The data for the study were collected systematically from the records entered in the histopathology section during the ten years period from 1980 to 1989.

CODING SYSTEM:

The coding system described by W.H.O. (9^{th} revision) using code numbers 140 to 202, has been for classifying the present data.

OBSERVATION: Observations have been recorded based on the analysis of the reports of the biopsies/ surgical specimens submitted for histopathology studies in the Department of pathology during 10 years period, from 1980 to 1989.

(A) The observations in retrospective study have been made under the following headings:

1. Incidence of cancer cases with respect to total number of biopsies/ surgical specimens studied during the period.
2. Incidence of cancer cases in various age groups.
3. Incidence of cancer cases in females.
4. Incidence of cancer cases of different anatomical sites with relative frequency in females to record leading sites of cancer.

Table 1: Incidence of cancer-year wise distribution of cases

Year	Total No. of Biopsies studied	Cancer Cases	Percentage
1980	3231	130	4.02
1981	2350	133	5.65
1982	2845	137	4.81
1983	3000	207	6.90
1984	3401	184	5.41
1985	3741	222	5.90
1986	4000	168	4.07
1987	3737	176	4.70
1988	4465	145	3.24
1989	4526	155	3.42
(10 years) 80-89	**35,296**	**1657**	**4.68**

Table 2: Relative frequency of carcinoma & sarcoma

Type	No. of Cases	Percentage
Carinoma	**1470**	**88.71**
Sarcoma	**187**	**11.29**
Total Malignant	**1657**	**100**

Table 3: Incidence of cancer in various age groups

Sr. No.	Age Group in year	In FEMALE	
		No.	% Age
1.	0 - 10	16	2.40
2.	11 - 20	17	2.17
3.	21 - 30	43	5.49
4.	31 - 40	143	18.26
5.	41 - 50	280	35.75
6.	51 - 60	156	19.96
7.	61 - 70	97	12.38
8.	71 - 80	24	3.06
9.	81 on wards	7	0.89

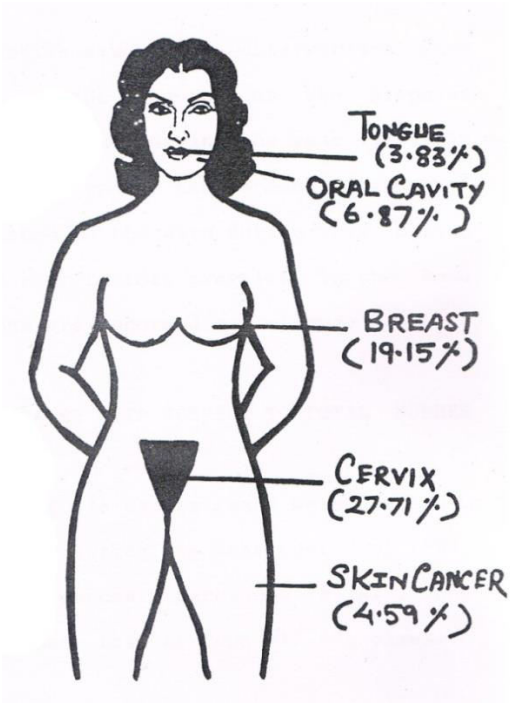
Table 4: Incidence of cancer of different anatomical sites (with relative frequencies in Females)

S. No.	I.C.D. Code No.	Sites	Total Cases FEMALE	
			No.	% age
1	140	Lip	9	1.14
2	141	Tongue	30	3.83
3	142	Major Salivary gland	4	0.45
4	143	Gum alveolus	20	2.55
5	144	Floor of mouth	1	0.12
6	145	Other unspecified parts of mouth (cheek)	33	4.20
7	146	Oropharynx	10	1.27
8	147	Nasopharynx	2	0.12
9	148	Hypopharynx	5	0.63
10	149	Other ill defined sites within 141-148	-	-

11	150	Oesophagus	8	1.02
12	151	Stomach	11	1.40
13	152	Small Intestine, Duodenum	3	0.38
14	153	Colon	3	0.38
15	154	Rectum, Rectosigmoid Junction and anal canal	15	1.91
16	155	Liver, Intraphepaticbile duct	13	1.66
17	156	Gall Biadder, Extra hepatic bileduct	3	0.38
18	157	Pancreas	2	0.25
19	158	Peritoneum and Retroperitoneum	3	0.38
20	159	Other and ill defined sites in 150-158	-	-
21	160	Nasal cavity middle ear accessory sinuses	16	2.04
22	161	Larynx (Epiglottis) vocal cords, cricoids	2	0.96
23	162	Lung, trachea and bronchus	-	-
24	163	Pleura	1	0.12
25	164	Thymus, heart, mediastinum	-	-
26	165	Other ill defined sites within 160-164	-	-
27	170	Bone and particular cartilage	20	2.55
28	171	Connective, soft tissue	24	3.06
29	172	Skin (Melanin)	1	0.12
30	173	Skin (Others)	36	4.59
31	174	FEMALE breast	150	19.15
32	175	MALE breast	-	-
33	179	Uterus nonspecific	1	0.12
34	180	Cervix Uteri	217	27.71
35	181	Placenta	2	0.25
36	182	Body of uterus (Corpus uteril)	23	2.93
37	183	Ovary and other associated uterine parts	24	3.06
38	184	Other unspecified FEMALE organs (Vulva and vagina)	15	1.91
39	185	Prostate	-	-
40	186	Testis	-	-
41	187	Penis, other FEMALE genital organs	-	-
42	188	Urinary bladder	-	-
43	189	Kidney and other urinary organs	6	0.76
44	190	Eye, lachry glands	7	0.89
45	191	Brain	-	-
46	192	Other unspecific part of cns	-	0.12
47	193	Thyroid gland	6	0.76
48	194	Other endoccrinal glands	-	-
49	195	other ill defined sites	-	-
50	196	Lymph node 33 secondaries and unspecified	29	3.70
51	197	Secondaries respiratory and Digestive	11	1.40
52	198	Secondaries other specified site	5	0.63
53	199	unspecified site	1	0.12
54	200	Lymphos arcoma and reticulo	6	0.76
55	201	Hodgkin's Disease	7	0.89
56	202	other lymphoid an histocytic tissue	-	-
Total	**140-202**		**783**	**47.26**

Table 6: Leading sites of cancer in females

Sr. No.	I.C.D. Code No.	Site	In FEMALE No.	% Age
1.	180	Cervix	217	27.71
2.	174	Breast	150	19.15
3.	143-145	Oral Cavity	84	6.87
4.	173	Skin (Excluding melanoma)	36	4.59
5.	141	Tongue	30	3.83



Common sites of cancer in females sex population

SUMMARY AND CONCLUSION

The present study entitled was undertaken to evaluate the incidence and pattern of cancer in female population in Rewa region in MADHYA PRADESH STATE. For this purpose, the records available in the Histopathology Section of the department of Pathology, S.S. Medical College, Rewa, during the period from 1980 to 1989, were analysed. The following observations were made:-

1. Out of total 35,296 biopsies studied during 10 years period, 1657 cancer cases were recorded, giving an over all incidence of 4.68 percent. A lower incidence of cancer cases has been noted in this series. This may be due to referring of large number of suspected cancer cases from the out-door and by the private practioners to established cancer centres like Indore, Bombay ect., as there is no facility of radio therapy available in the Medical College Hospital of this centre. As the present study was not based on Population based cancer registry, the Crude annual rate & Age adjusted annual rate of cancer (per 100 thousand population) in the Rewa region could not be determined.

   Further, in the present study, carcinoma was found to occur 8 times commoner than sarcoma, their relative frequency being 88.71% and 11.29% respectively.

2. In the present study, highest number of female cancer cases were recorded in fifth decade (35.75%) followed by Sixth decade (19.96%). Majority of the Cancer cases in FEMALE were recorded between 41 to 70 years of age group. The present figures were consistent with the observations made in other parts of the state and the country. Due to low life expectancy in India the peak incidence of cancer was found one decade lower than observed in western developed countries.

3. Out of total 1657 Cancer Patient 47.26% cases were found in FEMALES. The highest number of cancer were noted in cervix (27.71% cases). This was followed breast (19.15% cases), oral cavity (6.87% cases), skin (4.59% cases) and tongue (3.83 % cases) in descending order of frequency.
4. Cervical cancer was like-wise reported as the predominant cancer in Raipur, Jabalpur, Indore and Gwalior. However, oral cavity cancer was reported as the most frequent malignancy in Bhopal. In the present series, incidence of oral cavity and breast cancers are found similar to that reported from Gwalior.

In our country, cervix was the commonest cancer site in Andhra Pradesh, Pondicherry, Karnataka, Madhya Pradesh, Maharashtra, Manipur, Tamil Nadu, Uttar Pradesh, Goa, Delhi and Orrissa but in Bihar, cancer was found to occur most frequently in breast (FEMALE) while in Gujarat, Kerala, Rajasthan and U.P., oral cavity was the frequent most cancer site.

Incidence of cervical cancer worked out in present series is near similar to that reported from U.P., Rajasthan and Bihar.

Incidence of oral cancer is found comparable to that reported from Andhra Pradesh Gujarat, Kerala, Rajasthan, Tamil Nadu, Uttar Pradesh and Orrissa.

The incidence of Breast cancer observed in the present series is found consistent to that reported from Rajasthan and Uttar Pradesh.

The incidence of Skin cancer observed in the present study is found near similar to that reported from Uttar Pradesh, Maharashtra and Manipur.

Inspite of various sources of error and limitations, the frequency data determined from hospital records were found to be useful to have an idea of incidence of site pattern of cancer prevalent in Rewa region which would be useful for further studies.

Appropriate steps should be taken to detect cancer of the uterine cervix, breast and oral in women sex population in the early stages and to provide facilities for an effective cure. Further, an attempt may be made for uplifting the socio-economic condition and general health awareness among the people of Rewa region, so that the frequency of cancer of cervix, breast and oral in female sex population to may be brought down.

Improved health services and adequate health statistics will allow better prediction of risk of cancer among the population of Rewa Region.

REFERENCES

1. Census of India Cansua Hand Book ; Divisional Census office.
2. Doll, R.The epidemiology of cancer cancer, 45 : 2475-2485, 1980.
3. Dube, M.K. Cancer Project of India, 34th annual conference of India association of pathologists 21, Annexure 13,14,15 and 16, 1985. R.N.T. Medical college, Udaipur.
4. Gangadharan, P. Epidemiologic observation on cancer in Indian People. Indian J. Cancer, 16 : 1-17, 1979.
5. I.C.D. O; International Classification of diseases for oncology, 2nd edition : 9-11, W.H.O., Geneva, 1990.
6. Jussawalla, D.J. and Bhansali, S.K. Cancer in the tropics; A comparative study with spec ial reference to India. Indian J. cancer, 6 : 1-26, 1969.
7. Jussawalla, D.J., Yeola, B.B., Natekar, M.V. Narayan, R.A. Geographical variations in cancer incidence in two urban populations in India. India J. cancer, 18 : 91-98, 1981.
8. Karel Kupka. International classification of diseases ; ninth revision W.H.O. Chronicle, 32 : 219-225, 1978.
9. Robbins, S.L.Kumar, V. and Cotran, R.S. Robbins pathologic basis of disease, 4th Edition: 239, 1989.
10. Sandell, J., Sati, T.R., Mehrotra, S.K. Singh, L.D. Bhatnagar, K.L. A study of the spectrum of cancer lesion in some areas of Eastern U.P. Indian J.Cancer, 24 : 146-149, 1987.
11. Sanghvi, L.D. Cancer epidemiology in India: A crititque. Indian J. Med. Res. 62: 1850-1869, 1974.
12. Saran, S. and Agrawal, G.N. Cancer pattern in central U.P. Indian J. Cancer, 21 : 133-136, 1985.
13. Surange, S. Bhopal population based cancer registry. Annual report 1986 to 1987 : 11-17, Department of pathology Gandhi Medical College, Bhopal (1988)
14. Singh, Jaipal. Incidence and pattern of cancer in Chhatisgarh region: 42-62, Pt. J.N. Memorial Medical College, Raipur, 1988.
15. Jain, D.K. Cancer registry as an essential prerequisite to cancer control. Indian J. Cancer, 19: 363-368, 1975.

Source of support: Nil **Conflict of interest:** None declared