Awareness about Cancer in Urban Slum population of Mumbai, India

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Abstract: Objective: *To assess awareness about various cancers in an urban slum population of Mumbai, India*
Materials and Methodology: *This Community based Descriptive epidemiological study was conducted from July 2009 to October 2009 in the catchment area of urban health centre, Cheetah camp which is the field practice area of dept of P.S.M., Topiwala National Medical College and B.Y.L. Nair Ch. Hospital Mumbai. Sample of 525 above the age of 40 years was selected using cluster sampling. Information was gathered by personal interview using semi-structured proforma.*
Results: *Out of 525 study participants, males were 50.48%. Majority of the subjects belonged to age group of 40 to 44 years (39.04%). 169 (32.2%) participants thought that cancer is a disease; whereas 109 (20.6%) participants were not able to describe cancer. Regarding initial symptoms of cancer, 272 (51.8%) don't knew any symptoms. Commonest risk factor known to participants was tobacco consumption 450 (85.7%). Awareness of participants about prognostic factors, screening facilities, screening centres of cancers, treatment centres of cancer was very poor.*
Conclusion: *Awareness of study participants about cancers was very poor. There is a need for awareness generation programs to educate population about various common cancers, propagation of correct messages and promotion of early detection of cancers.*
Keywords: *Awareness, Cancer, Urban slum, Warning symptoms of cancer*

I.   Introduction

Non-communicable diseases are assuming increasing importance among the adult population in both the developed and developing countries. Cancer has become one of the main health problems in the present era. Cancer is a group of disorders characterised by uncontrolled growth and spread of abnormal cells. If the spread is not controlled, it can result in death. Most cancer cells eventually form a lump or mass called a tumour and are named after the part of body where the tumour originates.

Though the knowledge about the prevention and treatment of cancer is increasing, yet the numbers of new cases grow every year. Cancer afflicts all communities worldwide. Approximately 10.9 million new cases are diagnosed with cancer, 6.7 million deaths due to cancer every year; 24.6 million persons were living with cancer in the year 2002.[1] If the trend continues, 16 million people will discover they have cancer in 2020, two-thirds of them in newly-industrialized and developing countries, and the number of deaths would rise to 10.3 million unless we act promptly.[2] More than 70% of all cancer deaths occur in low- and middle-income countries, where resources available for prevention, diagnosis and treatment of cancer are limited or nonexistent. Current projections suggest that total cancer burden in India for all sites will double by 2026.[3] In terms of incidence, the most common cancers worldwide are lung cancer (12.3% of all cancers), followed by breast cancer (10.4%) and colorectal cancers (9.4%).

If cancer can be detected early, treatment may be curative. One means to that end is educating people regarding early signs of the disease. In 1970s the Government of India designed primary and secondary prevention strategies for the control of cancer. The major thrust area of cancer control programme included – public education, treatment, palliative care and training facilities for human resource development. Under the National Cancer Control Programme such efforts were envisaged to be carried out through the district cancer control projects for educating the people about the sign, symptoms and early identification of most common cancers.

Cancer prevention should also be considered in the context of other prevention programmes because important cancer risk factors – such as tobacco use, unhealthy diet, physical inactivity and obesity – are risks for other chronic diseases. Every country, regardless of resource level, can take steps to curb the cancer epidemic, save lives and prevent unnecessary suffering.[4]

A cancer screening programme is a far more costly and complex undertaking than an early diagnosis programme. Therefore, where resources are limited, and where the majority of cases are diagnosed in late

stages, early diagnosis of the most frequent cancers, linked to appropriate treatment, is likely to be the best option to reduce premature deaths and suffering due to cancer. Where the necessary resources are available, screening for cancers could be advocated, especially if there is high morbidity and mortality from such cancers.[5]

It is necessary that people are aware of early warning signs and symptoms, so that they seek appropriate interventions at proper time It is equally important that the general practitioners, who are likely to be the first contacts of many suspected cases, are well equipped with basic knowledge about warning signs and symptoms of the cancer, so that they are able to identify patients at early stage and guide them appropriately

Assessment of knowledge in this respect amongst the people as well as health care providers, would clearly identify the need in this respect, and support appropriate planning towards increasing the level of knowledge amongst people and practitioners.

II. Materials And Methodology

This Community based Descriptive epidemiological study was conducted from July 2009 to October 2009 in the catchment area of urban health centre, Cheetah camp which is the field practice area of dept of P.S.M., Topiwala National Medical College and B.Y.L. Nair Ch. Hospital Mumbai.

Cheetah camp Urban Health centre catchment area is divided into 11 sectors and has 3 colonies. Total population of the area is 112750, which resides in 22439 households. The number of population above forty years is nearly about 27850 (as per applying national demographic parameters). The health services are rendered by the urban health centre, maternity home, general practitioners and non-government organizations. Municipal Corporation of Greater Mumbai is the primary agency responsible for urban governance and it's Public Health Department for providing preventive, promotive, curative and rehabilitative health care services to the community through Urban Health Centre, Health Post, and Municipal Dispensary under M/East Ward. Study populations were people above age of 40 residing at Cheetah Camp.

Study was carried out with cluster sampling. Total 30 clusters were drawn, distributed in different sectors and colonies with sampling interval of 3302.66 i.e. approximately 3303. Each cluster was comprised of 17.5 numbers of samples which in whole numbers comes to 18.

Distribution of clusters in study area

Sectors	Population	Cumulative population	Clusters
A	7650	7650	2
B	10378	18028	3
C	10997	28985	3
D	12812	41797	4
E	11374	53171	4
F	7020	60191	2
G	9350	69541	3
H	1900	71441	0
I	943	72384	0
J	5437	77821	2
K	1962	79783	1
Paylipada	6420	86203	2
Trombay koliwada	7800	94003	2
Mahatma Phule nagar & Dutta nagar	5077	99080	2

Cluster interval = 3302.66 i.e. 3303.

The necessary approval was obtained from the Dean and The Professor & Head Department of Preventive & Social Medicine TN Medical College, Mumbai, Maharashtra, India. Approval was sought from Ethics committee regarding the study and materials and methods used. Baseline information of study area, study population and its distribution in sectors was gathered through baseline surveys and health post records. Detailed mapping of the area was done and interview schedule for general population was prepared. Clusters were drawn, distributed in different sectors and colonies.

Preformed, pre tested MCQ (Multiple choice question) questionnaire for adult population were prepared. An interview schedule, based on the aim and objectives of study was prepared. A pilot study was conducted in cheetah camp urban slum area of Mumbai. It included 50 people fulfilling inclusion criteria of study. The purpose of pilot study was to refine the questions in the interview checklist to accomplish the desired

outcomes as per aim and objectives of the study and calculate sample size for conducting study. There is no data available about knowledge of cancer amongst population. There is no information available on prevalence of cancer in this area, therefore national health and morbidity indicators are applied to this population. Sample size was calculated as mentioned below:

$N = 4pq/L^2$

        Pilot study was conducted involving 50 subjects, to revise the actual sample size based on finding of study. Analysis of data collected by pilot study showed that the prevalence of knowledge and awareness about warning symptoms and signs of cancer amongst population was 16%.

            P= prevalence of knowledge= 16%

            q=1-p= 84%

            L=allowable error=20% of P = 3.2

            Sample size=4(16) (84) /10.24=525

        Data was collected through personal interview by the principal investigator. Time required for each interview was nearly 20 minute. The gathered data was entered in Microsoft excel and analyzed using SPSS software (15.0 version)

III. Results

        TABLE 1 show, out of 525 study participants, males were 50.48%. Majority of the subjects belonged to age group of 40 to 44 years (39.04%). Among this study population, 29.52% were educated up to secondary class. As per Modified Prasad's Classification majority of the subjects belonged to Socioeconomic Class IV (lower Middle) 38.47%. Most common source of information for cancer was neighbours (34.45%) followed by media (24.79%) and friends (24.58%). Only 7.14% of subjects heard the information from medical person. TABLE 2 describes, 169 (32.2%) participants thought that cancer is a disease; whereas 109 (20.6%) participants were not able to describe cancer. Most participants 146 (27.8%) said cancer affects oral cavity, while 160 (30.5%) don't knew which organ can be involved in cancer. Regarding initial symptoms of cancer, 272 (51.8%) don't knew any symptoms. TABLE 3 and 4 reveal the various initial symptoms of oral, lung, oesophageal, stomach, prostrate, cervical and breast cancer. More than half of the participants don't know about any symptom of all these cancers. TABLE 5 describes knowledge regarding various risk factors and warning signs of cancers. Commonest risk factor known to participants was tobacco consumption 450 (85.7%). TABLE 6 reveals awareness of participants about prognostic factors, screening facilities, screening centres of cancers. Most participants 239 (45.5%) thought that it is the quality of treatment which decides the prognosis of cancer, 286 (54.5%) don't knew about any screening facility available for cancers. Regarding screening centres maximum participants (292, 55.6%) thought that screening facilities might be available in TATA hospital Mumbai and other Tertiary level hospitals. TABLE 7 shows, only 49.5% participants knew that cancer is a preventable condition and 425 (81%) said that cancer can be avoided by avoiding tobacco consumption. TABLE 8 shows, most patient 300 (57.1%) thought that cancers can be treated in tertiary care hospitals like TATA hospital. Only 36 (6.95%) participants knew that Breast and Testicular cancers can be diagnosed at early stages by self examination and most common source of information for this was media (12, 33.3%).

TABLE 1: Socio-demographic profile of study participants (n- 525)

	Class	Frequency
Age in years	44 – 44	205 (39%)
	45 – 49	89 (17%)
	50 – 54	55 (10.5%)
	55 – 59	46 (8.8%)
	60 – 64	50 (9.5%)
	≥ 65	80 (15.2%)
Sex	Male	265 (50.5%)
	Female	260 (49.5%)
Education	Illiterate	143 (27.2%)
	Primary	83 (15.8%)
	Secondary	155 (29.5%)
	Higher Secondary	118 (22.5%)
	Graduate	26 (5%)
Socio-economic status	Class V	10 (1.9%)
	Class IV	202 (38.5%)
	Class III	99 (18.9%)
	Class II	164 (31.2%)

	Class I	50 (9.5%)
Source of information for cancer	Doctor	44 (8.3 %)
	Relative	53 (10.1%)
	Friends	127 (24.2%)
	Media	128 (24.4%)
	Neighbour	173 (33%)

TABLE 2: Awareness about cancer in study participants

Awareness about cancer		Frequency
Description of cancer (n-525)	Cannot explain	109 (20.6%)
	Disease	169 (32.2%)
	Dangerous disease	66 (12.6%)
	Disease due to tobacco and addictions	22 (4.2%)
	Swelling	22 (4.2%)
	Tumour in various organs	137 (26.2%)
Organs affected by cancers (n-525)	Oral cavity	146 (27.8%)
	Lung	104 (19.8%)
	Breast	74(14.1%)
	Blood	62 (11.8%)
	Cervix	21(4%)
	Any organ of body	144 (27.4%)
	Don't know	160 (30.5%)
General Initial symptoms of the cancers (n-525)	Weight loss	109 (20.8%)
	Loss of appetite	83(15.8%)
	Fever	103(19.6%)
	Jaundice	14 (2.7%)
	Swelling in axilla or groin	153 (29.1%)
	Any other	25 (4.8%)
	don't know	272 (51.8%)

TABLE 3: Initial symptoms of various cancers (n - 525)

Cancers	**Initial symptoms of cancer**	**Frequency**
Oral cancer	Non-healing ulcer	178 (33.9%)
	Changes in fitting of denture	20 (3.8%)
	Altered taste	1 (0.2%)
	Difficulty in opening mouth	105 (20%)
	Bad breath	80 (15.2%)
	Decreased tongue mobility	50 (9.5%)
	White or red patch in mouth	62 (11.8%)
	Any other	10 (1.9%)
	don't know	272(51.8%)
Lung Cancer	Cough of long duration	130 (24.8%)
	Different sounds while breathing	62 (11.8%)
	Breathlessness	44 (8.4%)
	Chest pain	130 (4.8%)
	Recurrent chest infections	21 (4%)
	Blood in cough	106 (20.2%)
	Any other	12 (2.3%)
	don't know	296 (56.4%)
Oesophageal Cancer	Difficulty in swallowing	111 (21.1%)
	Weight loss in short duration	11(2.1%)
	Indigestion	41 (7.8%)
	Acidity	68 (13%)
	Painful swallowing	63 (12%)
	Any other	3 (0.6%)
	don't know	364 (69.3%)

TABLE 4: Initial symptoms of various cancers (n-525)

Cancers	Initial symptoms of cancer	Frequency
Stomach Cancer	Indigestion	35 (6.7%)
	Pain in abdomen	120 (22.9%)
	Nausea & vomiting	41 (7.8%)
	Swelling in abdomen	119 (22.7%)
	Any other	0 (0%)
	don't know	352 (67%)
Prostate cancer	Outlet obstruction	33 (6.3%)
	Fullness even after passing urine	12 (2.3%)
	Change in ejaculatory pattern	3 (0.6%)
	Diminished stream of urine	13 (2.5%)
	Pain during micturation	0 (0%)
	Blood in urine	12 (2.3%)
	Any other	0 (0%)
	Don't know	491(93.5%)
Cervical Cancer	post coital bleeding/spotting	8 (1.5%)
	Inter-menstrual bleeding	42 (8%)
	Prominent menstrual, post-menopausal bleeding	41 (7.8%)
	Yellowish vaginal discharge	12 (2.3%)
	Back pain	11 (2.1%)
	Any other	0 (0%)
	Don't know	448 (85.3%)
Breast Cancer	Lump or hard area in breast	154 (29.3%)
	Lump in axilla	35 (6.7%)
	Changes in nipple-ulceration or retraction	14 (2.7%)
	Discharge from nipple	7 (1.3%)
	Change in size and shape of breast	14 (2.7%)
	Pain in breast	27 (5.1%)
	Visible veins on breast	0 (0%)
	Any other	0 (0%)
	Don't know	350 (66.7%)

TABLE 5: Knowledge regarding various risk factors and warning signs of cancers

		Frequency (n-525)
Risk Factor for cancer (n-525)	Tobacco	450 (85.7%)
	Alcohol	387 (73.7%)
	Sharp teeth&/or ill fitting denture	57 (10.9%)
	Hot & spicy food	86 (16.4%)
	Age(old age)	92 (17.5%)
	Occupational factors	101 (19.2%)
	Pollution	195 (37.1%)
	Radiation	75 (14.3%)
	Infection	37 (7.1%)
	Family history	137 (26.1%)
	Genetic disorders/Hereditary	51 (9.7%)
	Obesity	43(8.2%)
	Early marriage	48 (9.1%)
	Early pregnancy	37 (7.1%)

	Early menarche	29 (5.5%)
	Breast feeding	61 (11.6%)
	Environmental toxins	156 (29.7%)
Warning signs for cancer (n-525)	Persistent change in bowel habits	110 (21%)
	A sore or wound that does not heal	198 (37.7%)
	Change in wart or mole	86(16.4%)
	Hoarseness of voice	173 (33%)
	Prolonged or frequent fever	136 (25.9%)
	Unusual weight loss or weight gain	136 (25.9%)
	Cracking of skin	4 (0.8%)
	Loss of appetite	161(30.7%)
	Blood loss from any natural orifice	111 (21.1%)
	Blackening/ darkening of skin	2 (0.4%)
	Prolonged jaundice	46 (8.8%)

TABLE 6: Awareness about prognostic factors, screening facilities, screening centres of cancers

	Prognostic Factors	Frequency
Knowledge regarding the prognostic factors of cancer (n-525)	Age	14 (2.7%)
	Sex	5 (0.95%)
	Early diagnosis	170 (32.4%)
	Grade of tumour	84 (17%)
	Quality of treatment	239 (45.5%)
	Any other	3 (0.57%)
	Don't know	210 (40%)
	Screening tests	**Frequency**
Knowledge regarding available screening facilities (n-525)	Oral cavity examination	65 (12.4%)
	PAP smear	27 (5.1%)
	Breast self examination	16 (3.1%)
	X-ray/C T scan / Blood investigations	165 (31.4%)
	Biopsy	96 (18.3%)
	Any other	95 (18.1%)
	Don't know	286 (54.5%)
	Screening centres	**Frequency**
Knowledge regarding available screening centres (n-525)	UHC	22 (4.2%)
	Traditional/folk practitioners	5 (0.9%)
	TATA hospital	292(55.6%)
	Private practitioner	48 (9.1%)
	Tertiary level hospital	292 (55.6%)
	Religious leaders' place	2 (0.3%)
	Any other	1 (0.1%)
	Don't know	286 (54.5%)

TABLE 7: Assessment of participants' knowledge about prevention of Cancer

Knowledge regarding prevention of cancer (n-525)	Class	Frequency
	Yes	260 (49.5%)
	No	265 (50.5%)

	Preventive Measures	Frequency
Knowledge regarding various preventing measures of cancer (n-525)	Avoid Tobacco	425 (81%)
	Avoid alcohol consumption	385 (73.3%)
	Balanced diet	319 (60.8%)
	Exercise	265 (50.5%)
	Periodic health check ups	303 (57.7%)
	Breast self examination	49 (9.3%)
	Genital hygiene	165 (31.4%)
	Proper occupational environment	95 (18.1%)
	Avoid radiation exposure	68 (13%)
	Vaccine	21 (4%)
	Control of infections	38 (7.2%)
	Proper time of marriage and pregnancy	64 (12.2%)
	Use of condoms	37 (7.1%)
	Use of screening methods	184 (35.1%)
	Extra care in case of family history	126 (24%)

TABLE 8: Assessment of Participants' knowledge about t/t and self examination in cancer

	Treatment Centre	Number
Knowledge regarding treatment centres of Cancer (n-525)	UHC	1 (0.1%)
	Tertiary level hospital	300 (57.1%)
	TATA hospital	305 (58%)
	Private practitioner	50 (9.5%)
	Traditional/folk practitioners	8 (1.5%)
	Religious leaders	5 (0.9%)
	Any other	4 (0.7%)
	Don't know	91 (17.3%)
Knowledge about self examination in case of breast & testicular cancer (n-525)	Knowledge	Frequency
	No	489 (93.1%)
	Yes	36 (6.9%)
Sources of information for self examination (n-36)	Source of information	Frequency
	Family doctor	15 (41.7%)
	Govt Hospital	3 (8.3%)
	Relative	6 (16.7%)
	Media	12 (33.3%)
Willingness of participants for screening of cancers (n-525)	Willingness for screening	Frequency
	Yes	380 (72.4%)
	No	145 (27.6%)

IV. Disscussion

This community based descriptive epidemiological study was carried out in Cheetah camp urban slum which is the field practice area of TN Medical College, Mumbai, India by selecting 525 individuals above 40 years of age by employing cluster sampling method. Among the subjects enrolled in the study, males (50.48%) and females (49.52%) were found to be nearly equal in number. Prominent age groups of study were age group 40-44 years (39%) followed by age group of 45-49 years (17%) and above 65 year population.

Among the educated subjects, majority of them were educated up to secondary class (29.52%) followed by higher secondary class (22.47%) and primary class (15.80%).Mere 4.9% of the educated ones were graduates. Illiteracy was also prevalent among the study subjects (27.23%). Very few subjects were having professional qualification like L.L.B.

As per Modified Prasad's Classification[6] majority of the subjects belonged to Socioeconomic Class IV (38.47%), which was followed by Class II (31.23%), Class III (18.85%). Only few were from Socioeconomic Class I (9.52%) and Class V. Most people of class I was also educated to higher level. Illiterate (30.19%), primary (17.32%) and secondary (33.66%) educated were forming the bulk of class IV. The main occupation is hand embroidery, bag making, fishing, auto-rikshaw driving and other manual labour. 90.67% of subjects claimed to have heard of cancer from different sources. Most common source for information of cancer was neighbours (34.45%) followed by media (24.79%) and friends (24.58%). Only 7.14% of subjects heard the information from doctors. The percentage of population which have not heard of cancer was only 9.33%.The people belonging to this category were mainly elderly (51%) and illiterate (57.1%) people. Somdatta P, Baridalyne N [7] found out the television as the most common medium through which women heard about breast cancer .Other sources of knowledge were neighbours and relatives (41%), hospital staff (19%), print media (9%) and radio (3%). Thus overall sources of information are same in India.

Majority (44.77%) of subjects identified cancer as a disease or dangerous, incurable disease with high mortality.

Tobacco was held main culprit and tobacco consumers (85.7%) identified as at risk people followed by alcoholics (73.7%). Old age was considered as risk factor by only 17.52% of subjects. Alarming fact was that 11.62% subjects thought breast feeding as risk factor. Many suspected cancer as contagious disease that's why they identified breast feeding risk factor and to some extent family history as a risk factor. Somdatta P, Baridalyne N[7] studied awareness of breast cancer in women of an urban resettlement colony and found that only 35% (n=65) of the women mentioned any of the risk factors of breast cancer. Nine women (4.9%) mentioned advancing age as a risk factor, while 12 (6.5%) believed that risk is more at younger age. Eight percent (n=15) believed that taking oral contraceptive can cause breast cancer irrespective of the duration of intake. Forty-five (24%) women believed that breast feeding protects against breast cancer while five women thought breast feeding is a risk factor. Other factors that that were mentioned were obesity and excessive intake of fat. Interestingly, 20 % of the participants believed that trauma to the breast while feeding leads to breast cancer. Darby S et al.[8] in study, 'Radon in homes and risk of lung cancer: collaborative analysis of individual data from 13 European case control studies' concluded that collectively, though not separately, these studies show appreciable hazards from residential radon, particularly for smokers and recent ex-smokers, and indicate that it is responsible for about 2% of all deaths from cancer in Europe.

In this study 109 (20.8%) participants thought that weight loss was initial symptom of cancer while 153 (29.1%) thought that it was swelling in axilla or groin. 272 (51.8%) participants don't knew about any symptoms of cancer.

Participants mentioned non-healing ulcer, changes in fitting of dentures, altered taste, difficulty in opening mouth etc. in case of oral cancer; cough, weight loss, breathlessness, chest pain etc in case of lung cancer; difficulty in swallowing, weight loss in short duration, chronic acidity in case of oesophageal cancer; indigestion, pain in abdomen, nausea and vomiting in case of stomach cancer; outlet obstruction, changes in ejaculatory pattern, pain during micturation in case of prostate cancer; post-coital bleeding, prominent menstrual bleeding, yellowish vaginal discharge etc in case of cervical cancer; lump or hard area in breast, nipple ulceration, discharge from nipple, change in size and shape of breast etc in case of breast cancer as initial symptoms. More than half of participants don't know about initial symptom of any cancer.

Lachlan M Carter et al.[9] investigated awareness of nursing staff risk factors for oral cancer, its clinical signs, and could therefore provide a 'screening' service for oral cancer. Over 80% thought oral health checks were important although only 49% performed this task regularly; approximately 70% identified smoking as a risk factor but less than 30% identified alcohol. Awareness of the clinical signs of oral cancer was low with 21% identifying white patches, 15% identifying ulceration and only 2% identifying red patches despite their malignant potential. Thus the awareness was found to be poor.

Aparajita Dasgupta et al.[10], in study,' A Community Based Study on the Prevalence of Risk Factors of Cancer Cervix in Married Women of a Rural Area of West Bengal', assessed the prevalence of the established risk factors associated with cancer cervix, found high prevalence of some important risk factors associated with

cancer cervix like age, age of marriage, age of first child birth, parity, family planning practices, genital hygiene and reproductive tract infections in the study population. The same scenario is found in the study population.

Somdatta P, Baridalyne N[7] in their community based, cross-sectional study,' awareness of breast cancer in women of an urban resettlement colony', carried out in a resettlement colony in South Delhi, interviewed a total of 333 women. The mean age was 36 years ±15.1 and 46% were illiterate. Only 185 (56%) women were aware of breast cancer; among them, 51% knew about at least one of the signs /symptoms, 53% were aware that breast cancer can be detected early, and only 35% mentioned about risk factors. Awareness about breast cancer was low amongst women in this community. These finding were consistent with the findings of our study. Most indicated their willingness to practice BSE regularly (93.3%) and to pass on the BSE knowledge to their relatives and friends (92%) in the post test. The outreach health education program has successfully reached women living in the 18 districts in Hong Kong. It appears to be useful in raising the awareness of breast health and BSE practice among the women, but longer term follow-up is required to ascertain its sustainability. These finding of study are matching with the present study.

Persistent change in bowel habits, non-healing sore or wound for long duration, change in wart or mole, hoarse of voice prolonged fever of unknown origin were some of the warning signs mentioned by study participants. Regarding treatment for cancer 42.67% of subjects did not believe in treatment of cancers. Many of them shared the belief that cancer is incurable while some had opinion that treatment is too costly to be affordable and is not very effective. This is also bolstered by the fact that very few cancer survivals were known to them. All they might have seen or heard was the mortality of disease. On inquiring about their knowledge regarding prognostic factor of cancer, it was found that the subject's know various prognostic factors of cancer. Most common identified prognostic factor was early diagnosis (32.38%) and quality of treatment, grade of tumour (17%) were other commonly identified prognostic factor.

Regular oral cavity examination, PAP smear, Breast self examination, X-ray, CT scan, Biopsy were the few screening facilities answered by participants. Majority of the study population (91.2%) identified Government tertiary level hospitals as screening centre, followed by Tata hospital (88.7%). 21.14% subjects were not aware of screening centres. Very few (0.3%) subjects opined about religious leaders' place as a centre for screening. Most people recognized government tertiary hospitals and Tata hospital as a centre for treatment. Further many people became aware of Tata hospital as a renowned centre for treatment of cancer in the city.

Regarding prevention of cancer 49.52% of subjects did not believe in prevention. Somdatta P, Baridalyne N[7] studied awareness of breast cancer in women of an urban resettlement colony. When asked how breast cancer can be prevented seventeen women mentioned regular check-up by a doctor; others said that breast cleanliness, washing nipples regularly, and not wearing underwear (brassier) can prevent breast cancer. This scenario is much similar with current study in before intervention phase. After interventions, the response was much better.

People were aware of the ill effects of tobacco consumption, substance abuse. They also knew the importance of balanced diet, regular exercise, maintenance of good genital hygiene, breast self examination, and avoidance of radiation.

J. W. Adlard and M. J. Hume[11] in their study, Cancer Knowledge of the General Public in the United Kingdom: Survey in a Primary Care Setting and Review of the Literature, conducted a survey of 406 adult patients in a two-centre primary care practice to determine their awareness of risk factors, presenting symptoms, treatments and support services for cancer. The two health centres are located in areas covering different socio-economic groups – one located in an affluent residential area, and the other a deprived inner-city population. Significant deficiencies were identified in the cancer knowledge of respondents. Personal or family history of cancer, younger age and female sex were associated with improved cancer awareness. The results suggest that overall the public knowledge of cancer is poor and greater attempts should be made to raise awareness.

J Waller et al.[12] in study, ' Awareness of cancer symptoms and anticipated help seeking among ethnic minority groups in England', found that awareness of warning signs was low across all ethnic groups, especially using the open-ended (recall) question format, with lowest awareness in the African group. Women identified more emotional barriers and men more practical barriers to help seeking, with considerable ethnic variation. Anticipated delay in help seeking was higher in individuals who identified fewer warning signs and more barriers.

Only 36 (6.9%) participants knew the importance of Breast and Testicular self examination. Abbas Khadra, Pippa Oakeshott[13], studied testicular cancer awareness and testicular self-examination in men attending two South London general practices. Ninety-one per cent were aware of TC (Testicular cancer) but only 26% knew both the age group most affected (25–34 years) and that TC can be curable if detected early. Although 49% of responders had carried out TSE (Testicular self examination) in the past year, only 22% were practising according to recommendations: feeling for lumps at least monthly. Although awareness of TC in this GP population was reasonable, less than half were practising TSE. This study shows much more prevalence of

knowledge which can be ascribed to education level and selection of cases from population attending private clinic.

Sophia S.C.Chan et al[14] in their study,' Using a Community-Based Outreach Program to Improve Breast Health Awareness Among Women in Hong Kong,' evaluated the effectiveness of a community-based health education program via a mobile van to promote the awareness of breast cancer and breast self-examination (BSE) practice among women in Hong Kong. About half were aware of breast health and breast diseases (53.7%) and breast screening methods (48.6%) before the intervention. It was found that women who had received instruction on BSE practice, and those who were aware of breast screening methods, breast health, and breast diseases were more likely to have had prior BSE practice.

Majority of subjects (41.67%) identified family doctor as source of information for self examination while government hospitals was the least (8.33%) identified source. In study participants 380 (72.4%) were willing to do screening for various cancers.

V.   Conclusion And Recommendations

Awareness of study participants about cancers was very poor. More than 50% study participants don't knew about initial symptoms, warning signs and symptoms, screening facilities, screening centres and treatment centres. There was a need for awareness generation programs like IEC (Information, Education, Communication) activities need to be taken vigorously and on repetitive manner. Mass media like T.V., theatres, radio, news papers and internet should be used. Pictorial messages are seen to have good impact and these methods should be used more to educate population about various common cancers. The early detection tests like oral cavity examination, PAP smear and mammography are cost-effective, affordable, acceptable, safe and need to be made accessible to the whole target population to promote early detection of cancers to halt pathogenic process of cancer at it earliest stage.

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