

HERBAL MOUTHWASH

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Abstract:-

Herbal mouthwash is another type of mouthwash which is prepared from the herbs extract .Herbal mouthwash has major advantage over the chemically prepared mouthwash due to their non-irritating and non-staining properties and have not alcohol content. In the herbal mouthwash the herbs extract are obtained from the leaves ,fruit ,flower, bark , and root of various plant .The natural content have minimal or no side effect and have less harmful effect. Various naturally and commonly available substances like salt ,alum , vinegar , olive oil etc were used .The mouthwash is a chemotherapeutic agents which are used as an effective home care by patient to enhance oral hygiene .This review is an outline of various natural products used as mouthwash over the synthetic ones .

Introduction:-

Mouthwash is an aqueous solution which is most often used for deodorant ,refresh ,and make pathogen free oral cavity or for control of plaque ¹.Herbal medicine are plays a preventive role this approach ,the major strength of these natural herbs are used because it has not reported with any side effect till the date . the herbal mouthwashes are not contain alcohol and sugar ,thus we can use herbal mouthwash maintain better oral health and hygiene .The extract of herbs containing anti-inflammatory activities for prevent bleeding and gum inflammation and also having antioxidant , antibacterial , antifungal , antiviral ,antimicrobial , and analgesic properties. Though herbal mouth wash help in the controlling of dental plaque and gingivitis .

In daily life dental practice plaque induced gingivitis is a frequently and highly prevalent periodontal disease which is caused by poor and inadequate oral hygiene. Prevention and control of plaque accumulation by a variety of method that improve level of oral hygiene such as brushing , dental floss ,tooth cleaning stick ,oral Irrigator and professional scaling and polishing².

Key words:-Introduction ,Mouthwash,. Natural product ,Chemical constituents ,Botanical name .

History of mouthwash:-

Egyptians are first used many product for te freshen of their breathe and oral cavity they chew sodium bi carbonate or rinse the mouth with honey and water to which goose fat , frankincense ,cumin , and ocher had been added .The Romans were really first to invent toothpaste and mouthwash , but it include a secret ingredient :Human urine ³. Until the 18 century , urine is continued to be an active ingredient in toothpaste and mouthwash ,because of the ammonia's cleansing abilities ⁴

Uses of mouth wash:-

The mouthwash should only be used for short periods of time and should never be the sole means of oral hygiene practice ,the condition of their teeth ,gingiva and oral mucosa ,their risk of oral disease .It can be used in the following cases :-

- ❖ Halitosis
- ❖ Mucositis
- ❖ Periodontal disease
- ❖ Gum disease
- ❖ Xerostomia
- ❖ To clean septic socket
- ❖ Vincent angina
- ❖ To control plaque
- ❖ To relieve pain
- ❖ To effectively deliver fluoride in order to prevent dental carries
- ❖ Reduce inflammation .²

Benefit of natural mouth wash:-

In the market there are some truly natural mouthwash are available in the market .Substance like tea tree oil have been found to naturally fight against bad bacteria .various Echinacea extract ,gotu , kola , mint , essential oil and cinnamon help to keep mouth healthy and fresh .the natural mouthwash typically do not contain :-

1. Alcohol
2. Sugar
3. Artificial color
4. Artificial sweeteners (saccharine)
5. Stannous fluoride ,a processed form of fluoride that stain teeth
6. Cetylpyridinium chloride (CPC),Which also can cause stain.

7. Sodium lauryl sulphate (SLS),
8. Harsh chemical preservatives and dyes.

Natural product used as a mouthwash:-

- **Neem (Azadirachta indica):-**

Chemical composition :-Nimbin ,Nimbidine ,Nimbinine.

The leaves ,twigs ,and seed of the azadirachta indica have been in India and South Asia from thousand of years to clean and fight bacterial and fungal infections .Neem extract has also a excellent effect as a non toxic repellent ,insecticides and pesticides⁵.In the treatment of gingivitis and other oral infection neem extract gel are mostly used .It also inhibit the plaque formation and bacterial growth. the person who are not able to use mouthwash there neem gel are mostly useful to wash mouth properly .

The extract Neem herbs have significant effect on both gram positive and gram negative bacteria and other type of organism that cause various ailment in human and animal such as E.choli ,salmonella and streptococcus etc. Several studies conducted on uses of neem extract effective against the streptococcus mutant.⁶

- **Basil (Tulsi):-**

Botanical name :-Ocimum sanctum

Chemical composition:- Eugenol ,Carvacrol ,Eugenol methyl ether , Caryophyllin ,Linalol ,Aneole , Terpinin , Decylaldehyde ,r-selinine , champhor sesquiterpines .Besides the volatile oil ,the plant contains of Alkaloid , Glycosides ,Saponins , and tannins .

The leaves contains Ascorbic acid carotene ,appreciable amount of Vitamin C , citric acid and tartaric acid ^{7,8}.

The medicinal properties of Basil are described in ayurveda ,having many therapeutic activity .It is specially used in the ,management of Cough ,Asthma, Fever and Common cold .

The leaves of basil are more effective in mouth ulcer and infection and the pleasant odor of basil leaves due to the present of a volatile oil . the chewing of some leaves of basil will cure these condition of mouth ulcer and infection . the dried leaf powder of basil are used as tooth powder for brushing the teeth .A paste can be prepared dried powder of basil leaf with the help of mustard oil and used as a toothpaste. Anti-inflammatory and anti-infectious property of basil make it a powerful treatment of gum disease.⁹

Lemon grass oil :-

Botanical name :- Cymbopogon citratus

Chemical composition :- Myrcene, Geranyl, Nerol, Geraniol, Neral, and traces of Limonene and citral,¹⁰

The cymbopogon citratus have anti-bacterial, anti-inflammatory, and also superoxide scavenging property^{11,12}. It also reduces the bacterial load and decrease the inflammation and also reduce the oxidative stress of the tissue. The lemon grass oil mouthwash can be used as an adjunct along with the non surgical therapy.¹³.

- **Peppermint:-**

Botanical name : Mentha piperata

Chemical composition:- Menthol, Methone, 1,8-cineole, Methyl acetate, Methofuran, Isomethone, limonene, β -pinene, α -pinene, Germacrene, Trans-sabinene hydrate and pulegone¹⁴.

Peppermint oil is mostly used in soap, toothpaste, mouthwash and other liqueur product due to its pleasant flavoring, but also it contains the healing properties as well. Generally, menthol and methyl acetate are responsible for the pungent and refreshing odour, which

Traditionally, peppermint oil has been used to treat gingivitis, indigestion, headache and colic etc. It also contains antiviral, anti-bacterial, analgesic and counterirritant properties. The tea of peppermint is used as a breath freshener and mostly used to treat gingivitis¹⁵.

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- **Turmeric :-**

Botanical Name:- Curcuma longa

Chemical constituents:- Turmerone, α -atlantone, γ -atalantone and zingiberene, 1,8-cineole, α -phellandrin, curcumin, monodesmethoxycurcumin, p-coumaroylmethane, and didesmoxycurcumin, di-p-coumaroylmethane, sugar, protein, vitamin C, resin and others..

Turmeric is a much more than the familiar spices that gives yellow colour and imparts to them a slightly astringent taste. Curcuma longa has amazing healing properties that have been valued for its therapeutic properties in Ayurveda and Chinese medicine from thousand years ago. It is an excellent antibiotic, hepatoprotective, antioxidant and cardioprotective in nature¹⁶.

It contains curcumin and curcuminoids, that is, reduce the inflammation by inhibiting the COX2 enzyme that leads to production of prostaglandin, which are responsible for pain and inflammation, thus turmeric mouthwash are used to reduce pain and inflammation of oral cavity as well as kill the micro-organism due to antibiotic activity¹⁷.

Material and methods of herbal mouthwash preparation :-

Collection of herb's :-

Bark ,leaves ,and stem of Azadirachta indica (Neem) ,Buds of Eugenia Caryophyllus (clove) , bark of Cinnamomum zeylanicam ,and root of glycerrhiza glabra(Liquorice) ,were randomly collect from nature .

Extraction process:-

Above all collected plants materials washed with the help of sterile water .dried in shadow and pulverized in to powder and collect separately .The aqueous extract of each plant material was prepared by soaking the powdered plant material in sterile water and incubated it at 37 degree Celsius temperature for 72 hours .Te herbal extract was filtered using Whatmann filter paper ;marc was washed with 10 ml of sterile water and pressed .

S.n.	Ingredients	Plant parts	function	%
1.	Azadirachta indica	Bark, Stem	Anti-microbial	30%
2.	Eugenia caryophyllus	Flower buds	Analgesic ,Anti-inflammatory	30%
3.	Cinnamomum zeylanicum	bark	Flaouring agent .bactericidal	20_%
4.	Glycerrhiza glabara	root	Demulscent,sweetener	10%
5.	Salt	-	Osmolytic preservatives	10%
6.	Sod. benzoate	-	preservatives	0.2%

Evaluation of herbal mouthwash:-

Colour and odour:-

Physical parameters like colour and odour are examined by the visual examination.

pH:-

The pH value of the herbal mouthwash was measured by using the pH meter .The pH meter was calibrated with the standard buffer solution about 1ml of mouthwash was weighed and dissolved in the 50ml of distilled water and pH was measured¹⁸ .

Microbial growth test :-

The prepared mouthwash was taken at a agar plate ,and the plate were placed in the incubator at 37°C for 24 hour .after the incubation period the plate was checked for microbial growth and compare with control group .

Stability testing of mouthwash :-

The stability testing of pharmaceutical products are done for the assurance of product stability at environment conditions. This is done in order to determine the physical and chemical stability of the prepared product and also determine the safety of the product ¹⁹.

Conclusion:-

An attempt has been made to outline few commonly available herbs ,plants ,and certain fruits ,which are easily available from the herbs and can be used in the preparation of herbal mouth rinse .they are cost effective and avoid the side effect ,the use of herbs for medicinal purpose have been successfully used in dentistry as antioxidant , antiseptic and pain -killer activity activity usefull for the management of periodontal disease .

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