AWARENESS OF DENTAL SENSITIVITY AND CORRELATION WITH GINGIVAL RECESSION AMONG PERIODONTITIS PATIENTS- A RETROSPECTIVE STUDY

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ABSTRACT
The aim of the current study was to assess the prevalence of dental sensitivity and awareness of dental sensitivity from the chief complaint and correlate with the gingival recession in periodontitis patients. Retrospective data collection was conducted from June 2019 to March 2020 on patients who visited the outpatient department from the record management system; presence of dental sensitivity was correlated with the gingival recession. Based on this hospital based assessment it was seen that there was a significant difference with the chief complaint and degree of gingival recession and Pearson's Chi square value was 41.292 which shows that there is less awareness about dental sensitivity associated with gingival recession among periodontitis patients and the number of patients seeking treatment for it.

Keywords:
Gingival recession, dental sensitivity, patient awareness, periodontitis

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INTRODUCTION:
Gingival recession is the apical migration of a gingival margin to the cement enamel Junction. The distance between the cemento enamel junction and the gingival margin gives the level of gingival recession (Miller et al., 1987; Khalid et al., 2016; Avinash, Malaippan and Dooraiswamy, 2017; Priyanka et al., 2017; Kavarthapu and Thamaraiselvan, 2018). Gingival recession is a common unfavourable condition resulting in root exposure and plaque accumulation which could result in root caries. Patients with recession also complain of the unaesthetic appearance of their teeth and of tooth sensitivity.

Gingival recession can be caused by various factors such as plaque and calculus, faulty tooth brushing, position of the tooth, smoking, chemicals et cetera long standing calculus is an important determinant in the onset of gingival recession at sites exhibiting pronounced recession at a young age in populations deprived of prophylactic dental care recession associated attachment loss seems to be a major feature of disease progression in populations without regular dental care It may be localized or generalized, and infrequently occurs in patients with periodontal disease as well as in subjects with healthy gingival. It is often associated with a mucogingival defect. Localized gingival recession may also be associated with malpositioned teeth (Quart, Small and Klein, 1991; Khocht et al., 1993; van Palenstein Helderman et al., 1998; Khalid et al., 2017).

Gingival recession can however often be a very visible dental change that is noted by patients and which may cause them to approach the dentist. Gingival recession may vary considerably depending on the aetiology, extent and associated symptoms in each case. an understanding of the factors relating to the development of gingival recession and how a patient presenting with gingival recession should be assessed. One of the main outcomes of gingival recession is hypersensitivity of tooth dentinal sensitivity or dentinal hypersensitivity is one of the most commonly encountered clinical problems. It is clinically described as an exaggerated response to application of a stimulus to exposed dentine, regardless of its location (Tugnait and Clerehugh, 2001; Panda et al., 2014; Mootha et al., 2016; Ramesh, Sheeja Saji Varghese, et al., 2016; Ramesh, Sheeja S. Varghese, et al., 2016; Ramamurthy and Mg, 2018).

A common symptom linked with the recession is cervical Dentin hypersensitivity but not all teeth are associated with gingival recession will Result in dentinal hypersensitivity The gingival recession will uncover the dentinal tubules and the other surrounding factors give rise to this sensitivity and the pain experienced (Addy and Urquhart, 1992; Thamaraiselvan et al., 2015; Varghese et al., 2015; Ravi et al., 2017; Ramesh et al., 2019).

Dentinal hypersensitivity maybe the patient’s primary concern in relation to the recession and the reason for seeking treatment. Thus this study aims in knowing the awareness of dental sensitivity and correlating with gingival recession among periodontitis patient
MATERIALS AND METHODS:
This study was a retrospective study done to find the awareness of dental sensitivity and correlates with gingival recession among periodontitis patients. After obtaining permission from the institutional review board of the University (Saveetha University Chennai India) for using the DIAS system the study was conducted based on an online setting and since this study is a prevalence study no power calculation was done, to avoid selection bias all the available data was used in the study the time period for collecting the data was from June 1, 2019 to March 1, 2020
The study included all patients above 18 years healthy and without any habits. The exclusion criteria include patients who have systemic diseases, deliberating habits like smoking; nail biting and bruxism patients who had incomplete data were also excluded from the study. The mean age of the patient was calculated and level of recession based on Miller’s classification in males and females were assessed and mean probing depth for male and female patients were also assessed.
Chief complaint for seeking dental treatment was recorded, and his chief complaint was correlated with the level of gingival recession and the results were analysed
Statistical analysis:
Mean value for probing depth and age and percentage for the amount of recession and Chi square test was done for comparing the chief complaint and recession in male and female patients.

RESULTS AND DISCUSSION
A total of 228 samples were analysed in the study of which 43% were females and 57% were male (figure 1) and the mean age was 43 years for females and 42 years for the probing depth for males was 4.5 to 6.7 mm and for females it was 3.7 to 6.9 mm.

Figure1: The pie chart represents gender distribution with 43% females and 57% males.
In the analysis of recession in male and female patients 26% of male patient and 26% of female patients had no recession, regarding millers class 1 gingival recession 29% of male patients and 31% of female patients had Millers class 1 gingival recession. Regarding millers class 2 gingival recession it was observed that 33% of male patients and 28% of female patients had Miller’s class 2 gingival recession. Of all the patients analysed it was observed that only 12% of male patients and 14% of female patients had Miller’s class 3 gingival recession and Miller’s class 4 gingival recession was seen in only in 1% of female patient (figure2, figure3).

Figure 2: The Pie chart represents percentage of gingival recession cases based on miller's classification in male patients of which 33% had Miller’s grade II(Brown) gingival recession, 29% had Miller’s grade I gingival recession (Green), 26% were healthy(Blue),12% had Miller’s grade III gingival recession (purple).

Figure 3: The Pie chart represents percentage of gingival recession cases based on miller's classification in female patients of which 30% of the patients had Miller’s class I (Green), 28% had Miller’s class II gingival recession (Brown), 26% of the female participants had healthy gingiva (Blue),14% had Miller’s grade III gingival recession and 1% of the female participants presented with Miller’s grade IV gingival recession.
The results regarding the chief complaint representing sensitivity was that only 21 percentage of male patient and 26 percentage of female patient presented dental sensitivity as chief complaint for seeking dental treatment (figure 4, figure 5).

Figure 4: The pie chart represents the percentage of patients reporting with the chief complaint of sensitivity in males of which 21% of the male patients had dental sensitivity as chief complaint and the rest 79% had irrelevant chief complaints.

Figure 5: The pie chart represents the percentage of patients reporting with the chief complaint of sensitivity in females, of which 26% of the patients had dental sensitivity as chief complaint (Green) and the rest 74% had irrelevant chief complaints (Blue).
Gingival recession is a problem affecting almost all middle and elder aged people to a certain degree. Gingival recession is known by the apical migration of gingival margin to the cementoenamel junction. The distance between the cemento enamel junction and gingival margin gives the level of gingival recession. Gingival recession can be caused by various factors such as periodontal disease, inflammation, improper flossing and aggressive tooth brushing, malocclusion. These can be localized or generalized gingival recession. Recession can occur with or without loss of attached gingiva. Gingival recession may result in increased sensitivity because of the exposed dentin, it can be assessed by presence of a long clinical tooth and varied proportion of the teeth when compared with adjacent teeth.

The clinical relevance of gingival recession has been related to many conditions such as cervical dentin hyperesthesia, esthetic distress is present especially when such lesions affect the anterior teeth there is higher risk of root caries and abrasion and erosion lesions because of exposure of the root surface to the oral environment, besides there is also an increase in the accumulation of dental plaque.
From the results of it is seen that there is no correlation between the chief complaint of the patient and degree of gingival recession in a study by Kasab et al (Kassab and Cohen, 2003). It was seen that more than 50 percentage of the population at gingival recession of 1mm at one or more than one site and recession was found in both patients who maintained and does not maintain oral hygiene but they did not look for the other parameters like dentinal hypersensitivity in the study.

In a study performed by Chabanski et al (Chabanski et al., 1997). It was found that the peak prevalence of gingival recession was 40 to 49 years and the dentinal hypersensitivity was higher in current periodontitis patient and previous periodontitis patient which seems to be in accordance to the results of our study.

In a study done by Shaveta etal (Sood et al., 2016; Ramesh, Ravi and Kaarthikeyan, 2017; M and Karthikeyan, 2018) They concluded that age tends to affect the Dentin hypersensitivity. No studies had tried to correlate the chief complaint and presence of gingival recession to find the awareness of gingival recession among periodontitis patients the limited sample size from the hospital-based study was an limiting factor in the study.

**CONCLUSION**

Within the limitation of the study, it indicates that there is less awareness about dental sensitivity associated with gingival recession among periodontitis patients and the number of patients seeking treatment with dental sensitivity as chief complaint. It was also seen that there was a significant difference with the chief complaint and degree of gingival recession.

**REFERENCE**


