

Article Information**Received:** March 13, 2025**Accepted:** March 19, 2025**Published:** March 20, 2025

Citation: Soolari A, Soolari E. (2025) Smiling at low cost following Scaling and Root Planing in the Management of Severe Periodontal Disease: A Case Report. Ku J Clin Stud Med Case Rep. 2(1): 41-43.

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Case Report Article

Smiling at low cost following Scaling and Root Planing in the Management of Severe Peri-odontal Disease: A Case Report

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1. Abstract

Periodontal disease, a prevalent chronic inflammatory condition, can lead to significant oral health deterioration if left untreated. This case report details the successful management of severe periodontal disease in a 41-year-old male patient through non-surgical periodontal therapy, primarily scaling and root planing. The patient presented with multiple signs of severe periodontitis, including extensive bone loss, deep pocket probing, and tooth mobility. Scaling and root planing, coupled with improved oral hygiene, resulted in substantial clinical improvements. This case highlights the efficacy of non-surgical intervention in even severe cases of periodontal disease, emphasizing the importance of early diagnosis and intervention.

2. Keywords

Periodontal disease, Scaling and root planing, Non-surgical periodontal therapy, Case report.

3. Introduction

Periodontal disease encompasses a spectrum of inflammatory conditions affecting the supporting structures of the teeth, ultimately leading to tooth loss if not addressed [1]. The etiology is multifactorial, with bacterial biofilm playing a crucial role in susceptible

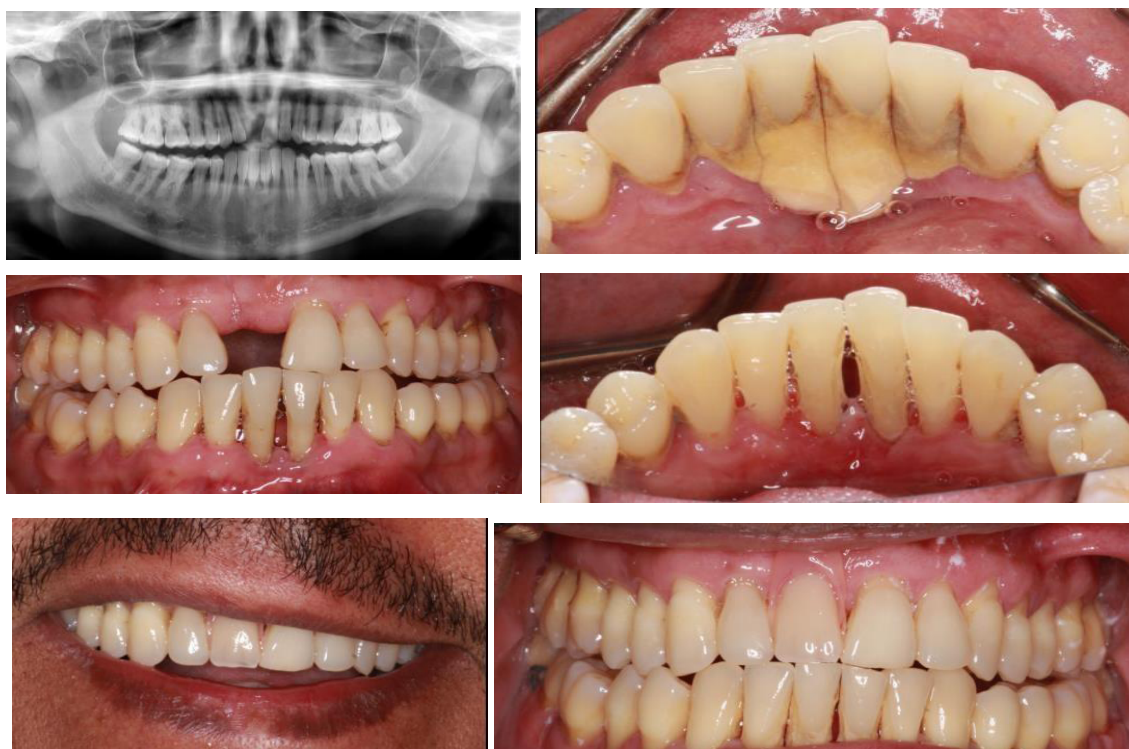
individuals. [1,2]. Other contributing factors include calculus accumulation, poor oral hygiene, genetic predisposition, and systemic diseases like diabetes [3]. This case report documents the successful non-surgical management of a patient with severe periodontal disease,

emphasizing the effectiveness of scaling and root planning in achieving clinical improvement.

4. Case Presentation

A 41-year-old male patient presented with severe periodontal disease. Financial constraints had prevented him from seeking dental care previously. Clinical examination revealed multiple missing teeth, ridge deformities, pathological tooth migration, tooth mobility, infected teeth, missing interdental papillae, edematous and erythematous gingival margins, generalized moderate to severe gingival recession, poor oral hygiene, heavy supra- and subgingival calculus, deep pocket probing depths, horizontal and vertical bone loss, non-carious cervical lesions, and occlusal disharmony.





5. Etiology and Pathogenesis:

The primary etiological factors in this case were plaque/calculus accumulation in a susceptible host, couple with a lack of professional dental care, contributing to the progression of the disease. Occlusal trauma and ineffective oral hygiene practices further exacerbated the condition. Bacterial biofilm is a well-established etiological factor in periodontitis, initiating an inflammatory cascade that leads to the destruction of periodontal tissues. Subgingival calculus provides a nidus for bacterial colonization and hinders effective plaque control, contributing significantly to disease progression.

6. Treatment and Clinical Progress:

Non-surgical periodontal therapy was initiated, focusing on scaling and root planning to remove plaque, calculus, and bacterial toxins from the crown and root surfaces. This procedure aimed to reduce the bacterial load and minimize gingival inflammation. The potential adjunctive use of systemic antibiotics was considered.

Scaling and root planning resulted in significant clinical improvements. Probing depths were reduced to 3-6 mm, bleeding on probing decreased, tooth mobility lessened, and the gingivae exhibited healthier color, tone, and texture. The consistency of the gingival tissues improved, returning to a healthy state. The patient reported improved ability to chew, enhanced quality of life, better overall health, and increased self-confidence. He was happy with his partial denture replacing his missing teeth.

7. Discussion

This case demonstrates the significant benefits of scaling and root planing in managing even severe cases of periodontal disease. Scaling and root planing address the primary etiological factors by removing plaque, calculus, and associated bacterial products, thereby reducing inflammation and promote healing [4,5]. The reduction in probing depths, bleeding on probing, and tooth mobility indicates the effectiveness of this non-surgical approach [6]. Improvements in gingival tissue color, tone, and texture further reflect the positive response to treatment [7].

While this case highlights the success of scaling and root planing alone, more advanced cases may benefit from adjunctive therapies such as local or systemic antimicrobials, periodontal surgery, or regenerative procedures [8]. Long-term maintenances, including regular professional cleanings and reinforcement of oral hygiene instructions, is crucial for preventing disease recurrence and maintaining periodontal health [9]. Patient compliance and motivation play a significant role in the long-term success of periodontal therapy.

8. Conclusion

This case report underscores the importance of scaling and root planing as a fundamental component of periodontal therapy. Even in cases presenting with severe periodontal destruction, non-surgical intervention can achieve substantial clinical improvements and enhance the patient's oral health and quality of life. Early diagnosis and intervention remain critical for successful

management of periodontal disease and prevention of tooth loss.

9. References

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