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Original Research Article

Awareness about risk factors for breast cancer and mammography among pregnant women

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ABSTRACT

Background: Breast cancer is a commonest cancer among females. Places that have experienced low prevalence are also affected recently due to failure at early detection. Increased level of awareness translates into early detection of the disease and early presentation. Improving awareness about the disease and availability of screening practices through targeted interventions will positively influenced adoption of early detection methods by women. We planned a study to determine the awareness about risk factors for breast cancer and mammography among pregnant mothers.
Methods: Cross-sectional survey of 400 pregnant women from May 2016 to August 2016, at Indira Gandhi medical college and research institute, Puducherry in India. Face to face interview was conducted with all participants by means of a questionnaire. The questionnaire contained a total of 21 questions. Answers to all questions were collected as categorical responses 'yes' and 'no'. Each answer was given a score of 1 and 0 respectively. Chi-square test was used to assess significance of study findings.
Results: A cohort of 400 pregnant women, and all completed the questionnaire by a face to face interview. Response rate was 100%. Mean age was 24±3.72 years. The mean knowledge score on awareness about breast cancer was 0.56 and the mean knowledge score on awareness about risk factors for breast cancer was 0.14. Only 31 pregnant women (7.75%) were aware about mammography. All socio-demographic variables had significant effect on knowledge with p-value <0.05.
Conclusions: The knowledge of our pregnant women on awareness about breast cancer was average and that on breast cancer risk factors and mammography was very poor.

Keywords: Awareness, Breast cancer, Mammography, Screening

INTRODUCTION

Breast cancer is a commonest cancer among females.[1] It has long been a disease of the developed nations, but recently women from developing countries are also equally affected by breast cancer and the incidence of breast cancer in developing countries like India is also rising.[2-4] Plenty of risk factors have been identified in development of breast cancer viz. increasing age, hormone replacement therapy, high dietary fat, excessive alcohol consumption, smoking and family history.[1] Vast changes in life style modifications, places women in developing countries at high risk for development of breast cancer.

Breast cancer if identified early can usually be cured and early detection through screening is the only way to reduce mortality.[5] It has been reported that women in developed countries present with breast cancer at early stages, whereas those in developing countries usually present only at late stages. The difference in time of presentation is mainly influenced by their awareness

about breast cancer and the available methods of screening for breast cancer. Patients in communities with high level of awareness usually present with less advanced stages of breast cancer as a result of adoption of screening methods1and those in communities with low level of awareness often present late.[6,7] The importance of knowledge of these screening methods is the need of the hour for every woman for surveillance on her breasts.

Breast self-examination, clinical breast examination and mammography are recognized screening methods for breast cancer.[8] Mammography screening is known to reduce mortality from breast cancer.[9-11] However, utilization of these methods by women depends on several factors including knowledge and awareness about breast cancer, its risk factors, the magnitude of problem and impact on quality of life, awareness regarding availability of screening methods, their religious beliefs and motivation by health care providers.[12]

Improving awareness about the disease and availability of screening practices through targeted interventions will positively influenced adoption of early detection methods by women, thereby reducing the morbidity and mortality. Hence we planned a study to determine the awareness about risk factors for breast cancer and mammography among pregnant mothers.

METHODS

A cross sectional survey of 400 pregnant women was done from May 2016 to August 2016. The study was conducted at Indira Gandhi Medical College and Research Institute, Puducherry in India. All consecutive pregnant women enrolled for antenatal check up at the obstetrics and gynecology OPD were included in the study. Written informed consent was obtained and assurance of confidentiality of responses was given to all respondent.

The study was approved by the hospital research and ethics committee. The aim of the study was to assess the level of awareness about breast cancer, its risk factors and mammography among pregnant women. Personal data regarding, age, education, occupation, place of residence was collected. Following which a face to face interview was conducted with all participants by means of a questionnaire. Participation was totally on voluntary basis. The questionnaire contained a total of 21 questions, 7 questions on awareness about breast cancer, 8 questions on awareness about risk factors for breast cancer and 6 questions on awareness about mammography. Answers to all questions were collected as categorical responses ‘yes’ and ‘no’. Each answer was given a score of 1 and 0 respectively.

Qualitative data was analyzed using Microsoft excel and Epi-info computer software. Chi-square test was used to assess significance of study findings.

RESULTS

The study analyzed a cohort of 400 pregnant women, and all completed the questionnaire by a face to face interview. Response rate was 100%. The age range of the study group was 19-36 years with a mean age of 24±3.72 years. The socio-demographic characteristics of respondents are depicted in Table 1.

Table 1: Socio-demographic characteristics of the respondents.

Variable	Participants	
	N	%
Age		
<20 years	22	5.5
21-30 years	321	80.25
31-40 years	57	14.25
Education		
Primary	102	25.5
Secondary	261	65.25
Tertiary	37	9.25
Occupation		
Home maker	347	86.75
Schooling	11	2.75
Employed	42	10.5

Table 2: Awareness of participants about breast cancer.

Questions	Yes		No	
	n	%	n	%
Breast cancer is the most common cancer in women	214	53.5	186	46.5
Breast cancer occur more commonly in old people	342	85.5	58	14.5
Breast cancer can be inherited	145	36.25	255	63.75
Breast cancer is caused by evil spirits	156	39	244	61
Breast cancer usually present as a painless breast lump	146	36.5	254	63.5
Breast cancer is curable when detected early	287	71.75	113	28.25
Early diagnosis improves outcome of Treatment in breast cancer	287	71.75	113	28.25

Majority (80.25%) of pregnant women was in the age range from 21-30 years. 65% had undergone secondary education and almost 87% of the pregnant women were housewives. Awareness of participants about breast cancer is shown in Table 2 and awareness of participants about risk factors for breast cancer is shown in Table 3.

Table 3: Awareness of participants about risk factors for breast cancer.

Questions	Yes		No	
	n	%	n	%
Increasing age	114	28.5	286	71.5
Positive family history of breast cancer	96	24	304	76
First childbirth at the age of ≥ 30 years	55	13.75	345	86.25
Nulliparity	36	9	364	91
Early menarche at the age of ≤ 12 years	33	8.25	367	91.75
Late menopause at the age of ≥ 55 years	21	5.25	379	94.75
History of previous benign breast lump	78	19.5	322	80.5
Current use of oral contraceptive pills	25	6.25	375	93.75

Table 4: Awareness of participants about mammography.

Questions	Yes		No	
	n	%	n	%
Have you heard about mammography	31	7.75	369	92.25
Is mammography beneficial	15	3.75	385	96.25
Is mammography painful	31	7.75	369	92.25
Is mammography safe	15	3.75	385	96.25
Can it detect early stage breast cancer before it is palpable?	22	5.5	378	94.5
Should healthy women have mammography	17	4.25	383	95.75

Table 5: Distribution of positive awareness of breast cancer and mammography to socio-demographic variables.

Variable	Scores in percentage		X^2	p-value*
	<50%	>50%		
Age				
<20 years	19	3	8.006	0.018
21-30 years	269	52		
31-40 years	39	18		
Education				
Primary	99	3	92.22	<0.0001
Secondary	200	61		
Tertiary	7	30		
Occupation				
Home maker	305	42	99.46	<0.0001
Schooling	8	3		
Employed	10	32		

Considering the overall response of pregnant women on awareness about breast cancer and its risk factors, the mean knowledge score on awareness about breast cancer was 0.56 and the mean knowledge score on awareness about risk factors for breast cancer was 0.14.

Table 4 shows awareness of participants about mammography. Only 31 pregnant women (7.75%) were aware about mammography. Table 5 shows the distribution of positive awareness of breast cancer and mammography to socio-demographic variables. All socio-demographic variables had significant effect on knowledge with p-value <0.05.

DISCUSSION

Breast cancer still remains a major public health issue especially in developing nations like India. Majority of the women, with breast cancer present very late in the course of the disease. This ultimately increases the morbidity and mortality. Late presentation finally leads to no or very little benefit derived out of any treatment option available. This scenario can be directly correlated to the level of awareness among women about breast cancer, its risk factors and the screening methods available. With this in focus this study was done to determine the awareness about breast cancer, its risk factors and mammography among pregnant women. Pregnancy is the easily available valuable time to educate women on their health issues. So studies on awareness of diseases in pregnant women can in general change the knowledge quotient of the society and help in building up a healthy community.

Majority of women in our study cohort were in the age group of 21-30 years and had undergone only secondary education and were housewives. The mean knowledge score on awareness about breast cancer was 0.56, which is just above average. The mean knowledge score on awareness about risk factors for breast cancer was only 0.14. This shows though our women had knowledge about breast cancer, it was just superficial, a tip of an iceberg knowledge. They were not aware of what were the risk factors that would predispose them to developing breast cancer. Their knowledge on the latter was very poor. In a study by Ibrahim from Nigeria, he has reported very good knowledge levels among the study participants who were doctors and nurses.[13] These contrasting results between our study and the previous studies show the positive influence of education and society on the awareness of pregnant women.

Only 31 (7.75%) pregnant women had ever heard about mammography. Thus we demonstrated a very low awareness about mammography among the study population. In a study by Obajimi from south Nigeria they demonstrated 5% awareness about mammography. Osime15 reported another study with 35% awareness of mammography among civil servants.[14] Akinola reported an awareness level of 40.5% among a hospital sample. In

our study majority (65%) of the women had undergone only secondary education.[16] Only 9% had tertiary education, which reflects on a low awareness level of mammography which was 7.75%. The high awareness levels reported by certain studies are due to the high level of education in their study samples. Further analyzing the effect of level of education on >50% knowledge score the difference was significant with p-value <0.0001. In our study 90% of women with tertiary level of education were aware about mammography. This is comparable to the study reported by Akinola where 77.1% of women who have heard about mammography had tertiary level of education.[16] Similarly even age and occupation had significant impact on level of awareness. Pregnant women who were employed had a good knowledge of breast cancer and its screening techniques when compared to housewives. This shows the influence of the community on awareness level.

Our study findings of low awareness of mammography among pregnant women have underscored the need for more community based interventions on breast cancer awareness. This finding also emphasizes the need for health care programs among pregnant women to improve the awareness of breast cancer and its screening methods. Constant audit works should be conducted to assess if measures taken have a positive impact on the target population. We also suggest studies to assess quality of life in women detected late with breast cancer, as these studies would emphasize the importance of screening programs and its awareness.

CONCLUSION

The knowledge of our pregnant women on awareness about breast cancer was average and that on breast cancer risk factors and mammography was very poor. The study has helped to identify factors affecting awareness about breast cancer and mammography in developing countries. The main reason for poor knowledge was inadequate education and lack of socialization. Opportunities for interventions should be planned based on these inferences to build up a healthy community.

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