



Cervical Abrasion and Gingival Recession in Dental Polyclinic Patients

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ABSTRACT

Background: The most common dental health problem in Indonesia is dental caries. The prevalence of caries by 92.2% and ages 35-44 years experienced dental health problems, with the DMF-T index of 6.9 meaning the average number of tooth decay was 6 to 7 teeth per person. One effort that can be carried out to prevent caries is to pay attention to the cleanliness of the oral cavity area especially teeth, plaque cleaning every day is by brushing teeth. Inappropriate brushing techniques can lead to the removal of tooth roots by transferring gingival margin bonds to the apical position of the cementoenamel junction which can result in tooth abrasion and gingival recession. The purpose of this study was to determine the cervical abrasion and gingival recession in dental polyclinic patients at the Pertamedika Clinic Office Center.

Method: This study used a descriptive method. The sample of this study was using purposive sampling as many as 54 respondents. The data used are secondary data taken from the patient's medical record.

Results: The results of cervical abrasion studies showed that 25 people (46.3%) did not have cervical abrasion and 29 people (53.7%) had cervical abrasion. Respondents did not have gingival recession of 26 people (48.1%) and those who had gingival recession were 28 people (51.9%).

Conclusions: Most of the Pertamedika Center Office clinic patients have cases of cervical abrasion and gingival recession.

KEYWORDS: Cervical abrasion, Gingival recession.

INTRODUCTION

The goal of health development is the creation of Indonesian people who live and behave in a healthy environment and are able to reach quality health services. On the other hand, health services provided throughout Indonesia must be carried out fairly, evenly and optimally. Health development is directed at increasing awareness, willingness and ability to live healthy for everyone so that the highest level of public health can be realized [1,2].

Dental and oral health services are carried out to maintain and improve the health status of the community in the form of improving dental health, preventing dental diseases, treating dental diseases, and restoring dental health which are carried out in an integrated, integrated and sustainable manner and carried out through individual dental health services and dental health services community [3]. The most common dental health problem in Indonesia is dental caries. Worldwide, caries contributes 15 times as high as the burden of Disability Adjusted Life Year (DALY) disease compared to periodontal disease. The 2018 Riskesdas National Survey reported that 92.2% of the Indonesian population aged 35-44 years experienced dental health problems, with a DMF-T index of 6.9 meaning that the average number of tooth decay was 6 to 7 teeth per person [4-6].

One of the efforts that can be implemented to prevent caries is to pay attention to the cleanliness of the oral cavity, especially the teeth, cleaning plaque every day is by brushing teeth. Inappropriate tooth brushing technique can cause tooth roots to be exposed due to displacement of the gingival margin bond to the apical position of the cementoenamel junction which can lead to tooth abrasion [7,8].

Tooth abrasion is the loss of tooth substance through an abnormal mechanical process. The resulting abrasion forms a 'V' shaped wedge or trench at the root between the crown and the gingiva. This causes the teeth to become sensitive when receiving thermal stimuli both hot and cold. Further abrasion can also lead to a risk of fracture (fracture) in the cervical region of the tooth [9,10].

The highest prevalence of tooth abrasion was found in respondents who brushed their teeth horizontally with the highest prevalence of abrasion at 54%. The improper method of brushing teeth causes some damage such as tooth abrasion and gingival recession [10,11].



Clinically, gingival recession is the exposure of the root surface of the tooth as a result of an apical displacement of the marginal gingiva away from the CEJ. Gingival recession can occur on one or more tooth surfaces in the oral cavity. Gingival recession can be localized in one tooth, several teeth, or generalized to all teeth. Gingival recession is often a problem because patients complain of aesthetic problems described by the patient as an increase in tooth length. Gingival recession can occur physiologically or pathologically, physiologically it usually occurs due to increasing age of the patient. While pathologically, among others, due to incorrect brushing, tooth malposition, gingival inflammation, frenulum attachment that is too high, movement of orthodontic appliances to the labial, inadequate restoration, and trauma from occlusion [12–14].

The results of research by Kalangie et al showed that the type of tooth that experienced the most abrasion was premolars, both in the upper jaw (36.65%) and the lower jaw (38%). The amount of tooth abrasion that occurred on the right side of the median line and the left side of the median line was not much different (50.9% and 49.1%). The most tooth abrasion occurred with a score of 1, which is a small amount of enamel structure loss (48.8%) [10].

The results of observations carried out on 10-14 February 2020 at the Pertamedika Dental Polyclinic, Head Office, showed that most patients complained of pain in their teeth when drinking cold. The disease report data at the dental dental clinic in January 2020 showed that out of 160 patients, the highest dental disease was dentinal caries, as many as 96 patients.

METHODOLOGY

The research design used is descriptive research. Descriptive research is a research method that is carried out with the main aim of making a picture or description of a situation objectively [15]. The sampling technique was purposive sampling, with inclusion criteria: recorded in the medical record for performing dental care for the period January to March 2020, diagnosis of tooth abrasion and diagnosis of gingival recession. Data collection was carried out in April 2020 using secondary data, namely recording from the medical records of patients who had cases of cervical abrasion and gingival recession and the instruments used were recapitulation sheets.

RESULT AND DISCUSSION

The proportion of respondents who are male is more than male, namely 31 people (57.4%) and most of the respondents are aged 31-140 years (46.5%). (Table 1)

Table 1. Frequency distribution of respondents based on their characteristics

Characteristics		n	%
Gender	Male	31	57.4
	Female	23	42.6
Age	21 – 30 years old	4	7.5
	31 – 40 years old	25	46.5
	41 – 50 years old	8	15.0
	51 – 60 years old	17	31.0

The results showed that the respondents who did not have cervical abrasion were 25 people (46.3%) and the respondents who had cervical abrasion were 29 people (53.7%). For gingival recession, there are 26 respondents (48.1%) who do not have gingival recession and 28 respondents (51.9%). (Table 2)

Table 2. Frequency distribution of cervical abrasion and gingival recession

Variabel		n	%
Cervical abrasion	Yes	29	53.7
	No	25	46.3
Gingival recession	Yes	28	51.9
	No	26	48.1



Tooth abrasion is the loss of tooth substance through an abnormal mechanism process. Abrasion in the cervical area is often found in elderly people who brush their teeth incorrectly. The resulting abrasion forms a 'V' shaped wedge or trench at the root between the crown and the gingiva. This causes the teeth to become sensitive when receiving hot or cold thermal stimuli.

Based on the results of the study, 25 respondents (46.3%) did not have cervical abrasion and 29 people (53.7%). This is in line with the results of the relevant research by Kalangie et al. (2016) which showed that of the 205 samples, most of them experienced tooth abrasion (74.15%). The results of this study when compared with relevant studies, have a better percentage of cervical abrasion. This may be because the patient at the polyclinic in pertamedika has a habit of brushing teeth in a combination of horizontal and vertical. Also agrees with Sintanaya that the occurrence of abrasion on teeth can be caused by brushing behavior, whether it is the frequency of brushing teeth, the type of toothbrush used, to the method or technique used. Brushing teeth with a combination of horizontal and vertical movements can cause tooth abrasion [7].

The results of the research data showing gingival recession showed that most of the respondents had gingival recession as many as 28 people (51.9%). This result is different from the research of Maulani which states that respondents who experience a recession are 22.6% [16]. This is possible because respondents have the habit of brushing their teeth in a combination of horizontal and vertical. In addition, gingival recession occurs because the average age of the respondents in this study is 43 years. It is reinforced by the opinion of Ulfah and Agustina which states that gingival recession can occur physiologically or pathologically, physiologically it usually occurs due to increasing age of the patient [14]. Asmara's research also proves that the severity of gingival recession occurs due to increasing age [17]. Gingival recession is a condition or condition of the marginal gingiva that is more apical than the CEJ and is usually accompanied by the opening of the tooth root surface. Gingival recession can be found in individual teeth in all age groups. Its prevalence, extent, and severity increase with age. Gingival recession can be localized or generalized. This condition has a high prevalence, but in some patients, recession may be a sign of periodontal disease.

CONCLUSION

Based on the research results, it can be concluded that most of the patients at the Pertamedika Dental Polyclinic had cervical abrasions as many as 29 people (53.7%) and 28 people (51.9%).

CONFLICT OF INTEREST

The author hereby declares no conflict of interest.

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