

Knowledge and Interest in Treating Gingival Recession among Dental Practitioners in Saudi Arabia

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Abstract

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BACKGROUND: Gingival recession is an enigma among clinicians due to multiple etiological factors and various treatment modalities.

AIM: Objective of this study was to evaluate the knowledge and interest among dental practitioners regarding the treatment of gingival recession.

MATERIAL AND METHODS: A survey was conducted to assess knowledge of gingival recession and interest and satisfaction of dental practitioners in periodontics. This survey was circulated among 250 dental practitioners throughout four months. The structured questionnaire consisted of 9 questions assessing the knowledge and interest of dental practitioners in periodontics; gingival recession per se.

RESULTS: Majority of the participants were general dentists. Among them, 46.23% had a habit of reading dental journals. Most of the participants had an opinion that improper tooth brushing (42.71%) is an important cause of the gingival recession. Only 34.17% had information about Miller's classification of gingival recession. Regarding general indication of root coverage procedures, 28.64% answered aesthetics was the most common indication. 39.7% mentioned that traumatic occlusion was a risk factor for gingival recession. A group of 29.65% mentioned that accidental toothbrush trauma leads to gingival recession.

CONCLUSION: The knowledge of gingival recession among the study participants was adequate. More specifically, the interest of participants in periodontics was 5.39 and satisfaction in treating periodontal cases was 5.47.

Introduction

The periodontal practice is swiftly shifting, as new evidence regarding cosmetic dental treatment is constantly increasing and extending further than replacement of teeth to include the soft tissue component of dentition and increase the lifespan of dentition using disease prevention or thorough treatment [1]. Also, the periodontal speciality is growing in diverse aspects ranging from newer advancements in diagnosis, treatment interventions, the use of regenerative techniques, and growth factors in various periodontal diseases [2].

One of the most common cosmetic concerns related to periodontium is a gingival recession [3]. It is a condition that affects the community and an enigma for dental practitioners because of numerous etiological elements and surplus treatment options present for its management. Local or generalized exposure of the root surface of teeth by the "displacement of marginal tissue apical to the cemento-enamel junction (CEJ)" is referred as gingival recession [4] and is often associated with problems such as cervical root abrasions, esthetic concerns [5], root caries [6] and root surface hypersensitivity [7] that make it a concern for patients.

As perio plastic surgeries are considered as sensitive technique procedures, the dentist should have thorough knowledge regarding gingival recession. The early diagnosis and treatment of gingival recession are very crucial for successful root coverage as the delay can worsen the expected outcome and in turn, may compromise the aesthetics. It is also essential to learn about possible gaps between scientific evidence and dental practice to adopt continuing education and to ensure that researchers include questions that are relevant to practising dentists.

A very limited scientific data is available regarding knowledge and interest in treating gingival recession among practising dentists in Saudi Arabia as general dental practitioners treat the major part of society, so their knowledge, attitude, and perception about the periodontal diseases and its management are of utmost importance.

The purpose of this study was therefore to evaluate the knowledge and interest among dental practitioners regarding treating gingival recession.

Material and Methods

A cross-sectional study was done among 250 dental practitioners in Saudi Arabia, throughout four months using the questionnaire by Grover V et al., [8] which was originally taken from the questionnaire used in the study conducted by Zaher et al., [9]. A panel of specialists evaluated the face validity of the questionnaire. The minor changes were made to make it more clear and understandable. The questionnaire was anonymous, and participation was voluntary. The approval for this study was taken from the Institutional Review Board.

The questionnaire consisted of 9 questions; most of them giving the possibility of multiple choices of answers. Initial information addressed the profile of the dentist. More precisely, about the dentist's age, years of practising after graduation, practising speciality, and preferred professional subjects. Furthermore, we recorded the habit of reading dental journals. The questions from 1 to 6 assessed the knowledge in the classification and aetiology of gingival recession as well as about the general indication of procedures for root coverage. Question 7 asked the dental practitioners about their habit of reading the dental journals (yes or no), question 8 estimated the interest in periodontics on a numerical scale from 1 (no interest) to 10 (high interest), and question 9 assessed the satisfaction in practising periodontics from 1 (no satisfaction) to 10 (high satisfaction).

The criteria for assessing knowledge

(adequate or inadequate) are based on the 2nd quartile value (50th percentile) as cut off the score. The analyses were made with the SPSS (version 16.0) software. The results were expressed as percentages of the total. Level of significance was set at 5%.

Results

A total of 199 (79.6%) out of 250 dentists responded to the questionnaire. All the responses received and then evaluated. The data associated with the general characteristics of the participants are presented in Table 1. Mean age of the participants was 34.59 ± 8.62 years, and the mean professional experience was 7.97 ± 6.30 years.

Table 1: General characteristics of the participants

General characteristics		Number	%
Number of responders		199/250	79.6
Practising sector	Government	138	69.35
	Private	61	30.65
Years since graduation	1-5	90	45.23
	6 to 10	48	24.12
	11 to 15	30	15.08
	15 to 20	24	12.06
	> 20	7	3.52

The majority of the participants were general dentists (57.79%) while others were periodontists (10.05%), oral surgeons (7.54%), prosthodontists (7.54%), endodontists (5.03%), pedodontists (10.02%) or belonging to another specialty (2.04%). About 46.23% of the participants had a habit of reading dental journals, and the majority of them were general practitioners. Majority of the participants who were reading dental journals were above 32 years of age and with 6 to 10 years of experience ($P < 0.01$).

All the questions had one correct answer among multiple choices of answers. The responses of participants are presented in Table 2.

Table 2: Frequency of correct responses

No	Questions	Frequency	Percentage
1	The most common cause for Gingival Recession?	85	42.71
2	Do you know Miller's classification of gingival recession?	68	34.17
3	Indication for Root Coverage procedure?	57	28.64
4	Risk Factor for Gingival Recession?	79	39.7
5	The consequence of lip, oral and tongue piercing?	156	78.34
6	Tooth Brush Trauma and Gingival Recession?	111	55.8

According to study results, majority of the participants had an opinion that improper tooth brushing (42.71%) is the most common cause of gingival recession while others responded periodontal disease (28.14%), abnormal tooth position (16.58%) and high frenal attachment (5%) as the most common cause of gingival recession.

Results of the study show 34.17% of the

participants had information about Miller's classification of gingival recession, 25.50% did not know the classification, and 27.26% did not remember the classification and 13.07% of the participants knew another classification for recession.

Regarding general indication of root coverage procedures, the participants answered aesthetics was the most common indication (28.64%), whereas others answered dental hypersensitivity (28.14%), prevention of further progression of recession (23.12%) and preservation of vitality of the tooth (10.55%) and occlusal stability (8.54%) as the most common indication.

Amongst the total participants, 39.7% mentioned traumatic occlusion as a risk factor for gingival recession while the others mentioned tooth position (24.62%), tooth vitality (18.59%) and enamel hypoplasia (17.09%). Of those who mentioned traumatic occlusion as a risk factor for gingival recession, the majority were with 6 to 10 years of experience. When asked about the consequence of lip, oral and tongue piercing, the majority of the participants (78.34%) answered gingival recession.

Among the participants, 29.65% mentioned accidental toothbrush trauma resulting in gingival recession while other considered it as physiological (20.105), factitious (20.105), iatrogenic (29.15%).

Out of total participants, 55.8% had adequate knowledge on gingival recession while 44.2% were with inadequate knowledge (Figure 1).

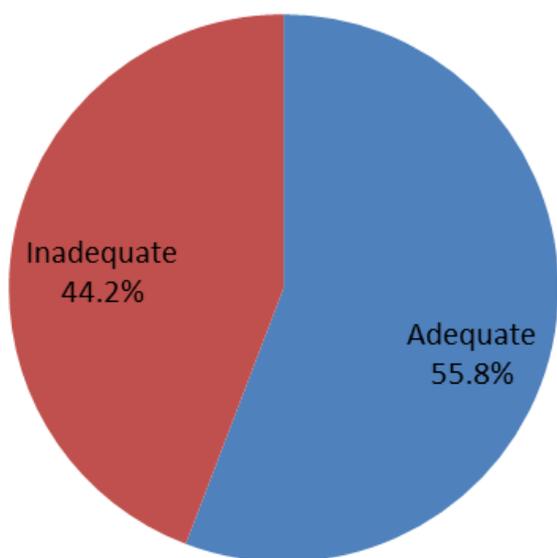


Figure 1: Knowledge regarding Gingival Recession among the subjects

The mean interest of participants in periodontics was 5.39 and satisfaction in treating periodontal cases was 5.47. The participants with 11 to 15 years of experience had more interest in periodontics and satisfaction in treating periodontal cases than the other groups, but the difference

between the groups was not significant. A statistically significant relationship between the habit of reading dental journals and the interest in periodontics was also noted (Table 3).

Table 3: Relationship between the habit of reading dental journals and the interest in periodontics

		The habit of reading dental journals	Interest in periodontics
Spearman's rho	Correlation Coefficient	1.000	.661**
	Sig.		.000
	N	199	199

** Correlation is significant at the 0.01 level.

Discussion

Gingival recession as a complex phenomenon makes the patients anxious and perplex for the practitioner who treats this situation. In day to day clinical practice, treatment of gingival recession depends on the practitioner's knowledge regarding classification, aetiology and treatment options. This survey evaluated the practitioners' knowledge of gingival recession and interest and satisfaction in treating periodontal cases.

The rate of response for this study was 79.6% which was similar to previous studies [10], [11], [12], [13]. In an attempt to encourage a high response rate and make the survey easy, the questionnaire was confined to 9 questions; most of them giving the possibility of multiple choices of answers.

According to the study results, the majority of the participants had an opinion that improper tooth brushing [11] (42.71%) is the most common cause of the gingival recession. This result was in consistent with an earlier study done by Zaher et al., [9]. 28.14% of the participants considered periodontal disease and 16.58% of participants considered abnormal tooth position as a major cause of the gingival recession. Stoner and Mazdyasna [12] have reported an association between high frenal attachment and gingival recession, while Powell and McEniery [13] found no correlation. In our study, 5% of the participant answered high frenal attachment as a major cause of the gingival recession.

Consistent with study results, 34.17% of the participants had information about Miller's classification of gingival recession, and 13.07% of the participants had information about a different classification for recession. However, there are various classification systems for gingival recession available in the literature [9], [14], [16]. Miller's classification [16] which is based on a prognostic evaluation of complete root coverage is still considered as the gold standard when deciding whether to attempt the root coverage for a certain

clinical case or not. Thus, it is important for practitioners to know this classification so that they can deliver proper treatment or refer gingival recession patients accordingly.

Amongst the total participants, 39.7% mentioned traumatic occlusion as a risk factor for gingival recession while the others mentioned tooth position (24.62%), tooth vitality (18.59%) and enamel hypoplasia (17.09%). Of those who mentioned traumatic occlusion as a risk factor for gingival recession, the majority were with 6 to 10 years of experience. Few studies [17], [18], [19] have mentioned possible risk factors of gingival recession. These studies have shown associations and possible factors, but they have not recognised the aetiological factors. Further studies are still required to explain the exact aetiology of gingival recession, to apply adequate preventive measures.

When asked about the consequence of lip, oral and tongue piercing, the majority of the participants (78.34%) answered gingival recession. Oral piercing is a cultural-causative factor of gingival recession [17], [19]. The differences that have observed among the various studies concerning the association between gingival recession and the examined variables could be attributed to numerous factors such as the heterogeneous population samples, the different study designs, etc.

The results revealed that almost 44.2% of the participants' knowledge on gingival recession was inadequate. The interest of participants in periodontics and satisfaction in treating periodontal cases was 5.47. So, there is an increased need for enhancing awareness among dental practitioners about the possible scope of periodontics so that timely specialist intervention is provided. Dental practitioner should pursue continued education through speciality teaching or certificate programs to stay informed about the newest research conclusions and novel treatment modalities to provide optimized care to the patient.

References

1. Mehta A. Risk factors associated with periodontal diseases and their clinical considerations. *Int J Contemp Dent Med Rev*. 2015; 2015:1-5.
2. American Academy of Periodontology. 2003 Practice Profile Survey, Vol. 114. Chicago: American Academy of Periodontology, 2004:209-10. PMID:15464614
3. Pini-Prato G. The Miller classification of gingival recession: limits and drawbacks. *J Clin Periodontol* 2011; 38:243-245. <https://doi.org/10.1111/j.1600-051X.2010.01655.x> PMID:21158897
4. Glossary of periodontal terms. 3rd ed. Chicago: The American Academy of Periodontology; American Academy of Periodontology (AAP), 1992.
5. Green PR. The flexible gingival mask: an aesthetic solution in periodontal practice. *British Dental Journal*. 1998; 184(11):536-540. <https://doi.org/10.1038/sj.bdj.4809691>
6. Reiker J, Van Der Velden U, Barendregt DS, Loos BG. A cross-sectional study into the prevalence of root caries in periodontal maintenance patients. *Journal of Clinical Periodontology*. 1999; 26(1):26-32. <https://doi.org/10.1034/j.1600-051X.1999.260105.x> PMID:9923507
7. Brannstrom M, Astrom A. The hydrodynamics of the dentine; its possible relationship to dentinal pain. *International Dental Journal*. 1972; 22(2):219-227. PMID:4505631
8. Grover V, Kapoor A, Malhotra R, Sachdeva S. Interest and satisfaction of dentists in practicing periodontics: A survey based on treatment of gingival recession. *Dental Research Journal*. 2012; 9(4):404-413.
9. Zaher CA, Hachem J, Puhan MA, Mombelli A. Interest in periodontology and preferences for treatment of localized gingival recessions. A survey among Swiss dentists. *J Clin Periodontol*. 2005; 32:375-82. <https://doi.org/10.1111/j.1600-051x.2005.00690.x> PMID:15811055
10. Smith RG. Gingival recession-Reappraisal of an enigmatic condition and a new index for monitoring. *J Clin Periodontol*. 1997; 24:201-5. <https://doi.org/10.1111/j.1600-051X.1997.tb00492.x> PMID:9083906
11. Wennström JL, Zucchelli G, Pini Prato GP. Mucogingival therapy-periodontal plastic surgery. *Clinical periodontology and implant dentistry*. 2003; 4:576-650.
12. Stoner JE, Mazdyasna S. Gingival recession in the lower incisor region of 15-year old subjects. *J Periodontol*. 1980; 51:74-76. <https://doi.org/10.1902/jop.1980.51.2.74> PMID:6928474
13. Powell RN, McEniery TM. Disparities in gingival height in the mandibular central incisor region of children aged 6-12 years. *Community Dent Oral Epidemiol*. 1981; 9:32-36. <https://doi.org/10.1111/j.1600-0528.1981.tb01025.x>
14. Kassab MM, Cohen RE. The etiology and prevalence of gingival recession. *J Am Dent Assoc*. 2003; 134:220-5. <https://doi.org/10.14219/jada.archive.2003.0137>
15. Miller PD, Jr. A classification of marginal tissue recession. *Int J Periodontics Restorative Dent*. 1985; 5:8-13. PMID:3858267
16. Pires IL, Cota LO, Oliveira AC, Costa JE, Costa FO. Association between periodontal condition and use of tongue piercing: a case-control study. *J Clinical Periodontol*. 2010; 37:712-8. <https://doi.org/10.1111/j.1600-051X.2010.01584.x>
17. Khocht A, Simon G, Person P, Denepitya JL. Gingival recession in relation to history of hard tooth-brush use. *J Periodontol*. 1993; 64:900-5. <https://doi.org/10.1902/jop.1993.64.9.900> PMID:8229627
18. Chrysanthakopoulos NA. Prevalence and associated factors of gingival recession in Greek adults. *J InvClin Dent*. 2013; 4:1-8. <https://doi.org/10.1111/jicd.12031>
19. Slutzkey S, Levin L. Gingival recession in young adults: occurrence, severity and relationship to past orthodontic treatment and oral piercing. *Am J Orthodont Dent Orthoped*. 2008; 134:652-6. <https://doi.org/10.1016/j.ajodo.2007.02.054> PMID:18984397