

A case study on prevalence of cancer cases in Wayanad District, Kerala, South India.

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Abstract: Cancer a multifactorial life-threatening disease among the humans in world wide. Lack of knowledge, awareness and early detection of cancer be able to widely spread throughout in India. Lack of cancer treatments in the hospitals and increasing number of cancer patients will provide unexpected ramble in the prevalence of cancer patience's. In our present study we investigate and collect the cancer reported cases and death in and around Wayanad District. The present study shows year wise increase in the cancer related diseases in different parts of Wayanad District.

Key words: Cancer, prevalence

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I. INTRODUCTION

Today cancer is a common domiciliary term, suffering or diagnosing everyday peoples in globally. In spite of good advancements for diagnosis and treatment, cancer is still a big threat to our society.¹ This is the second most common disease after cardiovascular disorders for maximum deaths in the world.² The world's population is expected to be 7.5 billion by 2020 and approximations predict that about 15.0 million new cancer cases will be diagnosed; with deaths of about 12.0 million cancer patients.³ The prevalence of cancer in India is estimated to be around 2.5 million, with about 8, 00,000 new cases and 5, 50,000 deaths per annum.⁴ The magnitude of cancer problem in the Indian Sub-continent (sheer numbers) is increasing due to poor to moderate living standards and inadequate medical facilities.⁵ Most frequently observed cancers in Indian population are of lungs, breast, colon, rectum, stomach and liver.^{4, 6, 7}

II. CANCER SCENARIO IN INDIA

Based on the increasing trends of cancer patients during the last few decades, the numbers of cancer patients have been predicted by the end of 2015 and 2020 in India. According to the data from cancer research Society, India the number of male, female and the total cancer patients in 2004 were 390809, 428545 and 819354 respectively. The number of male and female cancer patients increased continuously up to 2009, with 454842, 507990 and 962832 cases for male, female and total cancer patients, respectively. Similarly, 462408 male cancer patients and 517378 female cancer patients were recorded, with a total number of 979786 patients in 2010.

In recent times there has been increase in incidence of cancer in India as nearly two people are diagnosed every minute with cancer. This is mainly attributed to urbanisation, industrialisation, life style changes, population growth and increase in life span. The predominant risk factors associated with cancers are genetic, environmental and life style factors which include tobacco, alcohol, infections (HIV, HPV, HBV, HCV, H. Pylori) and dietary factors which overall are involved in 80-90% cases. Tobacco contributes directly to about 50% of cancers in males and 10-15% cancers in females. Most of the cancers have some relationship with diet. Predominant among them are cancer of esophagus, stomach, colon & liver. Consumption of large amounts of red chillies, food at very high temperatures and alcohol consumption are the main risk factors for stomach cancers in India. (Dr.KeerthiBhushan)

III.CANCER EFFECTS IN KERALA

Various government and NGO organizations have provided the data related to the cancer cases reported in district level. These data shows the incident of cancer diseases is compared to lower than North Indian States. Moreover now a days incensed cases are reported from different Districts of Kerala due to urbanization and Industrialization and lifestyle changes etc... According to the report from Regional cancer centre, Kerala 35,000 new cancer cases occur in in one year. Male population affected about 50% cases are cancer in the mouth, lungs and throats due to the consumption of tobacco products. In Kerala tobacco related cancer in women's are rare associated to other states in India but large group of female population has widely affected Breast cancer is really a matter of anxiety. Cervical cancer was one of the threatening cases are faced by women's before a decade. Every third women in the female populace are diagnosed with breast cancer. Mortality rate of breast cancer was not high but the cancer give stressful situation and are considered to be more defenceless.

IV.CANCER IMPACTS IN WAYANAD DISTRICT

Studies reported that a number of tribal people were severely affected by cancer. In Kerala, Wayanad district is considered as one of the major tribal hamlets of the state. Looking in to the causative aspects of the disease in the district, Wayanad, Alcohol and tobacco usage, extensive usage of pesticides, changes in life styles are the major factors which lead to the disease. It is significant to mention about the current cancer prevention and research programmes in Kerala. Dedicated cancer detection centres will be set up in five district hospitals of the state under National Rural Health Mission, NRHM, in the near future. Each hospital will be provided seven crore rupees under Non-communicable disease control scheme of the Centre. As per the latest data, the cases of cancer, especially breast cancer, are rising fast in a highly urbanised state like Kerala. AIR correspondent reports, Regional Cancer Centre, Thiruvananthapuram, a premier cancer institute of the country treats about 13000 cancer patients in a year. Fast increasing breast cancer cases are a matter of serious concern. Every year 1700 new breast cancer is detected in Kerala.⁷

V. COLLECTION OF CANCER STATED AND DEATH CASES IN WAYANAD DISTRICT

In our present study the prevalence of cancer cases reported various places of Wayanad District. According to the survey reports from Pain and palliative Unit, Wayanad District number of Cancer cases reported and death cases due to various cancer in the year of 2012- 2015 in the Wayanad District are listed below. (Table – 1&2) Statistical investigation of collected data of cancer cases reported in various years and the death cases due to cancer was compare using T – test. It is used to determine whether there is a significant difference between the means of two groups.

VI. RESULTS AND DISCUSSION

Statistical analysis of collected data - Statistical investigation of collected data of cancer cases reported in various years and the death cases due to cancer was compare using T – test. It is used to determine whether there is a significant difference between the means of two groups.

Table – 1 - Cancer cases reported in the Wayanad District hospitals in the period of 2012 - 2015

Sl. No.	Place	Years			
		2012	2013	2014	2015
1	Mananthavady	36	40	50	67
2	Thavinjal	16	40	48	56
3	Thirunelli	13	26	40	49
4	Panamaram	10	16	26	34
5	Edavaka	9	14	19	22
6	Thondernadu	6	13	15	22
7	Padinjathara	5	19	26	31
8	Vengapally	13	10	13	17
9	Kottathara	6	7	12	18
10	Thariyodu	9	12	14	18
11	Vythiri	4	7	20	30
12	Meppady	7	11	13	16
13	Pozhuthana	3	9	11	18
14	Muppainadu	9	11	14	19
15	Muttill	6	13	18	25
16	Kaniyambatta	10	14	19	36

17	Kalpetta	31	35	36	39
18	Pulpally	25	29	35	36
19	Mullankolly	19	23	36	45
20	Ambalavayal	8	14	29	47
21	Noolpuzha	5	19	33	37
22	Nenmeni	30	37	55	64
23	Meenangadi	10	13	19	25
24	SulthanBathery	15	19	24	30
25	Vellamunda	9	17	24	30
26	Poothadi	16	23	39	47
Total		330	592	688	878

Table- 2- Cancer Death occur in Wayanad District.

Sl. No.	Place	Year			
		2012	2013	2014	2015
1	Mananthavady	30	36	43	50
2	Thavinjal	10	31	40	50
3	Thirunelli	10	24	38	46
4	Panamaram	8	13	23	30
5	Edavaka	7	15	17	20
6	Thondernadu	4	10	14	19
7	Padinjarathara	4	17	24	29
8	Vengapally	11	10	12	15
9	Kottathara	6	5	10	15
10	Thariyodu	5	9	10	14
11	Vythiri	3	5	16	26
12	Meppady	4	9	10	14
13	Pozhuthana	2	6	9	15
14	Muppainadu	6	9	11	14
15	Muttill	5	12	15	20
16	Kaniyambatta	6	11	17	35
17	Kalpetta	27	30	33	37
18	Pulpally	20	26	33	34
19	Mullankolly	15	17	29	38
20	Ambalavayal	5	10	25	30
21	Noolpuzha	3	14	47	60
22	Nenmeni	26	31	47	60
23	Meenangadi	7	10	15	24
24	SulthanBathery	9	16	20	27
25	Vellamunda	5	13	20	30
26	Poothadi	13	22	39	45
Total		251	411	617	797

In the year 2012- 2013 (P- value - .0216) and 2013-2014 (P- value - .0204) we get significant relations. There is significant growth in the reported cases during these years. The year 2014-2015 (P- value - .0595) we accept null hypothesis, (not significant) therefore there is no increase in the reported cases. According to the data of death due to cancer in Wayanad District, in the year 2012- 2013 (P- value - .00103) and 2013-2014 (P- value - .0107) we get significant relations. There is substantial growth in the death cases during these years. The year 2014-2015 (P- value - .0674) we accept null hypothesis, (not significant) therefore there is insignificant increase in the death cases.

Cancer is a group of diseases caused by loss of cell cycle control. Cancer is associated with abnormal uncontrolled cell growth. ⁹Cancer is caused by both external factors (tobacco, chemicals, radiation and infectious organisms) and internal factors (inherited mutations, hormones, immune conditions, and mutations that occur from metabolism). Cancer is a significant worldwide health problem generally due to the lack of widespread and comprehensive early detection methods, the associated poor prognosis of patients diagnosed in

later stages of the disease and its increasing incidence on a global scale. Indeed, the struggle to combat cancer is one of the greatest challenges of mankind.¹⁰

Now a day's people suffered cancer because of lack of awareness about the early detection or diagnosis. Early detection of cancer significantly reduce the risk of treatments. Rural people alive in Indian villages focused on their routine jobs for their daily life. Promote Education about cancer awareness programme is prominently inspiration in the cancer saving programme amongst the peoples. Realize some possible early warning signs of cancer include lumps, sores that fail to heal, abnormal bleeding, persistent indigestion, and chronic hoarseness, which help to diagnose and reduce the great impact of disease.

Deforestation, urbanization and lifestyle changes in Wayanad District cause increasing number of cancer patients in every year. The affected peoples from Wayanad District suffering the lack of treatments in the hospitals and patients forced to travel for long time to near cities for the moral treatment. In our study revealed that increasing cases of cancer reports among the population here, awareness programme, early detection and screening are yet to arrange in the hospitals in Wayanad district.

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