Asian Oncology Research Journal

3(2): 28-31, 2020; Article no.AORJ.53653

Prevalence and Risk Factors for Breast Cancer: A Hospital Based Cross-sectional Study in Nepal

Pramodh Chaudhary[1*], Sanjaya Regmi[1] and Ashok Pandey[1]

[1]Padmashree School of Public Health, Rajiv Gandhi University of Health Sciences, Bangalore, India.

Authors' contributions

This work was carried out in collaboration among all authors. Author PC designed the study, performed the statistical analysis, wrote the protocol and wrote the first draft of the manuscript. Authors AP and SR managed the analyses of the study. Author AP managed the literature searches. All authors read and approved the final manuscript.

Article Information

Editor(s):
(1) Dr. Bing Yan, Hainan Branch of PLA General Hospital, Haitang District of Sanya City, Hainan Province, China.
(2) Dr. Dinithi C. Peiris, Professor, University of Sri Jayewardenepura, Sri Lanka.
(3) Dr. Vaishali Kapoor, Washington University in St. Louis School of Medicine, St. Louis, USA.
Reviewers:
(1) Jacilene Silva, State University of Ceará, Brazil.
(2) Michael Broodmare, Geisinger Commonwealth School of Medicine, USA.
(3) Amal Halim, Mansoura University, Egypt.
Complete Peer review History: http://www.sdiarticle4.com/review-history/53653

Original Research Article

Received 14 December 2019
Accepted 18 February 2020
Published 03 April 2020

ABSTRACT

Aims: The aims of this study were to assess risk factors of breast cancer in female and to find out the hospital-based prevalence of female breast cancer in Nepal.
Study Design: Hospital-based descriptive cross-sectional study was done.
Place and Duration of Study: The study sites were Bhaktapur Cancer hospital, Nepal. The duration of the study was 12 months.
Methodology: A hospital-based descriptive cross-sectional study was done to assess risk factors and prevalence of Breast cancer in Nepal at Bhaktapur Cancer Hospital. Data was collected by simple random sampling method and hospital record was collected to assess the prevalence of breast cancer and data analysis were carried out using SPSS software.
Results: The study shows the increase of the age; increases the risk of breast cancer. The mean age group is 52.65 with a standard deviation of 9.518. Out of 83 participants, 42 (48.2%) was a smoker and 46 (55.4%) were alcoholics. 15 (18.1%) of the participants have early menarche before the age of 7-11 years. As of 2013 and 2012 hospital data shows that breast cancer is third

**Corresponding author: E-mail: pramod314@yahoo.co.in;*

prevalent among all types of cancer. In 2013 Female breast cancer was 171 among all cancer 1713 and in 2012, 155 among 1602 of all cancer.
Conclusion: Breast cancer is the most common cancer. The strongest risk factor for breast cancer is age; the increase of age increases the risk of breast cancer.

Keywords: Breast cancer; hospital based; prevalence; risk factor.

1. INTRODUCTION

Cancer is the uncontrolled growth of abnormal cells in the body and cancer can develop at any site or tissue of the body and may involve any type of cell [1–4]. If the growth and development is not shunned, it can spread very rapidly and eventually lead to death [5]. Cancer is one of the most dreaded non-communicable diseases and has become an important contributor to the global burden of diseases [4,6,7]. It brings tremendous social distress, physical and psychological suffering, hardship to patients and their relatives [8].

There have been meticulous efforts around the globe to prevent and control cancer [9,10]. The incidence rate, prevalence rate, pattern, and high-risk factors are essential to plan, implement and to evaluate cancer prevention programs [1, 6,9–11]. However, scientific evidence is not easily available on less developed nations including Nepal. Hence, an attempt was made to assess the situation of breast cancer in the Bhaktapur cancer hospital of Kathmandu, Nepal.

2. MATERIALS AND METHODS

Bhaktapur cancer hospital is in the capital city of Nepal where around 5,000 cancer patients are treated every year from all places of Nepal. For the geographical representation of the population, Bhaktapur cancer hospital was chosen for the study. Patients diagnosed with Breast cancer by any diagnostic procedure were the study participants including both newly diagnosed and follow up cases in Bhaktapur cancer hospital, Nepal. A simple random sampling method was adopted to collect data. Total breast cancer patients in Bhaktapur cancer hospital were 161 at the time of study. The data was collected from 12 April 2011 to11 April 2012. The sample size was more than 50%. A set of semi-structured questionnaire was used for data collection of the risk factor of breast cancer. Face to face interview was done to collect data. Secondary data was collected from the hospital record to find out the top three cancer prevalence. Written informed consent was obtained from research participants before data collection. The information provided by the research participants was dealt with the highest confidentiality and used only for the study purpose. The privacy of the participants was maintained during data collection. Formal written permission was taken from Bhaktapur Cancer Hospital, Nepal.

3. RESULTS AND DISCUSSION

3.1 Age of the Participants

The strongest risk factor for breast cancer is age. The study shows that the increase of age increases the risk of breast cancer. The majority of 32 (38.6%) of the participants are of age group 50-60. The mean age of participants is 52.65 with a standard deviation of 9.518 (Table 1).

Table 1. Age of the participants (N=83)

Age (in years)	Frequency	Percent
30-40	11	13.3
40-50	24	28.9
50-60	32	38.6
60-70	16	19.3

3.2 Smoking Status of the Participants

Almost half of 40 (48.2%) of breast cancer patients were consuming smoking. Among them, the majority 33 (80.5%) of the participants were consuming daily. Almost one third 34 (32%) of the smoker participants smoked for 5-10 years (Table 2).

3.3 Alcohol Consumption

The majority of 46 (55.4%) of the participants were consuming alcohol. Among them, less than half 21 (45.7%) of the participants were taking alcohol more than 5-10 years (Table 3).

3.4 Age at Menarche and Menopause

The early menstrual period increases the risk of breast cancer. 8 out of 10 participants 15

(18.1%) have menarche before the age of 11 years. More than half 34 (53%) of the participant's menopause age was 50-55 years. The mean age of menopause is 49.25 with a standard deviation of 3.936 (Table 4).

Table 2. Smoking status (N=81)

Smoking status	Frequency	Percent
Yes	40	48.2
No	43	51.8
Frequency of smoking		
Daily	33	80.5
Occasionally	8	19.5
Years of smoking		
Less than 5 years	5	12.2
5-10 years	13	31.7
10-15 years	11	26.8
More than 15 years	12	29.3

Table 3. Alcohol consumption (N=83)

Alcohol consumption	Frequency	Percent
Yes	46	55.4
No	37	44.6
Years of alcohol consumption		
Less than 5 Years	17	37.0
5-10 Years	21	45.7
10-15 Years	5	10.9
More than 15 Years	3	6.5

Table 4. Age at menarche and menopause

Menarche age (N=83)	Frequency	Percent
Unknown	9	10.8
7-11 years of age	15	18.1
12-13 years of age	24	28.9
More than 14 years of age	35	42.2
Menopause age (N=64)	**Frequency**	**Percent**
35-40	4	6.2
40-45	6	9.4
45-50	34	53.1
50-55	19	29.7
55-60	1	1.6

3.5 Hospital Based Prevalence of Breast Cancer

Breast cancer was the third most prevalent cancer. A total of 177 breast cancer was there among a total of 1713 as on 13th April 2012 to 13th April 2013 (Table 5).

Table 5. Top three cancers

S.N	Types of cancer	Total case
1.	Lung cancer	192
2.	Cervix cancer	188
3.	Breast cancer	177 (Male-6, Female-171)

Source: Hospital record Date: 13th April 2012 to 13th April 2013

4. CONCLUSIONS

Breast cancer is the most common cancer in Kathmandu, Nepal. Information on the risk factors of breast cancer is an important basis for determining the priorities for breast cancer control. The study reveals that the increase in wage increases the risk of breast cancer. The behavior of smoking and consuming alcohol was found to be the highest among breast cancer cases. Breast cancer was more prevalent among women, whose menarche started before the age of 12. The study concludes that the menopause of breast cancer patients was due to consumption of chemotherapy.

CONSENT

All authors declare that, written informed consent was obtained from the respondent for publication of this case report.

ETHICAL APPROVAL

As per international standard, written ethical approval has been collected and preserved by the author(s).

ACKNOWLEDGEMENT

The support of the Padmashree School of Public Health, Rajiv Gandhi University of Health Sciences, Bhaktapur cancer hospital and the participants are appreciated.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

REFERENCES

1. American Cancer Society. Global facts and figures 2007. American Cancer Society, Inc. 2007;46.
2. Cancer N. Cancer Research in ICMR Achievements in Nineties. Cancer; 2017.

3. Sharma Subedi K, Sharma P. Cancer treatment in Nepal. A Historical Background Development of Treatment Facilities,Epidemiology and Challenges for Prevention and Control of Cancer. The Kitakanto Medical Journal 2015;65:165–166.
4. Souchelnytskyi S. Current status and challenges of personalized treatment of cancer: View inspired by the workshop. Experimental Oncology. 2011;33:166–169.
5. Bajracharya N, Karki P, Sapkota S, et al. Prevalence pattern of cancer and handling of cytotoxic cytotoxic drugs. Kathmandu University Journal of Science, Engineering and Technology. 2006;2:1-10.
6. Moore MA, Ariyaratne Y, Bhurgri FB, et al. Cancer epidemiology in South Asia - Past, present and future. Asian Pacific Journal of Cancer Prevention. 2010;11: 49–66.
7. Chawla R, Sathian B, Mehra A, et al. Awareness and assessment of risk factors for lung cancer in residents of Pokhara Valley. Asian Pacific Journal of Cancer Prevention. 2010;11:1789-1793.
8. Chataut R, Pandey A. Treatment seeking behaviour and cost of care among cancer patients in Nepal. Journal of Family Medicine and Community Health. 2015;2: 1–5.
9. Acharya SC, Jha AK, Manandhar T. Clinical profile of patients presenting with breast cancer in Nepal. Kathmandu University of Medical Journal. 2012;10:3-7.
10. Binu VS, Chandrashekhar TS, Subba SH, et al. Cancer pattern in Western Nepal: A hospital based retrospective study. Asian Pacific Journal of Cancer Prevention. 2007;8:183-186.
11. NHRC. Pravalance of Non Cominicable disease in Nepal Hospital Based Study Kathmandu; 2010.

Peer-review history:
The peer review history for this paper can be accessed here:
http://www.sdiarticle4.com/review-history/53653