



A DESCRIPTIVE ANALYSIS OF CANCER DEATHS AND ASSOCIATED RISK FACTORS IN MEDICAL BLOCK MATTAN, ANANTNAG KASHMIR

Community Medicine

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ABSTRACT

Background: Cancer is one of the significant causes of mortality worldwide. Cancer has been found to increase with acquisition of unhealthy dietary habits, smoking, sedentary life style etc. Objective: (1) To determine the number of cancer deaths in Mattan Block, Anantnag in the five year period of 2015 -2020. (2) To find out the prevalence of risk factors of cancer among the studied cases

Materials and Methods: It was a descriptive analysis of the cancer related deaths in Mattan area conducted from 2015 to 2020. Whenever a cancer death occurred, a team of health inspector and an ASHA worker went to the family of the deceased where upon socio-demographic details and the details about risk factors were collected. The data was entered and analysed by using Microsoft Word 2010.

Results: A total of 197 deaths were recorded. Most of the deaths were in the age group of above 60 years (40%) with male preponderance (65%). Maximum proportion of deaths was due to Gastrointestinal cancers (42%) followed by respiratory cancers (25.4%). About 56% of participants consumed dried vegetables at least twice a week. Salt tea was consumed 3-4 times a day by 35% of subjects, 45.2% of the subjects ate spicy food. About 53% of subjects were smokers.

Conclusion: In this study we found that there's high intake of salt tea, dried vegetables and spicy foods among family members of the deceased persons. Smoking is also a menace in the area. Awareness generation among the people in the area needs to be created about the healthy food and life style.

KEYWORDS

Cancer, Death, Diet, Smoking

INTRODUCTION

Cancer is one of the significant causes of mortality world over in both developed and underdeveloped nations. There's an ever increasing trend of cancer cases globally and burden is expected to grow due to the development and aging of the population, predominantly in economically underdeveloped countries, where almost 82% of the world's population resides. Cancer has been found to increase with acquisition of unhealthy dietary habits, smoking, sedentary life style etc., have increased the cancer burden in less economically developed countries. (1) A diagnosis of cancer often leads to huge out of pocket expenditure, especially in low economic countries. (2) Such catastrophic expenditures can press whole families below the poverty line and may, threaten social stability. (3,4) Cancers are an important public health problem as despite advances in the diagnosis and treatment, cancer is still a leading cause of death worldwide.

The details of cancer related deaths and prevalent cancer cases are quintessential epidemiological parameters that are mandatory to design appropriate cancer control activities and cancer related health programs. Descriptive epidemiology of cancers serves the purpose of shaping control measures in the particular population and demographic settings by making early diagnosis and addressing vulnerable age groups and gender in the population. Population ageing is often attributed to be the main reason of increases in cancer incidence, death rates, and health-care costs. (5) The continuing improvement of cancer outcomes will require changed priorities and strong national, regional, and district leadership. (6) It will also demand increased public spending on both primary health care and specialist facilities in every Indian state and more emphasis on improvement of cancer research in India. (4,7)

Our study will supplement and highlight the existing information by giving descriptive details of particular demography, cancer pattern, burden, and mortality in the UHTC Mattan.

OBJECTIVES OF OUR STUDY:

1. To determine the number of cancer deaths in Mattan Block, Anantnag in the five year period of 2015 -2020.
2. To find out the prevalence of risk factors of cancer among the studied cases

MATERIAL AND METHODS

Study design: It was a descriptive analysis of the cancer related deaths in Mattan area.

Study period: The data was collected from the families of the deceased who died of cancer in a period of 5 years from 2015 to 2020.

Data collection: In medical block Mattan, which is the field practice area of GMC Anantnag, a death record is maintained for all deaths. In the period of 2015-2020 a total of 197 deaths occurred due to cancer. Whenever a cancer death was recorded, a team of health inspector and an ASHA worker went to the family of the deceased. The details about the complete socio-demographic data and the risk factors were collected upon contacting the family. The life-style of the deceased was considered to be the same as that of the whole family. Only the smoking history of the deceased was particularly asked from the family members.

Sampling technique: A purposive sampling was done wherein the families of all those who died because of cancer were contacted after the death of the case.

Data analysis: The data was entered and analysed by using Microsoft Word version 2010.

Ethical Considerations: Informed consent was obtained from the head of the family. Ethical clearance was sought from the institutional ethical committee.

RESULTS

In our study, we have recorded 197 deaths in the five year period of 2015-2020. The socio-demographic details of the study subjects are given in table 1.

	Age Group (In Years)	Number (%)
Age-group	≤18	6 (3%)
	19 to 30	6 (3%)
	31 to 45	30 (15.2%)
	46 to 60	77 (39%)
	≥ 61	78 (40%)
Gender	Male	129 (65%)
	Female	68 (35%)

Education	Primary	1 (0.5%)
	Middle	26 (13.2%)
	Secondary	34 (17.3%)
	Higher Secondary	11 (5.6%)
	Graduation	8 (4%)
	Post-Graduation	4 (2%)
	Illiterate	113 (57.4%)
Residence	UHTC Mattan	33 (16.8%)
	SC Nambal	14 (7%)
	NTPHC Nanil	14 (7%)
	SC Akura	13 (6.6%)
	PHC Aishmuqam	13 (6.6%)
	SC Ganishpora	10 (5.1%)
	SC Krangsoo	9 (4.6%)
	NTPHC Ranbirpora	9 (4.6%)
	SC Brad	8 (4.1%)
	SC Hutmurah	8 (4.1%)
	Other 15 areas*	66 (33.5%)
Period of illness	<=5 years	190 (96.4%)
	6-10	4 (2%)
	11-15	3 (1.5%)

*Each of these areas had less than 4% cancer deaths individually. UHTC= Urban Health Training Centre, SC=Sub-Centre, NTPHC= New Type Primary Health Centre

Most of the study subjects were above 60 years of age (40%). About 15% were in the age group of 31 to 45 years. There was male preponderance with 65% of the subjects being male. UHTC Mattan reported highest number of cancer deaths (17%) followed by subcentre Nambal and NTPHC Nanil (7% each). About 96% of the study subjects had a survival period of up to 5 years or below while only 3.5% of the subjects had a survival period of more than 5 years.

Table 2 shows the type of the cancer in the study subjects.

Type of Cancer	Number (%)
Gastrointestinal Tract Cancer	82 (41.6%)
Respiratory Tract Cancer	50 (25.4%)
Blood & Lymphatic System Cancer	18 (9.1%)
Bone & Spinal Cancer	12 (6.1%)
Brain Tumor	11 (5.6%)
Urinary System Cancer	9 (4.6%)
Uterine & Ovarian Cancer	5 (2.5%)
Skin Cancer	4 (2.0%)
Breast Cancer	4 (2.0%)
Heart Cancer	2 (1.0%)

Maximum proportion of deaths was due to Gastrointestinal cancers (42%) followed by respiratory tract cancers (25.4%).

Table 3 show the prevalence of various dietary risk factors for cancer among the study subjects.

Table 3: Dietary risk factors among study subjects			
Food (per week)			Number (%)
Food (per week)	Mutton	<1	47 (23.6%)
		1	93 (47.2%)
		>=2	57 (28.9%)
	Beef	<1	50 (25.4%)
		1	116 (58.9%)
		>=2	31 (15.7%)
	Dried vegetables	<1	39 (19.8%)
		1	48 (24.4%)
		>=2	110 (55.8%)
	Dried/Smoked Fish	<1	183 (92.9%)
		1	13 (6.6%)
		>=2	1 (0.5%)
	Fast/Junk Food	<1	185 (93.9%)
		1	10 (5.1%)
		>=2	2 (1%)
	Salt tea (cups/day)	0-2	101 (51.3%)
		3-4	69 (35%)
		>4	27 (13.7%)
Cooking	Cooking Style	Spicy & Oily	89 (45.2%)
		Normal	62 (37.1%)

Water	Source/Method of Cooking	Oily	34 (17.3%)
		Spicy	12 (6.1%)
		LPG Stove	175 (88.8%)
	Source of drinking water	Wood Stove	47 (23.9%)
		Tap Water	147 (74.6%)
		Tube Well	43 (21.8%)
		Spring	35 (17.8%)
Milk	Method of water purification at household level	River	4 (2%)
		Boiling	140 (71.1%)
		R.O/U.V Filter	16 (8.1%)
		None	47 (23.9%)
	Source of Cow Milk	Dairy Shop	40 (20.3%)
		Home	157 (79.7%)

About 29% of the subjects consumed mutton more than once a week. About 59% of the subjects consumed beef at least once a week. About 56% of the participants consumed dried vegetables at least twice a week. Junk foods were not consumed very often (less than once a week by most subjects). Salt tea was consumed 3-4 times a day by 35% of the participants. 45.2% of the subjects ate spicy and oily food. Most subjects (89%) used LPG as fuel for cooking. About 75% of the subjects used tap water and the method of purification was boiling for 71% of the subjects.

Table 4 shows the prevalence of other risk factors among the study subjects.

Table 4: Other risk factors among study subjects			
Addiction			Number (%)
Heating	Source/Method of Heating during Winter	Smoking	104 (52.8%)
		Kangri	158 (80.2%)
		Electric Space Heater	46 (23.4%)
		Wood Burner/Masonry Heater	7 (3.6%)
		Coal Burner	5 (2.5%)
		Gas Heater	13 (6.6%)
Family history	Family history of cancer	None	7 (3.6%)
		Present	25 (12.7%)

About 53% of the subjects were smokers. Source of heating was Kangri for 80% of the subjects. There was positive family history of cancer for about 13% of the subjects.

DISCUSSION

In our study large proportion of the deaths was in the elderly people aged more than 60 years. The risk of cancer increases with age and the prognosis is also poor as the age increases. This finding has been replicated in other studies as well. (8) In our study we found a higher proportion of male deaths (65%) compared to females which may be because there is higher chance of cancer among males compared to females. Studies have shown the males to be more predisposed to cancer compared to females overall. (9)

About 96% of the cases survived for up to 5 years after being diagnosed for cancer. Maximum proportion of deaths was due to Gastrointestinal cancers (42%) followed by respiratory tract cancers (25.4%). The highest proportion of these cancers may be because taking hot foods as prevalent in Kashmiri population is a proven risk factor for oesophageal carcinomas. (10)

The two important dietary risk factors of concern were dried vegetables and salt tea. About 56% of the participants consumed dried vegetables at least twice a week. According to a report published in December 2015, frequent consumption of dried vegetables can lead to an increased risk of cancer. (11) Salt tea was consumed 3-4 times a day by 35% of the participants. Salt tea has high salt content and is usually consumed hot. In Kashmir, salt tea is the first food that is taken in the breakfast in most households. A study conducted by Nazir Ahmad et al in 2014, shows increased risk of oesophageal cancers with increased intake of salt tea. (12) Awareness needs to be generated among masses to decrease the intake of salt tea and if it is to be taken it must be consumed after keeping it for a while to bring the temperature a little down as the consumption of very hot beverage has been found to be significantly associated with oesophageal squamous cell carcinoma compared to when its cooled down. (13) Also about 45% of the

subjects ate spicy and oily food. Evidence suggests that eating spicy foods increases the risk of cancer. (14)

About 53% of the subjects were smokers. Smoking is a known risk factor for a number of cancers including gut and respiratory cancers. (15) In about 87% of the cases, there was no family history of cancer which means there might have been a large number of avoidable cancers owing to high rate of smoking and poor dietary habits. Source of heating was Kangri for 80% of the subjects. Kangri cancer is one of the skin cancers caused by excessive heat of a Kangri which is a small fire pot that is packed with ember.

Limitations:

1. Since we did not have sufficient manpower, the survey recruited cancer deaths only and information about the deceased was collected after his death. Many aspects of the deceased person's life could have been explored had the person been contacted when the cancer was diagnosed.
2. The number of total cancer patients in the area at baseline of the study period is not available which would have fetched much more information e.g., comparison of prognosis among males and females in the area.

Recommendations:

1. We recommend that food habits in Kashmiri population need to be changed through awareness generation about decreasing the intake of salt tea, dried vegetables and spicy foods. Also very hot foods should be allowed to cool for a while before consuming.
2. The menace of smoking needs to be done away with for which awareness generation, motivation to quit smoking and centers for de-addiction are indispensable.
3. Also further studies need to be carried out in the area and in other areas of Kashmir to know more about cancer and how it can be controlled.

CONCLUSION:

In this study we found that in the Mattan area, there's high intake of salt tea, dried vegetables and spicy foods among the family members of the deceased persons. Smoking is also a menace in the area. This information can guide policy makers in determining necessary cancer control and public health measures.

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