

ABSTRACT

Introduction:

Chronic periodontitis being polymicrobial and multifactorial, the treatment protocols are aimed at eliminating the periodontal pathogens which include adjunct use of local & systemic antibiotics as a part of non - surgical periodontal therapy. Undesirable side effects and resistance of antibiotics has led to the research in phytomedicine. Plant medicine like Tulsi (*Ocimum sanctum*), a traditional herb, it has uses in medicine, it could be a suitable agent adjunct to the treatment of chronic periodontitis.

Aim:

The aim was to prepare 10% tulsi gel, assess its efficacy in the treatment of chronic periodontitis, and investigate the qualitative changes of *Porphyromonas gingivalis* before and after placing the 10% tulsi gel.

Materials and Methods:

Split mouth design study. A total of 30 patients having at least a single tooth with 5-6 mm of probing depth bilaterally. Group I; control group (SRP alone), Group II; SRP with 10% tulsi gel. Tulsi gel at various concentrations were formulated, 10% showed better antimicrobial efficacy. Plaque index (PI), Gingival index (GI), Bleeding index (BI), Pocket probing depth (PPD), Clinical attachment level (CAL) were recorded at baseline and 21st day. Subgingival Plaque samples were obtained at baseline and 21st day for microbiological assessment. Treatment was done.

Statistical analysis:

To analyze the data parametric methods were applied, the Kolmogorov – Smirnov and Shapiro – Wilks tests were used. The observations were mean, mean difference, standard deviation, and standard error of the mean. $P < 0.001$ as compared to control was considered statistically significant.

Results:

There was statistically significant improvement in the clinical parameters on the 10 % tulsi gel sites and the presence of Porphyromonas gingivalis stains was significantly reduced on the 10 % tulsi gel sites.

Conclusion:

10% Tulsi gel showed desired effects on Porphyromonas gingivalis, statistically significant changes in the clinical parameters. Thus Tulsi gel can be used as an adjunct to the treatment of chronic periodontitis.

Key words:

Chronic Periodontitis, LLD, 10% Tulsi gel, antimicrobial efficacy, NSPT, Porphyromonas gingivalis.