

National Scenario of Malignant Head, Neck and CNS Tumor in Nepal 2003-2017

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ABSTRACT

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Malignant head, neck and CNS tumor in Nepal is increasing every year. In this study we focus to determine the current status and trend of head, neck and CNS tumor. This is a retrospective study of new malignant head, neck and CNS tumor that are collected in different institution from 2013 to 2017. The collected data are coded in ICD O3rd and IC D 10 based on International Classification of Disease for oncology, WHO/IARC 3rd Edition, Lyon France, and the data analysis is carried out by using SPSS 19.0. Among the head, neck and CNS cases, larynx is a common topography 17.09% followed by thyroid 11.44% and brain 11.35% for both sex. Cancer of the larynx 20.12% is common for male followed by other & unspecified parts of mouth 11.15% and brain 10.67%. Whereas, thyroid gland 21.54% was common for women followed by brain 12.48% and larynx 12.01% the trend of head, neck and CNS tumor is seen to be increasing yearly for the last few years. Well organized awareness activities and screening programs are needed to prevent and control the burden of head, neck and CNS tumor in national context.

Keywords : Malignant, Central Nervous System (CNS), Head & neck

I. INTRODUCTION

Cancer is synonymous with the term "malignant tumor" Cancer one of the common and most important non-communicable disease increasing around the world with marked rise in the least developed parts of the world. Preventing cancer is an important scientific and public health goal of this

century. Cancer is becoming a growing public health problem in our country too. The global cancer burden is estimated to have risen to 18.1 million new cases and 9.6 million deaths in 2018 (GLOBO CAN 2018). Globally, about 1 in 6 deaths is due to cancer. Approximately 70% of deaths from cancer occur in low- and middle-income countries. Brain and other nervous system cancer is the 10th leading cause of

death for men and women. It is estimated that 18,020 adults (10,190 men and 7,830 women) will die from primary cancerous brain and CNS tumors this year. Head and neck cancer is the sixth most common cancer in the world, and the largest burden occurs in developing countries. Head and neck cancer is a group of cancers that starts in the mouth, nose, throat, larynx, sinuses, or salivary glands etc. In recent days, the observation of the data of the head and neck cancer shows its increasing condition. Even in Nepal, the head and neck cancer is giving to increasing rapidly. According to the medical science, the poor hygiene, alcohol, tobacco use, HPV infection is its major factors. In this regard aim of this study was to hit up on the national status of malignant head, neck and CNS neoplasm using secondary data analysis of hospital based national cancer registry programme.

II. METHODS AND MATERIAL

This is a retrospective study of head, neck and CNS cases, collected from following hospitals. Collected data were coded based on ICD-O3rd and ICD -10, published by IARC/WHO and analysis is carried out by using SPSS 19.0.

Sources of data collection

1. BP Koirala Memorial Cancer Hospital, Bharatpur, Chitwan

2. Bhaktapur Cancer Hospital, Bhaktapur
3. Bir Hospital , Mahaboudha,Kathmandu
4. Manipal Medical College, Pokhara, Kaski
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

III. Limitation

A national level data base is very important for the study, plan and manage the malignant neoplasm. We are presently incorporating 12 hospitals where cancer is being treated. Many head, neck & nervous system tumor treating hospitals and departments are not included in national cancer registry programme therefore, the data coverage does not represent the whole country.

IV. RESULTS

Table 1

Cancer cases by sex - 2003							
ICD-10	Topography	Sex				Total	
		Male		Female			
		#	%	#	%	#	%
C00	Lip	8	0.54	4	0.23	12	0.37
C01	Base of tongue	0	0.00	1	0.06	1	0.03
C02	Other and unspecified parts of tongue	28	1.88	13	0.74	41	1.26
C03	Gum	12	0.81	2	0.11	14	0.43
C04	Floor of mouth	8	0.54	2	0.11	10	0.31

C05	Palate	7	0.47	5	0.28	12	0.37
C06	Other and unspecified parts of mouth	34	2.28	11	0.62	45	1.38
C07	Parotid gland	12	0.81	2	0.11	14	0.43
C08	Other and unspecified major salivary glands	2	0.13	0	0.00	2	0.06
C09	Tonsil	6	0.40	3	0.17	9	0.28
C10	Oropharynx	3	0.20	1	0.06	4	0.12
C11	Nasopharynx	12	0.81	12	0.68	24	0.74
C12	Pyriiform fossa	26	1.75	6	0.34	32	0.98
C13	Hypopharynx	6	0.40	0	0.00	0	0.00
C14	Other and ill-defined sites in lip, oral cavity and pharynx	8	0.54	2	0.11	10	0.31
C30	Nasal cavity and middle ear	2	0.13	1	0.06	3	0.09
C31	Accessory sinus	17	1.14	2	0.11	19	0.58
C32	Larynx	90	6.05	18	1.02	108	3.32
C33	Trachea	0	0.00	0	0.00	0	0.00
C47	Peripheral nerves and autonomic nervous system	1	0.07	0	0.00	1	0.03
C69	Eye and adnexa	24	1.61	14	0.79	38	1.17
C70	Meninges	1	0.07	0	0.00	1	0.03
C71	Brain	20	1.34	10	0.57	30	0.92
C72	Spinal cord, cranial, nerves, and other parts of CNS	3	0.20	0	0.00	3	0.09
C73	Thyroid gland	13	0.87	46	2.61	59	1.81
C75	Other endocrine glands & relate structures	1	0.07	0	0.00	1	0.03
C76	Other & unspecified parts of head, face & neck	16	1.08	10	0.57	26	0.80
**	Sum of Head, neck & CNS cases	360	24.19	165	9.36	525	16.15
**	Other cancers	1128	75.81	1598	90.64	2726	83.85
Total		1488	100.00	1763	100.00	3251	100.00

Table 2

Cancer cases by sex - 2004							
ICD-10	Topography	Sex				Total	
		Male		Female			
		#	%	#	%	#	%
C00	Lip	8	0.39	6	0.28	14	0.33
C01	Base of tongue	3	0.15	1	0.05	4	0.10
C02	Other and unspecified parts of	44	2.17	18	0.85	62	1.48

	tongue						
C03	Gum	22	1.08	7	0.33	29	0.69
C04	Floor of mouth	5	0.25	0	0.00	5	0.12
C05	Palate	7	0.34	5	0.24	12	0.29
C06	Other and unspecified parts of mouth	44	2.17	13	0.61	57	1.36
C07	Parotid gland	15	0.74	11	0.52	26	0.62
C08	Other and unspecified major salivary glands	5	0.25	3	0.14	8	0.19
C09	Tonsil	16	0.79	10	0.47	26	0.62
C10	Oropharynx	8	0.39	3	0.14	11	0.26
C11	Nasopharynx	40	1.97	11	0.52	51	1.21
C12	Pyriiform fossa	34	1.68	5	0.24	39	0.93
C13	Hypopharynx	6	0.30	2	0.09	8	0.19
C14	Other and ill-defined sites in lip, oral cavity and pharynx	7	0.34	1	0.05	8	0.19
C30	Nasal cavity and middle ear	3	0.15	3	0.14	6	0.14
C31	Accessory sinus	4	0.20	5	0.24	9	0.21
C32	Larynx	116	5.72	21	0.99	137	3.26
C33	Trachea	0	0.00	0	0.00	0	0.00
C47	Peripheral nerves and autonomic nervous system	0	0.00	1	0.05	1	0.02
C69	Eye and adnexa	9	0.44	9	0.42	18	0.43
C70	Meninges	1	0.05	1	0.05	2	0.05
C71	Brain	48	2.37	27	1.27	75	1.79
C72	Spinal cord, cranial, nerves, and other parts of CNS	2	0.10	1	0.05	3	0.07
C73	Thyroid gland	31	1.53	35	1.65	66	1.57
C75	Other endocrine glands & relate structures	0	0.00	1	0.05	1	0.02
C76	Other head, face & neck	-	-	-	-	-	-
**	Sum of Head, neck & CNS cases	478	23.56	200	9.40	678	16.14
**	Other cancers	1551	76.44	1927	90.60	3478	82.79
Total		2029	100.00	2127	100.00	4201	100.00

Table 3

Cancer cases by sex -2005							
ICD-10	Topography	Sex				Total	
		Male		Female			
		#	%	#	%	#	%
C00	Lip	15	0.73	5	0.21	20	0.45

C01	Base of tongue	9	0.44	3	0.13	12	0.27
C02	Other and unspecified parts of tongue	52	2.53	20	0.85	72	1.64
C03	Gum	24	1.17	7	0.30	31	0.71
C04	Floor of mouth	13	0.63	3	0.13	16	0.36
C05	Palate	8	0.39	1	0.04	9	0.20
C06	Other and unspecified parts of mouth	41	1.99	13	0.56	54	1.23
C07	Parotid gland	16	0.78	11	0.47	27	0.61
C08	Other and unspecified major salivary glands	5	0.24	2	0.09	7	0.16
C09	Tonsil	11	0.53	9	0.38	20	0.45
C10	Oropharynx	10	0.49	6	0.26	16	0.36
C11	Nasopharynx	40	1.94	12	0.51	52	1.18
C12	Pyriiform fossa	55	2.67	6	0.26	61	1.39
C13	Hypopharynx	2	0.10	1	0.04	3	0.07
C14	Other and ill-defined sites in lip, oral cavity and pharynx	4	0.19	0	0.00	4	0.09
C30	Nasal cavity and middle ear	4	0.19	8	0.34	12	0.27
C31	Accessory sinus	19	0.92	12	0.51	31	0.71
C32	Larynx	133	6.47	30	1.28	163	3.71
C33	Trachea	0	0.00	0	0.00	0	0.00
C47	Peripheral nerves and autonomic nervous system	3	0.15	0	0.00	3	0.07
C69	Eye and adnexa	16	0.78	23	0.98	39	0.89
C70	Meninges	0	0.00	1	0.04	1	0.02
C71	Brain	42	2.04	27	1.15	69	1.57
C72	Spinal cord, cranial, nerves, and other parts of CNS	2	0.10	1	0.04	3	0.07
C73	Thyroid gland	27	1.31	39	1.67	66	1.50
C75	Other endocrine glands & relate structures	1	0.05	1	0.04	1	0.02
C76	Other & unspecified parts of head, face & neck	-	-	-	-	-	-
**	Sum of Head, neck & CNS cases	552	26.84	241	10.30	793	18.04
**	Other cancers	1505	73.16	2099	89.70	3604	81.96
Total		2057	100.00	2340	100.00	4397	100.00

Table 4

Cancer cases by sex - 2006							
ICD-10	Topography	Sex				Total	
		Male		Female			
		#	%	#	%	#	%
C00	Lip	11	0.47	6	0.23	17	0.35
C01	Base of tongue	6	0.26	1	0.04	7	0.14
C02	Other and unspecified parts of tongue	58	2.49	24	0.93	82	1.67
C03	Gum	28	1.20	5	0.19	33	0.67
C04	Floor of mouth	13	0.56	1	0.04	14	0.29
C05	Palate	8	0.34	12	0.46	20	0.41
C06	Other and unspecified parts of mouth	53	2.28	27	1.05	80	1.63
C07	Parotid gland	20	0.86	3	0.12	23	0.47
C08	Other and unspecified major salivary glands	12	0.52	8	0.31	20	0.41
C09	Tonsil	20	0.86	7	0.27	27	0.55
C10	Oropharynx	14	0.60	4	0.15	18	0.37
C11	Nasopharynx	29	1.25	22	0.85	51	1.04
C12	Pyriiform fossa	65	2.80	11	0.43	76	1.55
C13	Hypopharynx	6	0.26	0	0.00	6	0.12
C14	Other and ill-defined sites in lip, oral cavity and pharynx	4	0.17	2	0.08	6	0.12
C30	Nasal cavity and middle ear	25	1.08	7	0.27	32	0.65
C31	Accessory sinus	12	0.52	9	0.35	21	0.43
C32	Larynx	118	5.08	43	1.66	161	3.28
C33	Trachea	0	0.00	0	0.00	0	0.00
C47	Peripheral nerves and autonomic nervous system	1	0.04	1	0.04	2	0.04
C69	Eye and adnexa	12	0.52	16	0.62	28	0.57
C70	Meninges	4	0.17	1	0.04	5	0.10
C71	Brain	55	2.37	19	0.74	74	1.51
C72	Spinal cord, cranial, nerves, and other parts of CNS	0	0.00	1	0.04	1	0.02
C73	Thyroid gland	26	1.12	50	1.94	76	1.55
C75	Other endocrine glands & relate structures	1	0.04	2	0.08	3	0.06
C76	Other & unspecified parts of head, face & neck	-	-	-	-	-	-
**	Sum of Head, neck & CNS cases	601	25.85	282	10.92	883	17.99

**	Other cancers	1724	74.15	2301	89.08	4025	82.01
Total		2325	100.00	2583	100.00	4908	100.00

Table 5

Cancer cases by sex -2007							
ICD-10	Topography	Sex				Total	
		Male		Female			
		#	%	#	%	#	%
C00	Lip	4	0.12	7	0.25	11	0.18
C01	Base of tongue	2	0.06	0	0.00	2	0.03
C02	Other and unspecified parts of tongue	24	0.73	86	3.12	110	1.82
C03	Gum	1	0.03	0	0.00	1	0.02
C04	Floor of mouth	4	0.12	3	0.11	7	0.12
C05	Palate	9	0.27	13	0.47	22	0.36
C06	Other and unspecified parts of mouth	50	1.53	67	2.43	117	1.94
C07	Parotid gland	8	0.24	17	0.62	25	0.41
C08	Other and unspecified major salivary glands	9	0.27	8	0.29	17	0.28
C09	Tonsil	2	0.06	16	0.58	18	0.30
C10	Oropharynx	8	0.24	18	0.65	26	0.43
C11	Nasopharynx	30	0.92	32	1.16	62	1.03
C12	Pyriiform fossa	36	1.10	51	1.85	87	1.44
C13	Hypopharynx	0	0.00	1	0.04	1	0.02
C14	Other and ill-defined sites in lip, oral cavity and pharynx	5	0.15	6	0.22	11	0.18
C30	Nasal cavity and middle ear	2	0.06	6	0.22	8	0.13
C31	Accessory sinus	15	0.46	9	0.33	24	0.40
C32	Larynx	38	1.16	60	2.18	98	1.62
C33	Trachea		0.00	0	0.00	0	0.00
C47	Peripheral nerves and autonomic nervous system	2	0.06	0	0.00	2	0.03
C69	Eye and adnexa	26	0.79	26	0.94	52	0.86
C70	Meninges	0	0.00	0	0.00	0	0.00
C71	Brain	43	1.31	39	1.41	82	1.36
C72	Spinal cord, cranial, nerves, and other parts of CNS	1	0.03	1	0.04	2	0.03
C73	Thyroid gland	74	2.26	92	3.34	166	2.75
C75	Other endocrine glands & relate structures	0	0.00	0	0.00	0	0.00

C76	Other & unspecified parts of head, face & neck	-	-	-	-	-	-
**	Sum of Head, neck & CNS cases	393	11.99	558	20.23	951	15.76
**	Other cancers	2884	88.01	2200	79.77	5084	84.24
Total		3277	100.00	2758	100.00	6035	100.00

Table 6

Cancer cases by sex - 2008							
ICD-10	Topography	Sex				Total	
		Male		Female			
		#	%	#	%	#	%
C00	Lip	19	0.70	14	0.43	33	0.55
C01	Base of tongue	8	0.30	2	0.06	10	0.17
C02	Other and unspecified parts of tongue	59	2.18	31	0.95	90	1.51
C03	Gum	11	0.41	1	0.03	12	0.20
C04	Floor of mouth	9	0.33	5	0.15	14	0.24
C05	Palate	11	0.41	5	0.15	16	0.27
C06	Other and unspecified parts of mouth	65	2.41	45	1.39	110	1.85
C07	Parotid gland	16	0.59	9	0.28	25	0.42
C08	Other and unspecified major salivary glands	9	0.33	5	0.15	14	0.24
C09	Tonsil	23	0.85	26	0.80	49	0.82
C10	Oropharynx	29	1.07	17	0.52	46	0.77
C11	Nasopharynx	29	1.07	28	0.86	57	0.96
C12	Pyiform fossa	53	1.96	15	0.46	68	1.14
C13	Hypopharynx		0.00		0.00		0.00
C14	Other and ill-defined sites in lip, oral cavity and pharynx	22	0.81	14	0.43	36	0.61
C30	Nasal cavity and middle ear	12	0.44	10	0.31	22	0.37
C31	Accessory sinus	14	0.52	12	0.37	26	0.44
C32	Larynx	111	4.11	44	1.36	155	2.61
C33	Trachea	0	0.00	0	0.00	0	0.00
C47	Peripheral nerves and autonomic nervous system	3	0.11	7	0.22	10	0.17
C69	Eye and adnexa	34	1.26	30	0.92	64	1.08
C70	Meninges	0	0.00	0	0.00	0	0.00
C71	Brain	54	2.00	49	1.51	103	1.73
C72	Spinal cord, cranial, nerves, and other parts of CNS	2	0.07	4	0.12	6	0.10

C73	Thyroid gland	35	1.30	41	1.26	76	1.28
C75	Other endocrine glands & relate structures	0	0.00	2	0.06	2	0.03
C76	Other & unspecified parts of head, face & neck	-	-	-	-	-	-
**	Sum of Head, neck & CNS cases	628	23.24	416	12.81	1044	17.55
**	Other cancers	2074	76.76	2831	87.19	4905	82.45
Total		2702	100.00	3247	100.00	5949	100.00

Table 7

Cancer cases by sex -2009							
ICD-10	Topography	Sex				Total	
		Male		Female			
		#	%	#	%	#	%
C00	Lip	12	0.40	5	0.15	17	0.27
C01	Base of tongue	6	0.20	0	0.00	6	0.10
C02	Other and unspecified parts of tongue	72	2.42	33	1.02	105	1.69
C03	Gum	9	0.30	1	0.03	10	0.16
C04	Floor of mouth	7	0.24	13	0.40	11	0.18
C05	Palate	13	0.44	6	0.19	19	0.31
C06	Other and unspecified parts of mouth	30	1.01	13	0.40	43	0.69
C07	Parotid gland	31	1.04	15	0.46	46	0.74
C08	Other and unspecified major salivary glands	18	0.61	8	0.25	26	0.42
C09	Tonsil	16	0.54	4	0.12	20	0.32
C10	Oropharynx	12	0.40	6	0.19	18	0.29
C11	Nasopharynx	56	1.89	17	0.53	73	1.18
C12	Pyramidal sinus	53	1.78	8	0.25	61	0.98
C13	Hypopharynx	10	0.34	3	0.09	13	0.21
C14	Other and ill-defined sites in lip, oral cavity and pharynx	38	1.28	16	0.50	54	0.87
C30	Nasal cavity and middle ear	20	0.67	20	0.62	40	0.65
C31	Accessory sinus	22	0.74	9	0.28	31	0.50
C32	Larynx	167	5.62	51	1.58	218	3.52
C33	Trachea	0	0.00	0	0.00	0	0.00
C47	Peripheral nerves and autonomic nervous system	20	0.67	15	0.46	35	0.56
C69	Eye and adnexa	28	0.94	15	0.46	43	0.69
C70	Meninges	4	0.13	2	0.06	6	0.10

C71	Brain	81	2.73	44	1.36	125	2.02
C72	Spinal cord, cranial, nerves, and other parts of CNS	3	0.10	2	0.06	5	0.08
C73	Thyroid gland	91	3.06	131	4.06	40	0.65
C75	Other endocrine glands & relate structures	1	0.03	2	0.06	1	0.02
C76	Other & unspecified parts of head, face & neck	-	-	-	-	-	-
**	Sum of Head, neck & CNS cases	860	28.96	439	13.60	1299	20.95
**	Other cancers	2110	71.04	2790	86.40	4900	79.05
Total		2970	100.00	3229	100.00	6199	100.00

Table 8

Cancer cases by sex -2010

ICD-10	Topography	Sex				Total	
		Male		Female		#	%
		#	%	#	%		
C00	Lip	12	0.38	9	0.25	21	0.31
C01	Base of tongue	9	0.28	2	0.06	11	0.16
C02	Other and unspecified parts of tongue	66	2.07	45	1.26	111	1.64
C03	Gum	19	0.60	7	0.20	26	0.38
C04	Floor of mouth	17	0.53	3	0.08	20	0.30
C05	Palate	9	0.28	8	0.22	17	0.25
C06	Other and unspecified parts of mouth	101	3.16	34	0.95	135	1.99
C07	Parotid gland	21	0.66	17	0.47	38	0.56
C08	Other and unspecified major salivary glands	15	0.47	9	0.25	24	0.35
C09	Tonsil	22	0.69	5	0.14	27	0.40
C10	Oropharynx	19	0.60	4	0.11	23	0.34
C11	Nasopharynx	34	1.07	16	0.45	50	0.74
C12	Pyriiform fossa	59	1.85	8	0.22	67	0.99
C13	Hypopharynx	7	0.22	2	0.06	9	0.13
C14	Other and ill-defined sites in lip, oral cavity and pharynx	8	0.25	4	0.11	12	0.18
C30	Nasal cavity and middle ear	23	0.72	20	0.56	43	0.63
C31	Accessory sinus	14	0.44	33	0.92	47	0.69
C32	Larynx	146	4.57	44	1.23	190	2.81
C33	Trachea	0	0.00	0	0.00	0	0.00
C47	Peripheral nerves and autonomic	0	0.00	0	0.00	0	0.00

	nervous system						
C69	Eye and adnexa	24	0.75	28	0.78	52	0.77
C70	Meninges	10	0.31	19	0.53	29	0.43
C71	Brain	94	2.94	53	1.48	147	2.17
C72	Spinal cord, cranial, nerves, and other parts of CNS	0	0.00	0	0.00	0	0.00
C73	Thyroid gland	33	1.03	96	2.68	129	1.90
C75	Other endocrine glands & related structures	0	0.00	0	0.00	0	0.00
C76	Other & unspecified parts of head, face & neck	-	#VALUE!	-	#VALUE!	-	#VALUE!
**	Sum of Head, neck & CNS cases	762	23.87	466	13.01	1228	18.13
**	Other cancers	2430	76.13	3115	86.99	4545	67.10
Total		3192	100.00	3581	100.00	6773	100.00

Table 9

Cancer cases by sex -2011							
ICD-10	Topography	Sex				Total	
		Male		Female			
		#	%	#	%	#	%
C00	Lip	14	0.42	3	0.08	17	0.24
C01	Base of tongue	2	0.06	2	0.05	4	0.06
C02	Other and unspecified parts of tongue	97	2.94	51	1.34	148	2.09
C03	Gum	26	0.79	11	0.29	37	0.52
C04	Floor of mouth	3	0.09	2	0.05	5	0.07
C05	Palate	14	0.42	14	0.37	28	0.40
C06	Other and unspecified parts of mouth	112	3.40	43	1.13	155	2.19
C07	Parotid gland	22	0.67	15	0.40	37	0.52
C08	Other and unspecified major salivary glands	6	0.18	15	0.40	21	0.30
C09	Tonsil	22	0.67	12	0.32	34	0.48
C10	Oropharynx	25	0.76	10	0.26	35	0.49
C11	Nasopharynx	34	1.03	19	0.50	53	0.75
C12	Pyriiform fossa	58	1.76	8	0.21	66	0.93
C13	Hypopharynx	17	0.52	6	0.16	23	0.32
C14	Other and ill-defined sites in lip, oral cavity and pharynx	26	0.79	5	0.13	31	0.44
C30	Nasal cavity and middle ear	21	0.64	17	0.45	38	0.54
C31	Accessory sinus	19	0.58	18	0.47	37	0.52

C32	Larynx	175	5.31	47	1.24	222	3.13
C33	Trachea	0	0.00	0	0.00	0	0.00
C47	Peripheral nerves and autonomic nervous system	3	0.09	6	0.16	9	0.13
C69	Eye and adnexa	29	0.88	33	0.87	62	0.87
C70	Meninges	4	0.12	1	0.03	5	0.07
C71	Brain	74	2.25	53	1.40	127	1.79
C72	Spinal cord, cranial, nerves, and other parts of CNS	6	0.18	1	0.03	7	0.10
C73	Thyroid gland	29	0.88	143	3.77	172	2.43
C75	Other endocrine glands & relate structures	4	0.12	2	0.05	6	0.08
C76	Other & unspecified parts of head, face & neck	-	-	-	-	-	-
**	Sum of Head, neck & CNS cases	842	25.55	537	14.16	1379	19.46
**	Other cancers	2453	74.45	3256	85.84	570	8.04
Total		3295	100.00	3793	100.00	7088	100.00

Table 10

Cancer cases by sex -2012

ICD-10	Topography	Sex				Total	
		Male		Female			
		#	%	#	%	#	%
C00	Lip	17	0.52	4	0.10	21	0.29
C01	Base of tongue	8	0.24	1	0.03	9	0.12
C02	Other and unspecified parts of tongue	78	2.37	37	0.94	115	1.59
C03	Gum	13	0.40	3	0.08	16	0.22
C04	Floor of mouth	14	0.43	3	0.08	17	0.24
C05	Palate	12	0.36	8	0.20	20	0.28
C06	Other and unspecified parts of mouth	123	3.74	55	1.40	178	2.47
C07	Parotid gland	25	0.76	13	0.33	38	0.53
C08	Other and unspecified major salivary glands	20	0.61	13	0.33	33	0.46
C09	Tonsil	23	0.70	7	0.18	30	0.42
C10	Oropharynx	21	0.64	10	0.26	31	0.43
C11	Nasopharynx	48	1.46	33	0.84	81	1.12
C12	Pyriiform fgossa	60	1.82	12	0.31	72	1.00
C13	Hypopharynx	6	0.18	1	0.03	7	0.10

C14	Other and ill-defined sites in lip, oral cavity and pharynx	6	0.18	4	0.10	10	0.14
C30	Nasal cavity and middle ear	18	0.55	15	0.38	33	0.46
C31	Accessory sinus	23	0.70	12	0.31	35	0.49
C32	Larynx	170	5.17	36	0.92	206	2.86
C33	Trachea	2	0.06	0	0.00	2	0.03
C47	Peripheral nerves and autonomic nervous system	2	0.06	4	0.10	6	0.08
C69	Eye and adnexa	22	0.67	16	0.41	38	0.53
C70	Meninges	6	0.18	6	0.15	12	0.17
C71	Brain	104	3.16	78	1.99	182	2.52
C72	Spinal cord, cranial, nerves, and other parts of CNS	3	0.09	2	0.05	5	0.07
C73	Thyroid gland	40	1.22	122	3.11	162	2.25
C75	Other endocrine glands & related structures	5	0.15	2	0.05	7	0.10
C76	Other & unspecified parts of head, face & neck	-	-	-	-	-	-
**	Sum of Head, neck & CNS cases	869	26.41	497	12.68	1366	18.94
**	Other cancers	2426	73.72	3424	87.32	5846	81.06
Total		3291	100.00	3921	100.00	7212	100.00

Table 11

Cancer cases by sex -2013							
ICD-10	Topography	Sex				Total	
		Male		Female			
		#	%	#	%	#	%
C00	Lip	27	0.67	8	0.17	35	0.40
C01	Base of tongue	7	0.17	1	0.02	8	0.09
C02	Other and unspecified parts of tongue	107	2.67	51	1.08	158	1.81
C03	Gum	17	0.42	8	0.17	25	0.29
C04	Floor of mouth	26	0.65	8	0.17	34	0.39
C05	Palate	22	0.55	8	0.17	30	0.34
C06	Other and unspecified parts of mouth	136	3.39	29	0.61	165	1.89
C07	Parotid gland	24	0.60	8	0.17	32	0.37
C08	Other and unspecified major salivary glands	19	0.47	11	0.23	30	0.34
C09	Tonsil	26	0.65	12	0.25	38	0.44
C10	Oropharynx	25	0.62	10	0.21	35	0.40

C11	Nasopharynx	57	1.42	25	0.53	82	0.94
C12	Pyriiform sinus	82	2.04	11	0.23	93	1.07
C13	Hypopharynx	14	0.35	2	0.04	16	0.18
C14	Other and ill-defined sites in lip, oral cavity and pharynx	14	0.35	3	0.06	17	0.19
C30	Nasal cavity and middle ear	23	0.57	23	0.49	46	0.53
C31	Accessory sinus	18	0.45	10	0.21	28	0.32
C32	Larynx	250	6.23	116	2.46	366	4.19
C33	Trachea	2	0.05	1	0.02	3	0.03
C47	Peripheral nerves and autonomic nervous system	2	0.05	2	0.04	4	0.05
C69	Eye and adnexa	18	0.45	23	0.49	41	0.47
C70	Meninges	4	0.10	13	0.28	17	0.19
C71	Brain	118	2.94	99	2.10	217	2.49
C72	Spinal cord, cranial, nerves, and other parts of CNS	7	0.17	9	0.19	16	0.18
C73	Thyroid gland	52	1.30	126	2.67	178	2.04
C75	Other endocrine glands & relate structures	2	0.05	3	0.06	5	0.06
C76	Other & unspecified parts of head, face & neck	24	0.60	21	0.45	45	0.52
**	Sum of Head, neck & CNS cases	1123	28.00	641	13.59	1764	20.21
**	Other cancers	2888	72.00	4077	86.41	6965	79.79
Total		4011	100.00	4718	100.00	8729	100.00

Table 12

Cancer cases by sex -2014							
ICD-10	Topography	Sex				Total	
		Male		Female		#	%
		#	%	#	%		
C00	Lip	18	0.45	7	0.14	25	0.28
C01	Base of tongue	3	0.07	0	0.00	3	0.03
C02	Other and unspecified parts of tongue	134	3.34	64	1.27	198	2.19
C03	Gum	37	0.92	18	0.36	55	0.61
C04	Floor of mouth	17	0.42	6	0.12	23	0.25
C05	Palate	15	0.37	11	0.22	26	0.29
C06	Other and unspecified parts of mouth	124	3.09	46	0.92	170	1.88
C07	Parotid gland	35	0.87	22	0.44	57	0.63
C08	Other and unspecified major	19	0.47	13	0.26	32	0.35

	salivary glands						
C09	Tonsil	20	0.50	13	0.26	33	0.37
C10	Oropharynx	24	0.60	6	0.12	30	0.33
C11	Nasopharynx	60	1.49	34	0.68	94	1.04
C12	Pyriiform sinus	82	2.04	9	0.18	91	1.01
C13	Hypopharynx	11	0.27	1	0.02	12	0.13
C14	Other and ill-defined sites in lip, oral cavity and pharynx	11	0.27	4	0.08	15	0.17
C30	Nasal cavity and middle ear	40	1.00	29	0.58	69	0.76
C31	Accessory sinus	25	0.62	17	0.34	42	0.46
C32	Larynx	247	6.15	112	2.23	359	3.97
C33	Trachea	0	0.00	0	0.00	0	0.00
C47	Peripheral nerves and autonomic nervous system	3	0.07	2	0.04	5	0.06
C69	Eye and adnexa	56	1.40	50	1.00	106	1.17
C70	Meninges	10	0.25	13	0.26	23	0.25
C71	Brain	119	2.96	83	1.65	202	2.24
C72	Spinal cord, cranial, nerves, and other parts of CNS	4	0.10	10	0.20	14	0.15
C73	Thyroid gland	38	0.95	145	2.89	183	2.03
C75	Other endocrine glands & relate structures	1	0.02	5	0.10	6	0.07
C76	Other head, face & neck	6	0.15	8	0.16	14	0.15
**	Sum of Head, neck & CNS cases	1159	28.87	728	14.50	1887	20.88
**	Other cancers	2855	71.13	4294	85.50	7149	79.12
Total		4014	100.00	5022	100.00	9036	100.00

Table 13

Cancer cases by sex -2015							
ICD-10	Topography	Sex				Total	
		Male		Female			
		#	%	#	%	#	%
C00	Lip	27	0.60	9	0.17	36	0.37
C01	Base of tongue	2	0.04	0	0.00	2	0.02
C02	Other and unspecified parts of tongue	119	2.65	53	1.01	172	1.77
C03	Gum	66	1.47	13	0.25	79	0.81
C04	Floor of mouth	13	0.29	4	0.08	17	0.17
C05	Palate	12	0.27	4	0.08	16	0.16
C06	Other and unspecified parts of mouth	118	2.63	31	0.59	149	1.53

C07	Parotid gland	23	0.51	18	0.34	41	0.42
C08	Other and unspecified major salivary glands	15	0.33	15	0.29	30	0.31
C09	Tonsil	30	0.67	13	0.25	43	0.44
C10	Oropharynx	19	0.42	8	0.15	27	0.28
C11	Nasopharynx	63	1.41	21	0.40	84	0.86
C12	Pyriiform sinus	81	1.81	17	0.32	98	1.01
C13	Hypopharynx	6	0.13	6	0.11	12	0.12
C14	Other and ill-defined sites in lip, oral cavity and pharynx	14	0.31	3	0.06	17	0.17
C30	Nasal cavity and middle ear	37	0.83	28	0.53	65	0.67
C31	Accessory sinus	22	0.49	22	0.42	44	0.45
C32	Larynx	254	5.67	106	2.02	360	3.70
C33	Trachea	3	0.07	0	0.00	3	0.03
C47	Peripheral nerves and autonomic nervous system	2	0.04	5	0.10	7	0.07
C69	Eye and adnexa	38	0.85	22	0.42	60	0.62
C70	Meninges	9	0.20	16	0.31	25	0.26
C71	Brain	137	3.06	108	2.06	245	2.52
C72	Spinal cord, cranial, nerves, and other parts of CNS	11	0.25	4	0.08	15	0.15
C73	Thyroid gland	59	1.32	143	2.73	202	2.08
C75	Other endocrine glands & relate structures	6	0.13	5	0.10	11	0.11
C76	Other & unspecified parts of head, face & neck	27	0.60	17	0.32	44	0.45
**	Sum of Head, neck & CNS cases	1186	26.46	674	12.87	1860	19.14
**	Other cancers	3297	73.54	4561	87.13	7858	80.86
Total		4483	100.00	5235	100.00	9718	100.00

Table 14

Cancer cases by sex -2016							
ICD-10	Topography	Sex				Total	
		Male		Female			
		#	%	#	%	#	%
C00	Lip	23	0.49	9	0.17	32	0.32
C01	Base of tongue	4	0.09	0	0.00	4	0.04
C02	Other and unspecified parts of tongue	139	2.96	70	1.29	209	2.07
C03	Gum	42	0.89	18	0.33	60	0.59
C04	Floor of mouth	14	0.30	6	0.11	20	0.20

C05	Palate	17	0.36	6	0.11	23	0.23
C06	Other and unspecified parts of mouth	129	2.75	43	0.79	172	1.70
C07	Parotid gland	21	0.45	19	0.35	40	0.40
C08	Other and unspecified major salivary glands	17	0.36	15	0.28	32	0.32
C09	Tonsil	20	0.43	9	0.17	29	0.29
C10	Oropharynx	21	0.45	10	0.18	31	0.31
C11	Nasopharynx	58	1.23	28	0.52	86	0.85
C12	Pyramidal fossa	63	1.34	15	0.28	78	0.77
C13	Hypopharynx	5	0.11	4	0.07	9	0.09
C14	Other and ill-defined sites in lip, oral cavity and pharynx	6	0.13	2	0.04	8	0.08
C30	Nasal cavity and middle ear	47	1.00	36	0.66	83	0.82
C31	Accessory sinus	18	0.38	17	0.31	35	0.35
C32	Larynx	223	4.75	66	1.22	289	2.86
C33	Trachea	1	0.02	0	0.00	1	0.01
C47	Peripheral nerves and autonomic nervous system	4	0.08	0	0	4	0.04
C69	Eye and adnexa	42	0.89	17	0.31	59	0.58
C70	Meninges	8	0.17	12	0.22	20	0.20
C71	Brain	174	3.70	105	1.94	279	2.76
C72	Spinal cord, cranial, nerves, and other parts of CNS	13	0.27	3	0.06	16	0.15
C73	Thyroid gland	62	1.32	174	3.21	236	2.33
C75	Other endocrine glands & related structures	1	0.02	3	0.06	4	0.04
C76	Other & unspecified parts of head, face & neck	20	0.43	17	0.31	37	0.37
**	Sum of Head, neck & CNS cases	1175	25.02	701	12.93	1870	18.48
**	Other cancers	3522	74.98	4719	87.07	8247	81.52
Total		4697	100.00	5420	100.00	10117	100.00

Table 15

Cancer cases by sex -2017							
ICD-10	Topography	Sex				Total	
		Male		Female			
		#	%	#	%	#	%
C00	Lip	18	0.36	9	0.16	27	0.26
C01	Base of tongue	1	0.02	0	0.00	1	0.01
C02	Other and unspecified parts of	162	3.28	48	0.86	210	2.00

	tongue						
C03	Gum	56	1.13	14	0.25	70	0.67
C04	Floor of mouth	11	0.22	4	0.07	15	0.14
C05	Palate	20	0.40	9	0.16	29	0.28
C06	Other and unspecified parts of mouth	153	3.10	61	1.09	214	2.03
C07	Parotid gland	18	0.36	19	0.34	37	0.35
C08	Other and unspecified major salivary glands	9	0.18	4	0.07	13	0.12
C09	Tonsil	27	0.55	7	0.13	34	0.32
C10	Oropharynx	29	0.59	10	0.18	39	0.37
C11	Nasopharynx	72	1.46	37	0.66	109	1.04
C12	Pyriiform fossa	62	1.26	11	0.20	73	0.69
C13	Hypopharynx	11	0.22	2	0.04	13	0.12
C14	Other and ill-defined sites in lip, oral cavity and pharynx	9	0.18	3	0.05	12	0.11
C30	Nasal cavity and middle ear	32	0.65	22	0.39	54	0.51
C31	Accessory sinus	23	0.47	17	0.30	40	0.38
C32	Larynx	204	4.13	74	1.33	278	2.64
C33	Trachea	0	0.00	1	0.02	1	0.01
C47	Peripheral nerves and autonomic nervous system	4	0.08	3	0.05	7	0.07
C69	Eye and adnexa	21	0.43	20	0.36	41	0.39
C70	Meninges	11	0.22	11	0.20	22	0.21
C71	Brain	132	2.67	108	1.94	240	2.28
C72	Spinal cord, cranial, nerves, and other parts of CNS	4	0.08	7	0.13	11	0.10
C73	Thyroid gland	49	0.99	174	3.12	223	2.12
C75	Other endocrine glands & relate structures	4	0.08	3	0.05	7	0.07
C76	Other head, face & neck	9	0.18	8	0.14	17	0.16
**	Sum of Head, neck & CNS cases	1147	23.22	683	12.25	1830	17.40
**	Other cancers	3792	76.78	4894	87.75	8656	82.31
Total		4939	100.00	5577	100.00	10516	100.00

Table 16

Head, neck & CNS cases by sex (2003-2017)							
ICD-10	Topography	Sex				Total	
		Male		Female			
		#	%	#	%	#	%

C00	Lip	233	1.92	105	1.45	338	1.75
C01	Base of tongue	70	0.58	14	0.19	84	0.43
C02	Other and unspecified parts of tongue	1239	10.21	644	8.91	1883	9.72
C03	Gum	383	3.16	115	1.59	498	2.57
C04	Floor of mouth	174	1.43	63	0.87	237	1.22
C05	Palate	184	1.52	115	1.59	299	1.54
C06	Other and unspecified parts of mouth	1353	11.15	531	7.35	1884	9.73
C07	Parotid gland	307	2.53	199	2.75	506	2.61
C08	Other and unspecified major salivary glands	180	1.48	129	1.78	309	1.60
C09	Tonsil	284	2.34	153	2.12	437	2.26
C10	Oropharynx	267	2.20	123	1.70	390	2.01
C11	Nasopharynx	662	5.46	347	4.80	1009	5.21
C12	Pyriform sinus	869	7.16	193	2.67	1062	5.48
C13	Hypopharynx	107	0.88	31	0.43	138	0.71
C14	Other and ill-defined sites in lip, oral cavity and pharynx	182	1.50	69	0.95	251	1.30
C30	Nasal cavity and middle ear	309	2.55	245	3.39	554	2.86
C31	Accessory sinus	265	2.18	204	2.82	469	2.42
zcC32	Larynx	2442	20.12	868	12.01	3310	17.09
C33	Trachea	8	0.07	2	0.03	10	0.05
C47	Peripheral nerves and autonomic nervous system	42	0.35	43	0.59	85	0.44
C69	Eye and adnexa	399	3.29	342	4.73	741	3.83
C70	Meninges	72	0.59	96	1.33	168	0.87
C71	Brain	1295	10.67	902	12.48	2197	11.35
C72	Spinal cord, cranial, nerves, and other parts of CNS	48	0.40	43	0.59	91	0.47
C73	Thyroid gland	659	5.43	1557	21.54	2216	11.44
C75	Other endocrine glands & related structures	27	0.22	31	0.43	58	0.30
C76	Other head, face & neck	75	0.62	64	0.89	139	0.72
**	Sum of Head, neck & CNS cases	12135	100.00	7228	100.00	19363	100.00

only national cancer institute of the nation. Data were collected from 12 w major hospital of the nation

V. Discussion

This study is undertaken at cancer prevention, control & research department BP Koirala memorial cancer hospital, Bharatpur, Chitwan, Nepal, which is

from 2013-2017. A total of 19363 cases were registered. Among the head, neck and CNS cases, larynx was a common topography 17.09% followed

by thyroid 11.44% and brain 11.35% for both sex. Cancer of the larynx 20.12% was common for male followed by other & unspecified parts of mouth 11.15% and brain 10.67%. Whereas, thyroid gland 21.54% was common for women followed by brain 12.48% and larynx 12.01.

VI. Conclusion

Among the head, neck & CNS cases larynx was a common cancer topography followed by thyroid and brain.

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VIII. REFERENCES

- [1]. Global cancer statistics 2018
- [2]. International Classification of Disease for oncology, WHO/IARC 3rd Edition, Lyon France , 2000
- [3]. National Cancer Registry Programme, Report of Hospital Based National Cancer Registry 2003, B.PKoirala Memorial Cancer Hospital Bharatpur, Chitwan, Nepal
- [4]. National Cancer Registry Programme, Report of Hospital Based National Cancer Registry 2004, B.PKoirala Memorial Cancer Hospital Bharatpur, Chitwan, Nepal
- [5]. National Cancer Registry Programme, Report of Hospital Based National Cancer Registry 2005, B.PKoirala Memorial Cancer Hospital Bharatpur, Chitwan, Nepal
- [6]. National Cancer Registry Programme, Report of Hospital Based National Cancer Registry 2006, B.PKoirala Memorial Cancer Hospital Bharatpur, Chitwan, Nepal
- [7]. National Cancer Registry Programme, Report of Hospital Based National Cancer Registry 2007, B.PKoirala Memorial Cancer Hospital Bharatpur, Chitwan, Nepal
- [8]. National Cancer Registry Programme, Report of Hospital Based National Cancer Registry 2008, B.PKoirala Memorial Cancer Hospital Bharatpur, Chitwan, Nepal
- [9]. National Cancer Registry Programme, Report of Hospital Based National Cancer Registry 2009, B.PKoirala Memorial Cancer Hospital Bharatpur, Chitwan, Nepal
- [10]. National Cancer Registry Programme, Report of Hospital Based National Cancer Registry 2010, B.PKoirala Memorial Cancer Hospital Bharatpur, Chitwan, Nepal
- [11]. National Cancer Registry Programme, Report of Hospital Based National Cancer Registry 2011, B.PKoirala Memorial Cancer Hospital Bharatpur, Chitwan, Nepal
- [12]. National Cancer Registry Programme, Report of Hospital Based National Cancer Registry 2012, B.PKoirala Memorial Cancer Hospital Bharatpur, Chitwan, Nepal
- [13]. National Cancer Registry Programme, Report of Hospital Based National Cancer Registry 2013, B.PKoirala Memorial Cancer Hospital Bharatpur, Chitwan, Nepal
- [14]. National Cancer Registry Programme, Report of Hospital Based National Cancer Registry 2014, B.PKoirala Memorial Cancer Hospital Bharatpur, Chitwan, Nepal
- [15]. National Cancer Registry Programme, Report of Hospital Based National Cancer Registry 2015, B.PKoirala Memorial Cancer Hospital Bharatpur, Chitwan, Nepal
- [16]. National Cancer Registry Programme, Report of Hospital Based National Cancer Registry 2015, B.PKoirala Memorial Cancer Hospital Bharatpur, Chitwan, Nepal

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