

Prevalence of Breast Lump and Risk Factors of Breast Cancer among Reproductive Aged Women of Jabalpur VDC of Sunsari District, Nepal

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Abstract

Introduction	Breast self-examination (BSE) and clinical examination of the breast recommended as complementary method of screening for women in the reproductive age group. BSE is of great potential value for the early detection of breast cancer. BSE has been proposed as a means of reducing the breast cancer problem. Although it is reported to be not as effective as mammography or examination by a trained physician, it may be a valuable approach, particularly in the countries that cannot afford sophisticated screening services for the entire female population at risk.
Objectives	To identify the burden of breast lump in selected age group and associated risk factors of breast cancer in breast lump cases.
Methods	All women (15 to 49 years) of Jalpapur enrolled in the study. Training program organized to the co-workers to develop skill on physical examination. Pre-testing of the tool was done in Dharan Municipality of Sunsari district. It is near by area from Jalpapur for feasibility and practicability of the study. Data collection procedure was started after validation and pre-testing of the tools. Prevalence drawn based on physical examination of breast in sampled population. Risk factors calculated based on responses given by the participants and obesity calculated by the body mass index (BMI) calculation technique provided by World Health Organization.
Results	Out of 541 respondents, 21(3.9%) cases had breast lumps and found that women aged 40-49 years were high-risk group for having breast lump. The most prominent associated risk factors of breast cancer among lump cases might be menstrual period (11-21 days), grand multi-gravita, breast feeding, age of menarche (12 years), age of first childbirth (15-19 years) and body mass index (<18.5).
Conclusion	The data collected from Jalpapur VDC of Sunsari district conclusively brought out that women aged between 15 to 49 years, were not free from breast lumps. There is no significant relation of age with breast lump in this study.
Keywords	Breast lump, Prevalence, Reproductive aged women, Risk factors, Nepal.

Introduction

The incidence of breast cancer is rising all over the world¹. In South Asia, there is significant increase in the incidence of breast among the women in reproductive age group². Since breast cancer prevention is still theoretical; efforts have focused on early detection. Breast cancer is more easily treated and often curable if it is found early. Breast lump is the localized swelling, protuberance or mass in the breast. It is one of the prime indicators of breast disorders. A lump might be a cyst, a benign tumor or a malignancy³.

every woman should get her breasts examined by a trained health care provider every three years up to the age of 40 years and annually thereafter. It is not practiced in the developing countries, although the risk of breast cancer is the same due to ignorance of people and lack of trained health manpower. The objective of the study was to identify the burden of breast lump in selected age group and associated risk factors of breast cancer in breast lump cases.

Professional organizations recommend the practice of monthly breast self-examination by a woman and that

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Methodology

It was a quantitative research method and cross-sectional descriptive study, which was exploratory in nature. The setting of study was Jalapur VDC of Sunsari District, Eastern Nepal. Target population of the study was all the women between 15-49 years of age residing at Jalapur VDC, irrespective of their education, occupation, income, religion and marital status. Population enumeration technique was used. Sample size was 541, where 64 percent population covered; rest 36 percent subjects were pregnant, lactating and physically not present at their home. Data collection was done in September and October 2003 by house-to-house survey using interview schedule and breast examination checklist, which was prepared by the investigator and was consulted with experts of

concerned departments. Risk assessment tool given by cancer line U.K. was adopted to identify the associated risk factors of breast cancer in this study. "Twelve stroke" method used for physical examination of breast. Pre-testing of tool done in Dharan Municipality of Sunsari district. Breast Cancer Screening Camp was organized on 3rd May 2003 and total 86 women were enrolled. One multiple and 5 single Breast Lumps were found among the 86 subjects (Prevalence=6.9%). Examination finding biases were minimized by giving planned training to the co-workers on techniques of examination. Skill test done by repeated re-demonstration of procedure by co-workers on lump located dummy, which helped to check the proficiency of skill. Chi-square test applied to check relationship between different variables and breast lump. Informed consent was taken from each respondent.

Table 1: Distribution of the respondents according to their demographic variables

Variables	Lump Cases (n= 21)		Non-lump Cases (n= 520)		Proportion
	No.	%	No.	%	
Age in year:					
15 -19	0	0	73	14.0	0
20 – 29	4	19.1	127	24.4	3.05
30 – 39	5	23.8	170	32.7	2.85
40 – 49	12	57.1	150	28.9	7.40
Religion:					
Hindu	9	42.8	183	34.1	4.68
Muslim	12	57.2	337	64.9	3.43
Socio-economic Status:					
Lower Middle class	3	14.2	93	18.1	3.12
Lower class	18	85.8	427	81.9	4.04
Educational Status:					
Illiterate	18	85.7	433	83.2	3.99
Literate	3	14.3	87	16.8	3.33

Results

Out of 541 respondents, Mean age of the respondents was 31.62±9.27 years. Pearson Chi-square test was applied which shows that this is not significant. Majority (57.2%) of the respondents belonged to Muslim religion and rest 42.8 percent were Hindu

among which 13.3 percent respondents were Mushar (marginal caste of Terai). Presence of lump among the participants according to their religion significantly different (p value=<0.04). Majority (83.2%) was illiterate and belonged to lower class (Table 1).

Table 2: Distribution of the respondents according to their obstetric variables

Variables	Lump Cases (n= 21)		Non-lump Cases (n= 520)		Proportion
	No.	%	No.	%	
Days of last menstrual period:					
< 7 days	8	38.1	187	35.9	4.10
7- 10 days	2	9.5	64	12.3	3.03
11- 21 days	6	28.6	104	20.0	5.45
22- 30 days	1	4.7	118	22.7	0.84
> 30 days	4	19.1	47	9.1	7.84
Gravida:					
Nulli	1	4.8	98	18.8	1.01
Primi	3	14.3	38	7.3	7.31
Multi	7	33.3	125	24.1	5.30
Grand- multi	10	47.6	259	49.8	3.71
Past history of Breast feeding:					
Yes	17	80.9	347	66.7	4.67
No	4	19.1	173	33.3	2.25

Table 2 depicts the obstetric variables of the respondents. Among lump cases, majority of respondents (28.6%) had their menstruation in 11-21 days. Nearly half (47.6%) had four or more pregnancy (grand multi-gravida) and majority (80.9%) had past history of breast-feeding. The study found that out of 21 lump cases detected, 17 (80.9%) respondents had a single lump while 4(19.1%) had multiple breast lumps.

Table 3: Distribution of the respondents as per the associated risk factors of breast cancer

Variables	No.	%
Age of menarche (year)		
12	10	47.6
13	3	14.3
14	7	33.3
15	1	4.8
Family history of breast cancer		
Don't know	9	42.8
Nobody	12	57.2
Age of first childbirth (years)		
15-19	15	71.4
20-22	6	28.6
Biopsy done in the past		
Don't know	2	9.6
No	18	85.7
Yes	1	4.7
Family planning pills Or hormonal therapy used		
Yes	5	23.8
No	16	76.2
Duration of family planning pills used		
< 6 months	2	40.0
6 months to 2 years	1	20.0
> 2 years	2	40.0
Body Mass Index (BMI)		
<18.5	9	42.8
18.5- 24.9	8	38.1
25 and above	4	19.1

Table 3 focused on risk factors of the breast cancer; majority (47.6%) of the cases were found with early

menarche (12 years) no case with family history of breast cancer found, one case had done biopsy and diagnosed to have benign breast diseases. Near about one fourth of the respondents were taking family planning pills. Nearly half (42.8%) of the respondents were under-nourished and one-fifth (19.1) of them were obese.

Discussion

Despite advancement and multifold improvement in scientific knowledge, at present there is no known method for primary prevention of breast cancer. Under the present circumstances, early detection and treatment of breast cancer as a secondary preventive measure seems to be the most appropriate approach for reducing mortality due to breast cancer and for improving quality of life. The most common age group affected by the breast cancer was 40 to 45 years⁴. Most cases of breast cancer are discovered by the patient themselves when a painless mass was noticed in the breast⁵. Present study revealed that women aged 40 to 49 years were high-risk group for having breast lump and some had painless lump. Different studies have brought out that those hormonal changes during the menstrual cycle lead to a cystic pattern of change in the breast size along with lumpiness and tenderness, which is maximal just before menses. Breast cancer is often associated with a positive family history. Unmarried women tend to have more breast tumors than married ones. Early menarche and late menopause were established risk factors for breast cancer. Estrogen and progesterone also played an important role in increasing its risk. Evidence of prior breast biopsy for benign breast disease is associated with an increased risk of breast cancer. Breast cancer is common in higher socio-economic groups; other factors

like radiation and oral contraceptive considered as risk factors of breast cancer⁶. According to this study Hindu have more chance of having breast lump. All respondents were married and had first childbirth before 22 years of their age. Some (23.8%) respondents were using hormonal pills; out of them 40 percent were taking pills for more than 2 years. Few (4.7%) respondents had past history of biopsy done with benign breast diseases. One-fifth (19.1%) of the respondents were obese. Socio-economic status of the respondents could not be taken as major predictor for breast lump, because no respondent fell into the higher socioeconomic class (calculated according to modified socioeconomic scale of Kuppaswamy)⁷.

Conclusion

The data collected during the study from Jalapur VDC of Sunsari district, conclusively brought out that women aged between 15 to 49 years, were not free from breast lumps. Out of 541 respondents, 21 (3.9%) had breast lumps and there is no significant relation of age with breast lump, but higher proportion was found among 40 to 49 years of age group.

Acknowledgement

It is my proud privilege to express my profound sense of gratitude and sincere thanks to the Nepal Health Research Council for their support to make my study successful which has been completed with logical and fruitful conclusion. I am extremely grateful to Dr. Anil K. Mishra, Member-Secretary of NHRC, and staffs of

NHRC for their invaluable help, encouragement and constructive criticism during the course of the study.

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