ORIGINAL ARTICLE

# Knowledge and Attitude towards Management of Gingival Recession among Dental Professionals in Puducherry

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## Abstract

Gingival recession is represented by atrophic periodontal changes. Gingival recession is a problem affecting almost all middle and older aged to some degree. Gingival recession, a riddle or puzzle among clinicians due to its multiple etiologies and various treatment modalities are found to distress in the field of Periodontology. The aim of this study is to evaluate the knowledge on diagnosis, opinions, treatment options and interests among the dental professionals with regard to gingival recession. Data were collected by using a structured, validated, standard, self-administered questionnaire. The questionnaire was sent to interns and post graduate students of all disciplines. Students were approached through known contacts and the questionnaire was sent as an online Google Form. Through the observations, we state that many dentists (interns and non-perio PGs) disregard these perioplastic procedures due to a lack of awareness, expertise and professional incompetence. Early detection and treating the gingival recession with appropriate perioplastic procedures will result in good outcome.

**Keywords:** Esthetic, Gingival recession, Periodontal disease.

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## Introduction

Periodontology and its consequences for periodontal practise are evolving at a rapid pace. The field of esthetic dentistry is constantly expanding, going beyond tooth replacement and tooth color to include the soft tissue component that frames the dentition. As periodontal therapy is increasingly oriented at esthetic outcomes for patients, exciting opportunities and difficulties for esthetic periodontal treatment for dental practitioners are paving the way. Gingival recession is a frequent cosmetic concern associated with periodontal tissues.

It is represented by atrophic periodontal changes. Gingival recession is an issue which impacts nearly everyone in their forties and fifties. It is defined as an apical migration of the marginal gingiva caused by different pathologies.[1] The exposed root surfaces besides being unesthetic cause additional problems like dentinal hypersensitivity, root caries, root abrasions and esthetic concerns. Because general dentists treat a large portion of society, a greater proportion of dental professionals are unaware of basic periodontal needs. General dentists play a critical role in the preliminary evaluation as well as therapy for periodontal patients.

To achieve long-term clinical success with complete periodontal treatment, the patient's condition must be periodically re-evaluated and maintained on a regular basis, which requires the combined efforts of the patient, the general dental practitioner and periodontist and referral to a specialist is often neglected, resulting in tooth loss. As a result, the aim of the present survey was to investigate and assess knowledge of dental professionals in diagnosis of gingival recession and its treatment strategies.

## Materials and Methods

Data collection was done using a structured, validated, standard, self-administered questionnaire. The questionnaire was sent to interns and post-graduate students of all disciplines around dental colleges in Pondicherry. They were contacted through known contacts, and the questionnaire was sent online through Google forms. Out of which 177 students responded from various disciplines. The responses were recorded and displayed as a percentage of means. Questionnaire used in this study consists of 13 multiple-choice questions. It emphasized details regarding the knowledge on diagnosis, opinions, treatment options and interest among students about gingival recession.

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## Results

### Classification for Diagnosis of Gingival Recession

Among the total participants, 71.6% mentioned most used gingival recession classification is Miller's (Fig. 1).

### Etiology of Gingival Recession

Regarding the etiology of recession of about 57.1% participants agreed to all the given options followed by progression of periodontal disease in 18.6%, mal-positioned teeth in 9.9% and the

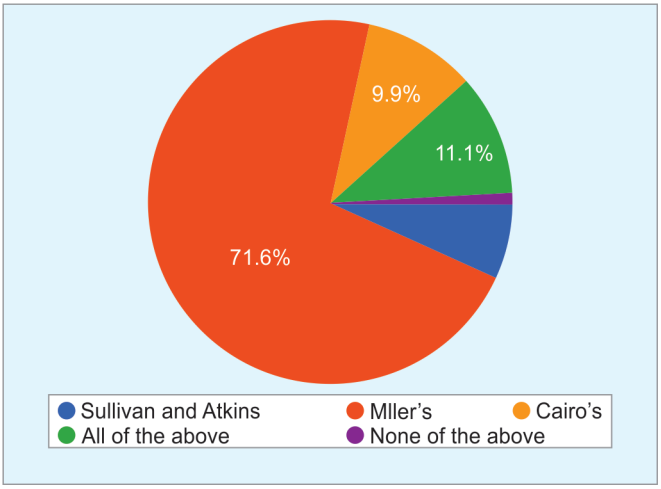



**Fig. 1:** Classification for diagnosis of gingival recession—responses

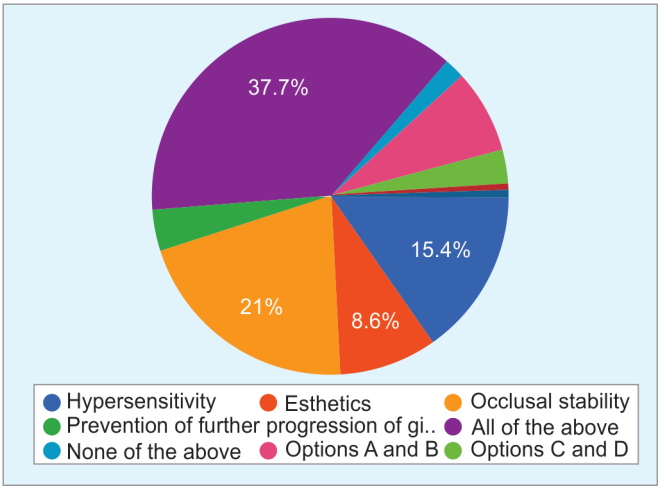



**Fig. 3:** General indications for root coverage—responses

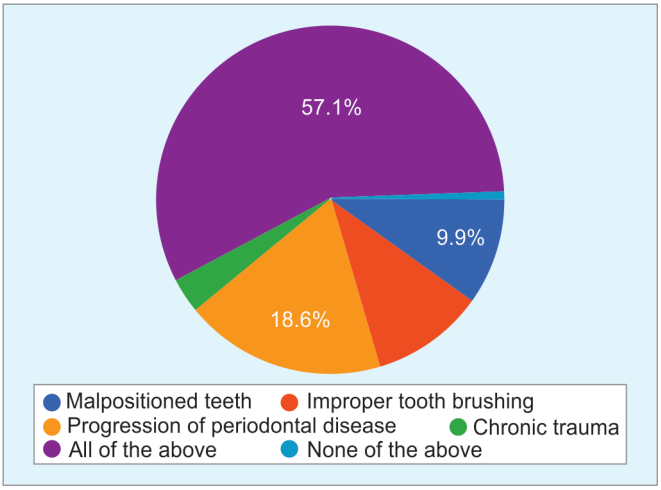



**Fig. 2:** Etiology of gingival recession—responses

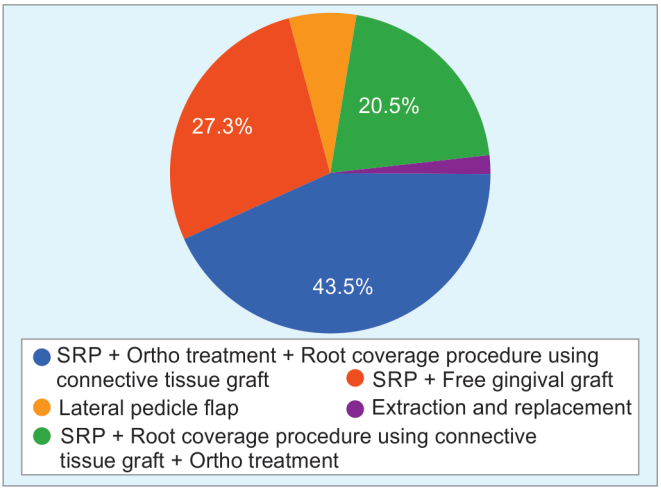



**Fig. 4:** Treatment protocol for gingival recession—responses

remaining participants had mentioned improper toothbrushing techniques in general (Fig. 2).

## General Indications for Root Coverage

Participants on answering about general indications for root coverage, an average of 37.7% participants mentioned all the given options, followed by prevention of further progression of disease in 21%, hypersensitivity in 15.4% and the remaining participants of 8.6% had chosen esthetics (Fig. 3).

## Treatment Protocol

A total of 43.5% opted for scaling and root planning (SRP) combined with orthodontic treatment and root coverage procedures using connective tissue graft, 27.3% had chosen SRP with free gingival graft, 20.5% in SRP combined with root coverage procedures using connective tissue graft and orthodontic treatment followed by lateral pedicle flap. The remaining had opted for extraction and their replacement to be the treatment protocol for root coverage procedures (Fig. 4).

## Factors Influencing the Outcome of the Treatment

A sum of 21.9% participants agreed on initial disease severity, 19.4% on gingival phenotype, 14.4% on case selection, while most of them had mentioned all the above conditions to influence the outcome of the treatment in case of gingival recession planning (Fig. 5). The details are depicted in Table 1.

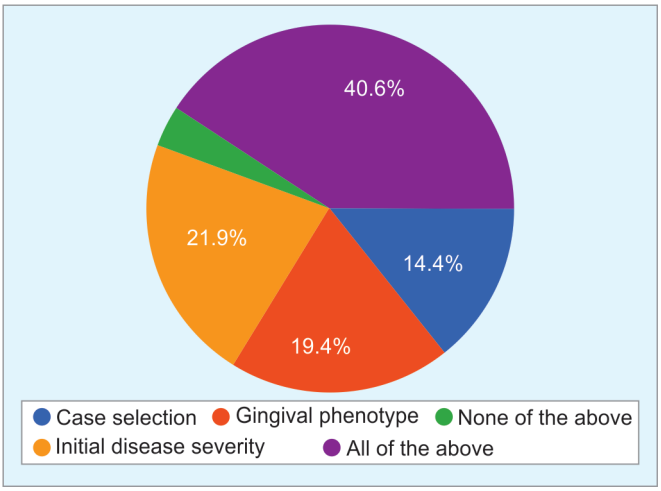
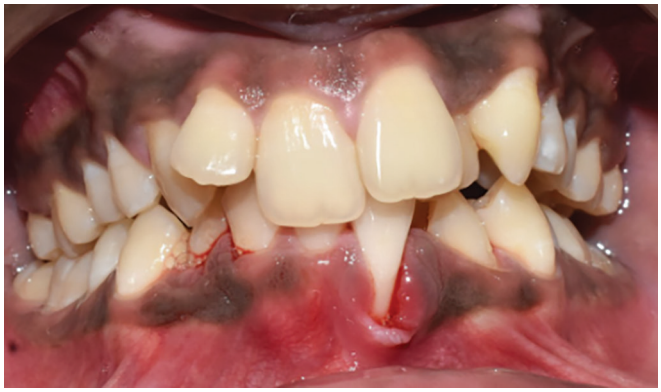
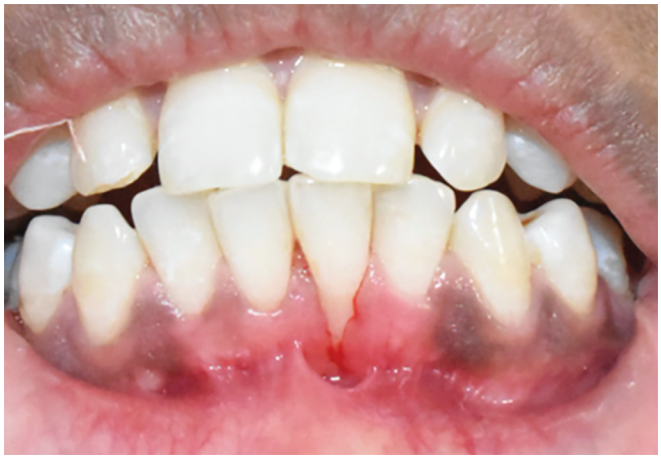



**Fig. 5:** Factors influencing the outcome of the treatment—responses

**Table 1:** Conditions to influence the outcome of the treatment in case of gingival recession planning

| *Questions* | *Responses* |
|---|---|
| 1. Most used classification for diagnosis of gingival recession? | For both the cases 71.6% participants opted for Miller's classification to be the most used one. |
| 2. Etiology of gingival recession | Majority of the participants opted for mal-positioned teeth, improper tooth brushing to be the etiology of gingival recession. |
| 3. General indications of root coverage procedures | Majority of the participants opted for hypersensitivity, esthetics, prevention of further progression of gingival disease to be the etiology of gingival recession. |
| 4. How do you classify this case of gingival recession? Radiographically there is no bone loss, Fremitus test was positive.  | Miller's Class-III gingival recession (50.6%). |
| 5. How do you classify this case of gingival recession? Radiographically there is bone loss, Fremitus test was negative.  | Miller's Class-II gingival recession (50.3%). |
| 6. What is the likely cause of gingival recession of the mentioned case? Specify for both the cases. | For case 1: Mal-positioned teeth.<br>For case 2: Mucogingival deformity. |
| 7. What will be the treatment outcome for both the cases? Specify for both the cases. | 63.4% of the total study participants have opted for good prognosis. |
| 8. According to you, what will be the treatment protocol for the above mentioned case 1? | • 43.5%—Scaling and root planning (SRP) + orthodontic treatment + connective tissue graft (CTG)<br>• 27.3%—SRP + free gingival graft (FGG)<br>• 20.5%—SRP + CTG + orthodontic treatment<br>• 6.8%—Lateral pedicle flap<br>• 1.9%—Extraction and replacement. |
| 9. According to you, what will be the treatment protocol for the above mentioned case 2? | • 32.1%—Frenotomy + pouch and tunnel using CTG<br>• 27.8%—SRP + FGG<br>• 19.8%—Lateral pedicle flap + frenotomy<br>• 19.1%—SRP + CTG<br>• 1.9%—Extraction and replacement. |
| 10. In your opinion which factors will influence the outcome of the treatment? | Majority of participants have opted for case selection, gingival phenotype, initial disease severity. |

## Discussion

The current survey assessed gingival recession knowledge, treatment techniques and opinions among dental professionals, including interns and postgraduate students from other specialties. The main reason for correcting gingival recession was intended for esthetically pleasing reasons. As majority of periodontists thought that periodontal disease was the source of gingival recession, more than one-third of them perceived root encompassing as a means of preventing further progression of periodontal disease.

With globalization and technological improvements, evidence-based approaches and care result in a strong integration of clinical experience with research-based evidence. According to the findings, aspiring periodontists demonstrated greater interest, knowledge of classification, diagnosis and treatment options by reading numerous periodontology journals, as well as satisfaction in clinical practice. Furthermore, they were more inclined to surgically repair gingival recession cases provided to them in the questionnaire.

For the first case, as the patient was not willing for orthodontic treatment, we opted for lateral pedicle flap and for the second case we chose frenotomy followed by free gingival graft in a single-stage approach.

Our observations are also in accordance with the following studies. Splieth et al.[2] in their survey stated that dentists with knowledge and trained in perioplastic surgeries were more likely towards the preservation and less than 10% of the respondents opted for tooth extraction and replacement. Corrente et al.[3] concluded that the combined orthodontic and periodontal therapy resulted in a realignment of the extruded tooth within the intrabony defects, a substantial decrease in probing depth, increase in the clinical attachment level and radiographic bone fill. Other author stated that 78% of dentists were aware of Miller's classification of gingival recession, 11% were unaware and 10% had forgotten the classification, and that the major causes of gingival recession as perceived by respondents were improper tooth brushing (56%), periodontal disease (34%) and periodontal disease (5%).[4] Mounssif et al.[5] stated that esthetics and dentinal hypersensitivity to be the two major indications for the root coverage procedures. These results are congruent with the responses given by Zaher et al.[6] in a survey of dentists in Swiss.

Roccuzzo et al.[7] evaluated coronally advanced flap, the lateral positioned flap, the free gingival graft, the connective tissue graft and guided tissue regeneration (GTR) with resorbable and non-resorbable membranes and discovered that connective tissue grafts excelled GTR. Al-Hamdan et al. examined available research on root covering strategies for gingival recession repair. Despite the fact that GTR-based root covering was proven to be helpful in treating gingival recession anomalies, traditional mucogingival surgery led to statistically superior root coverage and keratinized gingiva width.[8] In 2010, Kassab et al.[9] reviewed the literature on various root coverage methods and concluded that the combination of connective tissue graft and a coronally positioned flap had the greatest success rate. In 2008, Chambrone et al.[10] pointed out that a subepithelial connective tissue graft is the gold standard for Miller's recession type class I and II. Treatment is planned according to the patient needs, gingival biotype and type of the recession.

## Conclusion

Through our observations, we conclude that many dentists (interns and non-Perio PGs) disregard these perioplastic procedures due to a lack of awareness, expertise and professional incompetence. Early detection and treating the gingival recession with appropriate perioplastic procedures will result in good outcome.

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