

Assessment of Correlation of Smoking and Drinking Habits with Depression Symptoms among Head and Neck Squamous Cell Carcinoma patients

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ABSTRACT

Introduction: Head and Neck Squamous Cell Carcinoma are one of the most common oral malignancies affecting individuals worldwide. Smoking and drinking are autonomously and synergistically connected with an expanded danger of oral malignancy, and the dangers tend to increment with an expanded recurrence of presentation. Hence; we planned the present study to assess whether smoking or alcohol habit in patients diagnosed with oral cancer is associated to depressive psychiatric symptoms appearing several months after confirmation of diagnosis of cancer.

Material and methods: The present study included assessment of Head and Neck Squamous Cell Carcinoma cases that were identified from Dec 2014 to Jan 2017. Identification of all the cases was done based on the pathology reports. The study utilized a standardized, structured questionnaire that, in addition to obtaining demographic/environmental risk factor information, included questions regarding depressive symptoms and social support. Center for Epidemiologic Studies-Depression Scale (CES-D) was used for the assessment of depressive symptoms. The mean aggregate number of beverages expended/week was ascertained by summing the normal number of beverages (as characterized above) of brew, wine, and hard alcohol that were supposedly devoured/week. All the results were collected and summarized. Assessment of all the results was done by SPSS software.

Results: A total of 100 subjects were included in the present study which was diagnosed with suffering from Head and Neck Squamous Cell Carcinoma. Out of 100, 62 subjects had mean CES- D score of less than 15 while only 38 subjects had score of sixteen and above. Significant result was obtained while comparing the CES- D score of the patients. Significant difference was obtained while assessing the mean CES – D score of the subjects when categorized on the basis of age. Among subjects, who smokers were during the year of diagnosis, double odd ratios were observed in relation for existence of subsequent depression

Conclusion: Health care professionals should be aware of the depressive symptoms in cancer patients along with various risk factors that could act as precipitating factors for the occurrence of depression.

Keywords: Depression, Head and Neck Squamous Cell Carcinoma, Smoking

INTRODUCTION

Most of the oral carcinomas are squamous cell carcinomas, and by far most of oral squamous cell carcinomas are gone before by antecedent sores that can present as either leukoplakia, erythroplakia, or erythroleukoplakia. Minutely, these sores may show oral epithelial dysplasia (OED), a histopathologic finding described by cell changes and maturational unsettling influences characteristic of creating harm.¹ A determination

of oral epithelial dysplasia is critical on the grounds that announced harmful change rates among people determined to have OED are as high as 36%. As an outcome, the nearness or nonattendance of OED in a biopsy example is regularly a vital marker in deciding how intently an injury ought to be taken after and whether treatment ought to be started. Smoking and drinking are autonomously and synergistically connected with an expanded danger of oral malignancy, and the dangers tend to increment with an expanded recurrence of presentation.^{2,3}

In any case, despite the fact that a developing assortment of writing has investigated the event and associates of depressive manifestations among head and neck malignancy patients, and in spite of the fact that dejection has been connected to both liquor mishandle and smoking in an assortment of different populaces, just constrained data is accessible on the connection amongst despondency and either smoking or drinking among people determined to have Head and Neck Squamous Cell Carcinoma.⁴

Hence; we planned the present study to assess whether smoking or alcohol habit in patients diagnosed with Head and Neck Squamous Cell Carcinoma is associated to depressive psychiatric symptoms appearing several months after confirmation of diagnosis of cancer.

MATERIAL AND METHODS

The present study was planned in the Sanjeevani Cancer clinic, Amritsar and included assessment of Head and Neck Squamous Cell Carcinoma cases that were identified from Dec 2014 to Jan 2017. Identification of all the cases was done based on the pathology reports. These pathology reports serve fundamentally group based oral and maxillofacial specialists, other dental authorities and oncologists. Inclusion criteria for the present study included:

- Patients diagnosed with invasive Head and Neck Squamous Cell Carcinoma
- Patients between 30 to 70 years of age
- Patients without history of any other systemic illness

Patients without history of any known drug allergy

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Interview of the subjects was done by experienced and trained interviewers.

The study utilized a standardized, structured questionnaire that, in addition to obtaining demographic/environmental risk factor information, included questions regarding depressive symptoms and social support. The research used an institutionalized, organized survey that, notwithstanding acquiring statistic/ecological hazard figure data, included inquiries with respect to depressive manifestations and social support. Center for Epidemiologic Studies-Depression Scale (CES-D) was used for the assessment of depressive symptoms.⁵ Frequency of depression was depicted on CES-D (20- item scale with scores ranging from zero to sixty). Based on the results obtained by previous reports, a score of 16 or above on CED- D was termed as suffering from depression.⁶ As evolution of the depression of symptoms was done several months after the diagnosis of cancer, we used the term "subsequent depression" for cases with CES- D score of sixteen or more. The survey got far reaching smoking and drinking histories and was firmly adjusted from polls utilized as a part of past epidemiologic investigations of Head and Neck Squamous Cell Carcinoma.⁷ Since the parent study was intended to examine hazard elements for oral malignancy, questions identified with smoking and liquor utilization deliberately tended to years before and up to the year in which the disease was analyzed, however did not catch smoking and drinking data after conclusion. An "ever-smoker" was characterized as a man who revealed smoking no less than 100 cigarettes over his/her lifetime or who detailed smoking a pipe or stogie for 6 months or more.⁷ A "diagnosis year smoker" was characterized as a person who revealed smoking amid the date-book year in which the oral finding was made, while an "ex-smoker" was characterized as an ever-smoker who had stopped smoking before the time of determination.⁷ Questions relating to liquor utilization for a given mixed drink were assembled independently for weekdays and ends of the week. A "drink" was characterized for the review members as a 12-ounce lager, a 4-ounce glass of wine, and a 1.5-ounce shot of hard alcohol. The mean aggregate number of beverages expended/week was ascertained by summing the normal number of beverages (as

characterized above) of brew, wine, and hard alcohol that were supposedly devoured/week.⁷

Since the present study was the non-invasive and interview/questionnaire based study so no ethical considerations were needed.

STATISTICAL ANALYSIS

All the results were collected and summarized. Assessment of all the results was done by SPSS software. Chi- square test, student t test and univariate regression models were used for the assessment of level of significance. P-value of less than 0.05 was taken as significant.

RESULTS

A total of 100 subjects were included in the present study which was diagnosed with suffering from Head and Neck Squamous Cell Carcinoma. Table 1 shows the coloration of various demographic details of the subjects categorized on the basis of CES- D score. Out of 100, 62 subjects had mean CES- D score of less than 15 while only 38 subjects had score of sixteen and above. Significant result was obtained while comparing the CES- D score of the patients. When categorized on the basis of mean age of the subjects, 35 individuals were found to belong to age group of less than 45 years, out of which 22 were having CES- D score of less than fifteen while the remaining 13 had score of sixteen and above. Significant difference was obtained while assessing the mean CES – D score of the subjects when categorized on the basis of age. Table 2 and Table 3 shows the Odd ratios for smoking and drinking in relation to subsequent depression.

DISCUSSION

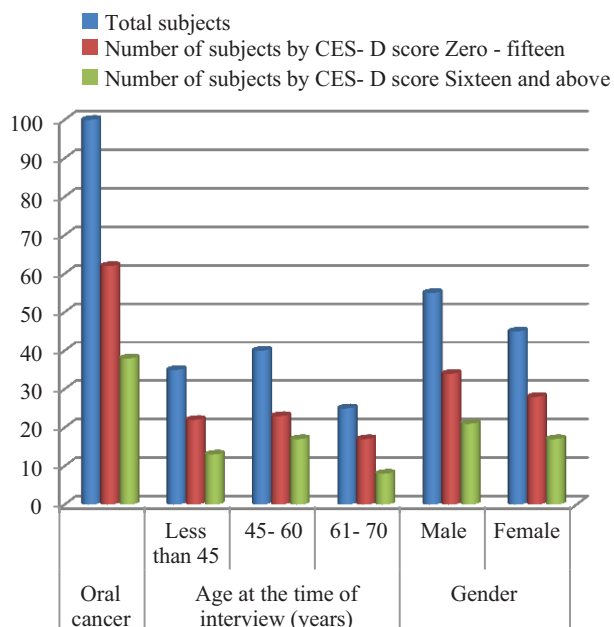
Smoking, liquor abuse and sorrow are among the most pervasive psychological wellness conditions in the United States. Head and neck growth patients will probably smoke, drink liquor and experience critical depressive side effects as well as full depressive issue than the all inclusive community.⁸ These patients are likewise more inclined to experience low quality of life. Past research shows that smoking and liquor admission and depressive issue regularly go undetected and untreated

Parameter		Total subjects	Number of subjects by CES- D score		P-value
			Zero - fifteen	Sixteen and above	
Head and Neck Squamous Cell Carcinoma		100	62	38	0.02*
Age at the time of interview (years)	Less than 45	35	22	13	0.01*
	45- 60	40	23	17	
	61- 70	25	17	8	
Gender	Male	55	34	21	0.45
	Female	45	28	17	
*: Significant					
Table-1: Correlation of various Socio- demographic details of the subjects					

Parameter		CES- D score		Odd Ratio adjusted
		Zero to fifteen	Sixteen and above	
Smoking status	Never	19	9	1.00
	Ex- Smoker	22	12	0.99
	During year of diagnosis	21	17	2.29
Smoking during year of diagnosis	Yes	21	17	2.25
	No	41	21	1.00
Table-2: Odds ratios for smoking in relation to a subsequent depression				

Parameter		CES- D score		Odd Ratio adjusted
		Zero to fifteen	Sixteen and above	
Drinking during year diagnosis	Yes	45	22	0.91
	No	17	16	1.00
Drinks per week in quartiles	< 1.5	16	9	1.00
	1.5 to 8	15	8	0.55
	8 to 23	17	8	0.39
	23 and above	14	13	0.41

Table-3: Odds ratios for drinking in relation to a subsequent depression



Graph-1: Socio- demographic details of the subjects

among such patients.^{9,10} Hence; we planned the present study to assess whether smoking or alcohol habit in patients diagnosed with Head and Neck Squamous Cell Carcinoma is associated to depressive psychiatric symptoms appearing several months after confirmation of diagnosis of cancer.

In the present study, we observed that out of total 100 Head and Neck Squamous Cell Carcinoma subjects included in the present study, 62 subjects had mean CES- D score of equal to or less than 15 while remaining 38 had score of sixteen and above (Table 1). We also observed that among subjects, who smokers were during the year of diagnosis, double odd ratios were observed in relation for existence of subsequent depression (Table 2). No association of subsequent depression was observed in subjects who were found to be drinkers during the year of diagnosis (Table 3). Morse DE et al surveyed whether smoking or drinking amid or before the conclusion year of oral malignancy or oral epithelial dysplasia (OED) was identified with "subsequent depression" measured months after the oral determination. They identified the frequency of occurrence of OED by assessing reports if three pathology laboratories. A phone managed survey included inquiries on smoking/drinking history through the finding year and measured depressive manifestations utilizing the Center for Epidemiologic Studies-Depression Scale (CES-D); scores of 16+ showed clinical dejection. A score of sixteen or more was categorized as "Subsequent depression". Patients who smoked amid their determination year had double the chances of consequent misery in respect to previous/never smokers. Our results propose that consequent gloom is decidedly connected

with finding year smoking and adversely connected with liquor utilization of >1.5 beverages/week among both determination year and ex-alcohol consumers.¹¹ Morse DE et al explored whether smoking and drinking designs vary for people with oral cancer (OC) in respect to those with oral epithelial dysplasia (OED), a precancerous condition. Interview of the OC and OED cases was done using a questionnaire which contained questions related to smoking and alcohol consumption history. The connection amongst smoking and OED was in any event as solid as that for smoking and oral cancer, proposing that smoking may have its most noteworthy effect on oral carcinogenesis preceding threatening change. Drinking was more firmly connected with Head and Neck Squamous Cell Carcinoma than OED, especially at hoisted utilization levels; the part of liquor does not seem restricted to a late-arrange impact.¹²

Li L et al assessed oral potentially malignant disorders (OPMDs) and evaluated role of smoking and drinking as risk factors. By assessment of reports of various pathological laboratories, identification of the persons diagnosed with OPMD or benign oral condition was done. Subjects were talked with utilizing an institutionalized, organized survey that acquired data, including nitty gritty histories of smoking and drinking. Odd ratios (ORs) for smoking and drinking in connection to having an oral premalignant issue, in respect to people with a considerate oral tissue condition, were acquired utilizing calculated relapse and balanced for age, gender, instruction, organic product/vegetable admission and smoking or drinking. With respect to drinking, no balanced ORs moved toward measurable criticalness, and few point gauges surpassed 1.0, regardless of whether utilization was characterized as far as ever, present, level (beverages/week), or refreshment sort. From the results, the authors concluded that current smoking was a substantial risk factor for OPMDs.¹³ Amarasinghe HK et al assessed a total of 1029 individuals and evaluated their dietary practices in the Sabaragamuwa province in 2006-07. Information gathering instruments were a questioner controlled survey, a three-day nourishment journal and an examination of the oral pit. Subjects related to OPMD and controls were examined for a situation control form. Among the OPMDs, those with leukoplakia were independently considered. A further subgroup investigation was embraced for β -carotene-rich sustenances. The investigation was stratified by bits of natural product/vegetables devoured as at least five segments and at least two bits day by day. The huge contrasts seen with Body mass record (BMI) and natural products/vegetables were weakened when balanced for betel quid biting, smoking and liquor utilize. Growth preventive properties in their weight control plans are constrained and are overwhelmed by the known cancer-causing operators related with utilization of betel quid, tobacco and liquor.¹⁴

CONCLUSION

From the above results, the authors concluded that health care professionals should be aware of the depressive symptoms in cancer patients along with various risk factors that could act as precipitating factors for the occurrence of depression.

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Annexure

CSE- D scale

Instruction for questions: Below is a list of the ways you might have felt or behaved. Please tell me how often you have felt this way during the past week.

- Rarely or None of the time (Less than 1 Day)
- Some or Little of the time (1- 2 Days)
- Occasionally or Moderate amount of time (3- 4 Days)
- Most or all of the time (5- 7 days)

During the past week:

1. I was bothered by these things that usually don't bother me.
2. I did not feel like eating; my appetite was poor.
3. I felt that i could not shake off the blues even with the help from my family or friends
4. I felt that I was just as good as other people.
5. I had trouble keeping my mind on what i was doing.
6. I felt depressed.
7. I felt that everything i did was an effort.
8. I felt hopeful about the future
9. I thought my life had been a failure.
10. I felt fearful
11. My sleep was restless.
12. I was happy
13. I talked less than usual.
14. I felt lonely.
15. People were unfriendly.
16. I enjoyed life.
17. I had crying spells.
18. I felt sad.
19. I felt that people dislike me.
20. I could not get "going".

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