

ABSTRACT

Patients undergoing routine periodontal maintenance may present with residual disease. To evaluate residual disease rates within a dental education setting, a random dental chart review was conducted involving a sample of patients in a dental hygiene and a post graduate periodontal recall maintenance program. Residual disease was characterized as the presence of one or more teeth (excluding third molars) with at least one 6 mm pocket that bled on probing. In the post graduate periodontal maintenance (PPM) sample, 29% of the patients (17/59) exhibited residual periodontal disease. In contrast, 59% of the dental hygiene periodontal maintenance (DHPM) sample (13/22) had residual disease. Patients with residual disease in both populations were similar with respect to mean age and gender balance: mean age was 63.5 and 73.7 years in the PPM and DHPM groups, respectively, while gender composition was 53% and 46% female in the PPM and DHPM groups, respectively. Mean interval between maintenance visits was similar in both groups, with 4.5 months for PPM and 4.8 months for DHPM; however a higher percentage of the PPM sample was seen on a shorter maintenance interval (≥ 4 months): 65% versus 45% in the DHPM group. **These findings suggest that despite regular periodontal maintenance care, a significant percentage of patients in a dental education setting still presented with residual disease.**

OBJECTIVE

The initial phase of periodontal care (surgical or non-surgical) is typically followed by a maintenance phase of treatment, wherein supportive care including local scaling, root planing and plaque removal is provided on a regular basis, typically every 2-4 months (McFall 1989). This phase, referred to as supportive periodontal therapy (SPT), represents an extension of the active phase of treatment (McFall, 1989) where the primary objective is to achieve optimal patient plaque control by encouraging patient oral hygiene and delivering frequent professional removal of plaque and calculus deposits (Ramjford 1987).

Patients with moderate-to-severe disease often complete initial care (scaling and root planing with or without surgery) and then begin SPT with residual pocket depth. During SPT, the overall clinical presentation is one of relative stability with little gain or reduction in either pocket depths or attachment levels. However, some patients may continue to experience breakdown at individual sites (McFall 1982, Lindhe 1984, Renvert 1990).

Because of this potential for residual and recurrent periodontitis, maintenance patients are at elevated risk for further breakdown, and as such, represent a "key group" for targeting care (Newman 1994). In this research, we evaluated dental maintenance behaviors and clinical status of patients undergoing SPT within an academic dental center. Specifically, the research was designed to compare status among patients receiving SPT from the school's post graduate periodontics program versus those managed in the dental hygiene program.

MATERIALS AND METHODS

To evaluate residual disease rates within a dental school setting, a random dental chart review was conducted involving a sample of patients in a dental hygiene and a post graduate SPT program. After obtaining permission from the school's institutional review board, the investigator assembled a random sample of patient charts from the two SPT programs.

Key data relevant to protocol eligibility criteria were abstracted relating to demographics, clinical status and dental utilization. No specific identifying information was collected (e.g., patient name). Where appropriate, dental radiographs were used to establish clinical status. Abstracted variables included:

- age
- sex
- medical status
- initial periodontal therapy (date)
- most recent periodontal therapy (date)
- maintenance interval (planned)
- disease severity (teeth with 5+ or 6+ mm pockets with bleeding on probing)

All abstracted data were entered directly into a spreadsheet via laptop computer. Following data collection, cases were categorized as to their probability of successfully passing periodontal clinical trials entrance criteria at screening.

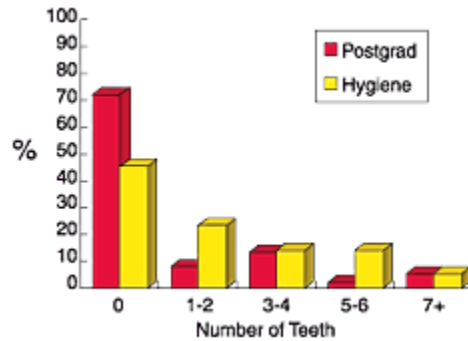
RESULTS

A total of 81 patient charts were reviewed and abstracted: 59 selected at random from the post graduate SPT program, and 22 selected at random from the dental hygiene SPT program. Residual disease was characterized as the presence of one or more teeth (excluding third molars) with at least one 6 mm pocket that bled on probing.

The mean age of the collective sample was 67.1 years, ranging from 37 years to 88 years. Gender composition of the collective sample was evenly distributed, at 50.0% female. Patients with residual disease in both the post graduate (PPM) and dental hygiene (DHPM) populations were similar with respect to mean age and gender: mean age was 63.5 and 73.7 years respectively, while gender composition was 53% and 46% female in the PPM and DHPM groups, respectively.

In the PPM sample, 29% of the patients (17/59) exhibited residual disease. In contrast, 59% of the DHPM sample (13/22) had residual disease (Table 1).

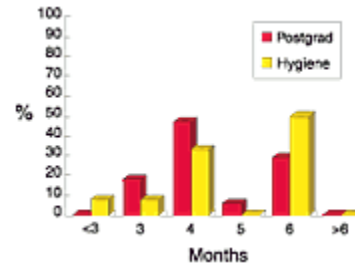
Table 1: Frequency Distribution of SPT Patients by Number of Teeth With at Least One Periodontal Pocket ≥ 6 mm



The mean number of years since initial periodontal therapy in the collective PPM and DHPM sample of 81 patients was 9.5 years. Considering only patients with residual disease, the mean number of years since initial therapy was 10.8 years and 6.7 years for the PPM and DHPM groups, respectively.

Mean interval between maintenance visits was similar in both groups, with 4.5 months for PPM and 4.8 months for DHPM; however a higher percentage of the PPM sample with residual disease were seen on a shorter maintenance interval (< 4 months): 65% versus 45% in the DHPM group (Table 2).

Table 2: Frequency Distribution of SPT Patients by Maintenance Interval



If these reported outcomes are representative, patients undergoing periodontal maintenance in academic settings may present with residual periodontal disease. Importantly, residual disease was more common among older patients, especially those over age 60 years, and in some patients, involved most retained teeth.

CONCLUSION

Regarding periodontal maintenance within dental school settings, these findings suggest:

-Dental school maintenance programs may include a significant proportion of patients with residual periodontal disease

-Differences may exist within dental schools as to disease severity and maintenance schedules for patients in post graduate programs versus those in hygiene programs

-This pilot exercise using a convenience sample may be a useful model for identifying patient types within academic maintenance programs, and could potentially target enrollment and reduce overall clinical cycle time.

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