

An Assessment of Community Based Cancer Screening Program Among Indian Women Using the Anganwadi Workers

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OBJECTIVE – To evaluate the use of anganwadi workers in the screening program they being an important link between the health providers and the community. **METHODS** – Only 33.2% of the workers had some knowledge of the established risk factors and tests for cancer. Hence they were trained and then used to organize cancer screening camps. **RESULTS** – Attendance to the camps improved from 24 women to 82 women. 87.8% women were now ready to undergo Pap smear as compared to only 33.3% women earlier. 85.7% women with abnormal smears were followed and given definitive treatment. 1.1% women with breast cancer and 1.5% with cervical cancer were diagnosed. Approximately 5.5 % of precancerous cervical lesions and 5.9 % breast lumps were brought under evaluation. Camps were repeated in the same area after 3 years at 12 places. Attendance increased from 74 women to 90 women. The genital hygiene had improved and number of abnormal smears decreased from 10.8% to 6.7%. **CONCLUSION** – Reaching out to the community with the help of an anganwadi worker is a simple, cost effective and easily implementable model for cancer screening among Indian women.

Key words : anganwadi worker, cancer cervix, screening

Introduction

Cancer cervix is the most common cancer among Indian women. Cancer cervix can be effectively controlled by health education and screening with pap smear. Cases of breast cancer are also on rise. We need to reach out to the community which is difficult for the health professionals. The concept of anganwadi workers was devised in the early 1970s as baseline village health workers. Their role is to provide state government-funded food supplements to pregnant women and children under five, to work as an immunization outreach agent, to provide information about nutrition and balanced feeding, to provide vitamin supplements, to run adolescents girls' and women's groups, and to monitor the growth of the children under their charge. There is one anganwadi worker and one helper posted per 1000 – 1500 people. They are selected from the same community. The anganwadi worker is the most strategic health worker in India, and can be used as a link between the health care providers and the community. This forms a model for community based intervention.

The aim of the study was to determine whether a community based cancer screening program can be started using the existing anganwadi workers.

Method

A community based program for cancer screening and prevention was started from September 1994. Various camps were organized in the initial 2 years but with poor turn up of patients and even poorer follow up. Help was then taken from the anganwadi workers to arrange such camps from July 1996. An evaluation was done to determine the level of awareness of symptoms and signs of cervical and breast cancer among the anganwadi workers. Lectures were taken for educating the anganwadi workers themselves on their pay day. A camp of breast examination and Pap smear was organized for these workers themselves. Simple charts in local language with pictures containing details of risk factors and early symptoms, explaining self breast examination and Pap smear were given to the workers. In the second phase, the anganwadi workers were motivated to conduct similar camps in their community. Help of local dispensary was taken for examination. Help of nonprofit organizations was taken to reward the anganwadi worker for her efforts. All women with abnormal Pap smear were followed up with the help of the anganwadi workers and definitive treatment given.

Results

Cancer cervix is the most common cancer among Indian women due to the prevalence of several risk factors in our community. In the present study it was seen that all the women attending the camp were married, belonged to the poor socio-economic class, were illiterate and their age varied from 18 to 72 years, average being 36 years. Poor genital hygiene (60.9%) and age at marriage less

Paper received on 14/04/03; accepted on 24/06/04

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TABLE I: Prevalance of Risk Factors Among Women attending the Camp [n= 2864]

Risk Factors	Number	Percent
Age at marriage less than 18 years	1675	58.5
Age at first child birth less than 18 years	1117	39.0
Number of children more than three	942	32.9
Poor genital hygiene	1744	60.9
Family history of cancer	281	09.8

Table II. Knowledge of Risk Factors, Symptoms and Screening Test among Anganwadi Workers [n = 152]

Knowledge	Yes	No	Unanswered
Symptoms			
Leucorrhoea	50	42	60
Postcoital bleeding	18	12	122
Postmenopausal bleeding	61	04	87
Lump in the breast	130	00	22
Nipple discharge	127	00	25
Risk factors			
Early age of marriage	20	12	120
Multiple childbirth	26	18	108
Multiple sexual partners	72	00	80
Family history of cancer	40	00	112
Poor genital hygiene	50	20	82
Infertility	12	27	113
Screening Method			
Pap test	19	10	123
Breast self examination	31	00	121

Table III. Attendance, Willingness and Follow up of Women attending the Camps

	Without Anganwadi workers	With Anganwadi workers
No. of camps	10	32
Average attendance in each camp	24	82
Willing to undergo Pap test	33.3%	87.8%
Follow-up	8.3%	85.7%

Table IV. Clinical and Laboratory Findings among Women attending the Camps.

CLINICAL FINDINGS	Number	Percentage
No complains	558	19.5
Leucorrhoea	1466	51.2
Pain in abdomen	1641	57.3
Leucoplakia	29	1.2%
Prolapse	86	3.7
Menstrual irregularity	802	28.0
Lump in the breast	168	5.9
Clinical malignancy in the breast	27	1.1
Pap Smear (n = 2384)		
Normal	1216	51.0
Unsatisfactory	52	2.2
Inflammatory	329	13.8
Infection	610	25.6
Squamous cell atypia (of undetermined significance)	20	0.8
Low grade squamous intraepithelial neoplasia	109	4.6
High grade squamous intraepithelial neoplasia	12	0.5
Malignancy	36	1.5

TABLE V. Findings in Camps repeated in Same Areas [n= 12]

	1 st Camp	2 nd Camp
Attendance (average)	74	90
Genital hygiene	50 (67.6%)	38 (42.2%)
Number of symptomatic patients	60 (81.1%)	60 (66.7%)
Abnormal Pap smear	08 (10.8%)	06 (6.7%)

than 18 years (58.5%) were the most common risk factors followed by age at first child birth less than 18 years (39%), multiparity (32.9%) and family history of cancer (9.8%) (Table I).

Ten camps were arranged from September 1994 to July 1996 directly without the help of the anganwadi workers. The average attendance to these camps was only 24 women of which only (8/24) 33.3% were willing to undergo internal gynecological examination and Pap test. It was possible to follow up only 8.3% of women with abnormal smears.

The help of anganwadi workers was then taken to reach the community. For any community based program to be successful it is important that each health care provider knows of the risk factors and early symptoms of common female cancers. 33.2% of the workers had some knowledge of the risk factors and symptoms of cancer. 7.3% had wrong notions while 59.5% did not know the facts. (Table II). Many workers knew of lump in the breast (130/152) and nipple discharge (127/152) as early symptoms of breast cancer. Only 19/152 workers and 31/152 workers knew of Pap smear and breast self examination respectively.

Thirty-two camps were organized with the help of anganwadi workers trained by attending lectures. The average attendance in the camps increased to 82 women. 87.8% women were willing to undergo examination and 85.7% with abnormal slides could be followed up. (Table III).

A total of 2864 women were examined. 19.5% women attending the camps had no complains. (Table IV). Pain in abdomen and leucorrhoea were the most common symptoms found in 57.3% and 51.2% women respectively. This was followed by menstrual irregularities in 28% women, prolapse in 3.7% and leucoplakia in 1.2% women. While 5.9% women presented with lump in the breast, 1.1% had clinically diagnosable breast masses.

A total of 2384 Pap smear slides were collected. The reasons for not taking Pap smear in some women were unwillingness to undergo internal examination, menstrual bleeding and very dry postmenopausal vagina wherein even speculum examination was not possible due to pain. Of the smears, 51% were normal while 2.2% were not satisfactory. 13.8% slides showed inflammatory changes and 25.6% had evidence of infection. 4.6% slides showed low grade squamous intraepithelial neoplasia (LGSIN), 0.5% showed high grade squamous intraepithelial neoplasia (HGSIN) and 1.5% showed frank malignancy.

Camps were repeated in the same area after 3 years at 12 places. It was seen that there was an increase in the attendance from 74 women to 90 women. The genital hygiene had improved from 67.6% having poor hygiene at the first camp to only 42.2% in the second camp. The number of symptomatic patients attending the camp decreased from 81.1% to 66.7%. There was also a reduction in the number of abnormal smears from 10.8% to 6.7%. (Table V).

Discussion

26.1% of women with cervical cancer have poor standard of genital hygiene and the estimated risk of cancer is 2.5.^{1,2} In the present study poor genital hygiene was documented in 60.9% women (Table I). The estimated relative risk for developing cancer cervix among women getting married before 17 years of age is found to be 7.9 as compared to women who are married after the age of 17 years¹. In the present study, amongst the women studied, 58.5% were married at less than 18 years of age and 39% had their first child at less than 18 years of age. The mean age at first pregnancy in cancer cervix patients was as low as 18.13 years³. There is a significant association between increased parity and occurrence of cervical neoplasia and the relative risk is found to be 2¹.

In the present study 32.9% of the women studied had more than three children. Thus, our population under survey had a high prevalence of all known risk factors for cancer cervix and urgently needed screening.

The attendance in the 10 camps conducted without the involvement of the local anganwadi health worker was very poor with only 24 women attending, of whom only 33.3% (8/24) were willing to undergo internal gynecological examination and Pap test. It was possible to follow up only 8.3% of women with abnormal smears. This led to a waste of resources like manpower and time. It was understood that the community did not understand the importance of the screening program. Thus, a link between the health provider and the community was needed. An anganwadi worker is the most strategic health worker in India and a model for community-based intervention⁴. Hence it became necessary to involve them.

Only a well informed person can be helpful for the success of any screening program. Unfortunately, only 33.2% of the workers had some knowledge of the established risk factors. Only 19/152 workers and 31/152 workers knew of Pap smear and breast self examination respectively. (Table II). This reflects an urgent need to educate all our anganwadi health workers and to provide them with self explanatory charts and reading material for reference. After taking lectures on risk factors and symptoms and explaining the importance of screening to the anganwadi workers, the scenario improved. Once the anganwadi workers had themselves undergone breast examination and Pap smear, the fear was broken. They were able to effectively motivate women of their area and the attendance to the camps improved significantly from an average of 24 to 82 women. (Table III). 87.8% women were now ready to undergo Pap smear as compared to only 33.3% women earlier. The anganwadi worker knew the women and their homes personally. Hence it was possible to follow up 85.7% of women with abnormal smears and give them definitive treatment.

Pain in abdomen and leucorrhoea were the most common symptoms found in 57.3% and 51.2% women respectively. This reflects the poor genital hygiene and presence of sexually transmitted infections which also act as precursors to cancer cervix. (Table IV). 13.8% slides showed inflammatory changes and 25.6% had evidence of infection. Up to 35% women screened have their smears displaying mixed or coccoid bacterial infections^{5,6}. In the present study 4.6% slides showed low grade squamous intraepithelial neoplasia (LGSIN), 0.5% showed high grade squamous intraepithelial neoplasia (HGSIN) and 1.5% showed frank malignancy. In these

camps, breast cancer was diagnosed in 1.1% women and cervical cancer in 1.5%. 5.5 % of women showed precancerous cervical lesions and 5.9 % showed breast lumps.

Twelve camps were repeated in previously screened population after a period of 3 years (Table V). The average attendance to the camp increased from 74 women to 90 women. There was an improvement in the genital hygiene from 67.6% having poor hygiene in the earlier camps to only 42.2% in the repeat camps. Though the number of women increased, the number of symptomatic ones had reduced which in itself implies that now the women were attending the camp more with the idea of screening and not merely for their complaints. Incidence of abnormal smears reduced from 10.8% in the earlier camp to 6.7% in the second camps.

There is a very high prevalence of risk factors for cancer cervix in our community. A level of awareness for Pap smear and breast examination is low even among the health workers. Reaching out to the community with the help of an anganwadi worker is a simple, cost effective and easily implementable model for cancer screening among Indian women.

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