



Knowledge & Attitude Towards Management of Gingival Recession Among Dental Professionals – A Questionnaire Survey

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ABSTRACT

Background: Receding gums, the conundrum among practitioners due to its numerous etiologies and various treatment modalities is found to be an alarming framework in the field of Periodontics. The decision to treat gingival recession is purely influenced by the judgment of the treating, referring dentists, and periodontists.

Aims & Objectives: Currently, there is limited data regarding the approach of an Indian dentist towards the treatment of the gingival recession and their referral to periodontists. Therefore, the purpose of this study is to evaluate the knowledge on diagnosis, treatment strategies, opinions, and interests among the dental professionals with regard to gingival recession.

Material and Methods: An online survey was conducted among 117 dental professionals including interns and postgraduates of various specialties with an age group of 18-30years. This self-prepared questionnaire-based survey was carried out at Mangalore, Karnataka for a period of 2 months.

Results: The study shows 33.3% of the participants (periodontists) were well aware of Cairo's classification of gingival recession and 66.7% did not have any idea. 32.5% mentioned malpositioning of teeth to be the primary cause for gingival recession. Regarding the general indication for root coverage procedures, periodontists (58.8%) and non-periodontists (41.1%) answered prevention of further progression of the gingival disease (43.6%) to be the most common reason.

Conclusion: Through our observations made in the present study, we would like to conclude that due to the lack of awareness, knowledge, and professional incompetency, many dentists neglect these perioplastic procedures in their routine practice.

Keywords: Gingival Recession, Perio plastic surgeries, Cairo's Classification, Dental esthetics.



Introduction

A pleasant smile is considered to be the symbol of beauty and well-being in modern society with dental esthetics being an integral part of it. The art of Periodontology and its traditional practice keeps changing expeditiously as newer advancements in diagnosis and treatment approach boons every day.

Gingival recession, an enigma among clinicians due to its multiple etiologies and various treatment modalities is found to be an alarming framework in the field of Periodontics. It is defined as an apical shift of the gingival margin caused by different pathologies. The exposed root surfaces besides being unaesthetic causes additional problems like dentinal hypersensitivity, root caries, root abrasions, and esthetic concerns.

A greater proportion of dental professionals are unaware of the basic periodontal needs as general dentists treat a major part of society. Their knowledge, attitude, perception, and management of the gingival and periodontal disease is often misleading and referral to the specialist is often neglected. This is evidenced by the documented rise in advanced periodontal diseases culminating in tooth loss. Therefore, the aim of this survey is to explore and evaluate the knowledge on diagnosis, treatment strategies, opinions, and interests among the dental professionals with regard to gingival recession.

Materials & Methods: An online survey was conducted among 117 dental professionals including interns and postgraduates of various specialties with an age group of 18-30 years. This self-prepared questionnaire-based survey was carried out at Mangalore, Karnataka for a period of 2 months.

The questionnaire was anonymous and participation was voluntary. The questionnaire consisted of 21 questions; most of them giving the possibility of multiple choice answers. The initial information more precisely addressed the age of the dentists, their designation – interns/postgraduates, the field of specialisation, and their interest in reading periodontology journals (Yes/No). Questions 5 & 6 estimated their interest in periodontics and their satisfaction in the periodontal treatment on a numerical scale from 1 (no interest) to 10 (high interest). The questions from 7 to 9 assessed their insight in the classification, etiology of gingival recession as well as on the general indications for root coverage procedures.

The photographs and clinical recordings of two such cases of the gingival recession were discussed from question 10 to 21 and the participants were asked to answer appropriately. It collectively included the cause, type of recession, the treatment protocol and outcomes, the factors that influence the treatment outcomes, and whether to consider periodontal treatment as a reasonable option.

Data Analysis: The data were analysed in Microsoft Excel 2010 using average and percentage.

Results: A total of 117 dental professionals participated in the survey. Out of which 61.5% were postgraduate students and 38.5% were interns. Almost 52.1% were in the age group of 21-25years, 40.2% were between 26-30years, and 7.7% between the age group of 18-21 years.

The postgraduate students from various areas of specialisation-Periodontics (30.1%), Prosthodontics (16.4%), Oral & Maxillofacial Surgery (15.1%), Oral Medicine (19.2%), and Orthodontics (19.2%) were enrolled in the study. Among the participants, 57.3% were interested and 42.7% showed no interest in reading periodontology journals.

Differentiation between Periodontists and Non-periodontists: With respect to interest in periodontics among participants on a numerical scale was found to be 23.9% (28 responses) with a score of 5; 22.2% (26 responses) with a score of 6. Among the responses, postgraduate students from the Department of Periodontics were highly interested and they gave a score of 9 (9 responses 7.7%) & 10 (5 responses 5.3%).

With respect to satisfaction in periodontal treatment among participants on a numerical scale was found to be 26.5% (31 responses) with a score of 7 & 23.9% (28 responses) with a score of 6. Only about 16 participants gave a score of about 9 & 10 (10.3% & 3.4%). It was found that the participants from the Department of Periodontics, Oral Medicine, and Interns were highly satisfied with the outcome.

Results of the study showed 33.3% of the participants, periodontists as in maximum number were well aware of Cairo's classification of gingival recession and 66.7% did not have any idea about this classification. (Figure: 1)

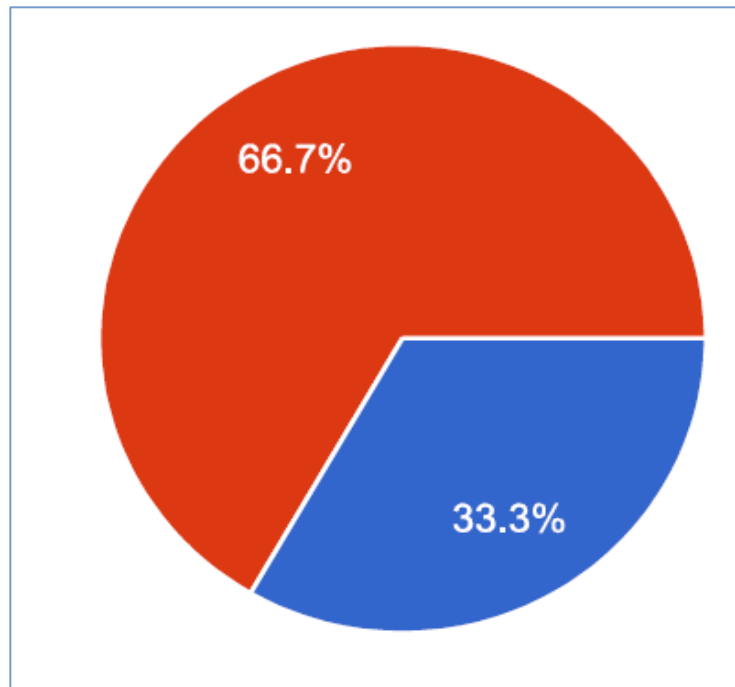


Figure1: Cairo's Classification - Responses

Among the total participants, 32.5% mentioned malpositioning of teeth to be the primary cause for gingival recession, while others mentioned progression of periodontal disease (29.1%), improper tooth brushing (22.2%) & chronic trauma (16.2%) to be the etiological factors. (Figure: 2) As most dentists consider improper tooth brushing to be the root cause for gingival recession, this investigation also affirmed the notion that 46.15% of the periodontists and 53.8% of the non-periodontists opted for this option.

A total of 58.8% of periodontists and 35.2% of non-periodontists considered a periodontal disease, while 26.3% periodontists and 73.6% non-periodontists attributed the malpositioning of teeth to be the primary etiological factor for gingival recession.

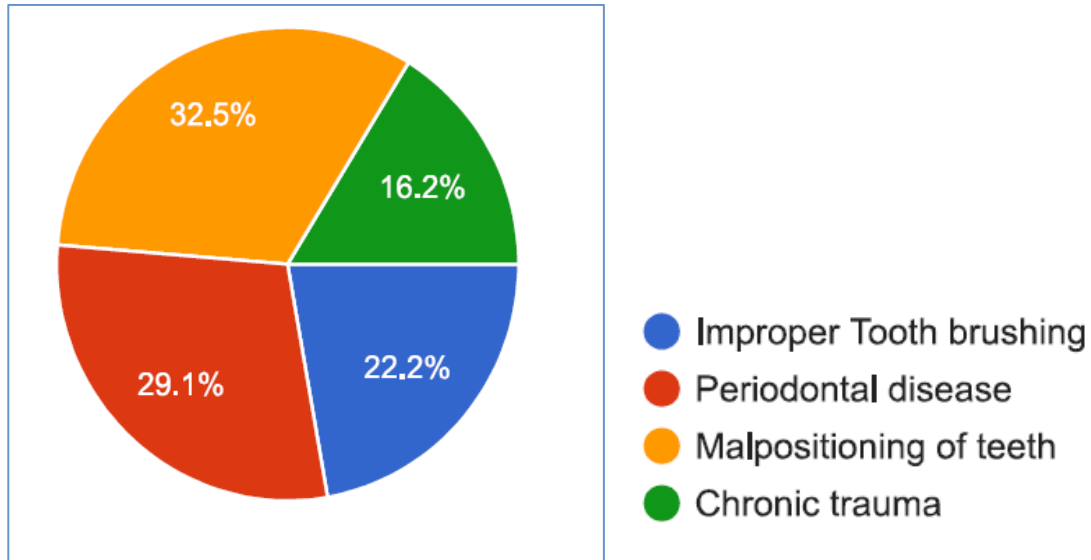


Figure 2: Etiology of Gingival Recessions – Responses

Regarding the general indication for root coverage procedures, the participant's periodontists (58.8%) and non-periodontists (41.1%) answered prevention of further progression of the gingival disease (43.6%) to be the commonest reason. With regard to esthetics (21.4%), the number of periodontists who opted for this option is found to be 24% and non-periodontists are 76%. There were also responses from both the participants, periodontists as well as non-periodontists with regard to dental hypersensitivity (18.8%) and occlusal stability (16.2%). (Figure: 3)

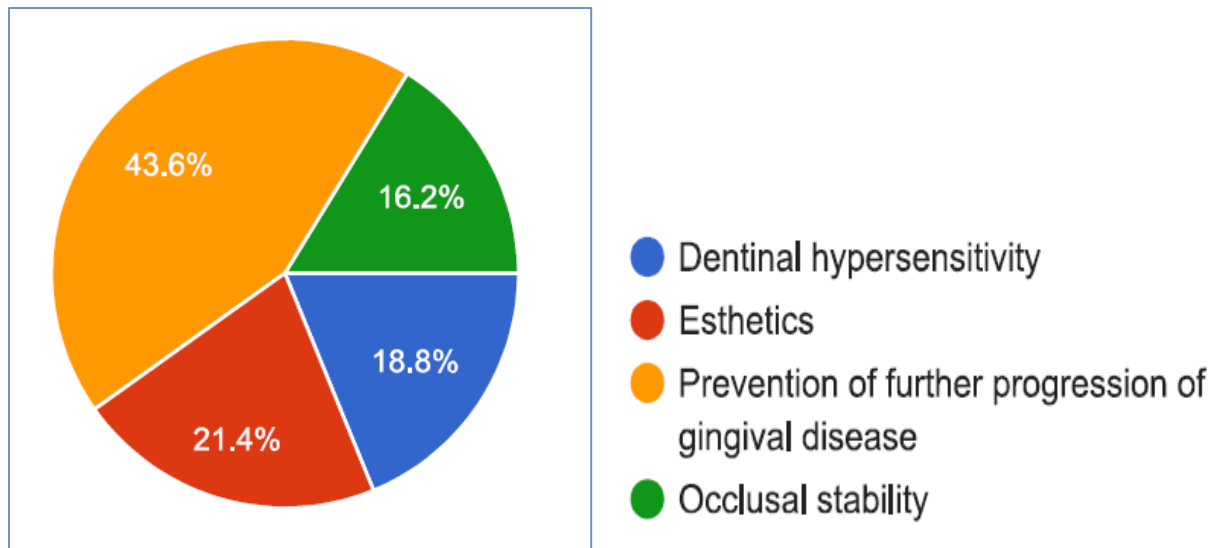


Figure 3: General indications for root coverage procedures - Responses

With regard to the photographs of gingival recession along with clinical findings that were discussed (Figure: 4 & Figure: 5).

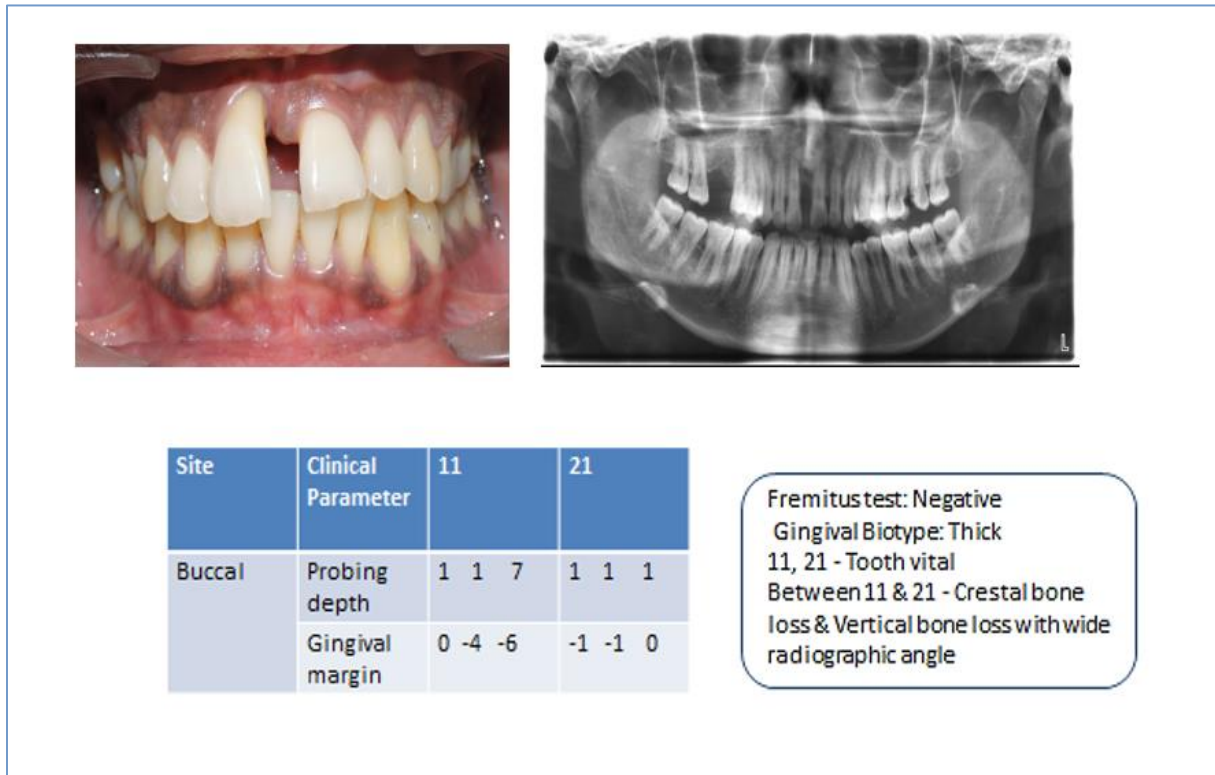


Figure 4: Case 1 – Clinical & Radiographic Photographs

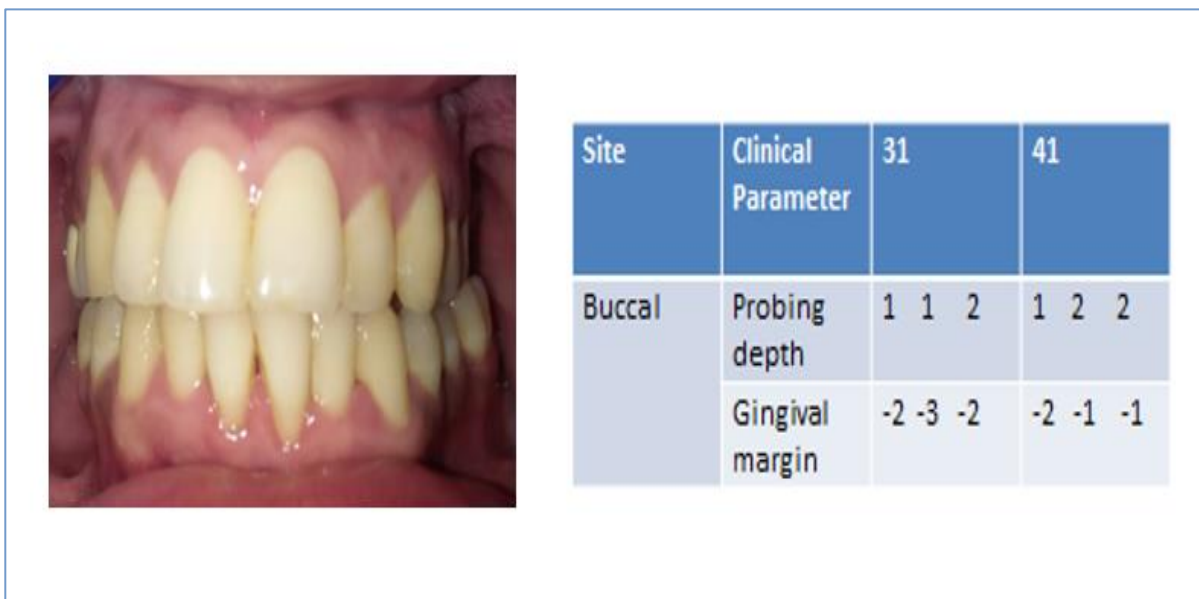


Figure 5: Case 2 – Clinical Photographs



Table 1: Results

Questions	Responses for Case 1	Responses for Case 2
How do you classify the case of gingival recession?	<p>Miller's Class IV – 23.9%*</p> <p>(Periodontists – 64.2%, Non periodontists – 35.7%)</p> <p>Miller's Class III – 58.1%</p>	<p>Miller's Class III – 60.7%*</p> <p>(Periodontists – 58.2.2%, Non periodontists – 40.2 %)</p> <p>Miller's Class II – 23.9%</p>
What is the likely cause of gingival recession of the above mentioned case?	<p>Malpositioning of teeth – 61.5%*</p> <p>(Periodontists – 41.3%, Non periodontists – 22.6%)</p> <p>Periodontal disease – 21.4% Chronic trauma – 10.3% Tooth brushing – 6.8 %</p>	<p>Periodontal disease – 36.8%*</p> <p>(Periodontists – 44.3%, Non periodontists – 28.6%)</p> <p>Tooth brushing – 29.9% Malpositioning of teeth – 15.4% Chronic trauma- 17.9%</p>
What will be the treatment outcome?	<p>Fair – 76.9% Poor – 14.5% Good – 8.5%</p>	<p>Fair – 63.2% Poor – 2.6% Good – 34.2%</p>
Will you consider periodontal treatment to be a reasonable option?	<p>Yes – 62.4% Not sure – 23.1% No – 14.5%</p>	<p>Yes – 68.4% Not sure – 22.2% No – 9.4%</p>
According to you, What will be the treatment protocol for the above mentioned case?	<p>SRP+ Ortho treatment+ Root coverage procedure using connective tissue graft + bone graft – 42.7%*</p> <p>(Periodontists – 50.3%, Non periodontists – 23.6%)</p> <p>SRP+ Root coverage procedure using connective tissue graft – 27.4%</p> <p>SRP+ Root coverage procedure using connective tissue graft+ Ortho treatment – 17.9%</p> <p>Extraction & replacement – 6%</p>	<p>SRP+ Root coverage procedure using connective tissue graft – 32.5%*</p> <p>(Periodontists – 46.3%, Non periodontists – 28.6%)</p> <p>SRP+ Ortho treatment+ Root coverage procedure using connective tissue graft – 28.2%</p> <p>SRP+ Free gingival graft – 27.4%</p> <p>SRP+ Root coverage procedure using connective tissue graft+ Ortho treatment – 12 %</p> <p>Extraction & replacement – 4%</p>
In your opinion which	Case selection – 60.7%	Initial disease severity – 39.3%



factors will influence the outcome of the treatment?	Initial disease severity – 27.4% Gingival phenotype – 12%	Case selection – 36.8% Gingival phenotype – 12%
Further opinion with regard to the factors that influences the treatment outcome	<ol style="list-style-type: none"> 1. Host response 2. Systemic factors 3. Oral hygiene and trauma from occlusion and extent of bone loss can affect the overall outcome 4. Improvement of recession post orthodontic treatment 	<ol style="list-style-type: none"> 1. Host response and systemic conditions

Correct responses*

Discussion: The present survey evaluated the knowledge, interest, satisfaction, treatment strategies, and opinions among dental professionals including the interns and postgraduate students from various other specialities with regard to gingival recession.

As with global movement and technology-driven advancements, the evidence-based approach and care bring about the strong integration between clinical expertise and research-based evidence. With the observations made, the budding periodontists showed higher interests, more acquaintance on classification, diagnosis, treatment options by reading through various periodontology journals had satisfaction in clinical practice too. Further, were more inclined towards the surgical correction of the gingival recession cases presented to them in the questionnaire.

With respect to satisfaction in periodontal treatment among participants on a numerical scale, it was found that the participants from the Department of Periodontics, Oral Medicine, and Interns were highly satisfied with the outcome.

With regard to the etiology of gingival recession, 46.15% of the periodontists and 53.8% of the non-periodontists opted for the option of improper tooth brushing. These results also coincide with that of the survey conducted by Zaher et.al. in 2005.¹

Furthermore, the specialists being more conscious about the etiology of periodontal disease admitted that the presence of disease could also be an etiological factor. A total of 58.8% periodontists, 35.2% non-periodontists considered a periodontal disease, while 26.3% periodontists and 73.6% non-periodontists attributed the malpositioning of teeth to be the primary etiological factor for gingival recession.²

Even though, the literature review search suggests that esthetics and dentinal hypersensitivity to be the two major indications for the root coverage procedures,³ the number of periodontists who opted for this option is found to be 24% and non-periodontists is 76%. In addition, periodontists 58.8% opted for the option of prevention of further progression of the gingival disease (43.6%) to be the primary indication for root coverage procedures.

The periodontal plastic procedures - free gingival graft, connective tissue graft, and coronally advanced flap procedures have shown a greater potential in obtaining complete/partial root coverages. With regard to case



1, the gingival recession and pathologic migration hinder the patient's esthetics in the anterior region. The management of this situation poses a clinical challenge due to its unpredictability, so it requires a multidisciplinary approach.

Several studies have demonstrated that teeth with reduced but healthy periodontium can be moved orthodontically without attachment loss.⁴ The present study also confirms that most of the respondents (42.7%) opted for this option to initially start with that of the orthodontic treatment and then to proceed with that of the periodontal therapy. This is in accordance with the study conducted by Corrente. et. al in 2003.⁵ where he concluded that the combined orthodontic and periodontal therapy resulted in a realignment of the extruded tooth within the intrabony defects, a significant reduction in the probing depth, gain in the clinical attachment level, and radiographic bone fill. Further, orthodontic tooth movement along with periodontal therapy promotes new attachment & coronally shifts the soft tissue. Besides, Spleith et. al in 2002,⁶ concluded that the threshold for periodontal extractions is very low and undifferentiated. This survey also confirmed that dentists with knowledge and training in perioplastic surgeries were more inclined towards the preservation and less than 10% of the respondents opted for tooth extraction and replacement.

With regard to case 2, 32.5% of respondents preferred connective tissue graft, as this provides substantial root coverage, clinical attachment, and keratinised tissue gain and is considered to be the gold standard for the treatment of recession defects.^{7,8}

Even though several factors like gingival phenotype, case selection, disease severity, host responses, systemic factors, oral hygiene measures, etc. influences the treatment outcomes,^{9,10} 60.7% of the respondents opted for the option of proper case selection (case 1) & 39.3% of the respondents opted the option of initial disease severity (case 2).

Conclusion: Through our observations made in the present study, we would like to conclude that due to the lack of awareness, knowledge, and professional incompetency, many dentists neglect these perioplastic 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 esthetics.

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