“OIL PULLING”- THE BEST DRUGLESS THERAPY

Abstract

At the dawn of twenty first century it causes doubt, disbelief and astonishment, if one advises to practice a therapy, which cures most diseases. In the past twelve years the curative results of "Oil Pulling” of thousands of people provides proof beyond doubt. It is described as the 'Best Drugless Therapy' a cure for most diseases. Oil pulling or oil swishing, in alternative medicine is a procedure that involves swishing oil in the mouth for oral and systemic health benefits. Oil pulling has been used extensively as a traditional Indian folk remedy for many years to prevent decay, oral malodor, bleeding gums, dryness of the throat, and cracked lips and for strengthening teeth, gums, and the jaw. In addition, this simple method is claimed to cure many diseases ranging from thrombosis, eczema, intestinal infection, and diabetes, to bronchitis and asthma. The curative property of this preventive daily hygiene measure is a modern marvel in the health of people. The aim of this paper is give an outline about this traditional Indian folk remedy, including the historical background and review of literature based on the recently published articles.

Key Words: Antibacterial activity, Detoxification, Microorganisms, Oil Pulling,

Introduction

Infectious diseases have influenced many aspects of human history. In fact, until the 1940’s a great part of human evolution appears to be driven by the challenge of surviving in a microbe dominated environment. Microorganisms have been considered different from human, and life has been a constant battle between “them” and “us”. But of course, the bacteria that cover most of our body surfaces are not just benign but actually essential to our life on earth. The human mouth contains more than 300 bacterial species.1 In the mouth, however, teeth provide hard, non-shedding surfaces for the development of extensive bacterial deposits. The accumulation and metabolism of bacteria on hard oral surfaces is considered the primary cause of dental caries, gingivitis, periodontitis, peri-implant infections and stomatitis. No matter how sophisticated dental techniques and procedures may have become, preventive dentistry remains the foundation of oral health care. Dental health care professionals need to put home oral hygiene at the core of their advice on preventive practices. Daily plaque removal with a toothbrush is an important component of most oral hygiene programs intended to prevent and treat periodontal diseases.2 Mechanical tooth cleaning even today remains the most reliable method of controlling supragingival bacterial plaque.3 Failure to comply and lack of technical skill of the patient has lessened the effectiveness of conventional tooth brushing.4 Because traditional mechanical methods for controlling plaque have proven inadequate, research efforts have focused on chemotherapeutic agents for reducing or preventing plaque induced oral diseases.

The development of bacterial resistance to presently available antibiotics has necessitated the search for new antibacterial agents.5 Resistant bacteria which are human pathogens may cause disease that are difficult to treat; even if the resistant bacteria are not human pathogens, they may still be dangerous because they can transfer their antibiotic resistance genes to other bacteria that are pathogenic.6,7 The overuse of antibiotics in the treatment of infectious diseases, and the appearance of ‘multi-drug resistant’ bacterial strains has driven research towards the study of antimicrobial agents from essential oils.8,9

Among the antimicrobial products available today, chlorhexidine gluconate have superior antimicrobial activity. These ingredients has been effective in supragingival plaque control and in reducing gingival inflammation when used in mouth rinses, gels, or when delivered with irrigation devices. Distinct adverse effects associated with chlorhexidine products have limited their use like brownish staining of teeth and tongue, increased calculus formation, mucosal irritation and altered taste sensation.

Oil pulling or oil swishing, in alternative medicine, is a procedure that involves swishing oil in the mouth for oral and systemic health benefits.

Oil Pulling Therapy

Ayurveda is one of the popular and well accepted modality of Complementary and alternative medicine. It is defined as the system of traditional medicine native to Indian subcontinent and practiced in other parts of the world as a form of alternative medicine.10 Oil pulling is an effective biomedical method which involves swishing oil in the mouth. It can achieve outstanding results in the treatment of various conditions, with absolutely no adverse side effects. In Ayurveda this process is said to cure about 30 systemic diseases ranging from headache, migraine to hypertension, diabetes, asthma etc. It basically slows down the ageing process. It may even eliminate the need to undergo surgery or to take certain medication.11

The concept of oil pulling is not new. It has been discussed in the Ayurvedic text “Charaka Samhita” (around 3000 BC) where it is referred to as “kavala graham” or “kavala gandoosha.12,13 Oil pulling has been used extensively as a traditional Indian folk remedy for many years to prevent decay, oral malodor, bleeding gums, dryness of the throat, and cracked lips and for strengthening teeth, gums, and the jaw.14-16 It is claimed to have advantages over commercial mouthwashes since it causes no staining, has no lingering after taste, causes no allergic reactions and is readily available in the household.17

Concept of Oil Pulling

Oil pulling traces its roots to oil gargling practiced in Ayurvedic medicine. Dr. F. Karach M.D. brought “oil gargling” back into the light with extensive research and practice. He proposed about a remarkable treatment at a conference of the All Ukranische-Union of the Oncologists (Specialists for Tumor diseases) and Bacteriologists, a part of the Academy of Sciences of UDSSR during 1991, said: “Sipping and sucking sunflower oil in the mouth is a fantastic biological healing process. Results of healing process cause astonishment and doubts and by practicing, one can see the results in one’s own body and get convinced. It is totally harmless and simple. Different illnesses could be totally cured without surgery or medicines. This heals cells, tissues and all other organs at once by removing the germs in the mouth that cause destruction of human organism”.

Dr Karach added: “Oil pulling heals migraine head-aches, bronchitis, diseases of teeth and gums, thrombosis, eczema, encephalitis, ulcers, stomach, intestinal disorders, gastro enteritis, peritonitis, diseases of heart, kidney, liver, and lungs; chronic blood disorders like leukemia; arthritis and related illnesses; Neuro-physiological paralysis, meningitis, chronic sleeplessness and women's hormonal disorders. Interminal diseases such as cancer, Aids, and chronic infections, this treatment method has been shown to successfully replace all others. With oil pulling, I have cured my chronic blood disease with which I suffered for 15 years. It also healed an acute arthritis in three days”.

The real important thing of this method is in its simplicity; it is just sipping or sucking oil inside the mouth. The further healing process then is done alone by the human organism. In this way it is possible to heal all at once-cells, tissues and all other organs because of the destruction of the natural mouth germs and with this the destruction of the human organism is stopped. The oil acts like a cleanser. When you put it in your mouth and work it around your teeth and gums it “pulls” out bacteria and other debris. As simple as it is, oil pulling has a very powerful detoxifying effect.

Oral cavity harbors billions of bacteria, viruses, fungi and other parasites and their toxins.18 Candida and Streptococcus are common residents in our mouths. It is these types of germs and their toxic waste products that cause gum disease and tooth decay and contribute to many other health problems including arthritis and heart disease.19 Our immune system is constantly fighting these troublemakers. If our immune system becomes overloaded or burdened by excessive stress, poor diet, environmental toxins and such, these organisms can spread throughout the body causing secondary infections and chronic inflammation, leading to any number of health problems.20

Oils Used

The most wonderful part of Oil Pulling is that, it can be performed using any oil easily available at homes. Sunflower and sesame seed oils are the most commonly used for oil pulling, but any vegetable oil will work. People have had success with olive, coconut, almond, and other oils. Liquids from milk and water to extracts of Ghooseberries and mangoes have also been used for oil pulling.21

Dr Karach had suggested refined sunflower Oil. In a study conducted by Amith et al11, oil-pulling therapy with sunflower oil was shown to reduce plaque scores after 45 days. However, the pre- and post- values of bacterial count reduction were not statistically different. Little information regarding antimicrobial properties of sunflower oil exists. Infants treated with sunflower oil are less likely to experience bacterial skin infections than control infants.22, 23 This may be the result of skin barrier enhancing effects, or some antimicrobial actions of the oil. Sechi et al24 and Menendez et al25 determined antimicrobial activity of Ozonized sunflower oil (oleozon) against S. aureus, E. coli, Pseudomonas aeruginosa, Enterococcus faecalis, Mycobacterium spp., Streptococcus pyogenes and C. albicans. However, the activity might be due to the powerful oxidant properties of the ozone itself.

Sesame oil is obtained from the seeds of the plant Sesamum indicum (Pedaliaceae family) largely by pressing methods.26 Sesamol contains high amounts of unsaturated fatty acids and has a potent antioxidant property (Kato at al 1998).27 Linoleic acid and oleic acid are the predominant compositions.

High amounts of both sesamin and sesamolin have been identified in sesame (Sirato-Yasumoto et al., 2001).28 Both sesamin and sesamolin were reported to increase both the hepatic mitochondrial and the peroxisomal fatty acid oxidation rate. Sesame seed consumption appears to increase plasma gamma-tocopherol and enhanced vitamin E activity (Cooney et al. 2001).29

Coconut oil has a unique role in the diet as an important physically functional food. Besides the health and nutritional benefits, coconut oil has been shown to have anti-carcinogenic effects against colon tumors.30 What make coconut oil different from most other dietary oils are the basic building blocks, or fatty acids, making up the oil. Recognition of the antimicrobial activity of coconut oil has been reported since 1982 by Hierholzer and Kabara.31

Recently, results from many studies revealed that monolaurin, the monoglycerides of lauric acid from coconut oil had antimicrobial activity against various gram positive and gram negative organisms, including Escherichia vulneris, Enterobcater species,32 Helicobacter pylori,33 Staphylococcus aureus,34 Candida species including C. albicans, C. glabrata, C. tropicalis, C. parapsilosis, C. stellatoidea and C. krusei 35 as well as enveloped viruses.36, 37

Thaweboon et al38 investigated the effect of oil-pulling against oral microorganisms in biofilm models. The results showed that oil-pulling therapy with some edible oils could probably be used as a preventive home therapy to maintain oral hygiene against dental caries.

Procedure for oil pulling

The essence of this method lies in its simplicity. Oil pulling can work its magic almost instantly. Oil pulling is one of the most remarkable methods of detoxification and healing. Compared to other forms of detoxification it is relatively effortless. It doesn’t require dieting, fasting, or consuming unpleasant, and often bowel loosening, mixes of herbs and pills. And it is completely harmless.

Take one tablespoon (two tea spoons=10ml) of oil in the mouth on an empty stomach in the morning. Do not swallow. With the mouth closed and chin up, without speed or effort, sip, suck, and pull the oil through the teeth for 10 -20 minutes and also exercise the jaw as if chewing. Try to produce as much saliva as possible because mucous traps bacteria, keeping unwanted substances out of the blood. Make sure you don’t swallow the oil as it has become toxic. Initially the oil is viscous but slowly it turns thin and white like milk. If the liquid is still yellowish, then you probably haven’t pulled and chewed long enough or thoroughly enough. Then it is spit out and mouth is rinsed thoroughly with water for several times.

One of the first cleansing symptoms is an increased flow of mucous from throat and sinuses. Mucous drainage is one of the body’s methods of removing toxins. While you are pulling, mucous may build in the back of the throat. In that situation expel the oil and clear the mucous from throat before reaching a full 20 minutes. Then take another spoonful of oil and continue for a total of 15-20 minutes. Some may also experience a little nausea and perhaps even need to vomit as the body expels toxic waste. Other symptoms may also arise temporarily. These symptoms will subside as the body becomes cleaner and will become more comfortable with oil pulling.

There are several instructions to be followed during the practice of oil pulling. It is preferably practiced during early morning hours, on empty stomach, after brushing the teeth and cleaning the tongue. It is practiced in sitting position with chin upright. It can be done for a maximum of three times in a day in case of acute diseases. There is no contraindication for the practice of oil pulling except for the children below the age of 5 years due to the dangers of aspiration and swallowing. For children of five years and above use only a teaspoon (five ml) of oil for oil pulling. People with dentures should remove them and practice.14

Mechanism of Action

The exact mechanism of the action of oil pulling therapy is not clear. It was claimed that the swishing activates the enzymes and draws the toxins out of the blood. The bottom line is that oil pulling actually cannot pull toxins out of the blood as claimed because the oral mucosa does not act as a semi-permeable membrane to allow toxins to pass through.

Sesame seed oil has a high concentration of polyunsaturated fatty acids and is a good source of vitamin. The antioxidants present in it are namely sesamin, sesamolin and sesaminol. These lignans have certain actions on the living tissues like- Detoxification of toxins, antioxidant effect, potentiates the action of vitamin E, prevents lipid peroxidation and antibiotic effect in that it helps in the destruction of microorganisms. Sesamin has found to inhibit the absorption of cholesterol as well as its production in the liver, reduces lipogenesis and exhibits an antihypertensive action.39,40

The mechanism by which oil pulling therapy causes plaque inhibition is not known. The viscosity of the oil probably inhibits bacterial adhesion and plaque co-aggregation. The other possible mechanism might be the saponifcation or the soap-making. process that occurs as a result of the alkali hydrolysis of fat.41 These soaps are good cleansing agents and might be effective in removing microorganisms or plaque materials. Soaps are good cleansing agents because they are effective emulsifying agents. Emulsification is the process by which insoluble fat like sesame oil is broken down into minute droplets and dispersed in water. Emulsification greatly enhances the surface area of the oil there by increasing its cleansing action. Sufficient scientific research has not been carried out to evaluate the beneficial effect of oil pulling therapy on oral health and these needs to be addressed.

Review of literature

An exhaustive search of literature didn’t yield any studies related to Oil Pulling and oral health. Oil pulling is an indigenous procedure, having its origin in the Ayurvedic literature of India. There is no literature or scientific proof to accept oil pulling therapy as preventive adjunct. Online searches in pubmed and other databases do not provide much scientific articles on oil pulling therapy except for testimonies and literature on personal experiences.

Khalessi AM et al. conducted a study to assess the oral health efficacy of Persica mouthwash containing an extract of S. persica, and found that it resulted in a 20-26% reduction in plaque accumulation.42

A few studies have been carried out in the literature regarding the role of oil pulling therapy in the maintenance of oral health. Amith et al (2007)11 have shown that oil pulling therapy with sunflower oil significantly reduced plaque scores after 45 days. In a study carried out by Sharath et al (2009)43 showed that oil pulling therapy was very effective against plaque induced gingivitis both in the clinical and microbiological assessment. Another study conducted by Asokan et al (2008)17 showed a definitive reduction in the Streptococcus mutans count in plaque and saliva after oil pulling therapy.Sharath et al (2011)44 compared the effect of oil pulling with sesame oil and chlorhexidine mouthwash. Their results showed that oil pulling therapy has been equally effective like chlorhexidine on halitosis and organisms, associated with halitosis. Thaweboon et al38 investigated the effect of oil-pulling against oral microorganisms in biofilm models.Anand et al (2008)45 evaluated the antibacterial activity of sesame oil and its inhibitory effect against the dental caries causing bacteria. The authors concluded that sesame oil have the antibacterial activity against S. mutans, lactobacilli, and total bacteria.

Extensive studies with larger samples, varying time periods, and long follow-up times should be carried out to establish the efficacy of oil pulling therapy in prevention of plaque-induced gingivitis.

Conclusion

Inspite of all the advances in the field of health science, traditional healing methods still have a major role to play. These methods are born out of native wisdom of very high intellectualism. They are untouched and unspoiled. If they are analyzed on scientific backgrounds they stand the test of time. Countries with a history of traditional medicine should support and integrate traditional medicine into national health systems in combination with national policy. Use of safe, quality products and practices must be ensured, based on available evidence, and traditional medicine has to be acknowledged as part of primary health care. It is also required to ensure patient safety by upgrading the skills and knowledge of traditional medicine providers. Oil pulling is one such method which improves the oral health and benefits various systems as well. What makes this method so exciting and innovative is that it is extremely simple to practice, no buying of complex products, mixing products like an alchemist or taking zillions of supplements. It doesn’t require dieting or fasting. Nearly anyone can do it, regardless of their level of health. If you have any health issues, don’t let the simplicity of oil pulling deter you from trying it. Sometimes the simplest procedures produce the greatest results.

References

1. Moore WEC, Moore LVH. The bacteria of periodontal diseases. Periodontol 2000, 1994; 5:66-77.
2. Tritten CB, Armitage GC. Comparison of a sonic and a manual toothbrush for efficacy in supragingival plaque removal and reduction of gingivitis. J Clin Periodontol 1996; 23:641-8.
3. Killoy WJ, Love JW, Love J, Fedi PF, Tira DE. The effectiveness of a counter-rotary Action Powered toothbrush and conventional toothbrush on Plaque Removal and gingival Bleeding. J Periodontol 1989; 60(8): 473-7.
4. Putt MS, Kleber CJ, Smith CE. Evaluation of an alum-containing mouth rinse in children for plaque and gingivitis inhibition during 4 weeks of supervised use. Pediatr Dent 1996; 18:139-44.
5. Mylotte JM, McDermott C, Spooner J. Prospective study of 114 consecutive episodes of Staphylococcus aureus bacteria. Rev. Infec. Dis. 9: 1987; 981.
6. Barton MD. Does the use of antibiotics in animals affect human health? Austral Vet. J. 76(3): 1998; 177-180.
7. Khachatourians GG. Agricultural use of antibiotics and the evolution and transfer of antibiotic-resistant bacteria. Can Med. Assoc. J. 159:1998; 1129-1136.
8. Hammer KA, Carson CF, Riley TV. Antimicrobial activity of essential oils and other plant extracts. J. Applied Microbiol. 86:1999; 985- 990.
9. Cox SD, Mannnn CM, Markham JL. The mode of antimicrobial action of the essential oil of Melaleuca alternifolia. J. Applied Microbiol. 88:2000; 170-175.
10. Alaka H, Vaishali K, Arvind S. Oil pulling – Unraveling the path to mystic cure. JIOH, December 2010, Volume 2 (Issue 4),11-14
11. Amith HV, Anil V Ankola, L NageshJ Oral Health Comm Dent 2007 ;1(1):12-1
12. Available from: http://en.wikipedia.org/wiki/Oil\_pulling.com. [last accessed on 2007 Oct 2].
13. Available from: <http://www.maharishi-european-sidhaland.org.uk>. [last accessed on 2006 Jan 23].
14. Available from: http://www.oilpulling.com. [last accessed on 2005 Dec 25].
15. Available from: <http://www.indiaids.org/alt_ther/ayurveda.asp#a4>. com. [last accessed on 2007 Jan 2].
16. Available from: http://www.ayurvediccure/mouthcare.htm. [last accessed on 2007 Jan 2].
17. Asokan S, Emmadi P, Chamundeswari R. Effect of oil pulling on plaque induced gingivitis: A randomized, controlled, triple-blind study. Indian J Dent Res 2009; 20: 47-51.
18. Offenbacher S. Periodontal disease: pathogenesis. Ann Periodontol 1996; 1(1):821-78.
19. Mealey BL. Periodontal implications: medically compromised patients. Annals of Periodontology 1996; 1(1)256-321.
20. Page RC. The pathobiology of periodontal diseases may affect systemic diseases: inversion of a paradigm. Annals of Periodontology 1998; 3(l) 108-120.
21. Dingari LC. The Shalakya Tantra II.1st ed. Hyderabad: Smt D Kamala Publishers; 2000:233-57.
22. Darmstadt G L, Saha S K, Ahmed A S, Chowdhury MA, Law PA, Ahmed S, *et al*. Effect of tropical treatment with skin barrier-enhancing emollients on nosocomial infections in preterm infants in Bangladesh: a randomized controlled trail. Lancet 2005; 365: 1039-45.
23. Darmstadt G L, Badrawi N, Law P A, Ahmed S, Bashir M, Iskander I*, et al*. Topically applied sunflower seed oil prevents invasive bacterial infections in pre-term infants in Egypt: a randomized, controlled clinical trial. Pediatr Infect Dis J 2004; 23: 719-25.
24. Sechi LA, Lezcano I, Nunez N, Espim M, Dupre I, Pinna A*, et al*. Antibacterial activity of ozonized sunflower oil (Oleozon). J Appl Microbiol 2001; 90: 279-84.
25. Menendez S, Falcon L, Simon DR, Landa N. Efficacy of ozonized sunflower oil in the treatment of tinea pedis. Mycoses 2000; 45: 329-32.
26. Guyton AC, Hall JE. Digestion and absorption in the gastrointestinal tract. Textbook of Medical Physiology. 11th ed. Mosby:Saunders: An Imprint of Elsevier; 2006. p. 811-2.
27. Kato MJ, Chu A, Davin LB, Lewis NG (1998). Biosynthesis of antioxidant lignans in *Sesamum indicum* seeds. Phytochemistry. 47: 583-591.
28. Sirato-Yasumoto S, Katsuta M, Okuyama Y, Takahashi Y, Ide T (2001).Effect of sesame seeds rich in sesamin and sesamolin on fatty acid oxidation in rat liver. J. Agr. Food Chem. 49: 2647-2651.
29. Cooney RV, Custer LJ, Okinaka L, Franke AA (2001). Effects of dietary sesame seeds on plasma tocopherol levels. Nutr. Cancer 39: 66-71.
30. Lim-Sylianco CY. Anticacinogenic effect of coconut oil. Phillipine J Coconut Studies 1987; 12: 89-102.
31. Hierholzer JC, Kabara JJ. In vitro effects of monolaurin compounds on enveloped RNA and DNA viruses. J Food Safety 1982; 4: 1-12.
32. Carpo BG, Verallo-Rowell VM, Kabara J. Noval antibacterial activity of monolaurin compared with conventional antibiotics against organisms from skin infections: an in vitro study. J Drugs Dermatol 2007; 6: 991-8.
33. Bergsson G, Steingrimsson O, Thormar H. *In vitro* susceptibilities of *Neisseria Gonorrhoeae* to fatty acids and monoglycerides. Antimicrob Agents Chemother 1999; 43: 2790-2.
34. Verallo-Rowell VM, Dillague KM, Syah- Tjundawan BS. Novel antibacterial and emollient effects of coconut and virgin olive oils in adult atopic dermatitis. Dermatitis 2008; 19: 308-15.
35. Ogbolu DO, Oni AA, Daini OA, Oloko AP. In vitro antimicrobial properties of coconut oil on Candida species in Ibadan, Nigeria. J Med Food 2007; 10: 384-7.
36. Bartolotta S, Garcia CC, Candurra NA, Damonte EB. Effect of fatty acids on are naviruses replications: inhibition of virus production by lauric acid. Arch Virol 2001; 146: 777-90.
37. Clarke NM, May JT. Effect of antimicrobial factors in human milk on rhinoviruses and milk-borne cytomegalovirus in vitro. J Med Microbiol 2000; 41: 719-23.
38. Thaweboon S, Nakaparksin J, Thaweboon B. Effect of Oil-Pulling on Oral Microorganisms in Biofilm Models. Asia J Public Health 2011; 2(2): 62-66.
39. Sankar D, Sambandam G, Rao R, Pugalendi KV, Modulation of blood pressure, lipid profiles and redox status in hypertensive patients taking different edible oils. Clin Chim Acta 2005; 355:97-104.
40. Namiki M. The chemistry and physiological functions of sesame. Food Rev Int 2002; 11:281- 329.
41. Ambika Shanmugam. Lipids. In: Fundamentals of biochemistry for medical students. 7th ed. Kartik Offset Printers: 2001.50-4.
42. Khalessi AM, Pack ARC, Thomson WM, Dunedin GRT. An in vivo study of the plaque control efficacy of Persica TM. A commercially available herbal mouthwash containing extracts of Salvadora persica. Int Dent J 2004; 54:279-83.
43. Sharath A, Emmadi P, Chamundeswari R. Effect of oil pulling on plaque induced gingivitis: A randomized, controlled, triple-blind study. Indian J Dent Res, 20(1), 2009, 47-51.
44. Sharath A, Kumar RS, Emmandi P, Raghuraman R, Sivakuamar N. Effect of oil pulling on halitosis and microorganisms causing halitosis: A randomized controlled pilot trial J Indian Soc Pedod Prev Dent 2011; 29:90-4.
45. Anand TD, Pothiraj C, Gopinath RM, Kayalvizhi B. Effect of oil-pulling on dental caries causing bacteria. African Journal of Microbiology Research Vol. (2) March, 2008:63-66.