

Short Communication

Empowering the community for early detection of cancer: a rural community intervention programme in Kerala, India

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ABSTRACT

Cancer is an emerging health problem in India. Breast, cervical and oral cancers are curable provided they are detected at an early stage. The best way to fight cancer is early diagnosis and appropriate treatment. Community participation is imperative for achieving and sustaining any progress in this direction. This study aims to show a model community intervention programme for cancer control in low resource settings using trained volunteers from the community through screening and creating public awareness. Community survey covered 5126 houses and 19991 individuals. Awareness classes and screening camps were conducted in all the twenty wards of the Panchayath. Prevalence of cancer and precancerous lesions in the Panchayath were 160 and 263 per 100000 populations respectively. Four new cases of cancer were detected during the programme. Early detection of cancer can be made possible by giving proper training and motivation to community volunteers who can educate, motivate, screen and conduct follow up in the community. Panchayats and NGOs can take a lead role and can take this as model for their cancer screening programmes.

Keywords: Cancer, Early detection, Community volunteers, Empowerment, Screening

INTRODUCTION

Based on the GLOBOCAN 2012 estimates, there were 14.1 million new cancer cases, 8.2 million cancer deaths and 32.6 million people living with cancer (within 5 years of diagnosis) in 2012 worldwide. 57% (8 million) of new cancer cases, 65% (5.3 million) of the cancer deaths and 48% (15.6 million) of the 5-year prevalent cancer cases occurred in the less developed regions. The overall age standardized cancer incidence rate is almost 25% higher in men than in women, with rates of 205 and 165 per 100,000, respectively.¹ Breast cancer is the commonest

cancer and the leading cause of cancer death among females, accounting for 23% of the total cancer cases and 14% of the cancer deaths. It is the leading cause of cancer death among females in developing countries, a shift from the previous decade during which the most common cause of cancer death was cervical cancer.² Poor Cancer survival in developing countries can be attributed to late stage at diagnosis and limited access to timely and standard treatment.

A substantial proportion of the cancer burden could be prevented through the application of existing cancer

control knowledge and by implementing programs for promotion of healthy lifestyle, early detection and treatment, public health campaigns promoting physical activity and a healthier dietary intake. Clinicians, public health professionals, and policy makers can play an active role in accelerating the application of such interventions globally.³

METHODS

The present programme was to empower the local community to identify early cancers and to seek treatment without delay and the programme objectives were; to identify community volunteers and to train them in cancer screening, create awareness about oral, breast and cervix cancer, conduct community survey to identify high risk people, conduct screening camps in the project area to identify early lesions and surveillance of the screened population. This was done by the department of community medicine, Dr. SMCSI medical college Karakonam in Kunnathukal Panchayath of Trivandrum District from November 2007-November 2008 and was completed in two phases.

Phase 1: Selection and training of community volunteers, Community health survey and ward based health education classes. Two volunteers from each of the twenty wards (n=40) of Kunnathukal Panchayath were selected with the help of local authorities. Three day training programme was held with the help of experts from Regional Cancer Centre. A training manual in local language was made for the purpose. The volunteers were named as Prathyasa Pravarthakar (Hope volunteers). Volunteers examined all members of the family after taking written informed consent from the head of the household. Those with high risk habits and precancerous lesions were invited to attend the screening camp.

Phase 2: Awareness classes and screening camps were organized in all wards by the investigators with the help of the volunteers and panchayat authorities. Those with high risk behavior for cancer and with suspected precancerous lesions referred by the volunteers were examined by experts at the camp. Lesions identified by the experts were referred to medical college for investigations to confirm cancer. Confirmed cancer patients were sent to regional cancer center for further management.

Prevalence estimates are described as proportions with 95% confidence limits. Data was entered in MS excel sheet and analyzed using open Epi software.

RESULTS

Volunteers visited 5126 houses covering a population of 19991 before the conduct of camps and classes. Average family size of the panchayat is 3.9 with a sex ratio was 1009. Adults ≥18 years of age comprised 72% of the population with 7% elderly (60 yrs and above). In the

survey 525 people with suspicious pre-cancerous lesions were identified by the volunteers. Twenty eight confirmed cases of cancer were already present among this population. The prevalence is 140 per 100000 population [0.14(0.09-0.21)] (Figure 1). Majority of them were females (57.14%) and 11 had breast cancer. Among the 12 males (42.86%), five had oral cancer and one had a tumour in the larynx, all of them gave history of tobacco use.

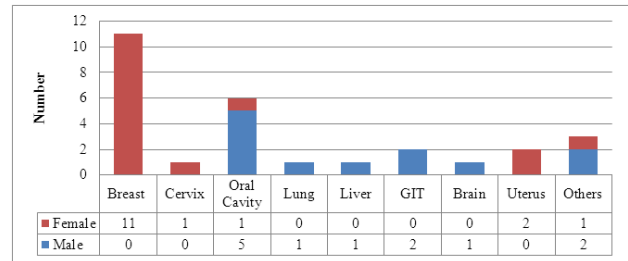


Figure 1: Distribution of cancer.

In the awareness classes a total of 2258 people attended. Individuals with suspicious lesions identified by the volunteers (525) were further examined at the screening camp conducted in their respective wards. Preparations and arrangements of the camp were done by local authorities with the help of NGOs and volunteers. From the camps 86 individuals were referred to Dr. S.M.C.S.I medical college for further investigation. Out of these four were confirmed with cancer (3 female breast cancers and 1 male oral cancer) and referred to Regional Cancer Center for further treatment. Two breast cancers and the oral cancer were in the early stage and one was in stage 2. The rest were benign lesions and treated accordingly. They are kept under follow up (Table 1).

Table 1: Details of the survey, awareness classes and camps.

Description of population	Number	Prevalence % with 95% CI
No. of houses covered by volunteers	5126	-
Population covered	19991	-
No. of people attended the awareness classes.	2258	11.3%
No of suspicious cases identified by the volunteers	525	2.63 (2.41-2.86)
Number of Diagnosed cancers	28	0.14 (0.09-0.21)
No. of referral cases	86	0.43 (0.35-0.53)
No. of screen detected cancers	4	0.02 (0.01-0.06)
Total No. of cancer patients	32	0.16 (0.11-0.23)

Prevalence of cancer in the area is 160 per 100000 populations. As the prevalence is very low Fleiss quadratic continuity correction equation was used to calculate the 95% confidence limits [0.16(0.11-0.23)]. In addition we offered palliative care services to those previously diagnosed with cancer; and not in a curable

stage. The enthusiasm of the volunteers was the key to the success of this programme. They have volunteered to keep under surveillance the people with early lesions and those with risk factors.

All adults were asked about the use of tobacco and alcohol during the survey. Data was analyzed using adults ≥ 18 years of age as denominator. Tobacco and alcohol use among the elderly was also studied. 10% of the adult population was found to be using tobacco. When the proportion of women was eliminated it increased to 21%. Among men above the age of 60; 31.4% were using tobacco and 19.3% using alcohol.

Dr. SMCSI medical college is located in this Panchayath and is capable for follow up services. Training volunteers from an area would prove to be helpful to the community in the long run. This example could be replicated in other areas, both urban and rural for the successful conduct of community health programmes.

DISCUSSION

In India most frequent cancers among men were cancer lung, lip and oral cavity, pharynx, oesophagus and stomach; in women, cancer cervix uteri, breast, ovary, lip and oral cavity and oesophagus. In males the cancers are mostly tobacco related.¹ Facilities for screening and proper management of cancer patients are limited in India. More than two-thirds of cancer patients are already in the advanced and incurable stage at the time of diagnosis. Appropriate strategies are being developed, including creating public awareness about cancer, tobacco control and application of self or assisted screening technique for oral, cervical and breast cancers.

Breast cancer is the second most common cancer among women in India and is likely to emerge as the major malignant neoplasm among female patients in the near future.⁴ It is already the leading cancer in women in Bombay and Kerala. The frequency of breast cancer is increasing in Kerala and currently accounts for 30% of all female cancers.^{5,6} Majority of patients are in an advanced stage of the disease at the time of first attendance. The need for early detection of Cancer in order to decrease mortality is well known. No significant progress has been made until now, probably due to lack of a suitable model for India. In developed countries 80% of the cancers are cured because of early detection. However in developing countries 80% of the cancers are incurable at the time of detection. The developing countries possess only 5% of the global resources for cancer control. There are very few screening programmes for cancer control with coverage sufficient to have an impact, in developing countries.⁷ In addition, some of the factors that influence cancer risk cannot be modified; several involve aspects of family and reproductive history rather than personal habits.⁸ Awareness of the disease, proactive detection measures, physical activity, balanced nutrition and an overall healthy lifestyle can possibly reduce the risks of

breast cancer. Community participation is one of the effective methods to reach the lower levels. Community volunteers are very good tools in reaching out to the grass root levels and to make a sustainable impact.^{9,10} Community volunteers of national rural health mission-Accredited Social Health Activist (ASHA) play a crucial role in the surveillance and control of Non Communicable diseases in Kerala.^{11,12}

Identifying volunteers from an area to detect cancers would prove to be helpful in the long run, as these volunteers could also help in long term surveillance and training of others from the community. This knowledge could be adopted in both urban and rural areas for the successful conduct of community activities.

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Conflict of interest: None declared

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