

Natural Relief: Soothing Herbal Remedies for Inflamed Gums

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ABSTRACT

Background: Chronic gingivitis is highly prevalent across all animals. Traditional methods for managing it have proven ineffective, prompting exploration into natural products as adjuncts to mechanical treatment due to their long-term safety profile. Coriandrum sativum, a member of the Apiaceae family, is recognized for its anti-inflammatory, analgesic, antibacterial, and antioxidant qualities. Previous studies have shown that applying extracts of C. sativum alongside non-surgical periodontal therapy (NSPT) effectively reduced periodontal clinical parameters in treating chronic periodontitis.

Methodology: Participants were randomly assigned to two groups: group A (control group) received a placebo gel, and group B (test group) received coriander sativum gel. They were instructed to apply the gel twice daily for two weeks. Before and after the two-week period, gingival index and gingival bleeding index were measured.

Results: Both the placebo gel and Coriandrum sativum gel significantly reduced gingival indices and gingival bleeding indices ($P < 0.001$). The placebo gel exhibited greater effectiveness in decreasing both gingival bleeding and gingival indices compared to Coriandrum sativum, although this difference did not reach statistical significance ($P > 0.05$).

Conclusion: Based On This Study, Coriandrum Sativum Gel Shows Promise In Reducing gingival indices and may be recommended to patients for managing chronic gingivitis.

KEYWORDS: Coriandrum Sativum, Chronic Gingivitis, Herbal Remedy, Periodontitis

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INTRODUCTION

Inflammatory periodontal diseases represent multifactorial infectious pathology due to the body's immune reaction in reaction to publicity to the oral biofilm. Excessive incidence of anti-inflammatory periodontal illnesses in young human beings. Low degree of oral hygiene despite a big choice of continuously improving hygiene products together with the instability of remedy effects unfavorable outcomes and lengthy-time period effects affecting the fitness decide significance and urgency of this hassle within the cutting-edge dentistry and healthcare system. these days there may be a promising approach of development and usage of medical products made from plant substances which can be distinctly powerful, easy to use, nicely tolerated .

Herbal drug treatments have anti-inflammatory, antimicrobial, analgesic, hemostatic and reparative outcomes, as well as boom the defense homes of the frame. The application of natural medicinal drug is of large interest in

dental practice namely use of natural arrangements such as yarrow and calendula in the treatment of gingivitis. in this regard, it's also promising to look for new dosage forms and capsules that could boom the effectiveness of treatment, which determined the aim and objectives of the prevailing have a look at.¹

Polyphenols are plant metabolites. Phenolic compounds are used in antiseptics, disinfectants and mouthwashes because of their low toxicity and antibacterial houses. Polyphenols exhibit antibacterial interest against periodontal pathogens with expanded antioxidant potential in oral fluids. Tannins are dense protein containing polyphenols. the use of tannins in the remedy of periodontal illnesses has come to be large. Tannins precipitate microbial proteins and inhibit the growth of microorganisms.²

Coriandrum sativum belongs to Apiaceae circle of relatives and is understood to have anti anti-inflammatory, analgesic, anti-bacterial, and anti-oxidant. Previous research have

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proven that regionally delivered extracts of *C. sativum* along with NSPT had been powerful in reducing periodontal medical parameter inside the remedy of chronic periodontitis³. *C. sativum* not simplest has an antimicrobial effect however additionally has anticancer interest. most cancers is the extraordinary, out of control boom of cells. some forms of most cancers might also invade different areas of the body remedy with nonsurgical strategies, inclusive of radiation and medications or surgical elimination of the mass.⁴ A massive feature of the oral gel is mucoadhesive strength for adhesion to the mucosa in the dental pocket. A proper gel adhesion to the mucosal floor outcomes in extended residence time and make contact with time and higher medical efficacy.⁵

AIM AND OBJECTIVES

To assess and compare the efficacy of two different gels for treating chronic gingivitis.

MATERIALS AND METHODS

Sixty healthy subjects displaying signs and symptoms of chronic gingivitis were selected from the Department of Periodontology at Swargiya Dadasaheb Kalmegh Smruti Dental College and Hospital, Nagpur. Patients with systemic diseases, smokers, those with existing periodontal conditions, or using antibiotics or other gels were excluded from the study. Detailed case histories were obtained, and informed consent was obtained from each subject prior to intervention. Both patients and the examiner were blinded to the type of gel administered.

Subjects were randomly assigned to two groups:

1. Group A (control group): Received a placebo gel (30 patients).
2. Group B (test group): Received a gel containing Coriandrum Sativum extract (30 patients).

Subjects were instructed to apply the gel they received twice daily (each time for two minutes) for two weeks. Clinical parameters, including the Gingival Index (GI) and Gingival Bleeding Index (GBI), were assessed at baseline and after 14 days.



CORIANDRUM SATIVUM EXTRACT



CORIANDRUM SATIVUM GEL



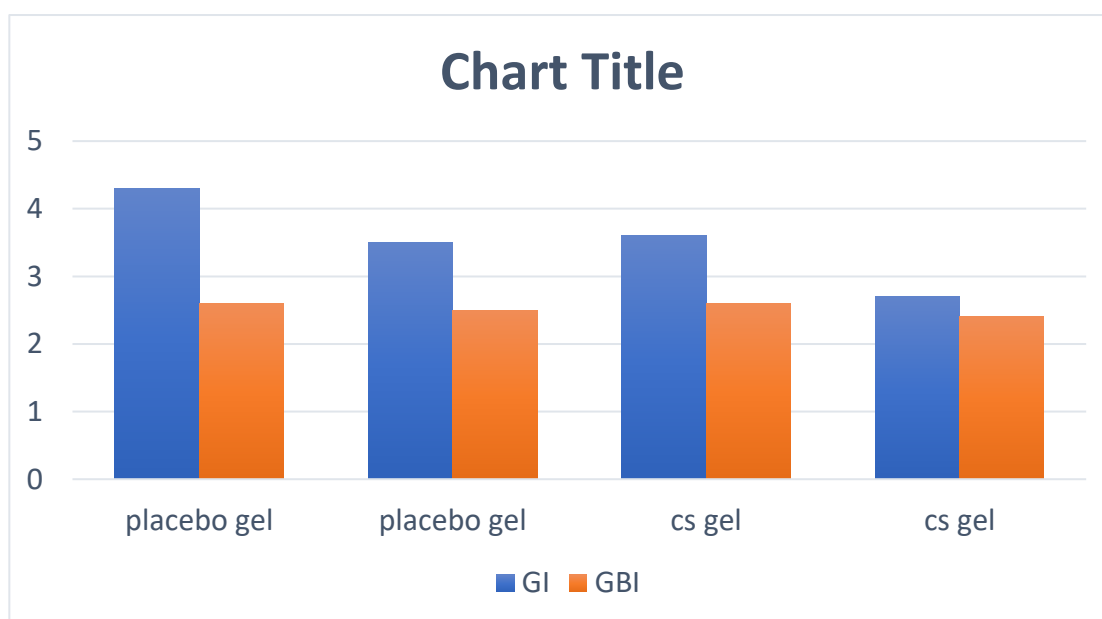
BEFORE APPLICATION AND AFTER APPLICATION OF CORIDRUM SATIVUM GEL
(PRE-OP AND POST OP)

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BEFORE APPLICATION AND AFTER APPLICATION OF CHLORHEXIDINE GEL
(PRE-OP AND POST-OP)

RESULT



The initial clinical parameters were similar between the control and test groups. Both the placebo gel and Coriandrum sativum gel significantly reduced gingival indices and gingival bleeding indices ($P < 0.001$). Scaling was conducted at baseline for all subjects to ensure uniform minimal levels of inflammation, although immediate resolution was not achieved on that day. The placebo gel demonstrated slightly better efficacy in reducing gingival bleeding and gingival indices compared to Coriandrum sativum gel, but this difference was not statistically significant ($P > 0.05$). Both gels showed substantial reductions in Gingival Index and gingival bleeding index within two weeks. The significant clinical benefits observed with both gels can be attributed to their distinct

DISCUSSION

Chronic gingivitis is marked by inflammation of the gum tissue, where there is no loss of attachment to the connective tissue. This condition arises due to the presence of dental plaque biofilms that remain undisturbed and the accumulation

of calculus..

Research suggests that gingivitis can deteriorate rapidly, typically worsening within 10 to 21 days if proper oral hygiene is not maintained, leading to uncontrolled plaque buildup.. Preventive measures such as regular oral care can effectively prevent gingivitis. However, if left untreated, it can progress to an advanced gum disease, also referred to as periodontitis

. Gingivitis is typically managed through consistent domestic oral hygiene practices performed twice daily, which generally suffice as a standard level of care. Periodontal diseases, which impact all animals with teeth, are prevalent. Gingivitis stands out as the most widespread of all periodontal diseases affecting humans, affecting more than 90% of the population regardless of age, gender, or ethnicity.

Prescription gels containing chlorhexidine gluconate are effective in treating gingivitis, but they should not be used for prolonged periods. They may also cause tooth staining and have an unpleasant taste⁶. Even though mechanical plaque manage strategies while there is potential for maintaining

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sufficient oral hygiene through various methods, clinical and population-based research indicates that these techniques are not consistently applied by many individuals. Therefore, several chemotherapeutic agents have been developed to manage bacterial plaque, aiming to enhance the effectiveness of daily oral hygiene practices. Natural products, including phytotherapeutic agents, have been extensively studied for their ability to reduce bacterial populations in this context.⁷ Whilst comparisons have been made among the control and the take a look at groups at unique intervals of time, the PBI was located not to be different between them, but in both the reduction was observed during the 1 month posttreatment period, even though this development did no longer hold between 1 month and three months after mechanical therapy⁸. The end result done by the usage of herbal LDD mixture on this take a look at can't be termed as a vast gain as the first line of remedy. beneath all conditions, the enormous position of SRP can not be dominated out that is still the primary-line method of periodontal remedy⁹. Because of current advances within the exploration of *C. sativum* as a capability healing agent towards some of sicknesses. Studying the properties of this substance as it affects humans has been highly encouraged. In this study, we examined the effects of the chemically characterized essential oil derived from *C. sativum* leaves on...

viability¹⁰. In lots of preceding research, only disk diffusion technique changed into used; but *Coriandrum sativum* seed have been noted for their effectiveness against a variety of microorganisms, although specific MIC-15 values were not provided.

CONCLUSION

Despite its limitations, the *Coriandrum sativum* gel demonstrated effectiveness in reducing gingival inflammation. Although the Placebo gel yielded superior results, *Coriandrum sativum* remains a viable recommendation for patients due to its cost-effectiveness and minimal side effects in treating gingivitis. Further long-term longitudinal studies are necessary to validate the results of this research.

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