

Cost Effective Therapies for Periodontal Diseases- A Review

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Introduction

Oral diseases are closely associated to one's lifestyle. Lack of proper oral hygiene, increased intake of sugar content in the diet and habits such as smoking and chewing of tobacco which result in the accumulation of plaque and calculus, serves as the major etiologic factors for the occurrence of gingivitis and periodontitis. Oral cavity is considered as a mirror image of different parts of the body and when oral health is compromised then overall health gets affected. There are many dental procedures and medications for the effective treatment of oral diseases. Along with these, there are also certain traditional remedies and natural products which are cost effective and are considered to be good alternatives.

OILS:

Oil pulling is a powerful detoxifying ayurvedic technique that has recently become very popular as complementary alternative medicine remedy for many different health ailments.

ABSTRACT

Cost effective therapies such as oil pulling, salt-water mixture and turmeric can be widely used as an alternative medication for strengthening of teeth, gums and jaw, prevention of pain, tooth decay, oral malodor, healing of socket and many other periodontal diseases. The aim of the study is to evaluate the efficacy of such inexpensive natural products in treatment of periodontal diseases and thus improving overall oral health.

Key words: Cost effective therapies, herbal therapy, periodontal therapy

Using this method, medication and treatment could be prevented for a number of chronic illnesses.¹ Ayurveda advises oil gargling to purify the entire system according to which each section of the tongue is connected to different organs of the body such as kidney , lungs , liver , heart , small intestine , stomach , colon , spine.

Various oils used to treat dental diseases are:

- **Olive oil :**

Use of olive oil for treating periodontal diseases is an alternative household method that involves swishing of oil in the mouth for oral and systemic health benefits. Oil pulling is mentioned in ayurvedic text charaka samhita where it is called kavala or gandusha.²

- **Mustard oil:**

Mustard oil is extracted by cold compression of mustard seeds, its essential oil is extracted by steam distillation of mustard seeds soaked in water. It basically consists of fatty acid, oleic acid, erucic acid and it has an anti-oxidant, anti-bacterial and anti-microbial property which helps in prevention of periodontal diseases.³

Effects:

1. GINGIVAL STRENGTHENING:

Mustard oil is extensively used as a cooking medium for its health benefits as it is rich in vitamins and filled with anti-oxidant properties and is widely used for gingival strengthening and relieving gingival pain.⁴

2. GINGIVAL RECESSION:

Receding gums are caused by loss of gingival tissue and the roots of the teeth are exposed. The gingival margin retracts from the crown of the tooth and leads to pocket formation between the teeth and gingival margin. These pockets get filled up with bacteria causing infection and damage to the gingival tissue.⁵

Gingival recession is a common problem especially in adults but sometimes also seen in young adult with poor oral hygiene and health.

Gingival recession leads to gingival diseases such as- gingivitis, periodontal disease in which bacterial infection erodes the gingival tissue which supports the bone that holds the tooth in place.

Massaging with mustard oil will stimulate blood circulation and restore the health of gingiva.

3. POST EXTRACTION:

Mustard oil is also used post extraction for the purpose of healing of the socket. Massaging mustard oil in a circular motion for about 3 to 5 minutes for 5 to 6 times a day can accelerate socket healing and also helps in gingival strengthening.

Clove oil :**How To Make
Clove Oil
For Toothache****You will need;**

1 teaspoon whole cloves
1 tablespoon olive oil

Here's how;

Use a small mortar and
pestle and crush the
cloves into the oil.
Apply with a cotton
bud.



Clove oil has an inhibitory action against various organisms like streptococcus aureus, monocytogens and aspergillus.⁶ Clove oil is anti-microbial in nature. The principal constituent of distilled clove is eugenol (80 to 90%). The oil contains 10% acetyl gallic acid, sesquiterpens, furfural and vanillin, methyl-n-amyl ketone, other constituents include flavenoids, carbohydrates, lipids, oleic acid, rhametin and vitamins.⁷

Clove oil for tooth pain:

Place two to three drops of oil along with some part of olive oil on the painful area with the help of a cotton pellet; keep it for 10 seconds making sure not to swallow the oil. Once complete, rinse with saline solution and repeat twice a day for best results.⁸

Clove oil to treat halitosis:

Halitosis is mainly due to the pathogens present in the oral cavity which proteolyses the amino acid and releases volatile sulphur.

Clove oil can be used as a short remedy for halitosis since it is anti-microbial but cannot be used as a long term remedy as it lacks pro-biotic activity.⁹

Clove oil for sore gums:

Clove oil is a very effective natural numbing solution that can be used for extremely sore gums as well.

Procedure:

Oil pulling is a cost effective remedy for periodontal diseases. It aids in plaque removal, gingivitis, strengthening gums and thus maintaining good oral health.

1. Put one tea spoon of oil in your mouth.
2. Swish it in your mouth and through your teeth for about 3 to 5 minutes.
3. Spit it out and rinse your mouth with water.
4. Do this twice a day for about a month.
5. Do not swallow the oil.

SALT:

Salt added with lukewarm water is an excellent short term treatment for toothache, gingivitis and as a post extraction / surgical remedies along with oils.

Benefits of salt:

Salt is not only a natural disinfectant but also removes any swelling from the tissues . Using salt water for 2 to 3 weeks post surgery/extraction etc can be quite effective.

Salt for gingivitis:

Salt is an effective remedy for gingivitis due to its antiseptic and anti-bacterial properties .it helps in treating swollen gums. Additionally oil draws infection out of any abscess and inhibits the growth of bacteria in mouth. ¹⁰

Salt for toothache:

Short, sharp pain and sensitivity can occur in response to hot, cold and sweet food /drinks resulting in toothache. Salt mixed with lukewarm water can be cost effective remedy for relieving toothache. ¹¹

Salt for post-surgical /extraction:

Salt with lukewarm water is advisable to patients who have undergone surgical procedures (5 to 6 times a day for a week). This rinse aids in relieving pain, flushes out food debris and bacterial growth from the healing socket and thereby helps in proper healing.

Procedure:

1. Take a pinch of salt in a cup of lukewarm water.
2. Rinse your mouth 5 to 6 times a day.
3. Repeat this procedure for maximum relief.

TURMERIC

In Ayurveda its usage is recommended for various medical indications like wound healing, nausea, indigestion, inflammation, liver diseases, improving skin complexion¹²⁻¹⁴. This orange pulp present within the rhizome constitutes the source of turmeric medicinal powder¹⁵. The components of tumeric are named as curcuminoids. The active constituents of turmeric are the flavonoid curcumin and various volatile oils including tumerone, atlantone, and zingiberone. Other constituents include sugars, proteins, and resins. Curcumin has been used extensively in ayurvedic medicine for centuries, as it is nontoxic and has a variety of therapeutic properties including antioxidant, analgesic, anti-inflammatory, antiseptic activity, and anticarcinogenic activity¹⁶. Due to its low rate of absorption, curcumin is often formulated with bromelain for increased absorption and enhanced anti-inflammatory effect^{17,18}.



Scientific classification of Turmeric:

Binomial name: *Curcuma longa*

Kingdom: Planta Angiosperms Monocot
Commelinids

Order: Zingiberales

Family: Zingiberaceae

Genus: *Curcuma*

Species: *C.longa*

Composition of Turmeric ¹⁹:

S.NO.	CONSTITUENTS	QUANTITY
1	Curcumin(curcuminoids)	2-4%
2	Volatile(essential)oil	3-7%
3	Fiber	2-7%
4	Mineral	

		3-7%
5	Protein	6-8%
6	Fat	5-10%
7	Moisture	6-13%
8	Carbohydrates	60-70%

Dental applications of turmeric:

Turmeric can be used in following ways to provide relief from certain dental problems.

Periodontal problems:

A paste made from 1 tsp of turmeric, ½ tsp of salt and ½ tsp of mustard oil can be used to treat gingivitis and periodontitis. It is recommended to rub the teeth and gums with this paste twice a day.¹⁶

Dental pain

Massaging the aching teeth with roasted, ground turmeric eliminates pain and swelling.

Pit and fissure sealant

It has been found that tinted pit and fissure sealant is used for applying on tooth surfaces in order to prevent or reduce the incidence of dental caries. This sealant can be produced from a composition containing acrylic monomer and at least one colorant selected from the group

consisting of Annatto extract, turmeric extract, and β -Apo-8.-Carotenal.²⁰

Recurrent Aphthous Stomatitis

Recurrent Aphthous Stomatitis (RAS) is an inflammatory condition of unknown etiology. The disease mainly involves non-keratinized mucosal surfaces. The patients who used conventional antiseptic gel, the lesion healed only after the period of time as in previous attacks. They experienced no early reduction in pain or frequency of recurrence. The patients who used *curcumin* oil reported that ulcers started healing earlier than in previous attacks; there was also early reduction in pain.²¹

Conclusion:

Thus, these natural products can be effectively used as an alternative medication for the treatment of periodontal diseases. These are cost effective and easily available remedies which are being practiced since ancient times. oils and salt are natural disinfectants and antimicrobial agents . Turmeric is also considered as a safe, non-toxic, and effective herb that can act as an alternative for many conventional drugs due to its enormous therapeutic properties on various systems of our body. Oil pulling and curcumin holds a high place in Ayurvedic medicine as a “detoxifier of the body,” and today, science has documented several diseased conditions that can be healed by the active ingredients of such natural products.

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