



NATIONAL SCENARIO OF CERVICAL CANCER IN NEPAL

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Abstract

Cervical cancer is a type of cancer that occurs in the cells of the cervix. It is a common cancer and leading cause of mortality in Nepalese women. The trend of cervical cancer is useful to policymaker for effective planning to reduce its burden in community. This study aims to determine the national scenario of cervical cancer for 2015 and its trend 2003 – 2015 in Nepal. This was a retrospective study with secondary data analysis of new cervical cancer registered in hospital based national cancer registry programme conducted by B.P. Koirala Memorial Cancer Hospital, Bharatpur, Chitwan, Nepal. In the year of 2015, net 868 new cases of cervical cancer were registered out of 5235 female cancer cases in national cancer registry system. Far the purposed, a large no of cases reported from BP Koirala Memorial Cancer Hospital followed by Bhaktapur Cancer Hospital and Paropakar Maternity and Women Hospital. Most of the cases were reported from Kathmandu. Age group of 50-54 years was most prevalent for cervical cancer. Maximum of patients were married, Hindus, illiterate and housework related occupation. Biopsy/ histology was most valid basis of diagnosis. As per data base net 669 (77.0 %) patients were received treatment out of 868. curative type of maximum of patients were received curative types of treatment. Whereas, radiotherapy & chemotherapy was first choice of treatment. Regarding the status of last contact, most of the patients were getting result of partial remission. The trend of cervical cancer was seen to be fluctuating yearly during 2003 to 2015. Well organized awareness activities, HPV vaccination and screening programme was recommended to prevent and control the cervical cancer burden in Nepal.

Keywords: Cancer, Scenario, Nepal.

INTRODUCTION

Most of the cervical cancer found in developing countries and lower socio economic status. In Nepal, hospital based data show that it is the top most cancer in females. According to National Cancer Registry Programme (NCRP), Nepal which collects hospital based data from twelve major hospitals and is the only aggregate data on cancer in the country shows that cervical cancer is the top ten cancer and top leading cancer among the women. According to most recent data from NCRP 2015, cervical cancer accounts for 16.6% of all cancer in women. Cervical cancer were most prevalent in marital women of child bearing age so it related to the reproductive health the researcher impressed to determine the current st Cervical cancer is the fourth most common cancer among women globally with in estimated 570,000 new cancer 2018 representing 6.6 % of all female cancers. Approximately 90% of death from cervical cancer occurred in low-and middle income countries. In Asian women, cervical cancer ranked second after breast cancer. The cancer causes a large number of deaths amongst women in the South –East regional countries (cervical cancer manual BPKMCH 2018).

MATERIALS AND METHODS

This was a retrospective study with secondary data analysis of new cervical cancer registered in hospital based national cancer registry programme conducted by B.P. Koirala Memorial Cancer Hospital, Bharatpur, Chitwan, Nepal.

Limitation of the Study

The study used only the secondary data from national cancer registration programme of Nepal, which include 12 major hospitals i.e. cancer diagnosis and treatment center of Nepal.

Sources of Data

B.P. Koirala Memorial Cancer Hospital Bharatpur, Chitwan is one of the national level hospital al in central part of Nepal which manages by the state policy. This hospital played vital role to control cancer by providing curative and preventive services and also conduct different programs like research and survey.

Member hospitals of data collection

1. Bhaktapur Cancer Hospital, Bhaktapur
2. Bir Hospital, Mahaboudha, Kathmandu
3. Manipal Medical College, Pokhara, Kaski
4. BPKM Cancer Hospital, Bharatpur, Chitwan
5. TU Teaching Hospital, Maharajgunj, Kathmandu
6. Kanti Children's Hospital, Maharajgunj, Kathmandu
7. BP Koirala Institute of Health Sciences, Dharan, Sunsari
8. Shree Birendra Hospital, Kathmandu
9. Civil Service Hospital, Kathmandu
10. Patan Academic of Health Science, Lalitpur
11. Paropakar Maternity & Women Hospital, Kathmandu
12. Nepalgunj Medical College Teaching hospital Kohalpur Banke

RESULTS

This was a descriptive epidemiological study with primary and secondary data analysis of new oral cancer that are recorded and collected in different data source institution. The data analysis was carried out by using SPSS 19.0.

Table 1. Summary of Total Cancer Cases (2003-2015)

S.N.	Total cases (2003-2015) for both sex				Number of Cervix cancer	Percentage Of cervical cancer
	Years	Total cases	Male	Female		
1	2003	3251	1488 (46%)	1763 (54%)	441	25.0
2	2004	4201	2030 (48%)	2171 (52%)	483	22.2
3	2005	4397	2057 (47%)	2340 (53%)	501	21.4
4	2006	4908	2325 (47%)	2583 (53%)	551	21.3
5	2007	6035	2758 (46%)	3277 (54%)	648	19.7
6	2008	5949	2702 (45%)	3247 (56%)	732	22.5
7	2009	6199	2970 (48%)	3229 (52%)	688	21.3
8	2010	6773	3192 (47.1%)	3581 (52.9%)	699	19.5
9	2011	7088	3295 (46.5%)	3793 (53.5%)	755	19.9
10	2012	7212	3291 (45.6%)	3921 (54.4%)	747	19.0
11	2013	8729	4011 (46.0%)	4718 (54.0%)	832	17.6
12	2014	9036	4014 (44.4%)	5022 (55.6%)	852	17.0
13	2015	9718	4483 (46.1%)	5235 (53.9%)	868	16.6

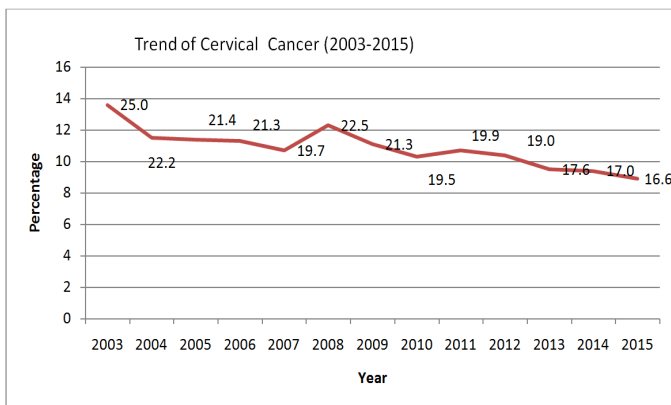


Figure 1. Trend of cervical cancer (2003-2015)

Table 2. Total Cancer Cases for Female – 2011

Distribution of cases by site				
S.N.	ICD-10	Topography	Number	Percentage
1	C 53	Cervix uteri	755	19.9
2	C 50	Breast	608	16.1
3	C 34	Bronchus & lung	391	10.3
4	C 56	Ovary	225	5.9
5	C 16	Stomach	147	3.9
6	C 73	Thyroid	143	3.8
7	C 23	Gall bladder	125	3.3
8	C 76	Other & ill defined sites	76	2.0
9	C 20	Rectum	76	2.0
10	C 92	Leukemia/myeloid	68	1.8
11	**	Other cancer cases	1179	31.0
Total			3793	100.0

Total 3. Total Cancer Cases for Female – 2012

Distribution of cases by site				
S.N.	ICD-10	Topography	Number	Percentage
1	C53	Cervix uteri	747	19.1
2	C50	Breast	641	16.3
3	C34	Bronchus & lung	398	10.2
4	C56	Ovary	238	6.1
5	C16	Stomach	148	3.8
6	C23	Gall bladder	144	3.7
7	C73	Thyroid	122	3.1
8	C76	Other & ill defined sites	88	2.2
9	C71	Brain	78	2.0
10	C20	Rectum	76	1.9
11	**	Other cancer cases	1241	31.6
Total			3921	100.0

Total 4. Total Cancer Cases for Female – 2013

Distribution of cases by site				
S.N.	ICD-10	Topography	Number	Percentage
1	C53	Cervix uteri	832	17.6
2	C50	Breast	728	15.4
3	C34	Bronchus & lung	492	10.4
4	C56	Ovary	350	7.4
5	C16	Stomach	215	4.7
6	C23	Gall bladder	161	3.4
7	C73	Thyroid	126	2.7
8	C32	Larynx	116	2.5
9	C20	Rectum	110	2.3
10	C22	Liver	110	2.3
11	C71	Brain	99	2.1
**		Other cancer cases	1478	31.5
Total			4718	100.0

Total 5. Total Cancer Cases for Female – 2014

Distribution of cases by site				
S.N.	ICD-10	Topography	Number	Percentage
1	C53	Cervix uteri	852	17.2
2	C50	Breast	826	16.5
3	C34	Bronchus & lung	549	10.9
4	C56	Ovary	350	7.1
5	C16	Stomach	223	4.4
6	C23	Gall bladder	220	4.4
7	C73	Thyroid	145	2.9
8	C20	Rectum	134	2.7
9	C32	Larynx	112	2.1
10	C22	Liver	108	2.2
11	**	Other cancer cases	1503	29.9
Total			5022	100.0

Table 6. Total 5. Total Cancer Cases for Both Sex – 2015

Distribution of cases by sex			
S.N.	Sex	Number	Percent
1	Male	4483	46.1
2	Female	5235	53.9
Total		9718	100

Total 7. Total Cancer Cases for both Sex – 2015

Distribution of cases by site for both sex				
S.N.	ICD - 10	Topography	Number	Percentage
1	C34	Bronchus and lung	1334	13.7
2	C53	Cervix uteri	868	8.9
3	C50	Breast	856	8.8
4	C16	Stomach	519	5.3
5	C56	Ovary	365	3.8
6	C32	Larynx	360	3.7
7	C23	Gall bladder	338	3.5
8	C91	Leukemia/lymphoid	281	2.9
9	C20	Rectum	270	2.8
10	C71	Brain	245	2.6
11	**	Others cancer	4282	44.0
Total			9718	100.0

Total 8. Total Cancer Cases for Female – 2015

Distribution of cases by site				
S.N.	ICD-10	Topography	Number	Percentage
1	C53	Cervix uteri	868	16.6
2	C50	Breast	838	16.0
3	C34	Bronchus and lung	574	11.0
4	C56	Ovary	365	7.0
5	C23	Gall bladder	235	4.5
6	C16	Stomach	227	4.3
7	C73	Thyroid gland	143	2.7
8	C20	Rectum	120	2.3
9	C71	Brain	108	2.1
10	C32	Larynx	106	2.0
11	**	Others cancer	1651	31.5
Total			5235	100.0

Table 9. Total Cervical Cancer Cases by Reporting Hospitals – 2015

Distribution of cases by reporting hospital			
S.N.	Reporting hospitals	Number	Percentage
1	BPKMCH	517	59.5
2	BCH	174	20.0
3	PMWH	66	7.6
4	MTH	47	5.4
5	BH	19	2.1
6	BPKIHS	18	2.0
7	SBH	12	1.3
8	NMC	5	0.5
9	TUTH	5	0.5
10	KCH	0.0	0.0
11	CSH	3	0.3
12	PAHS	2	0.2
Total		868	100.0

Table 10. Cervical Cancer Cases by Age group – 2015

Distribution of cases by age group			
S.N.	Age group	Cancer cases	
		Number	Percentage
1	0-29 yrs	14	1.6
2	30-39 yrs	110	12.6
3	40-49 yrs	221	25.4
4	50-59 yrs	240	27.6
5	60-70	196	22.5
6	70+ yrs	87	10.0

Table 11. Cervical Cancer Cases by District – 2015

Distribution of cases by district			
S.N.	Districts	Cancer cases	
		Number	Percentage
1	Kathmandu	54	6.2
2	Kaski	48	5.5
3	Rupendehi	31	3.5
4	Nawalparasi	30	3.4
5	Morang	30	3.4
6	Sarlahi	27	3.1
7	Chitwan	27	3.1
8	Parsa	27	3.1
9	Sindhuli	23	2.6
10	Jhapa	21	2.4
11	Other districts	550	63.3
Total		868	100.0

Table 12. Cervical Cancer Cases by Marital Status - 2015

Distribution of cases by marital status			
SN	Marital status	Cancer cases	
		Number	Percentage
1	Unmarried	5	0.5
2	Married	722	83.1
3	Widow	30	3.4
4	Not available	111	12.7
5	Total	686	100.0

Table 13. Cervical Cancer Cases by Educational Status - 2015

Distribution of cases by educational status			
S.N.	Educational status	Cancer cases	
		Number	Percentage
1	Literate	137	15.7
2	Illiterate	498	57.3
4	Not available	233	26.8
5	Total	868	100.00

Table 14. Cervical Cancer Cases by Religion – 2015

Distribution of cases by religion			
SN	Religion	Cancer cases	
		Number	Percentage
1	Hindu	741	85.3
2	Buddhist	93	10.7
3	Islam	14	1.6
4	Christian	3	0.3
5	Others	16	1.8
6	Not Available	1	0.1
7	Total	868	100.0

Table 15. Cervical Cancer Cases by Occupation – 2015

Distribution of cases by occupational			
S.N.	Occupation	Cancer cases	
		Number	Percentage
1	Agriculture	104	11.9
2	Business	19	2.1
3	Housework	571	65.7
4	Office work	17	1.9
5	Others	28	3.2
7	Not available	129	14.8
8	Total	686	100.0

Table 16. Microscopic Verification of Cervical Cancer – 2015

Microscopic verification			
S.N.	Cervix uteri	Cancer cases	
		Number	Percentage
1	Squamous cell carcinoma	378	43.4
2	Adenocarcinoma	91	10.4
3	Others	12	1.3
4	Not microscopic confirmation	387	44.8
Total		868	100.0

Table 17 . Distribution of Cases by Basis of Diagnosis – 2015

Distribution of cases by basis of diagnosis			
S.N.	Methods of diagnosis	Cancer cases	
		Number	Percentage
1	Clinical Examination	5	5.0
2	Endoscopy	10	1.1
3	Biopsy/Histology	737	84.9
4	Cytology/Haematology	36	4.1
5	Biochemical/Immunological test	1	0.1
6	Radiology	23	2.6
7	Death Certificate	3	0.2
8	Not Available	53	6.1
9	Total	868	100.0

Table 18. Distribution of Cases by Treatment Given/Taken – 2015

Distribution of cases by treatment given/taken			
S.N.	Treatment given/taking	Cancer cases	
		Number	Percentage
1	Yes	669	77.0
2	No	25	2.8
3	Not accepted	2	0.2
4	Unknown	172	19.8
5	Total	868	100.0

Table 19. Distribution of Cases by Treatment Type

Distribution of cervical cancer cases by treatment type			
S.N.	Treatment given/taking	Cancer cases	
		Number	Percentage
1	Curative	352	52.6
2	Palliative	110	16.4
3	Not available	207	30.9
4	Total	669	100.0

Table 20. Distribution of Cases by Treatment Received

Distribution of cases by treatment received			
S.N.	Treatment received	Cancer cases	
		Number	Percentage
1	Surgery	38	5.6
2	Radiotherapy	126	18.8
3	Chemotherapy	65	9.7
4	Supportive	98	14.6
5	Symptomatic	10	1.4
6	Surgery & Radiotherapy	61	9.1
7	Surgery & Chemotherapy	13	1.9
8	Radiotherapy & Chemotherapy	214	31.9
9	Surgery, Radiotherapy & Chemotherapy	44	6.5
Total		669	100.0

Table 21. Distribution of Cases by Status at Last Contact

Distribution of cases by status at last contact			
S.N.	Status at last contact	Cancer cases	
		Number	Percentage
1	Complete remission	45	6.7
2	Partial remission	388	57.9
3	Disease progression	37	5.5
4	Metastasis	5	0.7
5	Refer	8	1.1
6	Same	8	1.8
7	Death	9	1.3
8	Not available	169	25.2
9	Total	669	100.0

DISCUSSION

In this study cancer patients of all sex and age groups was conducted to assess the frequency of different types of cancer from January 1st to December 31st2015. A total of 10457 cancer cases were reported from participatory hospitals to B. P. Koirala Memorial Cancer Hospital. The cases of cervical cancer were verified by name, age, sex, address, topography and morphology. Repeated cancer cases were deleted. Indians and others cases, were excluded from database and the data were coded according to ICD-03 and ICD-10 published by WHO/IARC. And net 868 cervical cancer cases were preceded for analysis using SPSS 19.0. The present data provide an update of the cervical cancer burden in Nepal. BPKMCH reported a large no of cases 59.5% followed by BCH 20.0% and PMWH 7.6%. Cancer cases were most prevalent in the age group of 50-54 years followed by 45-49 years and 60-64 years. Most of the cases were reported from Kathmandu 6.2% followed by Kaski 5.5% and Rupandehi 3.5%. Among the cases 722 (83.1 %) were married, 30 (3.4%) widow, 5 (0.5 %) were unmarried. Whereas, 111 (12.7 %) cases were not available on record. Maximum number of patients 741 (85.3 %) were Hindus followed by Buddhists 93 (10.7 %) and Others 16 (1.8 %). Among the cases 498 (57.3 %) were illiterate while 137 (15.7 %) were literate. Whereas, 196 (22.5 %) were not available on record. Information on occupation, 571 (65.7 %) patients were from housework, sector and followed by 104 (11.9 %) from agricultural and 28 (3.2%) from others. According to valid basis of diagnosis, biopsy/ histology was 737 (84.9 %), was cytology/haematology 36 (4.1 %) and radiology 23 (2.6%). As per data base 669 (77.0 %) patients were received treatment out of 868. 352 (52.6 %) patients received curative mode of treatment, 110 (16.4 %) were provided with palliative and the rest 207 (23.8 %) were unknown. 214 (31.9 %) patients were treated by radiotherapy & chemotherapy followed by radiotherapy only 126 (18.8 %) and supportive care 98 (14.6 %). From the available data 388 (57.9 %) patients were feeling partial remission, 45 (6.7 %) were got complete remission while 37 (5.5 %) patients with progression of disease. Whereas, 168 (25.1 %) were not available on record.

Conclusion

In the years 2015 net 868 new cases of cervical cancer were registered in cancer registry system. Far the purposed, a large no of cases reported from BPKMCH followed by BCH and PMWH. According to age distribution, age group of 50-54 years was most prevalent for cervical cancer. Most of the cases were from Kathmandu followed by Kaski and Rupandehi. Maximum of patients were married, Hindus, illiterate and housework related i.e. housewife. Biopsy/ histology was most

valid basis of diagnosis followed by cytology/haematology. As per data base net 669 (77.0 %) patients were received treatment out of 868. According to type of treatment, curative followed by palliative. Whereas, radiotherapy with chemotherapy was choice of treatment followed by radiotherapy only and supportive care. Regarding the status at last contact, most of the patients were noticed as a complete remission.

Recommendation

The trend of cervical cancer was seen to be fluctuating yearly during 2003 to 2015. The number of patients were relatively increased over the study period. Well organized awareness activities, HPV vaccination and screening programme was recommended to prevent and control the cervical cancer burden in Nepal.

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