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A brief review article on “herbal mouthwash”

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Abstract--In the hunt for an appropriate adjuvant to medical therapy for long-term usage, several herbal mouthwash and herbal extracts have been tried in vitro and in vivo. The goal of this study was to investigate the antibacterial impact of herbal mouthwash on a variety of microorganisms. The major benefit of mouthwash is that it may be used at home as part of a regimen to maintain excellent dental hygiene. Mouthwash also has antibacterial properties. It is used as prophylaxis before and after oral surgical treatments such as tooth extraction. Mouthwash is used to clean the mouth after brushing. Natural herbs like spinach, neem, and tulsi, among others, have been clinically proven to be a safe and efficient treatment for oral health issues like bleeding gums, halitosis, mouth ulcers, and tooth decay prevention. Tulsi's anti-infectious characteristics make it an effective gum disease treatment. Chewing of tulsi leaves helps clear ulcers and infections of the mouth. Mouthwash is useful against bad breath and for maintaining healthy gums.^(1,2)

Keywords--herbal mouthwash, natural herbal extracts, oral hygiene, antibacterial activity.

Introduction

Mouthwash is an aqueous solution which is most often used for its deodorant, refreshing and antiseptic properties or for control of plaque. Maintenance of oral hygiene is imperative the buildup of plaque, a sticky film of bacteria and food that accumulate on teeth.

Mouthwash is a liquid accessory to clean and maintain the health of our teeth for oral hygiene. oral hygiene measures include acids such as toothbrushes, Interdental cleansers and chemotherapeutic agents such as mouthwash, dentifrices and chewing.

Mouthwash are solution or liquid intended to reduce the micro load in the oral cavity. It may contain alcohol, glycerin, synthetic sweetness, surface active agents. Flavoring agents, coloring agents etc. many popular herbal product have helped to control dental plaque and gingivitis and they Have so far been used as adjunct to other oral hygiene measures such as brushing and flossing.

Usually mouthwash are an antiseptic solution which is supposed to reduce the microbial load in the oral cavity ,although there are other mouthwashes which may be used for other reasons such as for their analgesic , anti inflammatory or anti – fungal action. Mouthwash is most commonly used at home as part of an oral hygiene anti cavity mouth rinse, which contains fluoride, which protects teeth from decay.It is however,generally agreed that the use of mouthwash dose not eliminate the need for both brushing and flossing. Some natural products are effective as an adjunct in improving the oral health.

Mouthwashes have two functions: they can be used at home as part of a regular oral hygiene regimen and they have antibacterial qualities. Before and after oral surgical procedures such as tooth extraction, prophylaxis is employed. Natural herbs such as spinach, neem, and tulsi, among others, have been clinically established to be safe and effective treatment against oral health problems such as bleeding gums, halitosis, mouth ulcers, and preventing tooth decay without adverse effects when used alone or in combination.^(1,3,6)

Chemical Mouthwash

Chlorhexidine mouthwash is the gold general mouthwash which is ideal instance for chemical mouthwash. it's far a cationic polybiguanide. it's far essentially antibacterial used as an antiseptic and for different packages. A style of merchandise are available chemical plaque manipulate, that is divided into the first era (e.g., phenols, quaternary ammonium compounds), second era (e.g., bisbiguanides-chlorhexidine gluconate [CHXG]), and 0.33 generation (e.g., delmopinol) [9]. Chlorhexidine is an important aspect in mouthwashes to lessen plaques accumulation and bacterial increase. therefore, it's far used all through the remedies including gingivitis, periodontitis, trauma, and after know-how tooth extraction.^(1,11)

Herbal mouthwash

Herbal mouthwash carries a natural ingredients called phytochemical that consists of desired anti-microbial impact. natural mouthwash will become greater famous they paintings without alcohol, artificial preservatives, taste, or colors [5]. as it consists of herbal herbs that have herbal cleaning and recovery assets to teeth and gums. Many naturalmouthwashes contain herbs with anti-microbial property which include Neem, YavanisatvaNagavalliGandhapurataila, Pilu, Bibhitaka, Ocimum, Echinacea, Chameli leaves, etc . some of the herbs

which can be used in mouthwashes are clove, which is historically used for oral fitness due to their antiseptic, antibacterial, and antiviral belongings, peppermint which offers cooling effect to the mouth, plantain has potential for velocity wound restoration and among the herbs carries anti-microbial, antioxidants, antiseptic houses such as neem, clove, triphala with aggregate of amalaki, haritaki, vibhitaki, tulsi, celery, licorice, o.k.tree, bakula, katha, spearmint, turmeric, and Aloe vera. almost all chemical mouthwashes comprise alcohol and fluoride that's poisonous to our body in overdose. hence, maximum natural mouthwashes are secure opportunity to pregnant ladies, human beings with dry mouth, diabetic and to children. as opposed to synthetic dyes, natural mouthwash made of vegetable juices consisting of beetroot, tomato, carrot, and annatto to feature colour. Vegetable glycerine, stevia, and xylitol are used as a sweetener wherein foster bacteria does not grow. Vegetable glycerine is derived from soy, and it is clean, colorless, and odorless liquid with an exceptionally sweet taste used as an agent in toothpaste, cosmetics, shampoos, soaps, herbal remedies, pharmaceuticals, and different family items. because it's far soluble in water and alcohol which additionally that aids herbalists in extracting botanical residences from plant substances with out using alcohol. Stevia is a herbal sweet herb used by diabetic patient and it also inhibits the growth and reproduction of a few micro organism and different infectious organisms, inclusive of the bacteria that reason enamel decay and gum sickness. Xylitol is a herbal sweetener which helps to improve the dental fitness, to prevent bacteria from sticking to enamel and also freshens the breath and cleans the mouth. crucial oils used to freshen .^(1,11)



Comparative study on chlorhexidine versus herbal

Some salivary micro floras like *S. mutans* play an crucial function in initiation and development of dental caries. despite the fact that chlorhexidine has anti-microbial hobby and top preference for effective plaque manipulate with the aid of dentist in clinics, it cannot be used for long duration because it has various facet consequences along with flavor alteration, supragingival calculus formation and desquamation of oral mucosa and additionally constrained usage in pediatric sufferers. It also causes extrinsic staining whilst the use of liquids like tea and coffee. severa research had been performed in contrast of chlorhexidine with natural mouthwash. despite the fact that the natural mouthwashes is much less effective than chlorhexidine mouthwash, it is able to be used as an amazing oral prophylaxis because it does not has any destructive consequences. some natural mouthwashes carries herbal extracts from *T. chebula*, *A. vera*, *Azadirachta indica*, pipe betle, *O. sanctum*, cinnamon and *T. chebula* extract in mixture,

inexperienced tea, peppermint satva, triphala, neem, pomegranate extracts, guava extracts, propolis, alum, darim leaves, mulethi, and many others., are much like chlorhexidine mouthwash in plaque manage. Many herbal mouthwashes incorporates , anti-microbial, and anti-oxidant properties which enhances oral hygiene comparatively with chlorhexidine mouth wash.^(1,5,8)

Usage of mouthwash

Patients in Group B were asked to use herbal mouthwash 15ml for 30 seconds twice daily after meals, i.e. after breakfast and dinner, after the main investigator recorded clinical parameters, in order to reduce the bias following brushing in both groups. Mouthwashes are a common and simple delivery method for bacteria removal and food debris removal from the mouth, which helps to avoid plaque formation. All patients were provided oral hygiene advice.



Advantages of herbal mouthwash

- Natural
- Gentle
- Easy to prepare
- Inexpensive
- Effective
- Free from unwanted synthetic chemicals (dyes) and other additives
- Safe for children, pregnant women, people with dry mouth and diabetics
- Can be used by children without the supervision of elders.

There are multiple benefits for mouthwash.

- Inexpensive - Homemade mouthwashes are less expensive has compared bought mouthwashes with the same or better performance.
- No harmful chemicals - Manufactures often use dyes,preservation ,artificial sweeteners and other chemicals that are harmful to human beings the environment also.
- The quality of ingredients – when we make our own mouthwash we choose to use ingredients of only the finest quality. In order to get more profits

some manufactures may choose to cut costs by using ingredients of cheap quality.

Functions of herbal mouth wash

- herbal mouthwash uses time – tested ingredients.
- Herbal mouthwash is gentle for even the most sensitive mouths
- Herbal mouthwash has naturally antibacterial properties.
- Herbal mouthwash contains no harsh additives.
- Herbal mouthwash is effective
- Herbal mouthwash doesn't cause dry mouth.
- Herbal mouthwash helps keep your mouth (and body) healthy.
- Herbal mouthwash contain no “mystery” ingredients

Disadvantages

Overusing – using mouthwash too much or inappropriately may lead to serious issues. For example, mouthwashes with a high level of alcohol can burn delicate mucous membranes in your mouth. While chlorthexidinegluconate, an ingredient present in some mouthwashes, stains and darkens teeth when in contact with leftover food in your mouth. Dangerous for children – children who use mouthwash regularly are prone to ingesting it sometimes, which can be very dangerous for them. Ingesting mouthwash can result in convulsions and in more serious cases, in a comatose state. Mouthwash shouldn't be used by children under the age of 6, and those older can use it, but only under adult supervision.

Various herbs used in herbal mouthwash

Green tea^(13,14)

Biological source-leaves of “Camellia sinensis”
Family-Theaceae

Chemical constituents

It mainly consist of following chemical constituents as follow :

- a. Polyphenols
- b. Caffeine
- c. Amino acids and nitrogenous compounds.
- d. Vitamin
- e. Inorganic elements [Alumininom and fluoring].

Use

- (1)- In green tea leaf alumininum and fluoring content are high as compared to other plants which show preventive effective against dental caries.
- (2)- Also show Antibacterial property.
- (3)-Helps in prevention of cancer.
- (4)-Helps to maintain cvshealth .
- (5)- Helps to treat Alrehimer disease. For toothache and for cleaning of teeth..

Turmeric:⁽¹³⁾

Biological source: A rhizomatous herbaceous plant product i.e. *Curcuma longa*.
Family- Zingiberaceae.

Chemical constituent

It contains Alkaloids as chemical constituents that is curcuminoids (3-5%), carbohydrate (70%), mineral and essential oils.

Use

- a- It is a very crucial ingredient for mouthwash for teeth whitening treatments.
- b- It also helpful in prevent from inflammations, so act as an anti-inflammatory agents.
- c- Also has an antibacterial activity.

Neem (2,3,13)

Biological source-: twigs and barks of, *Azadirachta Indica*
Family-: Meliaceae

Chemical constituents

Azadirachtin, nimboin, nimbin, salannin and quercetin.

Use

1. (1)- Neem bark is used in number of toothpastes and tooth powders due to its anti-bacterial property.
2. (2)- Its twigs are used as oral deodorant, for toothache and for cleaning of teeth.

Peppermint sativa⁽¹⁰⁾

Biological source-leaves of *Mentha piperita*

Family- Labiatae

Chemical constituent

It contains menthene, methylacetate, piperitone, menthol etc.

Use

1. It helps to get rid plaque and ensure that you have fresh breath for longer.
2. It is also being used for common cold, sinus infection treatment, headaches etc.

Amla

Biological Source-fruit of *Emblica officinalis*
Family-Euphobiaceae

Chemical Constituents-

It consist Enblicanin A & B chebulagic acid, Ascorbic acid, Elagic acid, Kampferol etc.

Use

- 1- Due to presence of vitamin c, it helpful in preventing mouth ulcer.
- 2- It also act as Antioxidant
- 3- It's power help to support the supporting tissue of the teeth.
- 4- It helps in healing and development of tissue.
- 5- Helps in prevention in mouth gum and tooth decay.
- 6- It helps from prevention of loosing of teeth.
- 7- Increase the effectiveness of taste buds.
- 8- Used in teeth whitening.

Alum

It found is the mineraly kalinite ,alonite& leucite which can be treated with sulphuric acid to obtain crystals of the alum. It is also known as Phitakri.

Uses

1. It is specially use to treat plaque and gingivitis in children.
2. It is also used to remove stains from the teeth.

Clove:⁽¹⁴⁾

Biological Source-buds of *Syzygium Aromaticum*
Family-Myrtaceae.

Chemical constituents-Eugenol ,gallotannic acids & AB carbophyllenes.

Use

- 1-Due to it's Antimicrobial property to it is used in herbal mouthwash.
- 2-It also act as an analgesic in toothache.
- 3-It is also act as an anti inflammatory agent in gum treatment.

List of various herbal mouthwash

S.NO.	BRAND NAME	ACTIVE INGREDIENTS	FLAVOUR
1	Therabreath fresh Breath oral rinse	Oxyd-8	Mint
2	Listerinc naturals	Peppermint,	Mint

	Antiseptic mouthwash	eucalyptus thyme	
3	The natural dentist healthy gums mouth rinse	Aloe-vera	Mint
4	Closys ultra Sensitive mouthwash	Peppermint oil	-
5	Hello naturally Healthy antigingivitis Mouthwash	Aloe-vera	Watermelon Mint
6	Tom's of Maine Refreshing Mint Sea Salt Mouthwash	Sea salt & Aloe-vera	Mint
7	Tom's of Maine Fresh Mint whole Care mouthwash	Fluoride	Mint
8	Hello activated Charcoal extra Freshening mouthwash	Activated charcoal Tea tree oil, Coconut oil mint	Mint
9	Lumineux oral Erssentials whitening Mouthwash	Hydrogen peroxide	-
10	Oxyfresh breath Lemon mint mouthwash	Aloe-vera	Lemon mint
11	JASON Health Mouth tartar control Cinnamon clove fresh Breath mouthwash	Tea tree oil, Greenfruit extract Perilla seed extract & Aloe-vera	Cinnanes & Cloves
12	Active wow 24k white Natural mouthwash tabs	Bakaing soda Spirulina & sorbitol	Mint

Conclusion

Mouthwash is a liquid accessory to clean and maintain the health of our teeth for oral hygiene. In the hunt for a suitable complement to mechanical therapy for long-term usage, several herbal mouthwashes and herbal extracts have been evaluated in vitro and in vivo. The mouthwash which contain purely herbal things without adding any kind of alcohol and any other additives, when used like, neem and tulsi plant extracts have been found to reduce plaque and gingivitis when combined with daily brushing and flossing. The herbal mouth rinsing were preferred by the patients for its taste, convenience of use and test duration in their mouth after rinsing. Present study has an important impact in order to create an effective and inexpensive herbal oral health intervention for low social economic communities.

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