Effectiveness of Herbal Root Canal Irrigants on Endodontic Bacteria

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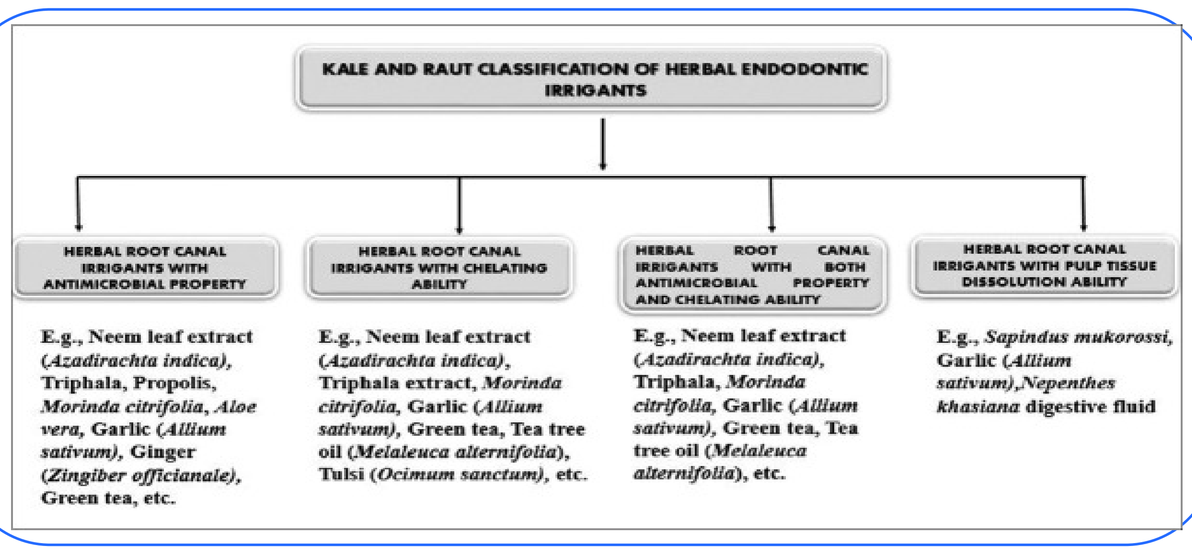
INTRODUCTION

Herbal Root Canal Irrigants have been popular for the last decade, and there has been a lot of research on their advantages and effectiveness. Also, traditional herbs are well-known for their minimal side effects and long-term healing capabilities. Tropical countries have abundant forest reserves, which contribute to producing these Herbal Irrigants. For instance, countries like India have Neem trees all around, and Neem leaf extract (Azadirachta indica) is good with chelating ability.

METHODS & MATERIAL

The literature search was conducted indefinitely using Google Scholar, MEDLINE, and PubMed databases. Reference lists of potentially relevant articles and review articles in the English language were screened. The search strategy used the following keywords: Herbal Intervention in Endodontics, Herbal Medications used in Endodontics, and Natural Products used in Endodontics. Only studies on herbal products in endodontics were considered; studies on other dental specialties were not. Some of the articles were labeled as reviews.

CLASSIFICATION OF HERBAL IRRIGANTS



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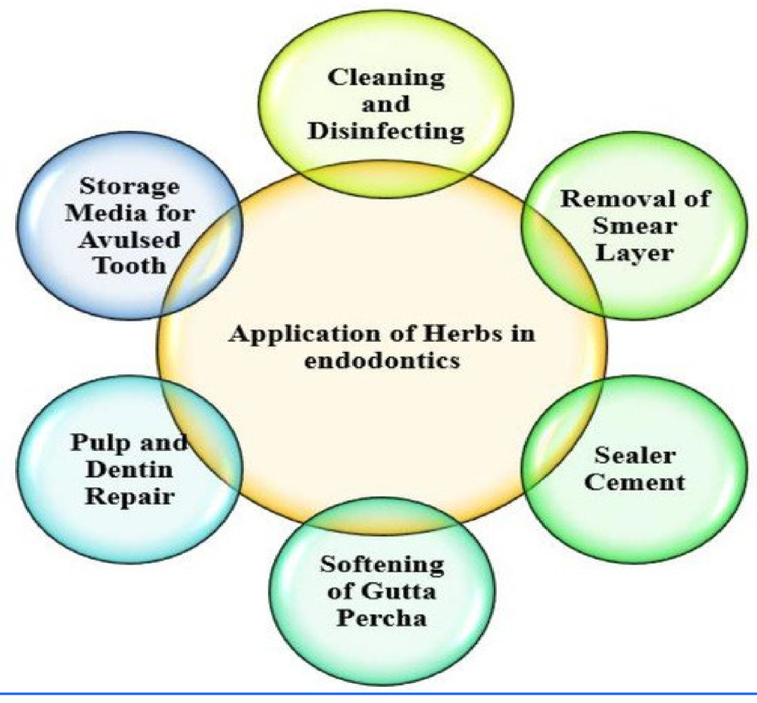
THE OBJECTIVE OF AN ENDODONTIC TREATMENT

The principal objective of root canal treatment is to disinfect the entire root canal system. Cleaning, shaping, and using antimicrobial medicaments reduce the bacterial load to some extent, and avoid factors causing re-infection. Endodontic treatment aims at disinfection and then obturation of the root canal system to prevent re-infection. Root canal Irrigants play a pivotal role in the disinfection process.

APPLICATION OF HERBS IN ENDODONTICS



PROPERTIES OF HERBAL IRRIGANTS

. Anti-bacterial Effect
. Biocompatible
. Anti-Microbial Efficiency
. Chelating agent
. Anti-bacterial Effect
. Anti-Microbial Efficiency
. Chelating agent
. Economical and absence of microbial resistance

RESULTS

A. indica A. juss demonstrated significant efficacy against *E. faecalis* and *C. albicans* and proved to be as efficacious as NaOCl at various concentrations (2.5%, 3%, 5%).

M. citrifolia had shown significant antibacterial effects against *E. faecalis* and *C. albicans*. Various studies showed *M. citrifolia* juice (MCJ) has antimicrobial efficacy equivalent to 1% NaOCl and *Triphala* in DMSO, comparable to 2.5% and 5% NaOCl.

CONCLUSION

Herbal Endodontic Irrigants are safe and equally effective as other traditional Irrigants. Also, Herbal Irrigants showed the least changes in microhardness and flexural strength of root dentin. Moreover, clinicians should consider the surface tension of Irrigants, root canal diameter, and curvature when choosing canal Irrigants. Additionally, manufacturing costs make herbal Irrigants expensive.

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