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Prevalence of Oral Lesion and Knowledge Regarding Oral Cancer among Auto Rickshaw Drivers

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Abstract: ***The present study was undertaken to assess the prevalence of oral lesion and knowledge regarding oral cancer among auto rickshaw drivers in Changanacherry taluk. The objectives of the study were to assess the prevalence of oral lesion, the level of knowledge among auto rickshaw drivers regarding oral cancer and to associate the prevalence of oral lesion with knowledge level, personal habits and selected demographic variables. Descriptive survey design was adopted for this study. Using convenient sampling technique, 200 auto rickshaw drivers were selected from Changanacherry taluk. Informed consent was taken and data was collected using structured questionnaire on socio demographic and knowledge variable. Structured rating scale is used to assess the personal habits and observational checklist for oral lesion. Data analyzed and it revealed a prevalence of oral lesion is 19% among the subjects. Out of these 28.94% subjects have erythroplakia, 18.42% have leukoplakia, 2.6% have erythroleukoplakia, and 23.68% have painless ulcer more than 3 months. Study could not establish any association between oral lesion with knowledge level and socio demographic variables. Among the subjects 47.5% have poor knowledge,50% have average knowledge and 2.5% have good knowledge regarding oral cancer Binary logistic regression is used to predict risk of personal habits such as smoking (p=0.001 OR=3.4, 95% CI=1.6-6.9), intake of alcohol (p<0.001 OR=13.7 95% CI=4.6-40.5), chewing pan masala/tobacco in any forms (p<0.001 OR=37.9 95% CI=14.1-101.8), sniffing(p=0.009 OR=3.8 95% CI=1.3-11.1),intake of pickles (p=<0.001 OR=3.4 95% CI=0.7-15.2) and intake of salted fish(p<0.001 OR=1.3 95% CI=0.5-3.28) for oral lesion and these variables have significant association with oral lesion. An informative pamphlet regarding oral cancer is provided to the subjects after the data collection.***

Keywords: Prevalence; oral lesion; oral cancer

1. Introduction

'Healthy living' means maintaining a healthy life style and introducing habits that improve health. A healthy lifestyle makes us fit energetic and reduce risk of diseases [1]. Unhealthy life style leads to poor health and health problems and if not treated or corrected could leads to diseases like cancer.

Cancer is a group of more than 200 diseases characterized by uncontrolled and unregulated growth of cells. Globally cancers account for 5.1% of total disease burden and 12.5% of all deaths. In India cancer account for 3.3% of disease burden and 9.9% of all deaths. Based on cancer registry there are about 8, 00,000 new cancer cases reported every year. In India oral cancer rate is high in males [2].

Surveys have revealed that most of the auto drivers, rickshaw-pullers, vendors, and construction workers will be chewing some form of tobacco and most of them are unwilling to give up the habit [3]. A study conducted in Chennai among auto-rickshaw drivers indicates that oral cancers are quite common among auto-rickshaw drivers who use pan masala regularly [4].

Oral cancer may occur on the lips or anywhere within the mouth (e.g. tongue, floor of the mouth, buccal mucosa, hard palate, soft palate). The incidence is nearly 11% in males and 5% in females. Factors that influence the development of oral cancer include tobacco use (gutka, tobacco chewing, cigar, cigarette, and pipe snuff), excessive alcohol intake and poor dental care. Individuals who smoke have 7 to 10 times higher risk of developing oral cancer than non smokers. India is the second largest consumer of tobacco in the world. Smokeless tobacco is used in different forms such as betel quid, pan masala, mainpuri, mawa, gutka etc. Its use is influenced by a variety of factors, including individual attitude, peer group influence, social norms, and advertisements [5]. The International Agency for Cancer Research says that heavy drinking increases the risk of oral cancer by 5-10 times [6].

Interrelated concept or abstractions assembled together in a rational scheme by virtue of their relevance to a common theme are referred to as conceptual framework. The conceptual framework used for the present study is based on Rosenstock and Becker health belief model. Figure 1 indicates the prevalence of oral cancer based on the site.

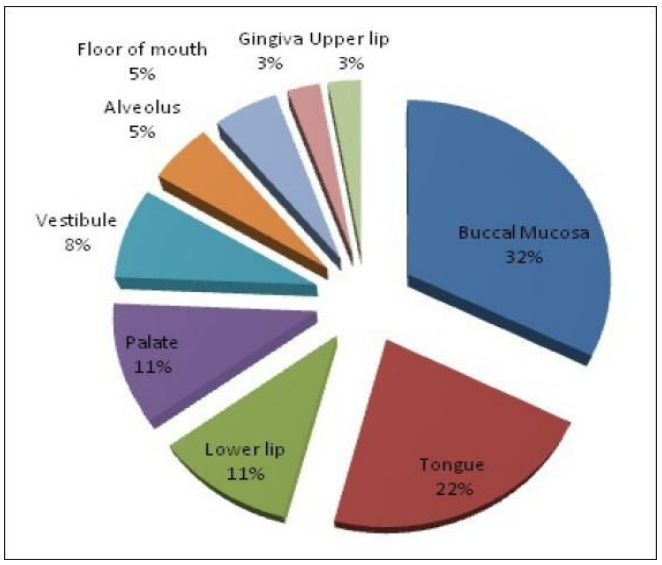

Figure 1: Cancer journal 2013 shows Percentage of cancer according to the site affected

2. Statement of the Problem

The Prevalence of oral lesion and knowledge regarding oral cancer among auto rickshaw drivers in Changanacherry taluk.

3. Purposes

1) The main purposes of the study were to assess the prevalence of oral lesion and knowledge regarding oral cancer among auto rickshaw drivers.
2) To identify the risk factors of oral lesions and make an awareness regarding oral cancer through an informative pamphlet.

4. Objectives

1) To assess the prevalence of oral lesion among auto rickshaw drivers.
2) To assess the level of knowledge among auto rickshaw drivers regarding oral cancer.
3) To identify the association between knowledge level and prevalence of oral lesion
4) To identify the association between selected demographic variables and personal habits with prevalence of oral lesion

5. Methods/Approach

Descriptive survey research design was used for the following study. Study variable under the study were: Prevalence of oral lesion and knowledge on oral cancer. This study was conducted among 200 auto rickshaw drivers in Changanacherry taluk

The tool consists of 4 sections.
Section A: Socio demographic data. This section consist of 8 items related to demographic variables of auto rickshaw drivers (age, gender, marital status, education, years of work, previous knowledge, family history of oral cancer, dental check up)

Section B: Structured rating scale on personal habits among auto rickshaw drivers. This section consists of 8 items related to personal habits and oral lesion.

Section C: Structured knowledge questionnaire

This section consists of 20 questions related to oral cancer. For each question 4 options were given. Each correct answer carries 1 mark .More than75% marks indicates good knowledge, 50-75% marks indicates average knowledge and <50% indicates poor knowledge.

Section D: Observational checklist.

Table 1: Observational Checklist

Findings	*Yes*	*No*
Leukoplakia	**1**	**0**
Erythroplakia	**1**	**0**
Erythroleukoplakia	**1**	**0**
Painless Ulceration	<3 Months-0	>3 Months-1

The data collection period was for four weeks from 1/2/15to 28/2/15.After taking prior permission from RTO, the researcher went to the place where fitness test for auto rickshaw drivers taking place .4 days in a week they are conducting fitness test for drivers. So the researcher got the opportunity to go there .The researcher explained the purpose of the study and a good rapport was established with the study participant and the researcher got a constant support from motor vehicle inspector. The researcher collected the socio demographic data and knowledge questionnaire was given. The researcher assessed the oral cavity for oral lesion with the help of observational checklist .Followed by that pamphlet regarding oral cancer was given and motivated the auto drivers for periodic oral checkup.

Frequency and percentage is used to analyze socio demographic variable, prevalence of oral lesion and analyze the personal habits with oral lesion.

Pearson chi-square test is used to determine the association between selected demographic variables, knowledge level and personal habits with prevalence of oral lesion. Binary logistic regression analysis is used to predict the relative risk factors of oral lesion.

6. Results

Among the study participants majority (44%) belongs to the age group of 41-60. years and 34.5% of subjects belongs to the age of 21-40 years. Majority (98%) of subjects is males and only 2% constitute females. 51% have high school level of education and 4% are illiterate.66% of subjects have more than 10 years of work experience and 34% subjects having only less than 10 years of experience. Majority of the subjects (95%) have heard about oral cancer .Survey results shows that 92% of subjects have no family history of oral cancer. It also shows that 86% of subjects have not done dental check-up within 6 months.

Majority (65.5%) of the subjects do not have the habit of smoking.Only19.5% subjects have the habit of smoking daily; 12% have the habit of smoking occasionally Regarding to the use of alcohol, 52% subjects never used alcohol.30% subjects used alcohol occasionally. sin relation to pan chewing 74% admitted that they never use pan masala or tobacco in any form. Whereas 15% used it occasionally.8% admitted daily use of pan chewing. Majority (92%) of the subjects do not have the habit of sniffing .Only 6.5% have the habit of sniffing occasionally.38.5% subjects preferred Chinese food occasionally. Regarding the use of pickles, majority (57.5%) used it occasionally.18% used pickles weekly and 10.5% of subjects have pickles daily Majority of the subjects (58.5%) preferred salted fish in their diet occasionally, whereas 18.5% used it weekly. In reference to the intake of hot liquids/foods, 12% subjects consumed it occasionally.

Among the study participants the prevalence of oral lesion is 19%.Out of these 28.94% subjects have Erythroplakia, 18.42% have Leukoplakia, 2.6% have Erythroleukoplaki, 26.3% have painless ulcer for less than 3 months duration, 23.68% have painless ulcer for more than 3 months.

Table 2: Prevalence of oral lesion

Variable	*f*	*%*
Oral Lesion Yes	38	19
No	162	81

Table 3: Prevalence according to type

Variables	*f*	*%*
Erythroplakia	11	28.94
Leukoplakia	7	18.42
Erythroleukoplakia	1	2.6
Painless ulcer<3 months	10	26.3
Painless ulcer >3 months	9	23.68

Among the subjects 47.5% have poor knowledge regarding oral cancer, 50% have average knowledge regarding oral cancer, and 2.5% have good knowledge regarding oral cancer

Table 4: Knowledge regarding oral cancer

Variable	***f***	***%***
Knowledge Good	5	2.5
Average	100	50
Poor	95	47.5

In this section the selected demographic variables such as age, gender ,marital status ,education ,years of experience, previous knowledge, source of information, family history and dental check up is not having significant association with oral lesion. Chi- square test is used to find the association. So the hypothesis, there is association between demographic variables and prevalence of oral lesion is rejected.

It also shows that there is no association between knowledge regarding oral cancer and prevalence of oral lesion. The result shows that χ^2=0.0003, p value=0.98.So there is no significant association between knowledge level and oral lesion. So the hypothesis there is association between knowledge level and prevalence of oral lesion is rejected.

Chi- square is used to find the association between personal habits and prevalence of oral lesion .From the 8 items in the structured rating scale 6 were statistically significant with oral lesion.

Table 5: Association between persona habits with prevalence of oral lesion

Variable	*χ2 value*	*df*	*p value*
Intake of Chinese food	0.050	1	0.82
Intake of pickles	39.59	3	<0.001**
Intake of salted fish	19.78	2	<0.001**
Hot liquids//hot food	2.05	1	0.15
Smoking	13.88	2	0.001**
Intake of alcohol	76.06	3	<0.001**
Pan/tobacco chewing	111.12	2	<0.001**
Sniffing	6.99	1	0.009**

Relative risk prediction of personal habits and oral lesion

- Subjects having the habit of smoking daily/occasionally have 3.4 times more chance to get oral lesion than those do not smoke(OR=3.4,95% CI=1.6-6.9),
- Subjects having the habit of intake of alcohol daily/weekly have 13.7 times more chance to get oral lesion than those do not use alcohol(OR=13.7, 95% CI=4.6-40.5)
- It also shows that chewing pan masala/tobacco have 37.9 times more chance to get oral lesion than those do not use it(OR=37.7,95% CI=14.1-101.8)
- .Subjects having the habit of sniffing occasionally have 3.8 times more chance to get oral lesion than those do not (OR=3.8,95% CI=1.3-11.1).
- Use of pickles having 3.4 times more chance to get oral lesion than those do not use pickles(OR=3.4, 95%CI=0.7-15.2)
- Subjects having the habit of intake of salted fish in their diet weekly/occasionally have 1.3 times more chance to get oral lesion than those do not use salted fish(OR=1.3, 95%0.5-3.28).

Table 6: Relative risk prediction of personal habits and prevalence of oral lesion

Variable	***Lesion present***	***Lesion absent***	***χ 2***	***OR***
Smoking				
Daily/Occasionally	22	47	13.88	3.4
Never	16	115		
Alcohol				
Daily/weekly/occasionally	34	62	76.06	13.7
Never	4	100		
Chewing				
Daily/weekly/occasionally	32	20	111.1	37.9
Never	6	142		
Sniffing				
Occasionally	7	9	6.99	3.8
Never	31	153		
Pickles				
Daily/weekly/occasionally	36	136	39.59	3.4
Never	2	26		
Salted fish				
Weekly/occasionally	32	131	19.78	1.3
Never	6	31		

7. Discussion

Oral cancer is the patches, ulcers, sores; present in the mouth which does not heal that may be caused due to smoking, alcohol consumption, and tobacco chewing. Oral cancer may occur on the lips or anywhere within the mouth (e.g. tongue, floor of the mouth, buccal mucosa, hard palate, soft palate.

In the present study prevalence of oral lesion is 19%. Out of these 28.94% subjects have erythroplakia, 18.42% have leukoplakia, 2.6% have erythroleukoplakia, 26.3% have painless ulcer less than 3 months and 23.68% have painless ulcer more than 3 months. 47.5% subjects have poor knowledge related to oral cancer. Chi-square is used to assess the association. The result shows that χ^2=0.0003, p value=0.98.So there is no significant association between knowledge level and oral lesion.

The selected demographic variable is not having significant association with prevalence of oral lesion. Chi- square and binary logistic regression analysis was used to find the association and relative risk of personal habits with prevalence of oral lesion. From the 8 items in the structured rating scale 6 were statistically significant with oral lesion

.They are smoking (p=0.001 OR=3.4, 95% CI=1.6-6.9, intake of alcohol (p<0.001 OR=13.7 95% CI=4.6-40.5), chewing pan masala/tobacco in any forms (p<0.001 OR=37.9 95% CI=14.1-101.8), sniffing(p=0.009 OR=3.8 95% CI=1.3-11.1),intake of pickles (p=<0.001 OR=3.4 95% CI=0.7-15.2),intake of salted fish.

8. Conclusion

The prevalence rate of oral lesion among subjects is 19%. Out of these 28.94% subjects have erythroplakia, 18.42% have leukoplakia, 2.6% have erythroleukoplakia, 26.3% have painless ulcer less than 3 months and 23.68% have painless ulcer more than 3 months respectively. Study shows 47.5% samples had poor knowledge regarding oral cancer and only 2.5% have good knowledge. Study could not establish any significant association between knowledge level prevalence of oral lesion. Study could not show any significant association between selected demographic variable and prevalence of oral lesion.6 items in the structured rating scale were statistically significant with oral lesion. They are smoking, intake of alcohol, pan/tobacco chewing, sniffing, intake of pickles, and intake of salted fish. The researcher distributed an informative pamphlet regarding oral cancer.

9. Future Scope

1) A similar study can be replicated with large sample of night drivers.
2) The study can be replicated in different settings.
3) A comparative study can be done with different group of peoples like bus drivers, lorry drivers, taxi drivers etc.
4) Conduct educational programmes to highlight the hazards of various bad habits

10. Limitations

1) Difficulty to collect information from auto rickshaw drivers as they were going for work in between the data collection.
2) The structured rating scale was used to collect the data which restricted the respondent in providing adequate information regarding risk factors.
3) Limited to auto rickshaw drivers, drivers doing night services are more urge of pan chewing.
4) False information regarding bad habits can be provided by the subjects.

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