Original Article

Knowledge of Diagnosis, Treatment Protocols, and Periodontal Treatment Procedures among Dental Care Professionals of Gujarat: A Cross-sectional Study

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Abstract

Aim: A greater proportion of general dentists is unaware of the basic periodontal diagnosis and their treatment protocols which need as evidenced by the documented rise in advanced periodontal diseases. Other than that, there were limited data which exist regarding the demographic predictors of referral for the specialty of periodontics in detail. Hence, the aim of the survey was to explore and evaluate the knowledge of diagnosis, treatment strategies, and opinions of general dentists on periodontal treatment procedures. **Materials and Methods:** One thousand medical professionals were interviewed through a questionnaire. Those interviewed included an equal number of medical interns, postgraduates, and consultants. **Results and Discussion:** A positive attitude toward dental and periodontal check and the treatment needs was observed among those questioned. The difference was statistically significant among the groups. However, inputs from this survey can be used to organize periodontal health programs and for planning of joint ventures. **Conclusion:** These surveys conclude that current knowledge on diagnosis and treatment planning among dentists' is still reduced. Poor choice and patterns of referral lead to inadequate planning and execution of treatment. Hence, the overall perception of the general dentists toward periodontal treatment in Gujarat needs to be gauged so that the general dentists can call for introspection and betterment of their services.

Keywords: Dentists, Gujarat, Knowledge about periodontal diseases, Surveys, Questionnaires.

Introduction

The specialty of periodontology is evolving in all aspects ranging from newer advances in diagnosis, to the use of growth factors and regenerative techniques in treatment.[1] These evidence-based advances have given periodontal diagnosis and treatment a level of predictability of success, which was lacking just a decade ago. Quality dental institutes, which incorporate all these advances in their setup and curriculum, have evolved all over the country. Thus, today we see periodontology as a specialty reaching newer heights, and with a very bright future in front of us.[2,3] In spite of the developing of quality dental institutes, a majority of the population visits private dental clinics for their dental needs, especially in the urban areas. The development of internet as a reliable source of knowledge and the publication of quality journals such as JISP and JIDA has made knowledge of periodontal treatment freely accessible to all practicing dentists. However, it is a common complaint of periodontists that the knowledge of periodontal diagnosis and treatment in the minds of a general dentist is sometimes limited to the level taught in the BDS curriculum at the time of their graduation.[21-23] There is a need to evaluate the attitude and perception of the general dental practitioners toward periodontal treatment, as they form the cornerstone of dental practice. Hence, this study aims to identify the various aspects of periodontal treatment provided at a general dental clinic, along with referrals to periodontists.[4-6]

This study, by the means of a questionnaire, aims to identify the current status of periodontal treatment in clinics, the protocol of maintenance therapy, and the general awareness of the dental profession toward periodontal care. In a study of a similar pattern, Zemanovich *et al*. have evaluated the demographic variables affecting patient referrals from general dental clinic to a periodontist.[7-10] They concluded that various

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factors such as gender of the dentist and the proximity to a periodontist affected the number of referrals by a general dentist. Furthermore, treatment of chronic periodontal disease was the most common periodontal procedure that was referred, followed by soft-tissue grafting procedures and implants. A comprehensive demographic study in the United States was authorized by the American Academy of Periodontology in 1981. The study concluded that GPs, in the prime of their careers tend to be the best source of referrals for periodontists. Our study intends to identify the patterns of referrals from general dental practitioners to periodontists.[25]

Materials and Methods

One thousand medical professionals working in a rurally based medical institute were interviewed through a questionnaire. Those interviewed included an equal number of medical interns, postgraduates, and consultants. They were interviewed on a Google form at their workplace.

The questionnaire covered following four sections of questions:

Section 1: DEMOGRAPHIC INFORMATION
1) Name
2) Gender
3) Age
4) Practicing years in dentistry
5) Work place

Section 2: AWARENESS ABOUT DIAGNOSIS
1) Instruments used for checking periodontal health
2) Most frequently observed periodontal sign
3) Usage of any special instrument for furcation and mobility
4) Common cause of mobility
5) Type of mucogingival defect

Section 3: AWARENESS ABOUT PERIODONTAL DISEASE TREATMENT PROTOCOLS
1) Referral to periodontist for specific periodontal problems
2) Success of periodontal therapy in percentages
3) Factors responsible for the recurrence of periodontal disease after treatment
4) Coeffectiveness of the periodontal treatment
5) Financial viability of periodontal treatments

Section 4: AWARENESS ABOUT TREATMENT STRATEGY FOR PERIODONTAL DISEASE
1) Signs of gingival or periodontal diseases during scaling
2) Line of treatment for bleeding of gums
3) Line of treatment in patients with periodontal pockets
4) Line of treatment for cases with furcation involvement
5) Consideration of mucogingival surgery for gingival recession
6) Line of treatment for Grade I, Grade II, and Grade III mobility of teeth.

The responses were compiled, computed, and analyzed for agreement or otherwise between and within the groups. Chi-square test with its corrections was used to confirm the difference in proportions. Probability of 95% was considered as statistically significant.

Results

Of 1,000 dentists included, 64% were male, while 36% were female. Average years of experience were 5.2 years ranging from 1.6 to 34 years. The results revealed that a whopping 98% of the GPs performed phase-I therapy on their own and all of them carried out scaling, advised use of mouth washes, and proper brushing techniques. About 52.6% of dentist's use that straight probe for checking periodontal disease followed by 43.4% is using explorer and only 3% is using calibrated probe.

In periodontal sign's case, 44.1% notice mobility followed by bleeding on probing 28%, trauma from occlusion 17%, and probing pocket depth 9.9%. Most of the dentists are using specialized probe for detection of furcation and mobility. About 45.1% of dentists are believing that loss of attachment is a very common cause of mobility, while about 36.6% of dentists are believing that trauma from occlusion is common cause. About 92.2% of dentists notice gingival recession as a mucogingival defect and about 96% of dentists are referring periodontists for periodontal problems. About 63.4% of dentists believe that periodontal therapy gives success of 40–60%. About 93% of general dentists accept that due to lack of knowledge and skill of periodontal health the recurrence is more after the treatment. About 80% of dentists are believe that periodontal treatments are pocket friendly and it gives back value of money.

Based on the results of this survey, we have identified certain factors which could be changed for the betterment of the society. These factors are grouped as periodontist factor, general dentist factor, and patient's factor.

Discussion

This questionnaire survey was aimed at general dentists. The questionnaire was styled in a closed personal manner, and a realistic response analysis was carried out.[11] It was noted that on an average, 64.8% of general dentists could give correct responses. However, this value is still truncated considering the fact that they form the first line investigators for dental and specifically periodontal problems across the state.[12,13]

Almost half of the dentists referred their patients to a periodontist for surgical treatment and half of them referred them once a month, while a very few of them referred patients twice a week. Although the cardinal sign of periodontal disease is considered to be the periodontal pocket/loss of attachment, in our study, we found that only one in every three dentists surveyed referred patients to a periodontist based on the presence of pockets.[14-16]

Another response to be noted is that almost half the number of dentists referred patients to a periodontist for chief complaint of mobile teeth.[17,18] Furthermore, answers to later questions revealed that a similar percentage, that is, 54% of the dentists believe that there is only an occasional reduction in mobility

following periodontal treatment. This finding gives us an indication that increasing research should be focused on the satisfactory management of mobile teeth.[19,20]

About the success of the periodontal treatment, almost all of them believed that there was stoppage of bleeding after the treatment, while two-thirds of dentists believed that there is occasional recurrence after flap surgery and there is no success with root coverage procedure. Thus, there is high level of satisfaction with the treatment of the most common periodontal complaints.[14,15] There is no consensus among general dentists that periodontal treatment always increases the lifespan of teeth.[24,25] Lack of maintenance and awareness toward oral hygiene measures was identified by the survey as the chief factor for recurrence of periodontal disease.[26-35]

Half of the dentists recalled patients after 3 months of surgical treatment. Although recall was made after 3 months, many dentists commented that patient's compliance was a problem.[35]

General dentists believed that surgical periodontal treatment remains unaffordable to a large section of our population. Cost structure and methods of payment may differ in different cities and even in different areas of the same city.

Based on the results of this survey, we have identified certain factors which could be changed for the betterment of the society. These factors are grouped as periodontist factor, general dentist factor, and patient's factor.

Conclusion

From this pilot survey, it was noticed that the current knowledge on diagnosis and treatment planning among dentists' is still reduced. Furthermore, poor choice and patterns of referral lead to inadequate planning and execution of treatment. Hence, the overall perception of the general dentists toward periodontal treatment in Gujarat needs to be gauged so that the general dentists can call for introspection and betterment of their services.

Scope for periodontist

There is a need to increase predictability of various root coverage procedures. There is also a need to develop indigenous graft materials and membranes which would be economical to both the patient and the dentist, and maybe, more acceptable. If affordability of periodontal treatment increases in private setups, larger cross-section of patients would be willing to undergo periodontal treatment.

Scope for general dentist

The general dentist should be persuaded about the important role he plays in motivating the patients and devising a customized treatment protocol including referral and recall. He should emphasize on building a professional partnership with the periodontist so as to harness their aptitude and competence for the treatment of periodontal diseases. Seminars, courses, and CDE programs should be attended so as to imbibe knowledge regarding the newer periodontal treatment procedures. The current knowledge and practice among dentists should be gauged by conducting regular assessment tests at national level. Furthermore, pro bono practice hours should be dedicated to render quality care for the needy.

Scope for patient

Patients should be made aware regarding the maintenance of oral hygiene measures. They should be convinced and motivated regarding the value of the periodontal treatment compared to its cost. They should be explained that periodontal treatment enhances the longevity of his dentition and provides him with increased treatment options.

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