Herbal Fungicidal Mouthwashes in Complete Denture Wearers

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ABSTRACT:

TOPIC: Herbal fungicidal mouthwashes in complete denture wearers

AIM: To check the effectiveness of herbal fungicidal mouthwash in complete denture wearers.

OBJECTIVE:

- -To understand the role of mouthwash,
- -To identify the problems of complete denture wearers

-To determine the impact and relevance of fungicidal mouthwash on complete denture wearers.

BACKGROUND:

Mouthwashes are solutions used to rinse the mouth, to act as an astringent, to deodorize, to remove or destroy bacteria and to have a therapeutic effect by relieving infection or preventing dental caries. Mouthwashes also provide a safe, effective chemical means of reducing or eliminating plaque accumulation. It is necessary to maintain oral hygiene to remove or keep the bacterial count low. In this study, sets of complete dentures of patients would be taken to see the effectiveness of the fungicidal mouthwash.

REASON: Mouthwash plays a vital role in maintaining oral health and preventing dental caries. Some freshen breath, others provide an anti-cavity benefit from fluoride, while others contain germ killing ingredients to help prevent plaque buildup. It's important to know the relevance and impact of different mouthwashes which can be efficiently used for various factors. This study will help in determining the relevance of fungicidal mouthwash on complete denture wearers.

INTRODUCTION:

Denture stomatitis is one of the important clinical presentations of oral candidiasis. Denture stomatitis is a common inflammatory reaction affecting denture wearers. Statistics have shown that 70% of complete denture wearers have denture stomatitis. It is comparably lower in partial denture wearers.Denture stomatitis is manifested as inflammation and erythema of the oral mucosal areas underlying dentures, more frequent in the maxillary mucosa than in the mandibular mucosa.

Various predisposing factors of denture stomatitis include diabetes, dry mouth, wearing dentures at night or having increased carbohydrate diet. Denture stomatitis is also the result of mild chronic erythematous candidiasis and can occasionally be associated with different lesions of fungal origin such as angular cheilitis, median rhomboid glossitis and candidal leukoplakia. Despite the fact that denture stomatitis is frequently asymptomatic, patients have complained of halitosis, mild bleeding and swelling in the involved area, or a burning sensation, xerostomia, or dysgeusia experienced.

In this study we will be using herbal fungicidal mouthwash as an agent to prevent and clear denture stomatitis and to compare its effectiveness compared to synthetic mouthwashes. As phytotherapy is the new sought out medicament for all treatments. Mouthwashes are solutions used to rinse the mouth, to act as an astringent, to deodorize, to remove or destroy bacteria and to have a therapeutic effect by relieving infection or preventing dental caries. Mouthwashes also provide a safe, effective chemical means of reducing or eliminating plaque accumulation.

MATERIALS AND METHOD:

MATERIALS:

- a. 9 Acrylic square boxes of 1x1cm
- b. Normal saline
- c. Nystatin
- d. Tea tree oil

METHOD

50ml of sterile artificial saliva and 15 acrylic square boxes were placed in sterile containers.0.5MF candida suspension was added and checked for the presence of candida under light microscope. This was then incubated overnight. The Acrylic square strips are then taken out and rinsed with distilled water in order to remove any loosely attached

organisms. 3 acrylic strips were each placed in normal saline, nystatin and tea tree oil. After incubation for 6 hours, swabs were taken from each strip and inoculated in SDA and incubated overnight. Presence or absence of the fungal colonies were examined

<u>RESULT</u>

	CFU/mm2		
GROUP	normal saline	Nystatin	ТТО
А	6.1 x10^6	2.1x10^6	2.4x10^6
В	6.7 x10^6	2.3x10^6	1.8x10^6
С	6.4 x10^6	2.1x10^6	2.1x10^6

Agent	Mean Value
Normal saline	6.4x10^6
Nystatin	2.2x10^6
Tea Tree Oil	2.1x10^6



DISCUSSION:

In our study it was found that the herbal mouthwash, Tea tree oil had shown an equal strength as the other synthetic nystatin mouthwash. In a study done by Pinella et al. it was found that there was not much effect of Nystatin in the reduction of denture stomatitis where as in our study we found that Nystatin can be replaced with tea tree oil which has less side effects. There were various studies done which proved the use of Nystatin to be effective in denture stomatitis. However, there were also various findings on the negative side effects of the use of nystatin as an antifungal medicament.

Nystatin has side effects such as mouth irritation, diarrhea, nausea, rash and other allergic reactions such as facial swelling. It is important to note that dose for children and adults is 4-6ml four times a day. Whereas, there have been no reported side effects of tea tree oil. Thus, proving its safe in use.

However, while these fungicidal mouthwashes are effective, it is every denture wearer' duty to maintain the oral hygiene for the proper maintenance of the prosthesis. The various measures need to be taken during appliance of denture is good oral hygiene is mandatory. The mouth must be kept as clean as possible and a thorough rinse after meals should be performed. The dentures

should be removed for as long as possible and definitely overnight. They should be brushed in warm, soapy water and soaked overnight in an antiseptic solution such as bleach. As for the dentists, they should ensure Dentures must be adequately polished and glazed, as pores increase denture contamination by oral microorganisms. Antifungal medications are recommended when yeasts have been isolated, or when lesions do not resolve with hygiene instructions.

CONCLUSION:

Tea tree oil is a volatile essential oil which has been largely employed primarily for its antimicrobial and anti-inflammatory properties, and through this study it can be concluded that they are equally effective to other chemical based antifungal agents by showing a promising result as a topical antifungal agent. However, it is mandatory to include denture stomatitis prevention in oral health care programs by ensuring that the patient has been given education on such issues when they come for dental visit.

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