

GENDER-WISE PREVALENCE OF BENIGN AND MALIGNANT TUMORS OF NECK REGION IN LAHORE

R. Shakeel¹, A. Ishaque², S. Qureshi³, A. Malik⁴, M. Hassan⁵, G. Amin⁶ and A. Tariq⁷

¹Demonstrator, Department of physiology, Bolan medical University of health sciences

²Demonstrator, Department of physiology, Bolan medical University of health sciences

³Associate professor, Department of Oral and Maxillofacial surgery, University College of Medicine and Dentistry, University of Lahore

⁴Associate professor, Department of Prosthodontics, University College of Medicine and Dentistry, University of Lahore

⁵Associate professor, Department of Science of Dental Materials, University College of Medicine and Dentistry, University of Lahore

⁶Associate professor, Department of Bio-chemistry, University College of Medicine and Dentistry, University of Lahore

⁷Postgraduate research coordinator, Research cell, University College of Medicine and Dentistry, University of Lahore

ABSTRACT: The purpose of the study was to explore the prevalence of benign and malignant cancers of neck region among both gender in Lahore. Data of 524 patients with cancer of neck region was extracted from the records. Data was collected from the OPD records of patients visited hospital in last 4 years from 2017 to 2020 with the permission of medical superintendent of hospital. The results of chi-square revealed that there was a significant difference found between both genders in terms of benign cancer prevalence ($X^2=17.019$, $P=.002$). Significant difference between males and females was found in terms of malignant cancer prevalence ($X^2=19.272$, $P=.013$). In conclusion, significant difference was found with regards to the prevalence of benign and malignant cancers of neck region among both genders.

Key words: Gender, hospital, Lahore, males and females, malignant cancers and prevalence

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INTRODUCTION

In Pakistan, Cancer is the leading cause of demise (Sarwar, Saqib & Schumacher, 2017). So, in developing countries, cancer is a serious and highly prevalent health issue. Current research concluded that 9007 new cancer cases have been reported in Iran from 2004 to 2008 (Roshandel, Sadjadi, Aarabi, Keshtkar, Sedaghat, Nouraie, Semnani, & Malekzadeh, 2012).

The most common cancer among Iranian population is esophageal squamous cell carcinoma (Roshandel, Sadjadi, Aarabi, Keshtkar, Sedaghat, Nouraie, Semnani, & Malekzadeh, 2012; Mahboubi, Kmet, Cook, Day, Ghadirian, & Salmasizadeh, 1973; Semnani, Sadjadi, Fahimi, Nouraie, Naeimi, Kabir, Fakheri, Saadatnia, Ghavamnasiri, & Malekzadeh, 2006). Risk factors associated with esophageal squamous cell carcinoma is usage of opium, alcohol, tobacco along with poor oral hygiene, hot tea intake as well as obesity (Malekzadeh, Semnani, & Sadjadi, 2008; Sadjadi, Marjani, Semnani, Nasseri-Moghaddam, 2010; Marjani, Biramijamal, Hossein-Nezhad, Islami, Pourshmas, & Semnani, 2010). The most prevalent histological category of cancer of esophagus is Squamous cell carcinoma specifically in low income countries. In Golestan, squamous cell carcinoma was found 90% in esophageal cancers cases (Malekzadeh, Semnani, & Sadjadi, 2008;

Sadjadi, Marjani, Semnani, Nasseri-Moghaddam, 2010; Marjani, Biramijamal, Hossein-Nezhad, Islami, Pourshmas, & Semnani, 2010).

Worldwide, new cancer cases reported were nearly 5.5lac per annum, and squamous cell carcinoma of head and neck is the 6th most prevalent type of cancer. All over the world, squamous cell carcinoma of head and neck rate has a great disparity and is commonly prevailing in Asian as well as northern European population (Jemal, Bray, Center, Ferlay, Ward, & Forman, 2011).

Poor prognosis is common in squamous cell carcinoma of head and neck due to which survival rate below 5-year was reported over the past 40years (Mafi, Kadivar, Hosseini, Ahmadi, & Zare-Mirzaie, 2012). In United States, nearly 61thousand new cases of Head and neck cancers was reported whereas 13190 deaths were recorded in 2016 (Massa, Osazuwa-Peters, Christopher, Arnold, Schootman, Walker, & Varvares, 2017).

A study conducted to explore the gender-wise prevalence of benign and malignant cancers of head region in Punjab which revealed a significant difference of benign and malignant cancers occurrence in head region. Nasal polyp was reported higher among both genders as benign cancer. On the other hand, among males, highest prevailing malignant cancer was Squamous Cell Carcinoma of tongue (52.6%) whereas

highest (39.3%) malignant cancer among females was squamous cell carcinoma of soft palate at head region (Khan, Nawadat, Ahmed, Irfan, Nisar, Shahid, & Tariq, 2020). No study has been cited for neck region cancer prevalence among both genders in Punjab, so there is a need to fill this gap by exploring the prevalence of benign and malignant cancers of neck region among both gender in Lahore. Hence, the purpose of the study was to explore the prevalence of benign and malignant cancers of neck region among both gender in Lahore.

METHODOLOGY

Research design: Analytical crosssectional study was designed to explore the prevalence of benign and malignant cancers of neck region among both genders in Lahore.

Sampling technique: Through convenient sampling technique, secondary data was collected from one hospital only.

Sample size: Data of 524 patients with cancer of neck region was extracted from the records. Data of only those patients was taken who were reported with any type of

cancer of neck region. From the total sample, 299 benign cancer patients were found whereas 138 malignant cancer patients were found with regards to neck region as cancer site.

Procedure: Data was collected from the OPD records of patients visited hospital in last 4 years from 2017 to 2020 with the permission of medical superintendent of hospital. Extracted data was documented in excel sheet. As demographic variable gender was taken and type of cancer as well as site of occurrence was noted.

Data analysis: SPSS version 25 was used for data analysis. As descriptive statistic, frequencies and percentages of both gender were reported. Gender-wise difference with regards to the prevalence of benign and malignant neck region cancers was explored using Chi-Square test.

RESULTS

Total sample comprised of 438 patients among which 267(61%) were males and 171(39%) were females as shown in the figure below.

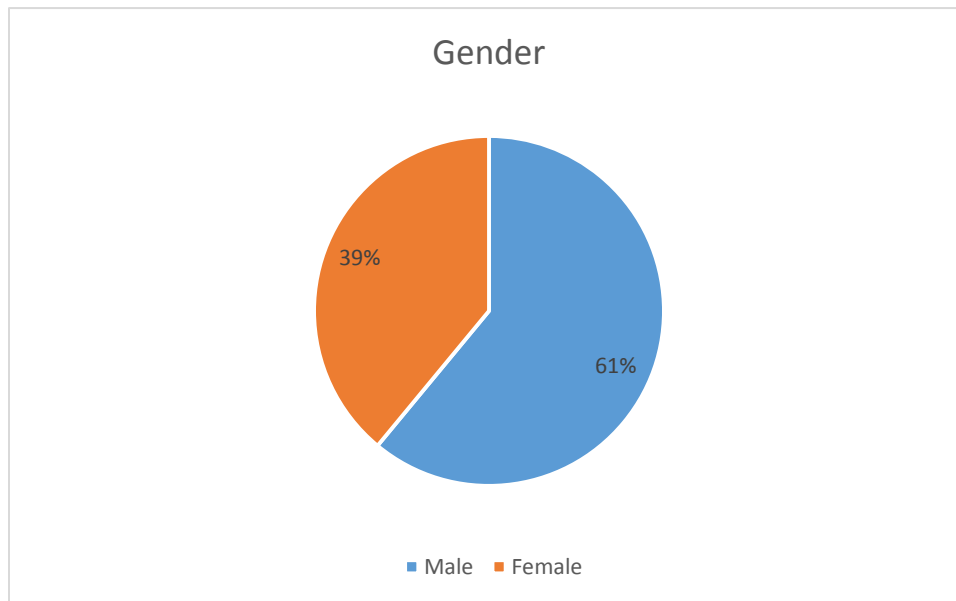


Figure 1. Gender wise sample distribution.

The results of chi-square revealed that there was a significant difference found between both genders in terms of benign cancer prevalence ($X^2=17.019$, $P=.002$). Multinodular goiter was highly prevalent among females (59.1%) as compared to males (36.6%). Follicular adenoma of thyroid was found higher in males (8.1%) as

compared to females (6.3%). Adenomatoid colloid goiter was found higher in males (44.8%) as compared to females (25.2%). Hashimoto's thyroiditis was found higher among males (9.9%) as compared to females (7.9%). Thyroglossal cyst is less prevalent in males (.06%) as compared to females (1.6%).

Table 1. Gender wise prevalence of benign cancer of neck region.

		Gender		X ²	Sig.
		Male	Female		
Benign cancer of neck region	Multinodular goiter (MNG)	36.6%	59.1%	17.019	0.002
	Follicular adenoma thyroid	8.1%	6.3%		
	Adenomatoid colloid goiter	44.8%	25.2%		
	Hashimoto's thyroiditis	9.9%	7.9%		
	Thyroglossal cyst	.6%	1.6%		

Significant difference between males and females was found in terms of malignant cancer prevalence ($X^2=19.272$, $P=.013$). Among females, papillary carcinoma of thyroid was found higher (44.2%) as compared to males (17.9%). Squamous cell carcinoma of vocal cord was found higher among males (26.3%) as compared to females (9.3%). Squamous cell carcinoma of esophagus was higher among females (11.6%) as compared to males (6.3%). Squamous cell carcinoma of supra-glothic region was found higher among males

(5.3%) as compared to females (2.3%). Squamous cell carcinoma of pharynx was found slightly higher among females (4.7%) as compared to males (4.2%). Hodgkin's Lymphoma was found more among males (14.7%) as compared to females (2.3%). Non-Hodgkin's Lymphoma was found more in females (9.3%) as compared to males (8.4%). Lymphoma was found higher among females (11.6%) as compared to males (7.4%). Squamous cell carcinoma of Larynx was found less in females (4.7%) as compared to males (9.5%).

Table 2. Gender wise prevalence of malignant cancer of neck region.

		Gender		X ²	Sig.
		Male	Female		
Malignant cancer of neck region	Papillary carcinoma of thyroid	17.9%	44.2%	19.272	.013
	Squamous cell carcinoma of vocal cord	26.3%	9.3%		
	Squamous cell carcinoma of esophagus	6.3%	11.6%		
	Squamous cell carcinoma of supra-glothic region	5.3%	2.3%		
	Squamous cell carcinoma of pharynx	4.2%	4.7%		
	Hodgkin's Lymphoma	14.7%	2.3%		
	Non-Hodgkin's Lymphoma	8.4%	9.3%		
	Lymphoma	7.4%	11.6%		
	Squamous cell carcinoma of Larynx	9.5%	4.7%		

DISCUSSION

The purpose of the study was to explore the prevalence of benign and malignant cancers of neck region among both gender in Lahore. The findings of the study revealed that Multinodular goiter was highly prevalent among females (59.1%) as compared to males (36.6%). Follicular adenoma of thyroid was found higher in males (8.1%) as compared to females (6.3%). Adenomatoid colloid goiter was found higher in males (44.8%) as compared to females (25.2%). Hashimoto's thyroiditis was found higher among males (9.9%) as compared to females (7.9%). Thyroglossal cyst is less prevalent in males (.06%) as compared to females (1.6%).

It was also explored that among females, papillary carcinoma of thyroid was found higher (44.2%) as compared to males (17.9%). Squamous cell carcinoma of vocal cord was found higher among males (26.3%) as compared to females (9.3%). Squamous cell carcinoma of

esophagus was higher among females (11.6%) as compared to males (6.3%) which was found quite low as compared to the results of the previously conducted studies in Iran which reported that squamous cell carcinoma was found 90% in esophageal cancers cases (Malekzadeh, Semnani, & Sadjadi, 2008; Sadjadi, Marjani, Semnani, Nasser-Moghaddam, 2010; Marjani, Biramijamal, Hossein-Nezhad, Islami, Pourshmas, & Semnani, 2010). Squamous cell carcinoma of supra-glothic region was found higher among males (5.3%) as compared to females (2.3%). Squamous cell carcinoma of pharynx was found slightly higher among females (4.7%) as compared to males (4.2%). Hodgkin's Lymphoma was found more among males (14.7%) as compared to females (2.3%). Non-Hodgkin's Lymphoma was found more in females (9.3%) as compared to males (8.4%). Lymphoma was found higher among females (11.6%) as compared to males (7.4%). Squamous cell carcinoma of Larynx was found less in females (4.7%) as compared to males (9.5%).

Conclusion: In conclusion, significant difference was found with regards to the prevalence of benign and malignant cancers of neck region among both genders.

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