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Dentistry

Effect of Scaling and Root Planning on Periodontal Parameters in Chronic Periodontitis Patients: A Research Article

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Abstract | **Original Research Article**

Periodontitis is a chronic inflimatory disease caused by infection to gingival leading to damage to the supporting structure like alveolar bone, periodontal ligament and cementum. Scaling and root planning has a profound effect on periodontal parameters like pocket depth, by decreasing the load of local factors
Keywords: CRP, scaling and root planing, periodontitis, inflammation, pocket depth.

INTRODUCTION

Periodontitis is a chronic infectious disease characterized by involvement of supporting tissues. There is a marked attachment loss, bone loss with deeping of sulcus leading to pocket formation and sulcular bleeding. There has been a drastic decrease in the depth of periodontal pocket reduction after thorough scaling and root planing. This decrease in the depth of pocket owes to the decreased levels of inflammation due to removal of biofilm and plaque by scaling and root planning.

Periodontitis has a high correlation with a number of systemic diseases including diabetes mellitus [3], Rheumatoid arthritis and cardiovascular disease [1].

AIM OF THE STUDY

To evaluate effect of scaling and root planning on clinical parameters like, Probing Pocket Depth (PPD) in Chronic Generalized severe periodontitisat Baseline and 90 days.

PARAMETERS SELECTED

Probing pocket depth (Williams Graduated Probe):

- Baseline
- Day 90

METHODOLOGY EMPLOYED

A total of 20 subjects with Chronic generalized severe periodontitis in whom scaling was done were selected after assessment of their periodontal status from Department of Periodontology Govt. Dental College and Hospital Srinagar

Recording of periodontal parameters

2) Probing pocket depth (Williams Graduated probe)

Probing pocket depth [2]

This indicated the amount of periodontal tissue breakdown. The pocket depth was measured with Williams Graduated probe which is calibrated with 1mm markings. The pocket depths were measured from the crest of the marginal gingiva to the base of the pocket. The pocket depth is measured at four surfaces of each tooth namely facial, lingual/palatal, mesial and distal. Mean PDD was obtained by adding all the PDD scores and dividing it by the number of surfaces examined. % sites showing PDD more than 5mm were noted. Customized acrylic occlusal stents with vertical grooves were prepared for each subject on a study model to standardize the readings. Vertical grooves were made to guide the probe penetration vertically in the same plane. Customized acrylic stents were stored on the prepared study casts to minimize distortion Results and observation.

Table-1

Probing Pocket Depth (PPD)							
Group	**Baseline**		**90 Days**		**Mean Difference**	**t-value**	**P-value**
	Mean	SD	Mean	SD			
	6.60	0.681	3.70	0.657	2.9	20.241	<0.001

Paired't' test, p<0.001 Highly Significant, p<0.05 Significant, p>0.05 Non Significant

DISCUSSION

Periodontal disease is a localized chronic inflammatory disease in which attachment loss is the determining factor. Attachment loss, as defined by the American Academy of Periodontology (AAP), is a measure of periodontal disease severity. On the basis of attachment loss periodontitis is classified into mild, moderate and severe periodontitis [3].

In this study an attempt has been made to estimate the effect of scaling and root planning on Clinical parameters including Probing Pocket Depth (Using Williams Graduated Probe) were measured at baseline and 90 days.

The mean reduction in probing pocket depth between baseline and 90th day was statistically significant (p value <0.05). These results were found to be consistent with the studies of Morrison [4] Proye [5] Reduction in probing depth subsequent to subgingival scaling and improvement in oral hygiene appears to be due to the combination of reduction of inflammation in connective tissues and formation of long junctional epitheliumand regular oral hygiene instructions that were given to the subjects.

CONCLUSION

The present study, 20 systemically healthy subjects of both sexes and in the age range of 30-65 years were randomly selected after assessment of their periodontal status 20 subjects with chronic generalized severe periodontitis in whom Scaling and root planing was given were selected from Department of Periodontology, Govt. Dental College and Hospital Srinagar.

All the subjects were examined for clinical parameters and the collected data was tabulated which included the following recordings at baseline and 90 days for PPD after scaling and root planing. The following parameters were assessed.

The obtained results were subjected for statistical analysis and significance was evaluated. From these results, the following conclusions were drawn: Statistically highly significant reduction in Probing Pocket Depth was found at 90 days as compared to baseline.

Fig-1: Pocket depth at Baseline

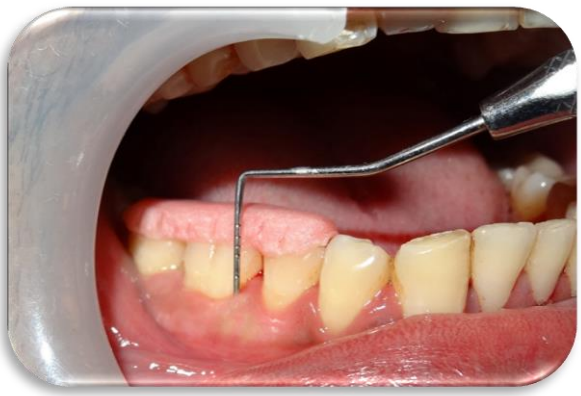

Fig-2: Pocket depth at 90 Days

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