

A Symphonytic Review of Polyherbal Mouthwash for Effective Oral Care

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Abstract:- An antimicrobial, external anti-inflammatory, therapeutic analgesic, or caries prevention mouthwash could also be suggested. Almost all commonly used mouthwashes contain fluoride and alcohol, both of which can be toxic or even fatal if ingested in large quantities. When using natural Polyherbal mouthwash, this is frequently not the situation. Mouthwash can enter your bloodstream immediately after coming into touch with your mucous membrane. Polyherbal mouthwash is made using natural plants like clove, peppermint, green tea, neem, tulsi. While Triclosan, Oxygenating Agents, Sodium Bicarbonate, Cetylpyridinium Chloride, and Chlorhexidine Hydrochloride, as well as the Alcohol Amount of Mouthwashes. Natural mouthwashes generally do not contain the following ingredients, in contrast to the majority of commercial cosmetic and therapeutic rinses: synthetic hues, synthetic sweeteners.[1]

Keywords:- Mouthwash, Oral Hygiene, Chlorohexidine, Natural Plants.

I. INTRODUCTION

Mouthwashes are beverages with analgesic, antimicrobial, and anti-inflammatory properties. Mouthwash is a common remedy for its deodorising, cooling, and antiseptic qualities as well as for plaque management. Alcohol, glycerol, artificial sweeteners, surface-active ingredients, flavourings, colorings, etc. should all be present. Mouthwashes that eliminate 99.9% of the bacteria in your tongue also eradicate the beneficial bacteria. The microbiome of the tongue and its defences against cavities, gingivitis, and bad breath may be harmed as a result. Mouthwashes are beverages with analgesic, antimicrobial, and anti-inflammatory properties. Mouthwash is a common remedy for its deodorising, cooling, and antiseptic qualities as well as for plaque management. Alcohol, glycerol, artificial sweeteners, surface-active ingredients, flavourings, colorings, etc. should all be present.[2]

Gingivitis is treated with chlorhexidine. It aids in reducing gum bleeding as well as mouth swelling and inflammation (redness).

The germs that develop in the film (plaque) that builds up on your teeth between brushings is what causes gingivitis. Chlorhexidine eliminates the bacteria, stopping the development of gingivitis. Chlorhexidine does not, however, stop plaque and tartar from developing; regular brushing and flossing are still essential and required.[3]

Natural products make up more than half of the popular medicines. Natural products' origins and inherent properties are crucial for the creation of new drugs.[4]

➤ Herbal Mouthwash Vs Chemical Mouthwash ?

Herbal mouthwashes are quite popular because of their quick pain alleviation, capacity to fight oral germs, and diminished side effects. Chemical mouthwashes, despite being reasonably cheap, have a tendency to discolour teeth and may have unfavourable effects. They contain hydrogen peroxide, chlorine dioxide, and cetylpyridinium chloride to rapidly whiten, sterilise, and relieve tooth soreness .[5]

II. TYPES OF MOUTHWASH

➤ Fluoride mouthwash

Mouthwashes with fluoride contain sodium fluoride, which helps guard teeth against decay and caries. Being cautious when using this type of mouthwash is advised because fluoride can be found in toothpaste and tap water, and too much fluoride consumption is bad for your general health.

➤ Antiseptic mouthwash

Most people use mouthwash like this. In order to prevent bacterial growth, this mouthwash—which typically includes alcohol—is primarily used by those who have mouth infections. People with halitosis or bad breath may also find this useful. In order to combat the bacteria that cause mouth infections and bad odour, this is used in conjunction with appropriate tooth brushing and flossing. Antiseptic mouthwash should not be used excessively as it can stain teeth.

➤ Cosmetic mouthwash

A mouthwash that only serves to conceal bad breath or freshen your breath without really affecting the health of your teeth as a whole.

➤ *Natural mouthwash*

The only difference between natural mouthwash and other mouthwash kinds is the ingredients. As an alcohol-free rinse, it is also a well-liked substitute. When compared to other mouthwashes, their components are safer to use .[6]

III. NATURAL PLANTS USED AS POLYHERBAL MOUTHWASH

➤ *PEPPERMINT*

Synonym : Brandy Mint.

Biological Source

It is the oil obtained by the distillation of *Mentha piperita*,

Family : Labiatae.

Chemical Constituents:

Menthol is the main component of peppermint oil, along with lesser amounts of menthyl acetate, isovalerate, menthone, cineol, dormant pinene, limonene, and other compounds. When it is cooled to a low temperature (-22°C), the menthol isolates. Both the ester and the alcoholic components of the oil are responsible for the oil's flavouring qualities, but only the alcoholic components are responsible for the medicinal value.

Uses:

It has stimulant, stomachic, carminative, inflatant, and colic effects. It also helps with cholera and diarrhoea as well as some cases of dyspepsia, sudden pains, and cramping in the belly. As babies cordial, peppermint oil relieves nausea and sickness. Inducing sweating and increasing body heat are two benefits of peppermint. Additionally, hysteria and nervous illnesses are treated with it.[7]

➤ *CLOVE*

Synonyms: Clove bud, Laung, Lavang, Caryophyllum.

Biological source

It consists of dried flower buds of *Eugenia caryophyllum* (Sprengel) Bullock .

Family: Myrtaceae.

Chemical Constituents:

Its primary constituents are volatile oil (15–20%), galletannins (10–15%), resin, chromone, and eugenin. The ingredients of the volatile oil found in the oil glands of cloves include eugenol (70 to 90 percent), eugenol acetate, caryophyllenes, traces of esters, ketones, and alcohol

Uses:

Phytomedicines made from cloves include mouthwashes for oral hygiene, analgesics (for headaches and toothaches), lozenges for diseases of the mouth and pharynx, and lozenges

for diseases of the head and neck. Clove-based phytomedicines are also used locally to treat minor wounds after cleaning. [8]

➤ *NEEM*

Synonyms: Azadirachta Indica.

Biological Source:

Neem consists of the fresh or dried leaves of *Azadirachta indica* J. Juss .

Family: Meliaceae

Chemical constituents :

Because of its chemical makeup, the neem tree has a wide range of medicinal qualities. Azadirachtin is most abundantly found in neem tree seeds. Other significant neem liminoids include nimbin, nimbidine, nimbicidine, nimbinol, salannin, gedunin, azadirone, nimbin, nimbidine, and nimbinol.

Uses:

Neem contains chemical constituents that have diuretic, anti-inflammatory, antiarthritic, antipyretic, hypoglycemic, spermicidal, antimalarial, antibacterial, and anti-spermicidal effects. For the treatment of cuts, obesity, and skin conditions, fresh leaf juice is very beneficial. When treating gum diseases, neem is very helpful.[9]

➤ *TULSI*

Synonyms: Sacred basil, Holy basil.

Biological Source:

Tulsi consists of fresh and dried leaves of *Ocimum sanctum* Linn.

Family: Labiatae

Chemical constituents :

The brilliant, yellow, and delightfully perfumed volatile oil found in tulsi stems. The steam distillation procedure is used to separate the oil from the leaves and flowering tips. 20% eugenol-methyl-ether, 70% eugenol present in it. The plant is also claimed to contain traces of citric acid, and tartaric acids, as well as glycosides, tannins, a considerable quantity of vitamin C, and alkaloids.

Uses:

The stems have stimulant, aromatic, spasmolytic, and diaphoretic properties. The juice is employed as an antiperiodic, a component of a number of concoctions for treating skin conditions. The medication functions well as an immunomodulatory substance. [10]

➤ *GREEN TEA*

Synonym: Camellia thea.

Biological source:

Tea contains prepared leaves and leaf buds of *Thea Sinensis* Linn.

Family: Theaceae.

Chemical Constituents :

Caffeine (1–3%), theophylline and theobromine (in small amounts), gallotannic acid (15%), and an enzyme mixture known as these are all present in its leaves. Gallotannic acid is responsible for the colour of tea leaves.

The bitter and whitish powder that makes up caffeine has no smell. It is overly simple. It is only marginally soluble in ether, chloroform, alcohol, and water.

Uses:

It is employed as a diuretic and a stimulant of the central nerve system. Because caffeine has a vasoconstrictor effect on the brain, it is used as a CNS stimulant. The treatment of migraines with caffeine (given along with ergotamine tartrate).[11]

IV. BENEFITS OF POLYHEDRAL MOUTHWASH

- *Natural mouthwash contains tried-and-true components.*
- Natural mouthwash is mild enough for even the most delicate mouths.
- The sensation of natural mouthwash is wonderful.
- Antibacterial qualities are inherent to natural mouthwash.
- Natural mouthwash doesn't have any harsh chemicals.
- Effectiveness of natural mouthwash.
- Waterlessness is not brought on by natural mouthwash.
- There is a big market for natural mouthwash, and it doesn't have any "mystery" components. [12]
- *Advantages*
- Healthy breath.
- Use of sodium fluoride to reduce tooth decay.
- Taking out microorganisms to lessen gum inflammation.
- Use of a bleaching product to whiten teeth
- Use of an anti-plaque substance to prevent gum disease.
- Mouthwash stops bacteria from infecting the gums and tooth sockets, preventing gingivitis and gum disease. [13,14]
- It can demineralize your teeth, reinforce the enamel, and stop plaque buildup, all of which help you prevent dental decay. [15]

V. CHEMICALS USED IN MOUTHWASH

Mouth irritation, Tooth staining, Dry mouth, unpleasant taste in your mouth;

- *Oxygenating Agents*

By releasing nascent oxygen, oxygenating substances like oxide, sodium peroxyborate, and peroxy carbonate work to loosen debris, clear stains, and eradicate anaerobic microorganisms. They are whiteners with potent burning abilities. Additionally, they are multifaceted antimicrobial drugs.[16] For severe ulcerative conditions, mouthwashes with oxygenating substances are recommended. [17]

- *Chlorhexidine*

Chlorhexidine may also be a symmetrical bisbiguanide synthesised antimicrobial composed of two biguanide groups, two chlorophenyl rings, and a hexamethylene bridge. Because of its dicationic nature, chlorhexidine interacts strongly with anions, which has implications for its efficacy, safety, and adverse effects. It is effective against lipid-enveloped viruses, yeasts, mushrooms, and both Gram-positive and -negative bacteria. [18,19] Its make the cytomembrane more permeable, which causes cellular proteins to clump together. [20]

- *Benzydamine hydrochloride*

Analgesic, anaesthetic, anti-inflammatory, and antimicrobial effects are thought to be present in benzodamine hydrochloride. Though the exact mechanism of action is unclear, it presumably affects the production of prostaglandins and thromboxanes while lowering the levels of pro-inflammatory cytokines [21]. Additionally, benzydamine hydrochloride is applied as a component of the following treatments: Acute Sore Throat, Gingivitis, Inflammation of Mouth, Laryngitis, Mouth Irritation, Mucositis of the Oro-Pharynx, Orofacial Pain, Pain, Pharyngitis, Sore lips, Throat Irritation, Traumatic Injuries Caused by Dental Prosthesis, inflamed gums, oral antisepsis, oral hygiene, and tooth extraction.[22]

- *Triclosan*

Triclosan (2, 4, 4'-trichloro-2'-hydroxydiphenyl ether) is a non-ionic antiseptic substance with anti-inflammatory properties that has been used in numerous toothpastes and mouthwashes. [23] Triclosan also makes mouthwashes more capable of adhering to the oral mucosa and remaining there for a longer duration.

VI. SIDE EFFECTS OF CHEMICAL MOUTHWASH

- *Chlorhexidine*

- oral annoyance
- discoloration
- mouth aridity
- A strange or unfavourable aftertaste
- Diminished sense of flavour.

- *Benzydamine Hydrochloride*

The tongue or throat may experience burning, stinging, or numbness as a result. There have also been reports of dizziness, waterlessness with thirst, and throat irritation.

➤ *Triclosan*

- Unsuitable thyroid hormone and physiological system connection
- Weakening of immune system.
- Children who receive early antibacterial treatment are more likely to develop hay fever, respiratory issues, and dermatitis.
- unrestrained cell proliferation

➤ *Alcohol Content of Mouthwashes*

Although mouthwashes with alcohol in them may temporarily kill germs, the alcohol's high concentration lowers saliva production, which worsens bad breath. Saliva's main function is to wash away possibly dangerous bacteria, making it more difficult for them to adhere to your teeth and gums. Vital to oral wellness is saliva. Without enough saliva, bad breath will result, and there will be a greatly increased risk of cavities and gum disease.

➤ *Povidone-iodine containing mouthwashes*

It has been hypothesised that absorbing too much iodine will result in metabolic complications, but in patients without thyroid disease already present and if the patient spits out the response, this is frequently not a cause for worry.

➤ *Uses of Mouthwash*

- Halitosis
- Mucositis
- Periodontal Diseases
- Gum disease
- Xerostomia
- To clean septic sockets
- Reduce inflammation
- Vincent's angina
- To control plaque
- To relieve pain

VII. CONCLUSION

Mouthwashes can be used for a number of diseases, depending on the lesions that are present in the oral region. The purpose of mouthwash is to promote improved oral health and protect your gums from disease. A variety of readily available fruits, herbs, and plants that can all be used as potent mouthwashes have been listed in an attempt to help. If people can use and promote such inexpensive, risk-free techniques for maintaining oral health, it should help to resolve some common dental problems.

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