Knowledge of cancer and its risk factors in Chandigarh, India.

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Citation

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Abstract

Research Question: What is the status of knowledge, common behaviours and attitudes pertaining to cancer in urban and slum dwellers of Chandigarh.Objectives: To determine the knowledge, attitudes and behaviors regarding common cancers in urban and slum dwellers of Chandigarh.Study Design: Community based descriptive field based study in and urban and slum dwellers of Chandigarh, India.Setting: Field practice area and adjoining largest slum of urban health training centre of Department of Community Medicine.Participants: Urban and slum inhabitants of ChandigarhStatistical Analysis: Percentage, proportionsResults: About 3/4th of respondents could correctly name the common cancers but the knowledge about preventive modes of cancer was lacking as only 2.5%(23) of Urban population and none among slum population were Knowing about Pap smear .None of the respondent could enumerate all the warning symptoms of cancer. 3/4th (307, 22.7%) of respondents knew about the tobacco as a risk factor for cancer followed by alcoholConclusion: There is a great need for increasing the awareness in masses by collaborative action of public health specialists, health professionals and via IEC activities.

INTRODUCTION

The world at present is heading towards various types of non communicable diseases which are also known as modern epidemics. Among the modern epidemics cancer is second largest non-communicable disease and it has a sizable contribution in the total number of deaths. There were more than 12 million new cancer cases and 7.9 million cancer deaths world-wide in 2007, the majority in developing countries.This amounts to 20,000 cancer deaths a day this year, according to Global Cancer Facts and Figures(1). The majority of these cases and deaths will occur in developing countries, with 6.7 million cases and 4.7 million deaths versus 5.4 million cases and 2.9 million deaths in developed countries, according to the report. The World Health Organization documents that cancer rates are set to increase at an alarming rate globally and it is projected by the

WHO that cancer burden would increase to 20 million by2020 with 70% in the developing world (2).

The burden of cancer is increasing in developing countries as deaths from infectious diseases and childhood mortality are declining and more people live to older ages when cancer most frequently occurs, “This cancer burden is also increasing as people in the developing countries adopt Western lifestyles such as cigarette smoking, higher consumption of saturated fat and calorie-dense foods and reduced physical activity.

It is estimated that there are 2 million cancer patients in India with 0.7 million new cases each year. Cancer is the third greatest cause of death with 0.4 million deaths per annum, and is thus a major public health problem in India. Facilities for screening and proper management of cancer patients are grossly limited in developing countries and also more than two third of cancer patients are already in advanced and incurable stage at the time of diagnosis. The increasing trend of cancer incidence has forced the humanity to work more on the cancer prevention and treatments. It is important for the public health professionals to understand the dynamics of cancer incidence for future strategies.

It is well documented that many of these cases of cancer can be tackled to a large extent by simple cost-effective methods that emphasize on primordial, primary and tertiary levels of prevention. The promotion of preventive strategies can be done by giving impetus to public awareness activities and early detection and screening programmes. Many studies done in developed countries shows a strong association between early reporting for detection and treatment in the

community. Undoubtedly primary and secondary preventive activities decrease the burden of cancer patients to the hospital and minimize human suffering.

Hence present study was done with the objective to assess the knowledge, attitude and practices in the community pertaining to various aspects of cancer so that higher authorities can be as a baseline for our further interventional studies.

METHODS

The study was conducted by Urban Health Training Centre of Department of Community Medicine, Govt. Medical College & Hospital Chandigarh (GMCH) from July 2007 to December 2007. At present the total population of Chandigarh is 9, 00,635 with literacy rate of 81.6% .As per 2001 census around 30% population lives in periurban areas which includes slum and rural population.

Study Design: This community based descriptive cross sectional study was done in the urban field practice area and adjoining largest slum of Chandigarh, individuals aged 18 years and above in the study area were selected.

Sample Size: The studies done in other parts of India and other countries depicted that nearly 40-50% of subjects were aware of the correct knowledge about the casual risk factors, prevention and treatment of common cancers. Considering the prevalence to be 45%, the optimum sample size came out to be 1323, with 90% confidence interval and 5% permissible error. Considering the refusal rate as 20%, 1588 subjects were thought to be contacted to reach the predetermined sample. But only 238 subjects did not respond and hence 1350 subjects were enrolled. Varied reasons so given for not responding were lack of time (96, 40.3%), no interest (94, 39.5%) and no belief in the use of such studies (48, 20.1%).

Sample was selected from the sampling universe using the systematic random sampling method. The first house to initiate the study was selected by using table of random members. To represent the population of Chandigarh adequate proportional allocation was given to both urban and slum populations. Therefore 932 and 418 subjects were interviewed in urban and slum area respectively.

The investigating tool so used was preformed, pretested questionnaire. This had both open and close-ended questions related to various aspects of cancer. It was further subjected to certain modifications after a pilot study so done. Subjects were enrolled after taking verbal consent from them. The study was performed in accordance with national and international guidelines stated at the declaration of Helsinki and complies with the legal requirements regarding confidentiality. The questionnaire was filled by the team of medical social workers, interns & doctors. They were trained in interview techniques before enunciation of the study. To encourage responses from them, the subjects were interviewed after establishing rapport.

Different factors related to cancer and information was gathered. Subjects were assessed for awareness of various cancers & associated risk factors. Moreover they were also interviewed about their knowledge of mortality and morbidity associated with cancer.

Data was collected, complied and analysed. Epi-info and SPSS Version 10 was used for statistical analysis.

RESULTS

Socio-demographic characteristics of respondents are shown in Table – 1. There were 418 (31%) and 932 (69%) respondents of slums and urban area respectively, with maximum 627 (46.4%) belonging to 20- 29 years age group followed by 457 (33.8%) in the age group 30-49 years. Almost half 202 (48.2%), subjects in the slum area were illiterate. In urban area 227(24.4%) respondents were literate till 10^{th} class and 443(29.7%) respondents were educated above secondary level. Labourers represented maximum 176 (42.1%) among slum population and in urban population 284(21%) of respondents were of business class followed by students 202, (21.7%).More than $3/4^{th}$ of respondents 1034 (76.6%) were married.

Figure 1

Table -1 Socio-demographic Characteristics of population in Chandigarh

Characteristics	Slums	Urban	Total
AGE (yrs)			
10-19	53 (12.68 %)	101 (10.8%)	154 (11.4%)
20-29	179 (42.8%)	448 (48.1%)	627 (46.4%)
30-49	151 (36.12%)	306 (32.8%)	457 (33.8%)
50-59	26 (6.22%)	47 (5.0%)	73 (5.4%)
≥ 60	9 (2.15%)	31 (3.3%)	40 (2.9%)
OCCCCUPATION			
Factory Worker	28(6.7%)	55 (5.9%)	83 (6.1%)
Labourer	176 (42.1%)	-	176(13.03%)
Govt. Job	5 (1.2%)	74 (8.5%)	79 (5.8%)
Student	14 (3.3%)	202 (21.7%)	216 (16%)
Pvt. Job	52 (12.44%)	89 (9.6%)	141 (10.4%)
Business	40 (9.5%)	244(26.2%)	284 (21%)
Housewife	101 (24.2%)	185 (19.9%)	286 (21.1%)
Retired	2 (0.4%)	83 (8.9%)	85 (6.3%)
EDUCATION			
Illiterate	202 (48.32%)	30 (3.2%)	232 (18.3%)
Primary	14 (3.3%)	61 (6.5%)	75 (5.5%)
Matric	136 (32.5%)	227 (24.4%)	363(26.8%)
10+2	24 (5.7%)	213 (22.9%)	237 (17.5%)
Graduate	38 (9.1%)	207 (22.2%)	245 (18.1%)
PG	4 (0.95%)	194 (20.8%)	198 (14.6%)
MARITAL STATUS			
Married	280 (66.85%)	754 (80.9%)	1034 (76.6%)
Unmarried	138 (33.15%)	178 (19.1%)	316 (23.4%)

Respondents were inquired about various variables of cancer like heard of cancer or not, knowledge of different common cancer in males and females, risk factors of cancer, warning signals of cancer etc. Most of urban respondents had heard of cancer but in slums only 239(57.2%) were aware .Among various cancers, maximum awareness was for breast cancer, 913(67.4%), followed by lung cancer, 897(65.1%) and blood cancer 558 (40.1%). Very few of slum subjects were knowing of cervical cancer, 2(0.5%) Similarly when asked about common cancers in males a large proportion 960(71%) were aware of lung cancer followed by blood cancer 901(67.1%).Minimum awareness was for kidney cancer,179(13.2%).A similar percentage responded for oral cavity cancer in females ,379(27.4%) and 380(28.1%) in males. (Table 2)

1062(78.6%) respondents knew that cancer can be symptomatic. Subjects were asked about seven cardinal symptoms of cancer recommended by WHO. Most common symptoms according to them were unusual swelling 897(66.4%) followed by blood in vomiting 800 (59.2%).

Cachexic features were known to less than ½ of respondents, 609(45.1%).More proportion of urban subjects responded for all the symptoms except for excessive bleeding.(Figure 1)

Figure 2

Figure 1

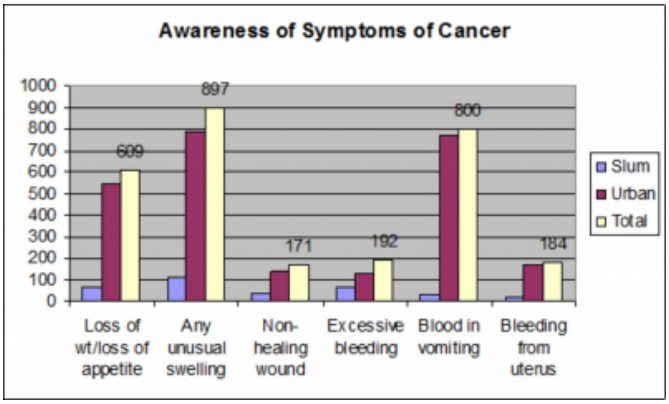


Figure 3

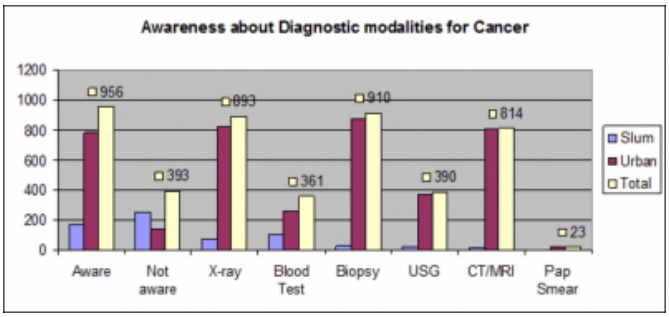
Table-2 Knowledge regarding various aspects of cancer in population Table-2

Aware of Common Cancer in Females	Slums (n=418)	Urban (n=932)	Total (n=1350)
Know about Cancer (Heard of Cancer)			
Yes	239 (57.2%)	905 (97.1%)	1144 (84.7%)
No	179 (42.8%)	27(2.9%)	206 (15.2%)
Breast Cancer	250 (59.8%)	663 (71.2%)	913(67.4%)
Cervix Cancer	02 (0.5%)	485 (52.1%)	487 (34.8%)
Blood Cancer	24 (5.7%)	534 (57.3%)	558 (40.1%)
Lung Cancer	108 (25.8%)	789 (84.7%)	897 (65.1%)
Oral Cavity Cancer	85 (20.3%)	289 (31.0%)	374 (27.4%)
Gall Bladder Cancer	05 (1.2%)	118 (12.7%)	123 (8.8%)
Brain Cancer	30 (7.2%)	256 (27.5%)	286(20.7%)
Kidney Cancer	05 (1.2%)	43 (4.7%)	48 (3.5%)
Stomach Cancer	01 (0.2%)	04 (0.4%)	05 (0.4%)
DNK (Others)	82 (19.6%)	-	82 (6.5%)
Aware of Common Cancer in Males			
Lung Cancer	73 (17.5%)	887 (95.2%)	960 (71.1%)
Liver Cancer	09 (2.2%)	678 (72.8%)	686 (50.8%)
Prostrate Cancer	04 (0.9%)	436 (46.8%)	440 (32.5%)
Oral Cavity Cancer	58 (13.9%)	322 (34.6%)	380 (28.1%)
Blood Cancer	27 (6.5%)	880 (94.5%)	907 (67.1%)
Brain Cancer	01 (0.2%)	682 (73.2%)	683 (48.9%)
Stomach Cancer	01 (0.2%)	510 (54.7%)	511 (37.8%)
Kidney Cancer	10 (2.2%)	169 (18.1)	179 (13.2%)
Causes of Cancer			
Bidi / Cigarette	149 (35.6%)	860(92.3%)	1009 (74.7%)
Zarda	138 (33.0%)	604 (64.9%)	742 (55.0%)
Alcohol	83 (19.9%)	723 (77.6%)	806 (60.0%)
Diet	05 (1.2%)	302 (32.4%)	307 (22.7%)
Environmental Pollution	10 (2.4%)	417 (44.7%)	427 (30.8%)
Treatment of Cancer			
Radiotherapy	29 (6.9%)	644 (69.1%)	673 (49.8%)
Surgery	81 (19.3%)	425 (45.6%)	506 (37.5%)
Chemotherapy	04 (0.95%)	794 (85.2%)	798 (59.1%)
Can not be treatment	378 (90.4%)	159 (17.1%)	537 (39.8%)
DNK	30 (7.2%)	23 (2.5%)	53 (3.9%)
Survival Time without treatment			
0 – 2 yrs	258 (61.7%)	412 (44.2%)	670 (49.6%)
2 – 4 yrs	98 (23.4%)	305 (32.7%)	403 (29.9%)
>4 yrs	62 (14.8%)	215(23.1%)	277 (20.5%)

Another interesting finding regarding detection of cancer was that 393(30.1%) respondents could not respond any method of detection of cancer. Different modalities of cancer detection were known to, 786(84.4%) urban subjects as compared to, 170 (40.7%) of slum subjects. More than ½ 910 (65.3%) knew that biopsy as one of the methods detection of cancer, this was followed by next common modality X-ray 893 (64.5%).None of respondents of slum population were aware of Pap smear and in urban area too only 23 (2.5 %) respondents were aware of this method. Same percentage of respondents thought blood tests to be another way of detecting cancer. Latest techniques MRI, CT scan and USG were known more to urban 803(86.2%) than in 11(2.6%) slum population.(Figure 2)

Figure 4

Figure 2



On probing for causes of cancer, various causes so enumerated included tobacco consumption, alcohol, diet and environmental pollution. Of the total, 1009(74.7%) could co-relate bidi/cigarette/cigarette smoking to be causing cancer. Another causal factor so identified was alcohol 806(60.0%).Almost similar percentage answered for diet 307(22.7%) and environment pollution 427(30.8%) as causes of cancer. Awareness for all causes was more in urban than in slum population.(Table 2)

Respondents who had a belief that cancer can not be treated were 537(39.8%). Regarding awareness of treatment options chemotherapy798 (59.1%) was the most common modality known to the participants followed by radiotherapy 673(49.8%).Subjects were assessed about their idea of survival time without any treatment. An equal percentage of both urban and rural respondents the maximum time to be 2 years. (Table -2)

DISCUSSION

The knowledge about cancer and other aspects related to cancer was low in slum dwellers as compared to urban population. A wide gap in the awareness was found as half of the slum respondents had heard of cancer as compared to more than 90% in urban population. Appreciating fact so observed was that subjects could enumerate the common cancers in males and females

More than 80% were aware of term cancer and also similar percent of respondents were aware of symptoms of cancer. The results were in corroboration to the study done in urban slum dwellers in New Delhi (3), where also large number of

subjects could tell at least one sign of cancer. But this also reflects that the efforts to raise awareness done under NCCP have not reached the masses. Its felt that in a country like, emphasis is given on primary prevention, even awareness about common symptomatology is not less than many cases would go undiagnosed and presenting late in stage thus reducing burden to medical facilities. Hence more strategic efforts are desired.

.Both urban and slum respondents answered breast cancer to be the commonest cancer in females and the difference was significant Other common cancers so identified in females were lung cancer and that of genital tract.

As we know that breast cancer is the commonest cancer in females. At present in India it is rising at the rate of 3% annually in females and various interventions are done at global as well as at national level to raise awareness against it. The finding that majority of respondents knew about it illustrate that IEC activities s done under national cancer control program raise the do have an impact on the awareness of breast cancer in females.

The common cancers in males in India are lung cancer, stomach cancer and liver cancer. In the present study, it was interesting that almost 3/4th of respondents could correctly name the commonest cancer to be the lung cancer in males, similar findings were evident in study done in Britain(4) The latest figures show that lung cancer is the deadliest and commonest of all the malignancies and responsible for 16% of all cancer related deaths to tackle this problem(5).

None of the respondents knew all of symptoms of cancer as mentioned by WHO. More than half were aware for unusual swelling as the first symptom of this. Urban subjects were more aware of all the symptoms except excessive bleeding which was more known to slum respondents. about Similar results were found in the study of West Bengal(6). Other symptoms so mentioned were blood in vomiting, followed by loss of weight / loss of appetite.

The lack in awareness about secondary and tertiary prevention was more as compared to that of primary prevention. Of the all study participants 1/3rd were not aware of the different modalities for detecting a case of cancer. More than half of respondents did not know how to detect cancer in slums where as in urban population more than one tenth were not aware. Biopsy and X-Ray were the two main modalities so identified in general. In urban individuals more than 80% also knew about CT/MRI scan where as in rural subjects maximum thought blood test to be the main way of detecting cancer. It was surprising to find that only 2% of urban respondents knew about Pap smear for cervical cancer and in rural area none of them knew about it, these findings were in corroboration to the findings of study done in South Africa(7) and New Delhi(3). This highlights the importance of need of concerted efforts to raise awareness and emphasis on screening.

Respondents of slum were ignorant about main modes of detection of cancer as one fifth they thought blood test to be the way to detect on the other hand knowledge about different modes of cancer detection was good in urban population

Undoubtedly, the burden due to tobacco related cancers is increasing alarmingly throughout the world. Worldwide tobacco control merits the highest priority in the fight against cancer and in this regard many steps are being taken. But still it was observed that only one third slum respondents could co-relate the relation between smoking and cancer. Risk factors at least one or two were known to a large number of individuals. This was also in similarity to the results of study done in Delhi, where 87% could tell about at least tone risk factor. Almost 3/4th could correlate the usage of tobacco leading a way to cancer. Where as the study done in New Delhi(3) showed that almost 90% know about tobacco to be a risk factor for cancer. Other risk factors so mentioned were alcohol, zarda (smokeless tobacco), dietary factors and environmental factors. Similar results were evident in the study done in Australia(8) and Poland(9). Study individuals in U.K.(4) and U.S.A(10). also responded for the tobacco to be the important risk factor. Epidemiologic studies from many countries have shown elevated risk of cancer in urban or industrially polluted area .Even in this study 1/3rd of subjects thought pollution to be the cause of cancer. This certifies that drive against harmful effects of tobacco is successful.

Diet and environmental pollution as the causes of cancer were more identified by urban subjects. The results of other studies revealed similar findings. Some of the respondents also answered for non-modifiable causes of cancer like viruses, God's disgrace etc. Other potentially modifiable risk factors so mentioned were tobacco smoking sun tanning, sunburn, obesity etc.

Individuals were also probed about tertiary prevention in simple and self explanatory language. When asked how the cancer can be treated chemotherapy and radiotherapy was

reported by the majority, though knowledge in slums was almost nil. One fourth of them thought that it can not be treated.

No comparable studies in the literature either from India or any other country were found that studied perception of survival time of cancer patients.

CONCLUSIONS

Increasing incidence of various cancers is of concern to public health. Analysis of this study revealed that awareness was lacking at all levels of prevention that is at primary, secondary and tertiary level. Undoubtedly single largest predictor of cancer patient survival is early diagnosis and diagnosis. Especially in developing countries owing to recourse crunch for diagnostic and treatment facilities, primary prevention has to be emphasized, a combined effort is needed. Educational program should be developed to promote adherence to recommended screening guidelines. For the program to be effective, an educational campaign need to be vernacular and elaborated scientifically. They should be directed towards masses and education should be given.

LIMITATIONS

Authors do feel that analysis of various aspects should have been gender wise too.

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