

Letter to Editor

Ayurveda and herbs in dental health

Access this article online

Website: www.ayujournal.org

DOI: 10.4103/0974-8520.92542

Quick Response Code:



Sir,

Ayurveda is the ancient Indian system of health care and longevity. It involves a holistic view of man, his health, and illness. Ayurvedic treatment is aimed at the patient as an organic whole, and treatment consists of salubrious use of drugs, diets, and certain practices.^[1] Currently, *Ayurveda* is widely practiced in the Hindustan peninsula (India and the neighboring countries) and, in recent years, has attracted much attention in economically developed countries such as those in Europe and in the United States and Japan.^[2] There are approximately 1,250 Indian medicinal plants^[3] that are used in formulating beneficial measures according to Ayurvedic or other ethnicity. This 5,000-year-old system of medicine recommends a combination of lifestyle management (which includes diet, exercise, and meditation), and treatment with specific herbs and minerals to cure various diseases. The botanicals in the Ayurvedic materia medica have been proven to be safe and effective, through several hundred to several thousand years of use.^[4] The exploration of botanicals used in traditional medicine, particularly traditional Asian medicine, may lead to development of novel preventive or therapeutic strategies for oral health.^[5] Western medical/dentistry has achieved limited clinical success in treatment of a variety of oral complaints, such as xerostomia, Aphthous ulcer, lichen planus, and Bechet's syndrome. In contrast to above it has been reported that therapeutic approaches based on traditional Chinese medicine can result in successful treatment of such ailments.^[6] *In vitro* studies suggest that a variety of botanicals commonly used in traditional Asian medicine have the potential for use as agents for prevention of caries and periodontal diseases.^[5] Herbal extracts have been successfully used in dentistry as tooth cleaning and antimicrobial plaque agents. The natural phytochemicals could offer an effective alternative to antibiotics and represent a promising approach in prevention and therapeutic strategies for dental caries and other oral infections.^[7] As most of the oral diseases are due to bacterial infections and it has been well documented that medicinal plants confer considerable antibacterial activity against various microorganisms including bacteria's responsible for dental caries.^[8] Antibacterial activity of some plant species like *Melia azadirachta*, *Calotropis gigantean*, *Leucas aspera*, *Vitex negundo*, and others have been tested.^[9] In India plant wealth is greatly exploited for its therapeutic potential and medicinal efficacy to cure dental caries. These include *Melia azadirachta*, *Moringa pterygosperma*, and *Balsamodendron mukul*. The stem, bark, root and young fruits of *Melia azadirachta* are used as bitter, tonic, antiseptic,

astrigent, and antibacterial. In several indigenous tooth powders, toothpastes, toilet soaps, the extract from various parts of this tree is used.^[7] The use of Neem twigs as tooth brush has been endorsed by the dentists to prevent caries.^[10] *Azadirachta indica* mouth wash is reported to inhibit growth of *S. mutans* and carious lesions.^[11] Standard Western medicine has had only limited success in the prevention of periodontal disease and in the treatment of a variety of oral diseases. *In vitro* studies indicate that many Asian botanical formulae, including their individual herbal compounds and chemical constituents, exhibit antibacterial and antifungal properties, which may significantly delay the development of plaque, calculus, and caries. While anticariogenic and anticalculus activities for some of these substances have been demonstrated in animal models; however, results from human clinical trials have been inconclusive. Some therapeutic approaches based on traditional Asian medicine have been reported to result in the successful treatment of such oral complaints as xerostomia (dry mouth), oral lichen planus, and glossodynia. However, at present many of the relevant studies are only available in the Chinese or Japanese language. With respect to those that have been published in English, many are difficult to interpret due to weak study designs. Nevertheless, the existing data are encouraging, and warrant further studies on traditional Asian medicine and their application to oral health.

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Letter to Editor

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