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Occurrence of Class 3 Carries In Patients with Different Age and Gender

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ABSTRACT

Aim: To aim of the study is to find out the occurrence of class 3 carries in patients with different age and gender

Background: The decay of the tooth is the common last longing disease found in the world. Even though dental caries have affected the human population in the past, this is found to have increased during these modern times worldwide, this prevalence of dental caries is due to a change in the diet. Dental caries is said to be an infectious microbiologic disease of the tooth that is due to localized dissolution and destruction of the calcified tissues.

Materials & methods: The study was conducted in the outpatient of Dental College and Hospital. The data was reviewed and analysed between June 2019-July 2021. A total of 1017 patients who were diagnosed for class 3 caries were under (1-75) yrs. of age group patients. The data includes the age and gender. Then the data was manually verified by 1-2 reviewers and finally tabulated and SPSS imported and got the results.

Results:: In our study the total population was 1017. In that majority of the patients affected by class 3 caries were Female 658 (64.7%). Whereas the Male patients were only 359 (35.3%). And majority of the female patients (18.5%) were under 31-40 yrs. age group. Whereas in Male patients the majority (8.75%) of them were under 21-30 yrs. of age group. The chi square test shows that p value is 0.000 which is p<0.005. This shows that there is a statistically significant difference between age group and gender.

Conclusion: Overall the study shows that Females have a high prevalence of class 3 dental caries compared to males. And majority of the female patients were under 31-40 yrs. age group. Whereas in Male patients the majority of them were under 21-30 yrs. of age group.

Key words: Class 3 carries, Occurrence, Age, Gender, Innovative study

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INTRODUCTION

The majority of industrialized countries have already experienced a significant decrease in the prevalence of dental caries because to the repeated enhancement of living conditions, improved self-care practices, fluorides effective use, adoption of healthy lifestyles and implementation of preventive oral care programs but in the countries which are developing rapidly has increased level of dental caries and the various treatment are needed [1]. Even though dental caries have affected the human population in the past, this is found to have increased during these modern times worldwide, this prevalence of dental caries is due to a change in the diet [2]. Dental caries is said to be an infectious microbiologic disease of the tooth that is due to localized dissolution and destruction of the calcified tissues. It affects approximately 90% of the adult population in the US according to the United States National Institutes of Health Consensus Development Panel [2001]; greater than two-thirds of American adults who were aged 35 to 44 years have losses at least one tooth because of dental caries. Dental caries is considered as a multifactorial disease for this various key factors play a role in the starting and progression of the carious lesion which includes the host, environmental factors and behavioral factor [3]. The caries distribution have changed in the last decade and the new data shows that 90 percent of carious lesions occur only in the pits and fissures of the posterior region of the permanent tooth which are most susceptible to caries [4].

The backbone knowledge about dental caries which

includes severity, extension and prevalence will give proper information about the eminence essence of caries and programs for prevention and need for the treatment in the populations. Which gives a greater burden financially and indirectly affects the quality of life of an individual [5]? The Greene Vardiman Black popularly known as G.V. Black is one of the founders of modern dentistry in the United States. G.V. Black in the end of the nineteenth century, classified the dental caries as class I, class II, class III, class IV and class V, an additional class VI was later on added by Simon as modification to Black's classification. The most susceptible areas for dental caries are the issues and proximal surfaces of the teeth [6]. Like this, various studies have been done in our institutions [7–26]. The aim of the study is to find the occurrence of class 3 carries in patients with different age and gender.

MATERIALS AND METHODS

The study was conducted in the outpatient of Dental College and Hospital. The study consisted of 1017 patients between the age group of 1-75 yrs. This is because the available data with similar ethnicity was collected from the particular geographic location. The trends in the other location were not assessed in the study setting. Ethical approval was done by the universal ethical committee before the start of the study. The approval number given was [SDC/SIHEC/2020/DIASDATA/0619-0320]. The data was reviewed and analysed between June 2019- March 2021.The case sheet was manually reviewed and cross verified in order to avoid errors. To minimize the sampling bias all available data was included and the sorting process was done. All the samples diagnosed as class 3 caries were included. This particular time was considered as internal validity and a prescriptive pattern was followed to analyse external validity. All the data like the patient's name, age, gender was included in the study. The data which are obtained were entered in the excel sheet and Tabulated and finally SPSS imported was done including the chi square test.

RESULTS AND DISCUSSION

In our study we found that the majority of the patients affected by class 3 caries were Female 658 (64.7%). Whereas the Male patients were only 359 (35.3%).In accordance to our study the other study also shows that Females (59.1%) have higher incidence of caries when compared with the males (40.9%). Approximal surfaces of incisors, canines, premolars and occlusal fissure sites in molars showed the highest caries rates in both sexes. In our study we found that the majority of the female patients (18.5%) belong to the 31-40 yrs age group. Whereas in Male patients the majority (8.75%) of them were under 21-30 yrs. of age group. Similar to that in their study they found that Caries were most common among individuals aged 17 to 25 years. In our study the chi square test shows that p value is 0.000 which is p< 0.005. This shows that there is a statistically significant difference between age group and gender. Other studies showed that females have more caries than males; the percentages are 60.5% and 39.5% respectively. The

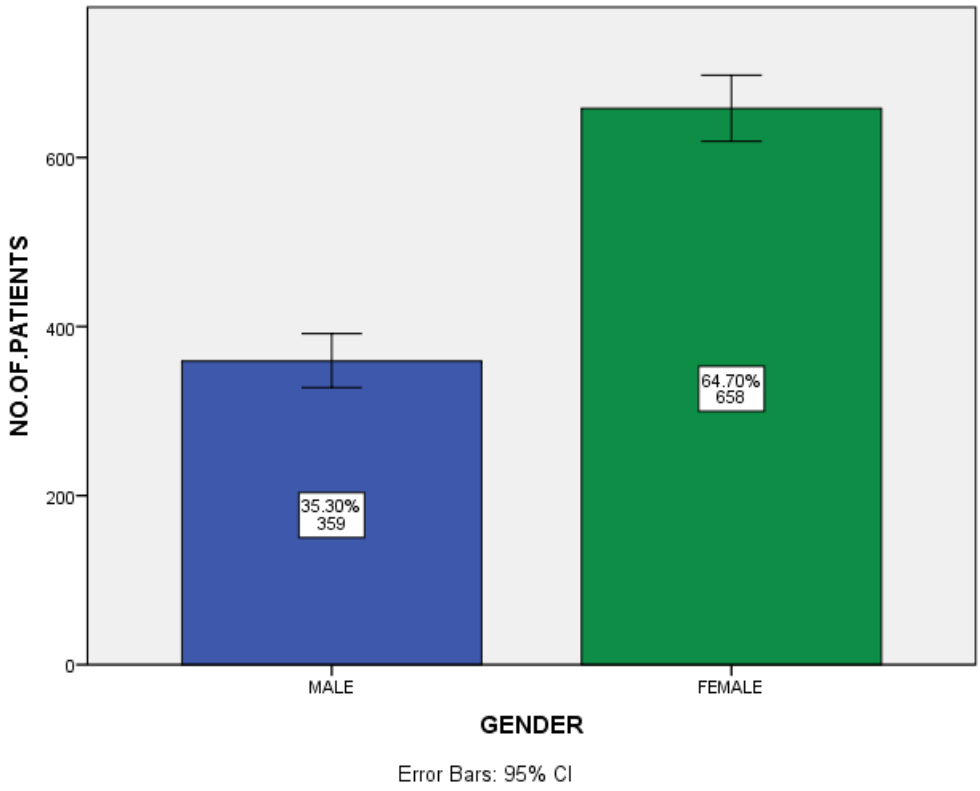

Figure 1: Frequency of gender.

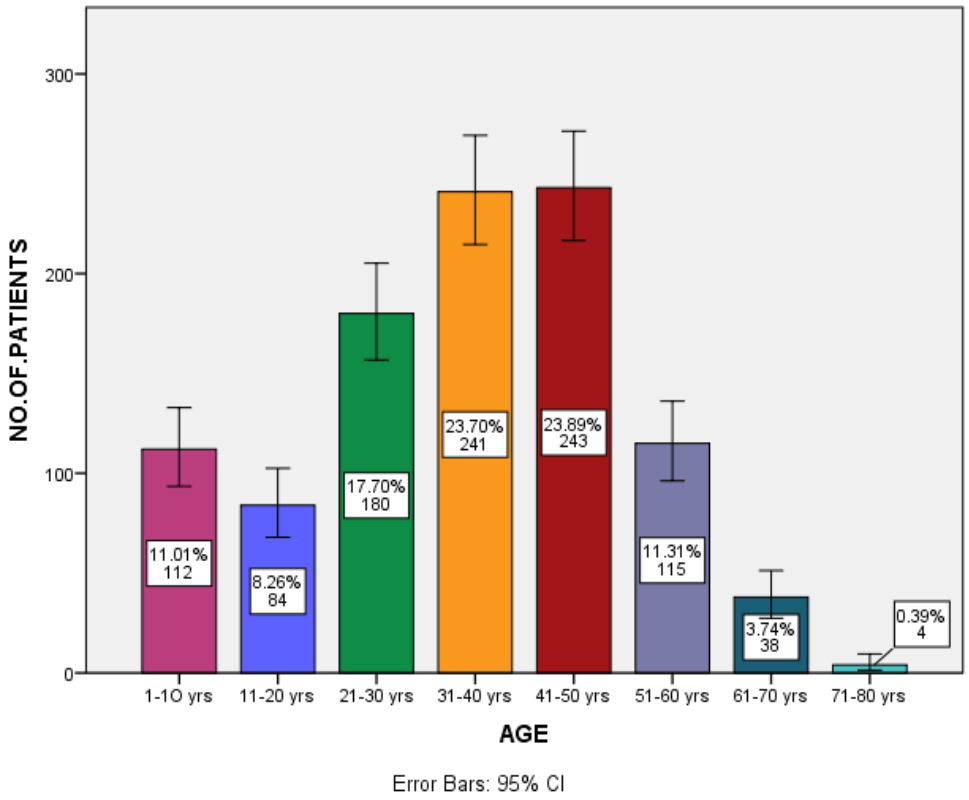

Figure 2: Frequency of age.

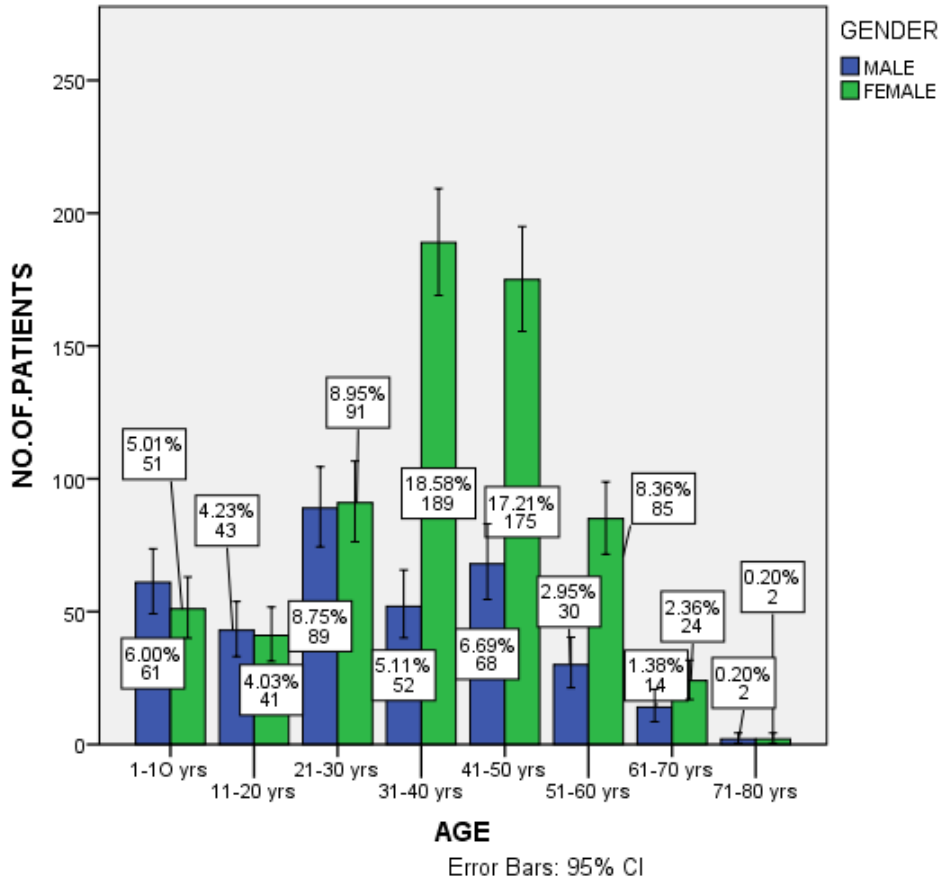

Figure 3: Association between gender and age.

Figure 1 shows the gender of the patients who were affected by class 3 carries. In that majority of the patients affected by class 3 caries were Female 658 (64.7%). Whereas the Male patients were only 359(35.3%). The Figure 2 shows the age of the patients who were affected by class 3 carries. In that majority of the patients affected by class 3 caries belonged to 31-40 yrs. and 41-50 yrs. of age group. Figure 3 shows the association between age and gender. The x axis represents the age and y axis represents the gender of the patients who have class 3 carries. Here the blue colour represents the males and green colour represents the Female patients. The graph shows that the majority of the female patients (18.5%) belong to the 31-40 yrs. age group. Whereas in Male patients the majority (8.75%) of them were under 21-30 yrs. of age group. The chi square test shows that p value is 0.000 which is $p<0.005$. This shows that there is a statistically significant difference between age group and gender.

This study also concludes that people in the early adulthood (20-39) age group have the highest rate of caries incidence [27]. Whereas in their study Gender and age do not affect the prevalence of caries on teeth sites. In addition, more caries are experienced in younger age groups, and their incidence decreases as age increases [28]. The gap between the genders is due to caries because of early eruption of the permanent teeth in women compared to males. Because of the high risk of caries experienced for a longer duration, the author assumes that females teeth would have decay more than the teeth of their male of the same age. That study also found that female patients continue to experience excessive caries, even after adjustments for prior eruptions of permanent teeth [29]. The other authors showed that the experience of dental caries will decrease with age. This may result due to a decrease in the number of remaining teeth [30]. High prevalence of dental caries were observed on distal aspects of the central and lateral incisors and premolars compared to other surfaces, except those of maxillary central and lateral incisors. In contrast, mesial surfaces of maxillary central and lateral incisors showed the highest rate of caries [31].

CONCLUSION

Overall the study shows that Females have a high prevalence of class 3 dental caries compared to males. And majority of the female patients were under 31-40 yrs. age group. Whereas in Male patients the majority of them were under 21-30 yrs. of age group.

LIMITATIONS

There are few limitations in our survey. There is a small sample size used for our survey which cannot be generated for a large population. And the survey doesn't represent the ethnic group and population.

FUTURE SCOPE

The survey should be done in a larger population. Multicenter surveys should be done including other criteria's.

CONFLICT OF INTEREST

Nil.

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