

**Evaluation of Antimicrobial Effect of
Different Medicinal Herbs against Single
Species of Enterococcus Faecalis and
Candida Albicans
(An in-vitro study)**

*A thesis submitted to the Faculty of Oral & Dental Medicine
Cairo University in Partial fulfillment of the Requirements for
the Master Degree in Endodontics*

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Dedication

I DEDICATE THIS WORK TO

The soul of my beloved father

My mother

for her love, care & unlimited support throughout all my

life stages

My sisters for their help & tender love

My family

My cherished supervisors

And to my lovely friends

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Introduction

Introduction

Success of Endodontic therapy is multifactorial. Many factors contribute to achieve an adequate root canal therapy, starting from appropriate access preparation, followed by proper cleaning and shaping till reaching the 3D obturation of the canals.

The eradication of root canal infection is of paramount importance in endodontic treatment, since residual infection is one of the chief factors leading to post treatment failure.

Enterococcus faecalis and *Candida albicans* are the most frequently associated microorganisms in persistent endodontic infections. This finding can be explained by their various survival and virulence factors; including their ability to compete with other microorganisms, invade dentinal tubules and resist nutritional deprivation.

Thus, thorough debridement of the canals to remove all pulpal tissues and microbes contributes to a great extent for the success of root canal therapy.

However, in clinical practice this is not always fully achieved due; to the anatomical complexities of many root canals and consequent limitations of access by instruments, irrigants and intracanal medications. Moreover, the efficacy of these measures may also depend on the vulnerability of the involved species.

In many parts of the world there is a rich tradition in the use of medicinal herbs for the treatment of many infectious diseases. The antimicrobial properties of essential oils have been known for many years and have been used against a wide variety of bacteria and fungi including oral pathogens.

Recently the use of medicinal herbs derived essential oils is a growing market and there is a considerable range of applications. The oils are used, for example, in the food beverages industry and as fragrances in perfumes and cosmetics. Also they are incorporated in some oral health products.

The changing face of dental care, continued research on microorganisms and their elimination from the dental apparatus may well define the future of endodontic specialty. With the increase in the prevalence of microbial resistance and possible side effects to conventional antiseptics, attention is now turning to the use of natural antimicrobial compounds isolated from plant species used in herbal medicine.

Further researches to discover and determine the antimicrobial activity of Medicinal herbs' extracts is worthwhile.

Review of Literature