Supportive Periodontal Therapy - Is the Patient Compliance Adequate?

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Introduction
Periodontitis is a chronic infectious disease characterized by inflammation related to intraoral biofilms harboring a variety of putative pathogenic micro-organisms. Chronic periodontitis can be effectively treated by means of mechanical non-surgical and surgical therapy.¹² Evidence has shown the importance of supportive periodontal therapy (SPT) in minimizing long-term tooth loss and controlling disease progression and relapse.³⁴ Periodontal maintenance is an integral part of periodontal therapy which starts after completion of active periodontal therapy and continues at varying intervals for the life of the dentition.⁵ Periodic clinical evaluations of the dentition and periodontium, removal of the dental biofilm, and a reinforcement of oral hygiene instructions are performed during SPT.

Studies have shown that tooth loss in periodontal patients is related to the frequency and quality of their maintenance care.⁶⁷ Failure of periodontal surgical therapy has been reported in patients who are followed up at infrequent maintenance intervals.⁸⁹ A recent systematic review by Gaunt et al.¹⁰ revealed that patients who are seen at regular intervals for SPT experienced less attachment loss.

Patient compliance is an important factor in the success of SPT and can be evaluated on the basis of the rate of attendance at the recommended schedule of visits. Even though several studies have reported low rates of compliance among patients; it was difficult to compare the observations due to the various parameters used.¹³¹⁴ The present study was conducted to evaluate the compliance of patients to SPT following periodontal surgical procedures in a university hospital. An attempt was made to explore the relationship with age and/or gender and the level of compliance. The reasons for non-compliance were reported through a telephonic enquiry.

Materials and Methods
Study design and setting
The study was conducted at the Department of Periodontology, Pushpagiri College of Dental Sciences. Records of patients who were diagnosed with chronic periodontitis and treated with surgical procedures were selected and relevant details collected. Data were collected from case records of patients who had received surgical periodontal therapy from May 3rd, 2010, until January 23rd, 2012. Case records of 100 patients...
were studied. Of these 85 patients were treated for pocket reduction or elimination, 6 patients were treated for furcation involvements, and 9 patients were treated for endo-perio lesions. Open flap debridement was done in all cases. Patients were advised their first recall visit at 3 months after surgery. Subsequent recall appointments were scheduled based on initial disease presentation, and the response to therapy seen at the first appointment. The last patient in the study group was followed up for 1½ years. Patients were grouped based on compliance as compliant, non-compliant and those with erratic compliance. Patients who reported for all scheduled appointments were considered compliant, those who reported irregularly, and those patients who reported only with a complaint were considered under erratic compliance. Those patients who did not report for any scheduled recall appointments were considered non-compliant. Patients were grouped on the basis of age and gender. Non-compliant patients were contacted by telephone. Only 47 of them could be reached. From among those patients who were contacted, reasons for non-compliance were sought and recorded.

Results
About 100 case records of patients who had undergone surgical periodontal therapy from May 3rd, 2010, until January 23rd, 2012 were studied. There were 33 male and 67 female patients (Table 1). When grouped according to their age group, 27 patients fell in the 20-40 years age group, 69 in 41-60 age group, and 4 patients in the above 60 age group (Table 1). 9% of patients were compliant, 67% were non-compliant, and 24% were not regular for maintenance appointments (Table 1 and Graph 1).

In the non-compliant group of patients, 24 were males and 43 were females (Table 1 and Graph 2). Statistical analysis using Chi-square test does not show a statistically significant relation between non-compliance and gender of patients (P = 0.267, P > 0.05). Non-compliance patients were maximum in the 41-60 age groups (Table 1 and Graph 3). Statistical analysis using Chi-square test does not show a statistically significant relation between non-compliance and patient’s age (P = 0.838, P > 0.05). All 47 non-compliant patients were contacted over telephone. All of them recalled that they were advised regular recall appointments and also the importance of maintenance visits were explained to them. Of them 28 patients stated that reason for non-compliance was due to personal inconvenience and 19 patients said that they did not report for follow-up as they did not have a complaint.

<table>
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<th>Patient group</th>
<th>20-40 years</th>
<th>41-60 years</th>
<th>&gt;60 years</th>
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<tr>
<td></td>
<td>Male</td>
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<td>Female</td>
</tr>
<tr>
<td>Compliant</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Erratic compliant</td>
<td>1</td>
<td>4</td>
<td>4</td>
<td>14</td>
</tr>
<tr>
<td>Non-compliant</td>
<td>7</td>
<td>12</td>
<td>16</td>
<td>29</td>
</tr>
<tr>
<td>Total</td>
<td>9</td>
<td>17</td>
<td>22</td>
<td>47</td>
</tr>
</tbody>
</table>

Graph 1: Distribution of compliant/erratic/and non-compliant patients.

Graph 2: Gender wise distribution patients.

Graph 3: Distribution of patients in various age groups.
Discussion
Prior history of periodontal disease is an important risk marker and a major cause of tooth loss. Inadequate control of dental biofilm after the phase of active treatment may result in recolonization of the subgingival area by periodontal pathogenic microorganisms, which could compromise the results of the treatment. Patients, who attend regular periodontal maintenance programs, have significantly less attachment loss and tooth loss when compared to those who did not receive SPT. Several studies have shown the correlation between compliance with SPT and tooth loss.

A study conducted by Wilson et al. in a private dental care center indicated that a complete complier group retained more teeth than did erratic compliers. Another study revealed that poor-compliant patients with SPT were 5.6 times more likely to lose teeth than regularly compliant patients. Patients, who failed to comply with SPT, were less motivated to home care methods which resulted in recurrence of the periodontitis.

In this study, compliance to maintenance phase following surgical periodontal therapy is assessed. All cases taken up for study were diagnosed with chronic periodontitis. The first recall visit was scheduled at 3 months post-treatment. Subsequent visits were decided based on initial disease presentation and on response to treatment seen at first 3 months. The last patient evaluated for compliance was followed up for 1½ years. Previous studies have shown that higher incidence of disregard to SPT was observed in the 1st year of maintenance. Hence, this period is critical for patients’ motivation. Results of the study show that only 9% of patients are compliant, 24% display erratic compliance and 67% were non-compliant. An earlier study that evaluated patients’ adherence to the periodontal maintenance program at a university hospital in Brazil showed that only 20.2% of the patients were complete compliers, 9.0% were irregular compliers and 70.7% of the patients were non-compliers. Most studies in this regard indicate that compliance was not associated with patients’ gender. However, an association between gender and compliance rate was shown in other studies, where women exhibited a higher compliance rate.

Regarding patients’ age, no significant differences were observed among compliant, erratic compliance, and non-compliant groups. Most of the studies show that elderly patients are the best compliers. In this study, the reasons for non-compliance were sought by contacting patients over telephone. The most common reason given was that of personal inconvenience. This sheds light into the fact that patients have not attached due importance to the maintenance phase of therapy. Many of these patients think that they no longer require treatment. As periodontal disease activity often silently progresses without much pain, patients do not consider recall visits important. Study results indicate that periodontists need to take positive measures to communicate the importance of SPT to their patients. Audiovisual aids could be more effective in this regard. Consequences of non-compliance should be informed. Treated patients should be carefully examined for adequate plaque control and any site of disease recurrence should be recorded. Patient compliance can be improved by reminding them of their recall appointments by post, telephone, or mail. Motivational aids in the form of printed hand-outs with scheduled recall appointment dates could go a long way in improving compliance.

Conclusion
The maintenance phase of periodontal therapy is as important as the treatment phase. However, compliance to SPT is poor. Study results show that only 9% of patients are compliant, 24% display erratic compliance, and a large 67% were non-compliant. When questioned on the reasons for non-compliance, most patients attributed it to personal inconvenience. A scheduled and planned maintenance phase is mandatory to maintain a stable periodontium in the treated patient. Clinicians must take all positive measures to reiterate the importance of SPT to their patients.

References