

Turmeric: The Golden Spice In Clinic

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Abstract

Since ancient times, herbal medicine is drugs of plants origin which have been used as a traditional method of treatment. Due to various side effects of conventional drugs herbal medicine are preferred. Turmeric is used as a herbal medicine due to its medicinal properties since ancient times. The aim of this article is to enlighten the various medicinal properties of turmeric for oral and general health. Turmeric acts as an antiseptic, anti inflammatory, immunostimulant, antimutagenic , antioxidant , hepatoprotective . Its use is quite beneficial in dentistry because of these properties. It is useful in various periodontal diseases, tobacco taking patient. It is available in gel form, mouthwashes, creams. In gel form it is used as a local drug delivery system.

Keywords: Turmeric, mouthwash, antioxidant, Medicine.

In many parts of the world medicinal plants have been used as a traditional treatment agent for various diseases. Medicinal plants used as a primary source of medicine in certain areas of developing countries. About 90% of people use traditional medicine for health care. Turmeric (haldi), a rhizome of *Curcuma Longa*, is a flavourful yellow- orange spice. It is 3 to 5 ft tall, pointed short-stemmed leaves and funnel-shaped yellow flowers.¹ Turmeric is comprised of a group of curcuminoids: Curcumin (diferuloylmethane), demethoxycurcumin, and bisdemethoxycurcumin, as well as volatile oils (tumerone, atlantone, and zingiberone), sugars, proteins, and resins. Curcumin is a lipophilic polyphenol that is nearly insoluble in water but is quite stable in the acidic pH of the stomach. Turmeric is a non toxic drug which is used in Ayurveda to treat various disorder including rheumatism, body ache, skin diseases, intestinal worms, diarrhea,

intermittent, fevers, hepatic disorders, biliousness, urinary discharges, dyspepsia, inflammations, constipation, amenorrhea, and colic. Topically it is used to treat bruises, pain, sprain, boils, swellings, sinusitis, and various skin disorder.²

In ayurvedic medicine curcumin is used from centuries, because of its various therapeutic properties including analgesic, anti-inflammatory, antiseptic, antioxidant etc.³

Applications of Curcumin

Curcumin is the active constituent of turmeric, which shows the wide range of therapeutic effects:

Curcumin is a strong antioxidant because it protects against free radical damage. On comparing Vit.C and Vit. E, Water- and fat-soluble extracts of turmeric and its curcumin component exhibit strong antioxidant activity.⁴

Curcumin acts as an anti-inflammatory agent by lowering the histamine level and and by increasing the production of cortisone by adrenal glands. It has ability to inhibit synthesis of prostaglandin from arachidonic acid.⁵

Curcumin protects the liver from various toxic products by acting as an antioxidant agent. It helps to treat the gallstones by increasing the bile production and its solubility.⁶

It helps to prevent against atherosclerosis, by preventing platelets from clumping together which helps in circulation.⁷

Curcumin acts as an antimutagenic agent, as it helps to prevent the formation of new cancers that are caused by chemotherapy or radiation therapy to treat the existing cancers. It helps in deactivating the carcinogen.⁸

Curcumin plays an important role in inhibiting the gastric ulcers caused due to stress, alcohol, indomethacin etc.

Curcumin has several beneficial effect on gastrointestinal tract, various components of curcumin helps in secretion of Bicarbonate, pancreatic enzyme, secretin, and gastrin,

secretion and intestinal spasm reduced by sodium curcumin.⁹

Turmeric in Dental Application

Pain: Most commonly turmeric is used to relieve from dental pain and swelling. Applying roasted ground turmeric on aching tooth helps in reduction of pain.

Periodontal Problems: Turmeric helps in reduction of gingivitis and periodontitis. Applying a paste on gingiva twice a daily, made from turmeric, salt and mustard oil helps in the reduction of gingivitis and periodontitis.³

Turmeric can be used as mouthwash which is equally effective as chlorhexidine gluconate mouthwash. Due to its anti-inflammatory property, it helps to reduce gingivitis and periodontitis. Turmeric mouthwash is prepared by dissolving 10 mg of curcumin extract in 100 ml of distilled water and 0.005% of flavouring agent peppermint oil with pH adjusted to 4. Study conducted by Waghmare *et al.* concluded that chlorhexidine gluconate and turmeric mouthwash can be effectively used as an adjunct to mechanical plaque control methods in prevention of periodontitis and gingivitis.¹⁰

PIT And fissure Sealant: It can be used as a pit and fissure sealant to reduce the incidence of caries.

Anticancer Properties: Curcumin possess anticancer property due to its effect on various biological pathways including mutagenesis, cell cycle regulation, apoptosis, metastasis. Its anticancer properties are due to its antioxidant property and scavenging free radical property.¹¹

Precancerous Lesion And Condition: Curcumin plays an important role in reducing the symptoms of various precancerous lesion and condition. It helps in reducing burning sensation and pain due to its analgesic property.¹²

Recurrent Aphthous Stomatitis: It is an inflammatory disease of oral mucosa of unknown etiology. It involves non-keratinized surface of oral mucosa with single or

multiple ulcers with periodic recurrence and healing. Patient experienced pain or burning sensation with ulcers. Studies showed that patient using curcumin led to reduction in sign and symptom of ulcers with no recurrence.¹³

Side Effects and Toxicity: No side effect and toxicity seen, but may cause gastric irritation, nausea, diarrhoea, skin reaction. Some studies in rat, revealed that it cause ulcer at very high doses.¹⁴

Conclusion

Turmeric has various benefits for both general and oral health, it is safe non toxic and effective herbal medicine. It is very effective in oral cancer patients. Further research is needed to know various other uses of turmeric.

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