Research Article

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Top ten cancers' incidence assessment in south sindh's cancer hospital

Abstract

Background: In developing countries, more than 5million in cancer cases annual increase has been seen and this non communicable disease is increasing due to adoption of cancer associated lifestyle choices (diet styles, physical activity reduction and use of betelnut, Pan, gutka, Tobaco. This study was conducted to investigate out the top ten cancers registered at Nuclear Institute of Medicine and Radiotherapy (NIMRA) Jamshoro Pakistan.

Materials and Methods: NIMRA is one of PAEC's (Pakistan Atomic Energy Commission) healthcare facility for diagnostic, therapeutic facility for various malignancies. Total 15854 patients were included in this study from 2008 to 2014 registered at NIMRA. From which males were 8032 and females were 7822 (approximately equal ratio). The mean age for males and females were 50±9 and 46±8year respectively.

Results: The data shows that the most common tumour in males was head and neck and breast carcinoma was top malignancy in females. Carcinoma of lung was second in males whereas head and neck was on second position. The third top carcinoma in males was in ca. lung and in females at third was gyneacological cancer.

Discussion: The trend of rising of cancer incidence in Pakistan can be linked with socio-economic conditions of population, nutritional insufficiency, dietary changing habits, decrease in physical activities and use of betelnut, pan, tobacco.

Conclusion: The most of patients registered at NIMRA presented in very high stages so the launching of cancer detection campaign and initiating a cancer control program is vital.

Keywords: gyneacological, cancer, betelnut, pan, tobacco, tumour, breast carcinoma, westernized diets, patients, deadly disease, health, radiotherapy, Pakistan, research, dietary

Volume 2 Issue 2 - 2017

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Received: November 10, 2016 | **Published:** February 09, 2017

Introduction

In developing countries, the annually increase of more than 5million in cancer cases has been observed and it is estimated that more than 15million new cases of cancer will be reported by 2020 every year.[1] This non communicable deadly disease became a serious threat to health in many Asian countries and needs utmost encounter.[2,3] From its intendance in 1947 to present date, Pakistan faces high increase in incidence of cancer.[4] This burden of cancer is increasing due to adoption of cancer associated lifestyle choices like changing of diets style (westernized diets), less physical activity and smoking.[5]

Although the accurate statistics on occurrence of this deadly disease and outcome are necessary for the planning and evaluation of existing schema for the purposes of cancer control and for research methodology[6] but in Pakistan no extensive database available and only hospital based figures are available.[7] This study was carried out to explore out the number of top ten cancers recorded at Nuclear Institute of Medicine and Radiotherapy (NIMRA) Jamshoro Pakistan.

Materials and methods

NIMRA (Nuclear Institute of Medicine and Radiotherapy Jamshoro Pakistan is one of healthcare facility has skills of diagnosis, treatment of malignant disorders and is capable to do research on these lethal diseases under sanctuary umbrella of Pakistan Atomic Energy Commission (PAEC). The objective of building the nuclear medical institutes by PAEC is to diagnose and treat the malignant ailment and to adopt and apply latest research trends for the cancer management.

For this study total 15854 patients enrolled from 2008 to 2014 at NIMRA were included from which male patients were 8032(50.66%) and female patients accounted were 7822(49.34%) with approximately equal ratio as shown if Figure 1. The mean age at presentation for males was 50±9 and for females was a 46±8year.

Figure 1 Graphical distribution of carcinomas in both sexes (male and female).

Results

The attended patients from the period of 7years (2008 to 2014) are summarized in Tables 1 & 2 separately for each of gender and graphically represented in Figures 2 & 3. Combine data for both sexes has been illustrated in Table 3 & Figure 4. Facts and figures show the share of ten commonest malignancies in either sex. The first most common tumour in males was head and neck whereas it contributes in females at second top position. In females breast carcinoma was on the top in malignancies whereas in males it was least common. Ca. lung and ca. liver hold second and third places in males and in females, ca. lung and ca. liver were on sixth and fifth place respectively. In females gyneacological cancer is on third place whereas ca. esophagus hold fourth place and in male's ca. esophagus is on eight places.

Table 1 Top ten malignancies in males

	2008	2009	2010	2011	2012	2013	2014	Total
Head & Neck	140	192	315	337	317	336	412	2049
Lung	89	104	162	107	118	95	92	767
Liver	54	62	124	102	65	83	72	562
Lymphoma	25	48	78	71	81	57	36	396
Urinary Tract	40	23	60	68	48	67	53	359
Colorectal	27	29	43	51	56	61	41	308
Leukemia	23	27	28	53	40	35	18	224
Oesophagus	16	28	33	42	37	37	26	219
Prostate	27	15	37	35	32	31	36	213
Brain	1	24	22	31	20	21	23	142

Table 2 Top ten malignancies in females

	2008	2009	2010	2011	2012	2013	2014	Total
Breast	260	265	293	265	259	288	319	1949
Head & Neck	102	128	246	220	196	225	166	1283
Gynea	85	107	147	153	141	157	159	949
Oesophagus	34	45	65	89	70	68	53	424
Liver	27	19	38	34	23	36	11	188
Lung	21	18	34	38	24	23	25	183
Colorectal	12	13	30	36	31	28	30	180
Lymphoma	18	15	38	27	35	17	24	174
Urinary Tract	15	16	32	27	29	22	16	157
Leukemia	12	20	26	24	28	24	13	147

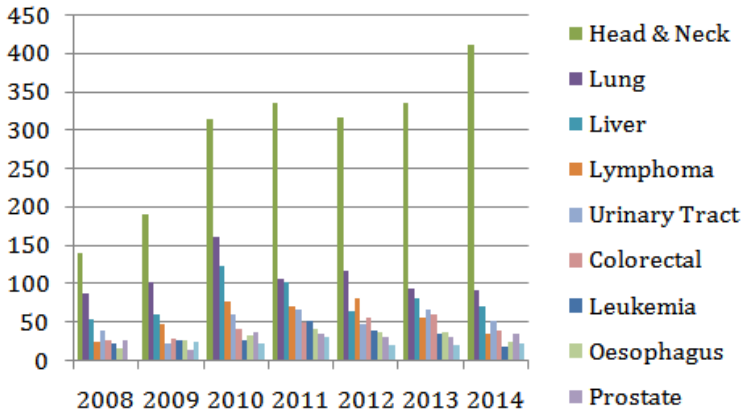

Figure 2 Graphical representation of carcinomas in males (yearwise).

Citation: Mangi FH, Laghari NA, Memon SA, et al. Top ten cancers' incidence assessment in south sindh's cancer hospital. *Int J Radiol Radiat Ther.* 2017;2(2):38–41. DOI: 10.15406/ijrrt.2017.02.00019

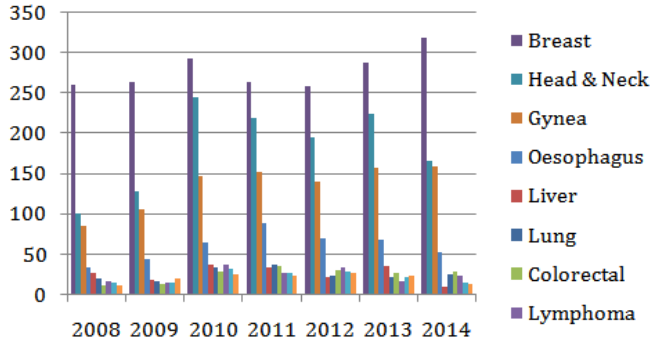

Figure 3 Graphical representation of carcinomas in females (yearwise).

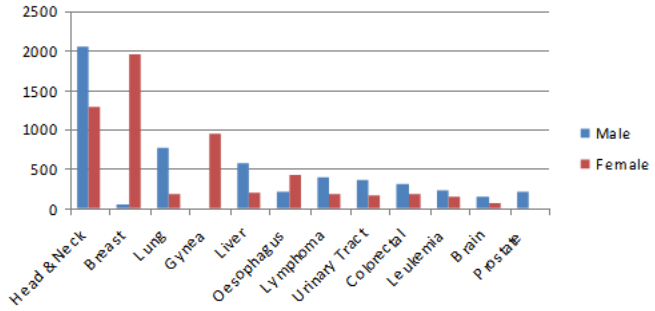

Figure 4 Graphical presentation of carcinomas in both genders (male and female).

Table 3 Overall combined data of reported carcinomas

	Male	Female	
Head & Neck	2049	1283	3332
Breast	52	1949	2001
Lung	767	183	950
Gynea	0	949	949
Liver	562	188	750
Oesophagus	219	424	643
Lymphoma	396	174	570
Urinary Tract	359	157	516
Colorectal	308	180	488
Leukemia	224	147	371
Brain	142	73	215
Prostate	213	0	213

Discussion

The cancer data from one tertiary care cancer institute is presented here (Figure 5) and it may be possible that the numerals may differ from other Institutional Figure 7. The rising tendency of cancer incidence in Pakistan can be linked with low socio-economic conditions, lack of nutrition, changes in dietary habits, decreasing physical activity and increasing trend of betelnut, pan chewing, tobacco etc. use.[1] In current study, the first most commonest tumour in males was head and neck whereas it contributes in females at second top position as also reported by Hanif et al.[7]

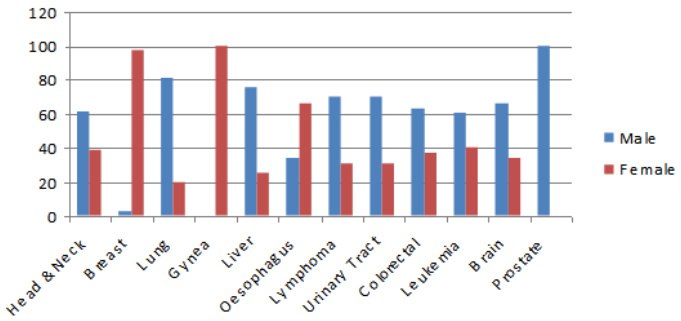

Figure 5 Graphical presentation of percentagewise carcinomas in both genders (male and female).

The researchers[8–22] revealed that the extensive use of betelnut, pan, gutka, tobacco in any form either in smoked (cigarette, biddi) or chewable form (naswar, nass) may raise the risk of cancer of head and neck specially carcinoma of oral cavity. The breast carcinoma was found most frequent females in this study and as data contributed by Bhurgri Y et al.[23–26]

Conclusion

The incidence of cancer rise may be prevented by controlling dietary habits, avoiding the usage of betelnut, gutka, pan, tobacco in any form as cigarette/biddi (smoked) or naswar/nass (chewable), minimal usage of preservative food material and least amount of pesticides spraying on crops as suggested by Yasmin Bhurgri.[1] The most of reported cases at NIMRA are presented with advance stage. The reasons behind late reporting of carcinomas at tertiary care hospitals are low socioeconomic status of population, literacy etc. as reported by Zeb A,[27] so it is indeed the words of the time that the campaign must be launched for detection of cancer in early stage and an effective program should be launched for early detection of the cancer and control on it.

Acknowledgements

None.

Conflict of interest

Author declares that there is no conflict of interest.

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