

Original Research Article

Spectrum of Cancers on Histopathology –Retrospective Study of 5 Years**Amit Agravat¹, Abhishek Godhani^{2*}, Gauravi Dhruva³, Pooja D Kagathara⁴**¹Associate Professor, P.D.U. Government Medical College and Hospital, Rajkot, Gujarat, India²Assistant Professor, Shantabaa Medical College & General Hospital, Amreli, India³Professor & Head, Department of Pathology, P.D.U. Government Medical College and Hospital, Rajkot, Gujarat, India⁴Assistant Professor, Shantabaa Medical College & General Hospital, Amreli, India

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Abstract

Background: With the control of many infectious diseases and increase in general longevity of human lives, other diseases have occupied the front as casual factors of death. One of the chief contributor is cancer. It is now no more considered to be the disease peculiar to “so called civilized” races and countries. It is now known to be present and prevalent in all nations and all populations. **Aims:** To study the incidence of cancer cases; to study the cancer cases according to socio- demographic profile, gender and age; to evaluate cancers according to histopathology. **Materials and Method:** This was a retrospective study. A total 801 patients were evaluated clinically, pathologically and radiologically in Pathology Department, P.D.U. government medical college, Rajkot, during the period of 1st August 2013 to 31st July 2018. **Results:** Out of 801 cancer cases; accordingly to anatomical sites Lip, oral cavity, pharynx cancer cases were in lead in both sexes. Histopathological classification showed squamous cell carcinoma in the lead. In male according to histopathology squamous cell carcinoma and in female infiltrating ductal carcinoma cases were in lead. **Conclusion:** The present study concludes cancer cases analysis according to age, sex, religion, occupation, residential Status, anatomical site involvement and clinical diagnosis and pathological diagnosis which are helpful for understanding incidence of cancer cases.

Keywords: cancer, histopathology, diagnosis.

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Introduction

With the control of many infectious diseases and increase in general longevity of human lives, other diseases have occupied the front as casual factors of DEATH. One of the chief contributor is CANCER. It is now no more considered to be the disease peculiar to “so called civilized” races and countries. It is now known to be present and prevalent in all nations and all populations[1].

Aims & Objectives

1. To study the incidence of cancer cases in Rajkot, P. D. U. Medical College & Hospital.
2. To study the varieties of cancers.
3. To study the cancer cases according to socio- demographic profile.
4. To assess the cancer cases according to gender and age.
5. To evaluate cancers according to histopathology.
6. To assess histopathology of most common cancers.

Material & Methods

Patients from all several districts of saurashtra& some patients from Gujarat state else then Saurashtra& other states of India are also being diagnosed and treated in P.D.U. Medical college and Hospital, Rajkot. So it was taken as a role model for this cancer study. A retrospective study of spectrum of cancers on histopathology was carried out in P.D.U. Medical College & Hospital, Rajkot between

1st August 2013 to 31st July 2018. The case records of these cancer cases were sorted out according to age, sex, religion, occupation, residential Status, anatomical site involvement and clinical diagnosis and pathological diagnosis.

Results

1. Total of 801 cancer cases were registered in these 5 years span.
2. Out of 801 cancer cases 409 male cancer cases and 392 female cancer cases were seen with ratio of 1.04:1 male:female population.
3. 41-60 years age group showed maximum cancer cases of total with 397(49.56%) of 801(100%) cancer cases registered.
4. 717(89.51%) cancer case were Hindu, 75 (9.36%) cancer cases were muslim.
5. Out of 801 total cancer cases, highest cancer cases were found in housewife/household works 332(41.45%) section.
6. Cancer cases were studied accordingly to anatomical sites in both sexes which showed out of 801(100%) cancer cases; Lip, oral cavity, pharynx cancer cases were in lead in both sexes with 267(33.33%) cancer cases followed by breast cancers 161(20.10%) and digestive tract cancers 149(18.60%) cases respectively in both sexes.
7. Out of 409(100%) total male cancer cases 208(50.86%) cases were of lip, oral cavity and pharynx cancers; and digestive tract cancer cases were 94(22.98%) at second place.
8. Out of 392(100%) total female cancer cases, cancer breast was in lead with 159(40.56%) cancer cases followed by lip, oral cavity, pharynx cancer cases with 59 (15.05%) cases.
9. Histopathological classification which showed squamous cell carcinoma in the lead with 355(44.32%) cases followed by

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- adenocarcinoma with 134(16.73%) cancer cases of 801(100%) total cancer cases.
10. 409(100%) male cancers were classified according to histopathology of which 255(62.35%) cancer cases were of squamous cell carcinoma followed by adenocarcinoma with 84(20.54%) cancer cases respectively.
 11. 392(100%) female cancers were classified according to histopathology of which 123(31.38%) cancer cases were of infiltrating ductal carcinoma followed by 100(25.51%) squamous cell carcinoma cases respectively.
 12. Lip-oral cavity and pharynx cancers were classified histopathologically in which 202(97.12%) of 208(100%) in males and 57(96.61%) of 59(100%) cases were of squamous cell carcinoma.
 13. Digestive tract cancer cases were classified histopathologically in which 74(78.72%) cancer cases were of adenocarcinoma of total 94(100%) cancer cases in males.
- Of the 159 breast cancer cases in females, 139(87.42%) cancer cases were infiltrating ductal carcinoma.

Table 1: Distribution of cancer cases according to anatomical sites (1st August 2013 to 31st July 2018)

No.	Anatomical Site	Cancer Cases		Total
		Male	Female	
1	Lip, oral cavity, pharynx	208 (50.86)	59(15.05)	267(33.33)
2	Respiratory & Thoracic organ	01(0.24)	01(0.26)	02(0.25)
3	Genito Urinary Tract Organs	31(7.58)	46(11.73)	77(9.61)
4	Breast	02(0.49)	159(40.56)	161(20.10)
5	Digestive organs	94(22.98)	55(14.03)	149(18.60)
6	Bone & Soft tissue	06(1.47)	01(0.26)	07(0.87)
7	Seconadaries In Lymph Nodes and Other Organs	06(1.47)	08(2.04)	14(1.75)
8	Brain & CNS	01(0.24)	01(0.26)	02(0.25)
9	Skin	52(12.71)	47(11.99)	99(12.36)
10	Endocrine Glands	-	07(1.78)	07(0.87)
11	Pancreas & Hepatobiliary System	08(1.96)	08(2.04)	16(2.00)
	Total	409 (100.00)	392 (100.00)	801 (100.00)

Table 2: Histopathological Classification of Cancer Cases (1st August 2013 to 31st July 2018)

Histopathological Classification	Malesn(%)	Femalesn (%)	Total
Squamous Cell Carcinoma	255(62.35)	100(25.51)	355(44.32)
Adeno Carcinoma	84(20.54)	50(12.76)	134(16.73)
Infiltrating Ductal Carcinoma	03(0.73)	123(31.38)	126(15.73)
Papillary Carcinoma	03(0.73)	10(2.55)	13(1.62)
Sarcoma	02(0.49)	01(0.26)	03(0.37)
Basal Cell Carcinoma	14(3.42)	28(7.14)	42(5.24)
Lymphoma	07(1.71)	10(2.55)	17(2.12)
Others	41(10.02)	70(17.85)	111(13.86)
Total	409(100.00)	392(100.00)	801(100.00)

Discussion

In P.D.U. Medical College & Hospital, Rajkot the retrospective and prospective study was carried out for the period 1st August 2013 to 31st July 2018; in which 801 cancer cases were seen of which 409 cases were male and 392 cases were female respectively which had ratio of 1.04:1 for male female cancer incidence. Same way GCRI (Ahmedabad) studied the magnitude of cancer problem in their

registered cancer cases in 1988. There were 7015 cases with 1.46:1 (M:F ratio) and in 1998 there were 9807 cancer cases with 1.42:1 (M:F ratio) respectively[2]. Another study at ShriSiddhivinayakGanapati Cancer Hospital, Miraj,Maharashtra during 1st March 2005 to 28th February 2006 showed 1.009:1 (M:F ratio) out of 1891 cancer cases[3].

Table 3: The Age & Sexwise Distribution Combined for Both Sex

Age Group(In Years)	Present Study(1 st August 2013 to 31 st July 2018)		GCRI(1998)n(%)	Melamaruvathur(South India) ⁴ (2009-2015)n(%)
	N	%		
0-20	12	1.50	135(4.43)	6(2.00)
21-40	199	24.84	472(15.51)	61(16.00)
41-60	397	49.56	1321(43.42)	218(55.00)
>61	193	24.09	1114(36.62)	108(27.00)
Total	801	100.00	3042(100.00)	393(100.00)

Table 4: Distribution of Cancer Cases According to Anatomical Sites (Combined for Both Sex)

Anatomical Site	Present Study (1 st August 2013 to 31 st July 2018) n(%)	Rank	AnatomicalSite	GCRI (1998) n(%)
Lip, oral cavity and pharynx	267(33.33)	1	Lip, oral cavity and pharynx	563(18.51%)
Breast	161(20.10)	2	Genitourinary tract	459(15.09)
Digestive tract	149(18.60)	3	Digestive tract	451(14.83)

Cancer breast is the commonest cancer in females at global level[5]. In our study too cancer breast was in lead in females with 159(40.56%) cancer cases. Even in GCRI, showed same with 353(27.80%) cancer cases of 1270 in 1998. Out of 159 breast cancer cases, 139(87.42%) were infiltrating ductal carcinoma followed by

lobular (4.40%), others(3.14%), papillary and medullary cancers, etc. Another study at Bhaktapur Cancer Hospital, Nepal during 2012 showed most common histopathological breast cancer type was infiltrating ductal carcinoma with 84(75%) cases out of 112(100%) breast cancer cases followed by medullary (5.4%) cancers[6].

The digestive system cancer cases were 149 (18.60%) of which 94(22.98%) and 55(14.03%) were found in males and females of 801 total cases respectively. It was in 2nd place in males and 3rd place in females respectively. In GCRI 1998 it showed digestive tract cancers are in 3rd place with 451(14.83%) cases with 290(16.37%) and 161(12.68%) cases which stood 2nd in males and 3rd in females of total 3042 cancer cases[2].

Conclusion

Non communicable diseases including cancer are emerging as a major cause of death worldwide. Most of the cancers are diagnosed histopathologically but cytopathology is also an upcoming branch which gives us an early indication of cancerous growth, but still histopathological diagnosis by examination of tissues removed still remains the commonest method for the final diagnosis of malignant neoplasm.

Conflict of Interest: Nil

Source of support: Nil

References

1. Mitra S. Jour of Obst. & Gyne. India. 1961; 12:1.
2. Gujarat Cancer Research Institute, Annual Report, 1998
3. KapilH Agrawal, S.S. Rajderkar. "Magnitude And Leading Sites of Cancer In A Tertiary Cancer Care Hospital of Western Maharashtra" National Journal of Community Medicine, 2011, 2(3).
4. Sumathi, Cancer report – "a statistical analysis by site, age and sex distribution in rural area of Melmaruvathur, South India". Indian Journal of Pathology and Oncology. 2016; 3(3):440-445.
5. Fundamentals of Oncology global problem of cancer: <http://reach.ucf.cau/-oneeduc1/intro.html>
6. Pathak R, Jha A, Neupane PR, Chalise S, Basnyat AS. "Histopathological evaluation of carcinoma of breast" Journal of Pathology of Nepal. 2016; 6:922-927.