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Assessment Of The Knowledge And Awareness Towards The Aetiology And Diagnosis For Gingival Recession And Attitude Towards Its Management

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Abstract

Aim– The Aim of the study is to assess of the Knowledge and Awareness towards the aetiology and Diagnosis for Gingival Recession and attitude towards its management among interns and post-graduates.
Materials and Methods: 250 dental professionals including interns and postgraduates from diverse specialties participated in an online survey. This self-prepared questionnaire-based survey consisting of 14 questions was carried out at Rama dental college Kanpur for a period of 2 months.
Statistical analysis used:
Descriptive statistics have been used to summarize and describe the distributions of responses for each question. These statistics include measures like counts, percentages, means, and standard deviation. The Chi-square test and ANOVA test were used to analyze and compare the variables.
Results:54.8% of interns and postgraduates had good knowledge and attitude towards aetiology and management of gingival recession, 44.4% had intermediate knowledge whereas 0.8% had poor knowledge.
Conclusion: The study concluded that the Knowledge and Awareness towards the aetiology and Diagnosis for Gingival Recession and attitude towards its management among interns and postgraduates was good.

Keywords: Gingival Recession, Periodontal disease, Risk factors

Introduction

The term "gingival recession" refers to an apical shifting of the gingival margin. It is among the most prevalent periodontal aesthetic issue. This condition has impact on the community and causes problem for dental practitioners because of multiple causative factors and available methods for treatment and its management.[1]
The underlying anatomy, faulty brushing technique, excessive trauma that is mechanical or occlusal and periodontal inflammation are some of the common risk factors to the condition's multifactorial aetiology and etiopathogenesis.[2] Aesthetics is the main concern of patients and often mentioned as a primary reason for seeking the treatment. In Previous studies, results stated a deficit in the Knowledge and Awareness towards the aetiology and Diagnosis for Gingival Recession among the dental practioners.[3]Most of the Perio-plastic surgeries are acknowledged as the technique sensitive interventions and for the optimal root coverage, gingival recession must be diagnosed and treated as soon as possible because delay will decrease the expected results and compromise the periodontal health as well as aesthetics of patients.[1]
Every dental practioner should have good knowledge of etiopathogenesis and diagnosis of recession.[4]For betterment of patients, referring a patient to the specialist by treating doctor enhanced the efficiency of treatment plan via mutual understanding and knowledge. To gain the maximum results by the periodontal treatment mutual efforts of the patient and doctor are required.[5]Hence this survey was done to evaluate the Knowledge and Awareness of interns and postgraduates, towards the aetiology and Diagnosis for Gingival Recession and their attitude towards its management.

Materials & Methods

Study design and period

250 dental practitioners that included interns and postgraduates of all dental specialties were taken in this survey study. The study was conducted online, with age group of 20-35 years and was done at Rama dental college, Kanpur for a period of 2 months. The questionnaire consisted of 14 questions all of which were multiple choice answers. The study was carried out after the permission from the Institutional Ethical Committee (IEC).
The assessment of the knowledge and awareness towards the aetiology and diagnosis for gingival recession was done by question no. 1 -6. Question 7 to 14 assessed the knowledge and attitude towards management of gingival recession.
Validity of questionnaire is checked by face validity that is 1 and Cronbach analysis that is 0.88.Descriptive statistics have been used to summarize and describe the distributions of responses for each question. These statistics include measures like counts, percentages, means, and standard deviation. Chi-square and ANOVA test were used to analyze and compare the variables.

Results

A total of 250 interns and postgraduates participated and filled the questionnaire. The answers were received and assessed.

The response of participants to questions pertaining to aetiology of gingival recession are presented in Table 1.

Table 1: Distribution of responses to questions pertaining to the aetiology of gingival recession (n=250)

Question	Option	n	%
What is the major reason for gingival recession	Abnormal tooth position	5	2
	High frenum attachment	12	4.8
	Improper tooth brushing	180	72
	Periodontal disease	53	21.2
What are the risk factors for gingival recession?	Immunocompromised individuals	6	2.4
	Lack of attached gingiva	109	43.6
	Presence of a thin biotype	69	27.6
	Presence of bone deficiencies	29	11.6
	Smoking	37	14.8
Are you aware that dehiscence, decreased alveolar bone crest thickness and Frenum insertion near the cervical region of gingiva are the predisposing factors for gingival recession?	Yes	227	90.8
	No	23	9.2

Are you aware of Miller's classification of gingival recession?	Yes	218	87.2
	No	11	4.4
	Do not remember	21	8.4
What is indication of root coverage procedures?	Dental hypersensitivity	44	17.6
	Esthetics	171	68.4
	Occlusal stability	6	2.4
	Preservation of tooth vitality	11	4.4
	To prevent the further gingival recession	18	7.2
Orthodontic treatment may cause gingival recession?	Yes	202	80.8
	No	48	19.2

72% subjects accept that faulty or improper tooth brushing is main cause of gingival recession in present survey and 21.2% replied periodontal disease, as main etiological factor for gingival recession while 4.8% subjects answered frenum attachment and 2% answered abnormal position of tooth.
Regarding risk factors of gingival recession, (43.6%) participants answered lack of attached gingiva as risk factor, whereas other answered presence of thin biotype(27.6%), smoking (14.8%) and presence of bone deficiencies (11.6%).
Among total participants, 90.8% are aware about dehiscence, decreased alveolar bone crest thickness and frenulum insertion near cervical region of gingiva are the predisposing factors for gingival recession (68.4%), and 87.2% participants knew the miller classification of gingival recession. 80.8% participants agreed that orthodontic treatment may cause gingival recession.
The 68.4% participants replied aesthetics being the most frequent indication for treatment, whereas other answered dental hypersensitivity (17.6%), preservation of tooth vitality (4.4%) and occlusal stability (2.4%).
Among the 250 participants 72% had a good knowledge of aetiology of gingival recession, 26% had intermediate and 2% had poor knowledge. (Figure 1).

The responses of participants to questions pertaining to management of gingival recession are presented in Table 2.

Table 2: Distribution of responses to questions pertaining to the management of gingival recession (n=250)

Question	Option	n	%
Do you check for gingival recession?	Yes	250	100
	No	0	0
If yes, do you call in for a periodontist for recession treatment?	Yes	208	83.2
	No	42	16.8
If no, then what is your line of treatment? (n=42)	Apically displaced flap	5	11.9
	Frenectomy/frenotomy	3	7.1
	Mucogingival surgeries	34	81.0
What is your thinking about the success of gingival recession treatment?	Successful	227	90.8
	Not successful	6	2.4
	Don't know	17	6.8
Gingival recession is preventable?	Agree	231	92.4
	Disagree	6	2.4
	Don't know	13	5.2
Chances of recurrence of gingival recession are high?	Agree	178	71.2
	Disagree	43	17.2
	Don't know	29	11.6
Gingival recession treatment is cost effective for patients?	Agree	199	79.6
	Disagree	51	20.4
What is the gold standard treatment for gingival recession?	Autogenous soft tissue graft	40	16
	CAF (coronally advanced flap) + CTG (connective tissue graft)	122	48.8
	CAF + SCTG (Subepithelial connective tissue graft)	60	24
	FGG (Free Gingival Graft) + CAF	19	7.6
	Tunnelling technique + CTG	9	3.6

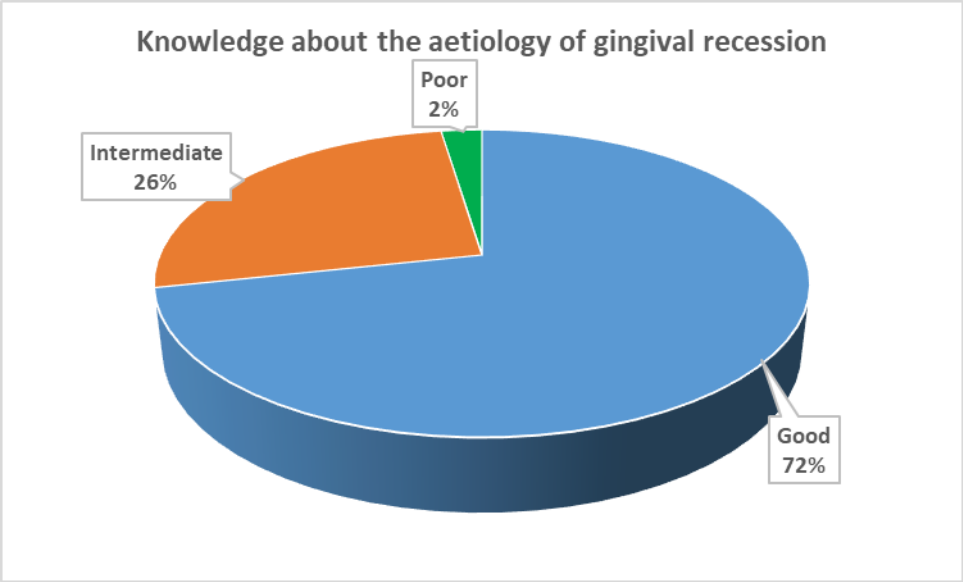

Fig 1

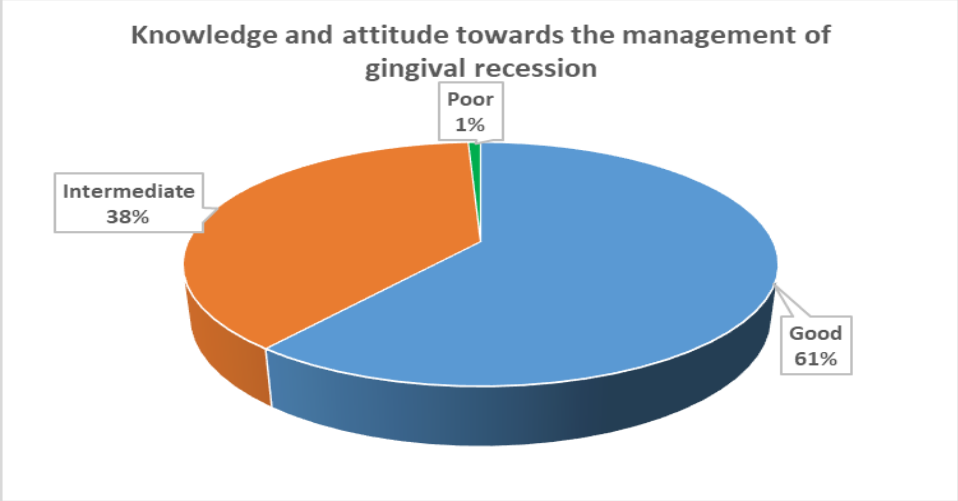

Fig 2

LEGENDS

Fig,1- **Knowledge about the aetiology of gingival recession**

Fig.2- **Overall knowledge and attitude towards aetiology and management of gingival recession**

Results revealed that all participants check for gingival recession. And majority of them (83.2%) call a periodontist for recession treatment. 16.8% participants who treat the recession by themselves, they prefer to do (81%) mucogingival surgeries, in compare to (11.9%) apically displaced flap or (7.1%) frenectomy/frenotomy.

Out of 250 participants, 90.8% agreed that gingival recession treatment become successful. But however, 71.2% participants also agree that chances of recurrence of gingival recession is high.

Most of participants (79.6%) agree that it is cost effective while (20.4%) don't agree.

Regarding gold standard treatment for gingival recession 48.8% participants thought coronally advanced flap with connective tissue graft, while 24% vote the coronally advanced flap with Sub Connective Tissue Graft, 7.6% answered coronally advanced flap with free gingival graft and 3.6% told tunnelling technique with connective tissue graft.

Among 250 participants 61% had good knowledge and attitude towards management of gingival recession,38% had intermediate knowledge and 1% had poor knowledge (Figure 2).

Discussion

The complexity of Gingival recession makes the patients apprehensive and difficult for the treating doctor. In daily dental practice, management of gingival recession is based on clinician's knowledge regarding its aetiology and different modalities of treatment. This survey-based study assessed the Knowledge and Awareness of interns and postgraduates, towards the aetiology and Diagnosis for Gingival Recession and their attitude towards its management.

The survey result shows that the majority of the participants believe that faulty tooth brushing [6] is the most common cause of the gingival recession (72%). Same results was in accordance with the survey conducted by Zaher et al.[7] in which 91.5% of all respondents considered traumatic tooth brushing as the major cause of gingival recession. Stoner and Mazdyasna [8] found that mainly higher papillary frenum attachment cause pulling of frenum and cause gingival recession among all frenum attachments and reported a correlation between high frenal attachment and gingival recession in his study. In Our study 4.8% of the clinician thought that the major cause of the gingival recession is high frenum attachment., in contrast to our study Powell and Mc Eniery [9] found no correlation between gingival recession and frenum attachment.

Regarding risk factors for gingival recession 43.6%) participants answered lack of attached gingiva as most common risk factor gingival recession. [10] In this study 87.2% of the participants were aware of Miller's classification of gingival recession, and 4.4% of the participants were not aware of it. Despite many classifications have been given for gingival recession but Miller's classification [11] is most reliable and correct for deciding whether the root coverage can be done in a given case or not because it is based on the prognostic evaluation. So, knowledge of this classification is essential for dentists to treat or refer gingival recession patients appropriately.

According to participants majority (80.8%) had opinion that orthodontic treatment may cause gingival recession. This is in contrast to study [12] that says orthodontic movement can prevent gingival recession.

Perioplastic procedures such as free gingival graft, connective tissue graft, and coronally advanced flap that have ability to achieve root coverage, [13-16] were chosen as treatment options for root coverage by most participants which shows that dental surgeon are more inclined towards surgical treatment of gingival recession .That is in contrast to results reported by Mali et al.,[17] in which periodontal treatment provided at a dental clinic was assessed and it shows that general practitioner did not opt for mucogingival surgeries and nearly all of them had opinion that the root coverage procedures are not successful.

In his meta-analysis, R Roccuzzo et al, [18] reviewed the various perio aesthetic technique which have been used for the recession treatment and they found that not any single technique is much superior than others but connective tissue grafts technique have some significant benefits over other treatment modalities like guided tissue regeneration technique, free gingival graft, coronally advanced and lateral positioned flap. in present study, our budding dental surgeon (48.8%) also favours that combination of coronally advance flap and connective tissue graft as gold standard for gingival recession treatment. In addition. Al-Hamdan et al.,[19] analysed the available studies data on root coverage procedures to repair gingival recession in their meta-analysis. they found that GTR-based root coverage successfully repaired gingival recession defects, but conventional mucogingival surgery resulted in statistically better root coverage and width of keratinized gingiva.

This study concluded that there is an need for enhancing awareness among about gingival recession, its etiology, diagnosis and treatment. Due to the lack of awareness and knowledge many dentists neglect these perio-plastic procedures in their routine practice. Hence an awareness along with a multidisciplinary approach should be aimed at treating the patients based on clinical experiences and individual preferences with a primary indication of demand for improved aesthetics.

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