DOI: https://doi.org/10.54393/df.v3i01.26

DIET FACTOR
Journal of Nutritional & Food Sciences
https://www.dietfactor.com.pk/index.php/df
Volume 2, Issue 1(Jan-Jun 2021)

Original Article

Demographic Variables Associated with Oral Squamous Cell Carcinoma in a Small Subset of Population at a Tertiary Care Hospital of Lahore

Tallat Anwar Faridi[1], Sami Ullah Mumtaz[2*], Umar Raees[3], Uzma Rafi[4], Maria Fareed Siddiqui[5], Muhammad Azzam Khan[6] and Iqra Hamid Khan[1]

[1]University Institute of Public Health, Faculty of Allied Health Sciences, The University of Lahore, Lahore, Pakistan
[2]North Medical Ward, Department of Medicine, Mayo Hospital, Lahore, Pakistan
[3]Pakistan Council of Research in Water Resources, Lahore, Pakistan
[4]Department of Biology, Lahore Garrison University, Lahore, Pakistan
[5]Department of Pharmacy, The University of Lahore, Lahore, Pakistan
[6]Department of Rehabilitation Sciences, Faculty of Allied Health Sciences, The University of Lahore, Lahore, Pakistan

Keywords: Oral Cancer, Gutka, Pan, Sapari, Substance Abuse

How to Cite:
Faridi, T. A. ., Mumtaz, S., Raees, U., Rafi, U., Siddiqui, M. F., Khan, M. A., & Hamid, I. (2021). Demographic variables associated with oral squamous cell carcinoma in a small subset of population at a tertiary care hospital of Lahore. DIET FACTOR (Journal of Nutritional &Amp; Food Sciences), 2(01), 21–25. https://doi.org/10.54393/df.v3i01.26

Corresponding author:
Shahid Bashir
Myo Hospital Lahore, Lahore, Pakistan.
drsumumtaz@gmail.com

Article History
Received: 21st March 2021
Accepted: 25th April 2021
Published: 30th June 2021

ABSTRACT

Oral Squamous Cell Carcinoma (OSCC) is life-threatening disease in South-Asian Countries where there is more consumption of tobacco, gutka and other substance of abuse. **Objective:** To evaluate the demographic variables in a small subset of population at a tertiary care hospital of Lahore **Methods:** This cross-sectional study was conducted in a tertiary care hospital of Lahore, Pakistan and a designed proforma was used for data collection after consent of patients. **Results:** Majority of the patients were males; frequent age group was 60-80 years and well differentiated carcinoma patients were more as compared to other grades **Conclusions:** Regular oral checkup for smokers and drinkers and preventive measures should be taken for discouraging and giving up the smoking.

INTRODUCTION

The high incidence and aggressive behavior of squamous cell carcinoma of head and neck region is alarming of all cancers affecting humans [1-3]. Although the global incidence of oral cancer has decreased but the oral cancer due to human papilloma virus is no rise [4].

The mortality rate for intra-oral cancer is still high which is an estimated 50%, it may be due to the fact that the disease is usually diagnosed and presented at advanced stage [5]. Early diagnosis of oral cancer may prevent the metastatic stage and mortality. Usually, the delay is at both ends: patients as well as doctors [6]. Oral cancer is at top ranking in cancers of males and a major cause of mortalities due to cancer in Pakistan [7]. The detection of pre-cancerous lesions may be helpful in proper treatment and further progression of disease [8]. It may have a negative impact on quality of life of patients and should be diagnosed and treated well in time [9]. The etiological factors of oral cancer may vary depending on the environmental or modifiable factors such as substance abuse, smoking, gutka and genetic factors [10]. Early detection is the main prevention in this regard [11].

WHO pointed out as the 5th leading cause of cancer worldwide and a major cause of mortalities due to cancer. Location of Pakistan falls in a geographic area where incidence exceeds 25 per 100,000 according to the WHO 2005 oral cancer incidence [12]. Its incidence has been on the increase during the last 30 years. The population of the southern and south-

DOI: https://doi.org/10.54393/df.v3i01.26

east regions of Brazil have the highest incidence of this disease. These regions of Brazil are the areas of low income [13,14]. Among these areas, the incidence rate is highest in the city of Sao Paulo with 25.3 per 100,000) [4]. According to the epidemiological study by Wozniak, it has been seen that total of 400,000 cases of the mouth and throat cancer and of 160,000 cases of laryngeal cancer, the death occurs in the 300,000 people annually [15].

METHODS

It was a cross-sectional study including OSCC patients of all age groups, both genders and complete history, visiting Pathology Department of Fatima memorial hospital and college of medicine and dentistry, Lahore. Data of the patients was collected according to the hospital proforma given at the end

RESULTS Out of 40 cases, there were 30 males and 10 females, In these cases, there were 14 cases (35%) of well differentiated (WD), 16 cases (40%) of moderately differentiated (MD) and 10 cases (25%) of poorly differentiated (PD) squamous cell carcinoma for males. The maximum number of patients were in the age group of 60 to 80 years. Male predominance was seen in the present study. Out of many sites of head and neck region, the maximum number of biopsies are from the floor of the mouth. This shows that this cancer mostly occurs in the floor of the mouth.

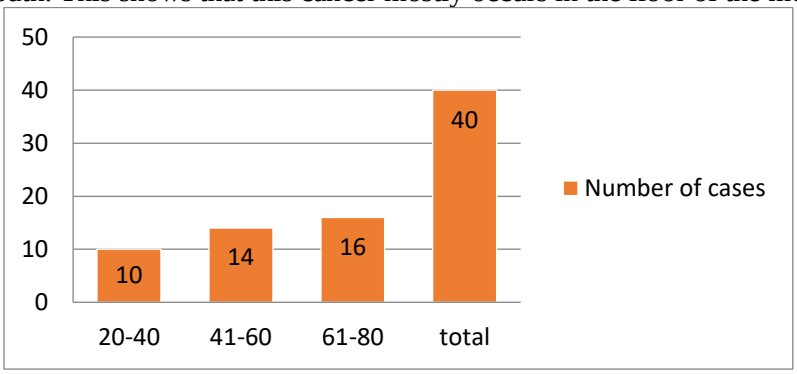


Figure 1: Total number of cases w.r.t age

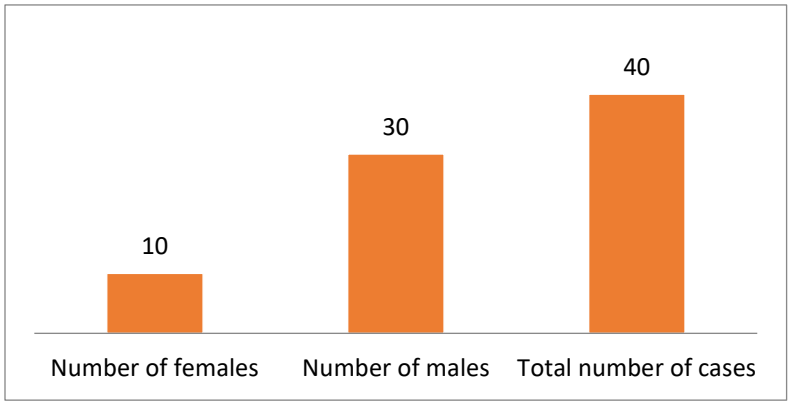


Figure 2: Total number of cases according to gender

DOI: https://doi.org/10.54393/df.v3i01.26

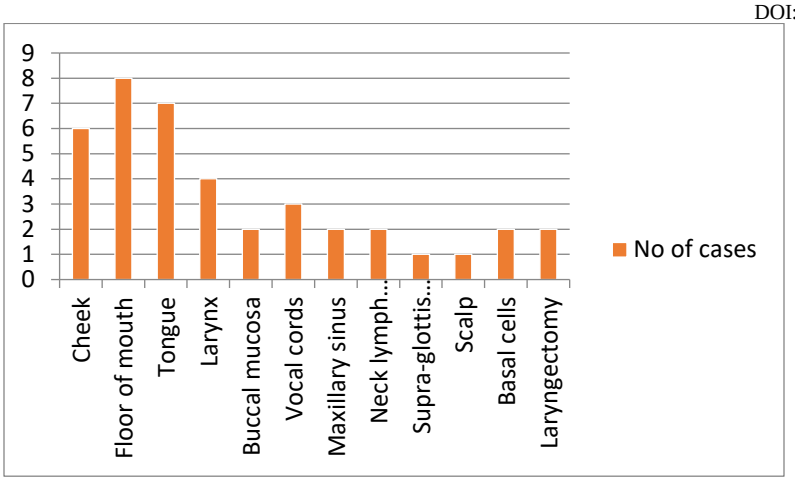
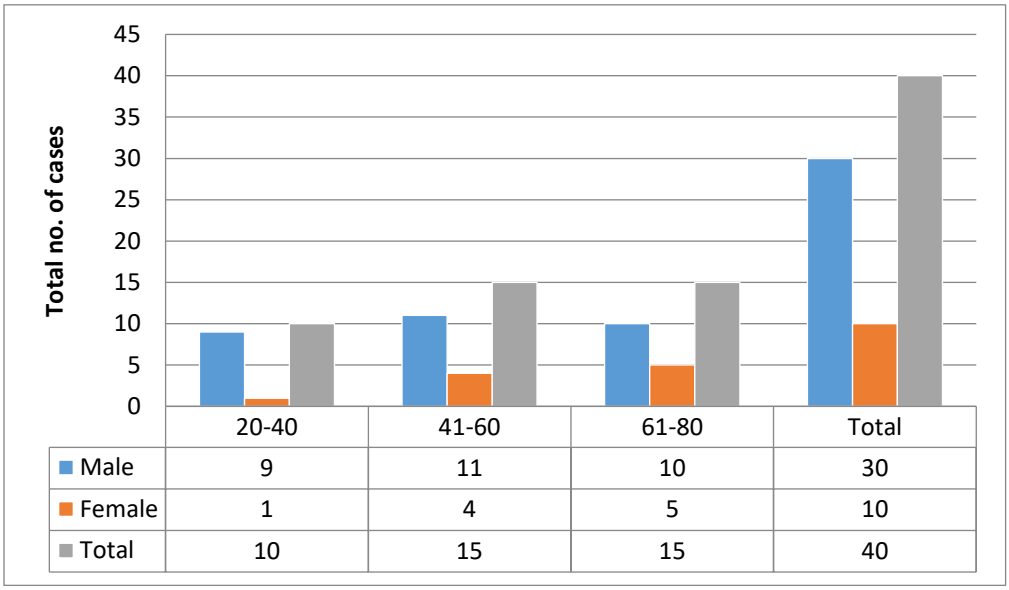
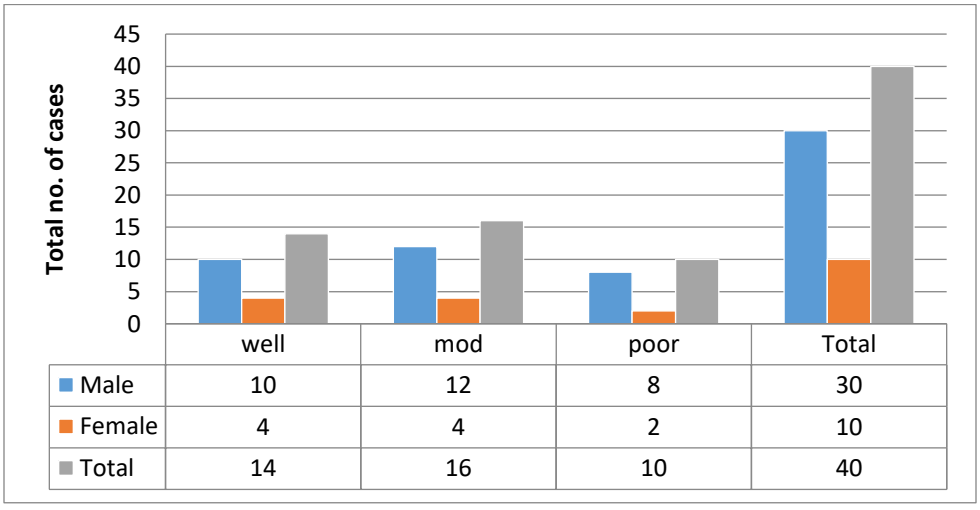


Figure 3: No of cases w.r.t site of biopsy



	20-40	41-60	61-80	Total
Male	9	11	10	30
Female	1	4	5	10
Total	10	15	15	40

Figure 4: Agewise and Genderwise distribution of OSCC cases



	well	mod	poor	Total
Male	10	12	8	30
Female	4	4	2	10
Total	14	16	10	40

Figure 5: Gender wise distribution of OSCC cases according to grading

DOI: https://doi.org/10.54393/df.v3i01.26

DISCUSSION

OSCC is becoming the problem in all over the world and its etiological factors are different in different areas of the world. In developing countries including Pakistan, males predominantly use substance of abuse such as cigarettes, alcohol and gutka while women rarely use these susbtances. Cheek, floor of mouth and tongue were the most prevalent sites of oral carcinoma. Preventive measures should be adopted by minimizing the usage of substance of abuse and smoking [16,17]. Most of the patients belonged to elderly group (61-80 years). People of developing countries are exposed to a big range of risk factors which usually starts at minor ages and primary policies, strategies and measures are needed for prevention [18]. The most risk involving factors considered are tobacco and alcohol. There is a great association of poly-ingredient oral dip products and tobacco with oral squamous cell carcinoma. Among different smoking types, simple tobacco, chewing tobacco, bidi of smokeless types, consumption of gutka, use of sapari, mishri and of oral dip products indicate the strong association with oral squamous cell carcinoma. Above mentioned products are in use of people of India excessively. So far as concerned gutka, sapari, areca nut, chewing tobacco(tobacco flakes), bidi smoking and mishri (tobacco powder use especially as cleaner for tooth and gums), and these are the permanent risk for mouth related cancers [19].

It is not possible to conduct epidemiological study based on long term strategy because of non-availability of records (of registration) of cancer cases at country level. According to the data available for the presence of head and neck squamous cell carcinoma (HNSCC) at locally based areas in Pakistan which highlights the HNSCC as the most common among all the malignancies [20].

CONCLUSION

Oral cancer has been observed more in males, age range of 61-80 years and well differentiated carcinoma was prevalent than moderate and poorly differentiated.

REFERENCES

1. Jemal A, Siegel R, Xu J, Ward E. CA A Cancer Journal for Clinicians, 2011, **61**(2): 133-133. doi.org/10.3322/caac.20073
2. Montero PH, Patel SG. *Cancer of the oral cavity*. Surg Oncol Clin N Am. 2015 Jul;**24**(3):491-508. doi: 10.1016/j.soc.2015.03.006.
3. Wong T, Wiesenfeld D. *Oral Cancer*. Aust Dent J. 2018 Mar;63 Suppl 1:S91-S99. doi: 10.1111/adj.12594.
4. Farris C, Petitte DM. *Head, neck, and oral cancer update*. Home Healthc Nurse. 2013 Jun;**31**(6):322-8; quiz 328-30. doi: 10.1097/NHH.0b013e3182932f01.
5. Walker DM, Boey G, McDonald LA. *The pathology of oral cancer*. Pathology. 2003 Oct;**35**(5):376-83. doi: 10.1080/00312890310001602558.
6. van der Waal I, de Bree R, Brakenhoff R, Coebergh JW. *Early diagnosis in primary oral cancer: is it possible?* Med Oral Patol Oral Cir Bucal. 2011 May 1;**16**(3):e300-5. doi: 10.4317/medoral.16.e300.
7. Malkani N, Kazmi S, Rashid MU. *Epidemiological Assessment of Oral Cancer Burden in Pakistan.* Cancer Invest. 2021 Nov;**39**(10):842-853. doi: 10.1080/07357907.2021.1982962.
8. Neville BW, Day TA. *Oral cancer and precancerous lesions*. CA Cancer J Clin. 2002 Jul-Aug;**52**(4):195-215. doi: 10.3322/canjclin.52.4.195.
9. Valdez JA, Brennan MT. *Impact of Oral Cancer on Quality of Life.* Dent Clin North Am. 2018 Jan;**62**(1):143-154. doi: 10.1016/j.cden.2017.09.001.
10. Khalili J. *Oral cancer: risk factors, prevention and diagnostic*. Exp Oncol. 2008 Dec;**30**(4):259-64.
11. Palmer O, Grannum R. *Oral cancer detection*. Dent Clin North Am. 2011 Jul;55(3):537-48, viii-ix. doi: 10.1016/j.cden.2011.02.009.
12. Petersen PE, Bourgeois D, Ogawa H, Estupinan-Day S, Ndiaye C. *The global burden of oral diseases and risks to oral health*. Bull World Health Organ. 2005 Sep;**83**(9):661-9
13. Marchioni DM, Fisberg RM, Francisco de Góis Filho J, Kowalski LP, Brasilino de Carvalho M, Abrahão M, Latorre Mdo R, Eluf-Neto J, Wünsch Filho V. *Dietary patterns and risk of oral cancer: a case-control study in São Paulo, Brazil*. Rev Saude Publica. 2007 Feb;**41**(1):19-26. doi: 10.1590/s0034-89102007000100004.
14. Wünsch-Filho V. *The epidemiology of oral and pharynx cancer in Brazil*. Oral Oncol. 2002 Dec;**38**(8):737-46. doi: 10.1016/s1368-8375(02)00066-0.
15. Woźniak A, Szyfter K, Szyfter W, Florek E. *Nowotwory głowy i szyi--historia [Head and neck cancer--history]*. Przegl Lek. 2012;**69**(10):1079-83. Polish.

DOI: https://doi.org/10.54393/df.v3i01.26
16. D'souza S, Addepalli V. *Preventive measures in oral cancer: An overview*. Biomed Pharmacother. 2018 Nov;**107**:72-80. doi: 10.1016/j.biopha.2018.07.114. E
17. Paré A, Joly A. *Cancers de la cavité buccale : facteurs de risque et prise en charge [Oral cancer: Risk factors and management]*. Presse Med. 2017 Mar;**46**(3):320-330. French. doi: 10.1016/j.lpm.2017.01.004.
18. e Camargo Cancela M, Voti L, Guerra-Yi M, Chapuis F, Mazuir M, Curado MP. *Oral cavity cancer in developed and in developing countries: population-based incidence.* Head Neck. 2010 Mar;**32**(3):357-67. doi: 10.1002/hed.21193.
19. Madani, A. H., Dikshit, M., Bhaduri, D., Aghamolaei, T., Moosavy, S. H., & Azarpaykan, A. (2014). *Interaction of alcohol use and specific types of smoking on the development of oral cancer*. International journal of high risk behaviors & addiction, *3*(1), e12120. https://doi.org/10.5812/ijhrba.12120
20. Bile KM, Shaikh JA, Afridi HU, Khan Y. *Smokeless tobacco use in Pakistan and its association with oropharyngeal cancer*. East Mediterr Health J. 2010;16 Suppl:S24-30. https://pubmed.ncbi.nlm.nih.gov/21495585/