



## KNOWLEDGE, AWARENESS AND PRACTICE ON DIAGNOSIS OF PERIODONTAL DISEASES AND CASE SELECTION METHODS FOR PERIODONTAL SURGICAL PROCEDURES AMONG GENERAL DENTAL PRACTITIONERS-A KAP STUDY

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**ABSTRACT** **Aim of the study:** To assess the knowledge, awareness and practice on diagnosis of periodontal diseases and case selection methods for periodontal surgical procedures among general dental practitioners. **Materials and Methods:** A questionnaire based survey was conducted among general dental practitioners in and around Chennai to assess the knowledge, awareness and practice on diagnosis of periodontal diseases and case selection methods for periodontal surgical procedures. The data collection was done through google forms. **Results:** On analysing the results, the majority of the participants were males. Majority of the practitioners (55.6%) assess the probing depth and clinical loss of attachment as an important sign of assessing a periodontal disease and 66.7% were aware of the optimal probing force, 77.8% of the participants were aware of the various non surgical and surgical procedures for the management of periodontal diseases. **Conclusion:** It can be concluded that the dentists had good knowledge on diagnosis of periodontal diseases and case selection methods for periodontal surgical procedures.

**KEYWORDS :** Periodontics, Periodontal surgical procedures, Periodontal diseases, Case selection methods.

### INTRODUCTION :

Periodontology is a broad subject of dentistry in which new ideas and concepts are constantly being added to the existing literature (1). Dentists' primary goal is to extend the life of the dentition by preventing disease or providing complete treatment (2). Periodontology is evolving in many ways, including fresh developments in diagnostics, therapy interventions, the use of regeneration procedures, and the use of growth factors in various periodontal disorders (3). Periodontal diseases are a global pandemic, according to epidemiological data, with a prevalence of 50 percent to 100 percent throughout the geographically diverse Indian subcontinent(4,5). According to the WHO, people experience 15%–30% tooth loss, and that early detection and treatment can help prevent and manage periodontal disorders (6). The speciality of periodontology is evolving in all aspects ranging from newer advances in diagnosis, to the use of growth factors and regenerative techniques in treatment. These evidence-based advances have given periodontal diagnosis and treatment a level of predictability of success, which was lacking just a decade ago. Despite the development of high-quality dental institutes, the majority of the population, particularly in urban areas, still uses private dental clinics for their dental requirements.

The growth of the internet as a credible source of information, as well as the publication of high-quality journals, has made periodontal treatment knowledge readily available to all practising dentists. However, periodontists frequently remark that a general dentist's understanding of periodontal diagnosis and treatment is sometimes restricted to the level provided in the BDS programme at the time of graduation (7). Patients' lack of access to care, poor socioeconomic level, patient anxiety, non-acceptance of referrals, and the primary caregiver's non-referral attitude have all been identified as key hurdles to providing effective therapy(8). It is more probable that the patients would have a favourable experience if they are taught about the benefits of advanced periodontal care(9). However, periodontists frequently remark that a general dentist's understanding of periodontal diagnosis and treatment is sometimes restricted to the level provided in the BDS programme at the time of graduation (8). Because general dentistry practitioners treat the majority of the population, their understanding, attitude, and perception of periodontal diseases and their treatment are of utmost importance.

Patients who see periodontists in private practice or dental institutes receive excellent periodontal care, while many patients who attend general practitioners (GPs) may not receive adequate therapy (10). The general dentist is entirely responsible for examining and determining whether or not a referral is necessary (11). Every doctor should have a solid understanding of diagnosing and creating a sound treatment strategy (12). Zemanovich et al examined the demographic characteristics influencing patient referrals from a general dentistry

clinic to a periodontist in a study of a similar pattern. They came to the conclusion that a variety of variables, such as the dentist's gender and proximity to a periodontist, influenced the amount of recommendations made by a general dentist. Treatment of chronic periodontal disease was also the most commonly suggested periodontal procedure, followed by soft tissue grafting and implants(13). The state and quality of periodontal treatment offered by general dentistry practitioners and their referral relationships are the subject of little research. Various research on the interaction between general practitioners and specialists are being performed in various parts of India(9,14,15).

Similarly, the goal of this study is to examine general dental practitioners in and around Chennai's knowledge, awareness, and practice on diagnosis of periodontal diseases and case selection methods for periodontal surgical procedures.

### MATERIALS AND METHODS:

This study was conducted among general dental practitioners in south India. A convenient sample size of 50 consecutive general dental practitioners, who are currently pursuing dental practice participated in the study. A cross-sectional observational online based study was conducted. Questionnaires were constructed in Google forms website with dichotomous responses and multiple choice questions. The questionnaire consists of 15 questions.

A link containing these questionnaires was shared with all the participants and required them to answer the questions. All the responses were analysed and recorded. The collected data was entered in Microsoft excel. The results were recorded and the difference was considered statistically significant.

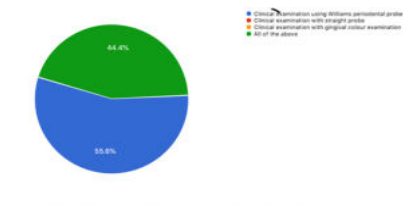
### RESULTS:

Out of 50 respondents, 60% of them were males and 40% of the participants were females. This included people of various age groups with varied years of experience in this field.

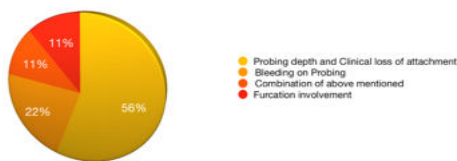
When the participants were asked about the most preferred methods for diagnosing periodontal diseases with options including Clinical examination using Williams periodontal probe, Clinical examination with straight probe, Clinical examination with gingival colour, 55.6% of the practitioners suggested clinical examination with william's periodontal probe while the rest 44.4% of them all the above criteria should be considered while diagnosing a periodontal disease.

The participants were asked about the signs that they check for assessing the periodontal status of their patients, majority of the practitioners (55.6%) assess the probing depth and clinical loss of attachment as an important sign of assessing a periodontal disease

followed by 22.2% of the participants use bleeding on probing as a important sign of assessment of periodontal disease, followed by 11.1% of the participants checked for the furcation involvement for diagnosing the periodontal disease. A very least number of participants (11.1%) used a combination of various signs for diagnosing the disease. Various other options like Mobility, mucogingival defects , Trauma from occlusion were also included options which were not chosen by any of the participants.



**Figure 1: Most preferred method for diagnosing periodontal diseases.**



**Figure 2: Pie chart showing most preferred signs and symptoms for assessing a periodontal disease.**

A question was asked to assess their awareness about the optimal probing force and the angulation to be used for probing. Majority of the dentists (66.7% ) were aware of it and applied it in their practice whereas 22.2% of them were aware of it but did not apply it during assessment. 11.1% of the dentists were not aware of the optimal probing force.



**Figure 3 : Pie chart showing awareness about the optimal probing force and the angulation to be used for probing.**

Every participant is aware that the medical history of a patient plays an important role while diagnosis of a periodontal disease out of which diabetes plays an important role in its progression. Also they are aware of lab investigations and normal values for diagnosing diabetes myelitis and if in case of an uncontrolled diabetes to be referred to a general physician.

The participants were asked about the landmarks / features that they observe in a radiograph for diagnosing periodontal disease, various suggestions like presence of radiolucency, bone loss, their types and pattern, changes in peri apical region and periodontal space were given.

77.8% of the participants were aware of the various non surgical and surgical procedures for the management of periodontal diseases. Gingivitis, presence of gingival recession, bone loss, presence of severe pocket, frenectomy/ frenotomy, depigmentation were some of the suggestions given by dentists for indications of periodontal surgical procedures. Sensitivity, Pain, Bleeding, food lodgement were some of the most common post op complications faced by them during periodontal procedures.

Every general dentist prescribed mouthwash to patients having gingival / periodontal diseases and chlorhexidine mouthwash was the most common commercial brand prescribed. This result is similar to a

positive finding in a research done by other researchers , proving that there is high awareness among dentists regarding demonstration of proper oral hygiene maintenance methods (7).

**DISCUSSION:**

This questionnaire survey was aimed at general dentists, who interact with a large number of varied patients on an everyday basis. The questionnaire was styled in a closed class personal manner, and a realistic response analysis was carried out. The questionnaire contained 15 questions assessing their demographic status and their knowledge and awareness on periodontally diseases and treatment modalities were analysed.

The most preferred methods for diagnosing periodontal diseases, 55.6% of the practitioners suggested clinical examination with william’s periodontal probe with probing depth and clinical loss of attachment as an important sign of assessing a periodontal disease. Studies suggest that traditional clinical periodontal assessment methods, such as pocket probing depth (PPD), bleeding on probing (BOP), clinical attachment level (CAL), and radiological assessment of the alveolar bone volume, are widely used diagnostic methods. However, these traditional periodontal classification parameters fail to provide noteworthy information on current disease activity, severity and extent of breakdown, future progression and therapy response. More importantly, the biological phenotype of the patient is not properly reflected by the clinical assessment methods (16-19). Newly developed point-of-care periodontal diagnostic tests led us to infer that there may be a better means of diagnosing periodontitis and assessing its stage activity than the traditional clinical assessment methods.(20-23).

In this study, 77.8% of the participants were aware of the various non surgical and surgical procedures for the management of periodontal diseases. Nonsurgical periodontal therapy is gaining equal amounts of importance across the world as surgical therapy. In a study conducted by researchers, in private dental clinics in Pune chiefly limited to surgical therapy, Gingivectomy was the most common procedure carried out by general dentists followed by flap surgery, crown lengthening, and ridge augmentation. Hardly any dentists performed mucogingival surgeries or bone grafting/GTR procedures.(24-27)

**CONCLUSION:**

Within the limitations of the study, it can be concluded that the dentists had good knowledge on diagnosis of periodontal diseases and case selection methods for periodontal surgical procedures, which is in contrast to many other studies. This difference may be due to various limitations such as single ethnic group ,unicentric study and limited population.

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