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Portrayal Of Complementary And Fringe Medicine In Dentistry – A Review

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Abstract:

With the increasing concern about the adverse effects of conventional medicines, increased resistance by bacteria to antibiotics, and challenges faced by medical personnel in managing chronic disease, complementary medicine takes a holistic approach to finding natural solutions to assist the immune system in fighting against infection and disease. Complementary medicines were broadly classified into manipulative and body-based therapies, and mind-body interventions like Yoga, Spirituality, and relaxation. Alternative medical systems include Homeopathy, naturopathy, Ayurveda energy therapies, and biologically based approaches.

These treatment modalities were beneficial, cost-effective, and safe enough to be used as an alternative healthcare approach in dentistry. By considering the broadened scope and benefits with minimal side effects, it can be inculcated as an integrative technology along with professional dental care treatments. Researchers should be encouraged to explore and validate the hidden values of alternative medicines that can benefit a wide range of people.

Keywords: Complementary medicine, Homeopathy, Yoga, Ayurveda

INTRODUCTION

With the increasing concern about the adverse effects of conventional medicines, increased resistance by bacteria to antibiotics, and challenges faced by medical personnel in managing chronic disease and their symptoms ⁽¹⁾, it is becoming increasingly important for health professionals to have a wide understanding knowledge of complementary and alternative modalities for the treatment of these chronic ailments. "Complementary Medicine" is defined as "a diverse group of medical and health care systems, practices, and products that are currently not considered to be part of conventional medicine⁽²⁾."As a result, "complementary" medicine can be used alongside standard medications, and "alternative" medicine in place of standard

medications.⁽³⁾ Complementary and Alternative Medicine were defined as a broad range of healthcare practices that are not part of the country's own tradition and are not integrated into the dominant healthcare system. (WHO 2020) ⁽⁸⁾.

Complementary medicine takes a holistic approach to finding natural solutions which assist the immune system in fighting against infection and disease. These treatment modalities were beneficial, cost-effective, and safe enough to be used as an alternative healthcare approach in dentistry. As CAM became more widely discussed in the media and mainstream medicine, patients were becoming more comfortable with using these therapies. ⁽²⁾

In conventional medicine, diseases are treated as a collection of symptoms rather than their underlying cause or etiology, but this most often targets the underlying cause of the disorder, stimulating the body's healing process. ⁽¹⁾ These systems are an essential component of culture. Acupuncture, Ayurveda medicine, Homeopathy, Naturopathy, chiropractic therapy, Herbal medicines, massage therapy, biofeedback, Hypnosis, Meditation, Deep breathing exercises, Yoga, and Tai Chi are some of the most common Complementary Medicine therapies. ⁽⁴⁾

There is an obvious gap between the lack of scientific evidence for most of the Complementary medicine approaches in dentistry and their usage in clinical routine. ⁽³⁾ Complementary medicine may not have been widely used due to a lack of interest or time, or conventional-oriented practices may not have seen the significance of engaging in the issue.

Furthermore, it is impossible to verify whether their assertions correspond to their real beliefs, and how frequently the given treatment is truly recommended sometimes which may lead to underestimation and can cause inaccuracy⁽³⁾. It usually lacks scientific validation, its effectiveness is either unknown or disproven, and treatments also might take longer time. ⁽⁷⁾ Hence this study aimed to discuss the possibilities of the role of these complementary medicines in oral health care.

CLASSIFICATION OF COMPLEMENTARY MEDICINE:

I) Manipulative and body-based therapies

- a) Massage
- b) Chiropractic
- c) Osteopathy

II) Mind-body interventions

- a) Yoga
- b) Spirituality
- c) Relaxation

III) Alternative medical systems

- a) Homeopathy
- b) Naturopathy

IV) Ayurveda Energy Therapies

- a) Reiki
- b) Magnets
- c) Qigong

V)Biologically based approaches

- a) Diets
- b) Herbs

c) Vitamins

VI) Based on cultural origin or type of belief

1. Unscientific belief systems:

Naturopathy

Homeopathy

2. Traditional ethnic systems

a) Herbal medicine

b) Acupuncture

c) Massage

d) Exercise

e) Dietary therapy

3. Supernatural energies

a) Chiropractic

b) Reiki

4. Holistic therapy

5. Religion, faith healing, and prayer

I. AYURVEDA ENERGY THERAPIES

AYURVEDA:

According to Ayurvedic medicine (Ayurveda for short), one of the world's oldest holistic healing systems. ⁽²⁾ Health and wellness are dependent on a delicate balance of the mind, body, and spirit. Ayurveda is based on the concept that every person is made up of space, air, fire, water, and earth ⁽²⁾. Ayurvedic treatments are conceived on a thorough understanding of an individual's physical, spiritual, mental, and social health.

The human body is made up of three doshas, according to Ayurvedic principles: Vata (wind, air); Pitta (Bile, fire); and Kapha (mucus, water); these "tridoshas" are physiological entities that play a crucial role in performing all metabolic functions of the body. ⁽¹⁾ Ayurvedic healing system describes health as an expression of cosmic consciousness which encompasses the metaphysical, physical health disease, happiness, sorrow, pain, and pleasure.

Ayurveda describes teeth and gums, the various kinds of toothpaste available and how to select the tooth powder based on the constitution and character of the gums, various teething disorders, beneficial and harmful diet, congenital anomalies, traumatic injuries, ANUG, gingivitis, periodontitis, dental caries and toothache, alveolar abscess, malignancies of jaw bones, and TMJ dislocation, as well as their treatment. ⁽⁶⁾ Evidence suggests that, when compared to the western medical system, ayurvedic treatments received a lot of attention in the field of prevention and cure. Ayurvedic treatments cannot completely replace conventional dental therapies, but they can be used as a supplement. ⁽¹⁾

UNSCIENTIFIC BELIEF SYSTEMS:

HOMEOPATHY:

Homeopathy medicine is gaining popularity around the world for the treatment of various illnesses, which explores the essence of disease through the symptom syndrome and uses the body's healing capacity to cure diseases. Homeopathy can be integrated into dental practice by replacing conventional drugs or treating conditions for which there are no other options. It cannot, however, replace the mechanical art of dentistry. ⁽¹⁾ The fundamental principle of homeopathy is the selection of a remedy that, if given to a healthy individual, will produce a spectrum of symptoms similar to those observed in ill patients.

Tablets, tinctures, and pellets are only given in trace amounts. ^(5,11) Various homeopathic drug used for treating dental diseases includes Belladonna, Hepar sulphuris calcareum, Silicea myristica, calendula gelsemium, aconite, Coffea cruda, chamomilla, phosphorous, arnica Belladonna, Ruta graveolens, calendula chamomilla, calcarean carbonica, magnesium phosphoric, Coffea cruda, Antimonium crudum, hypericum Ledum, staphysagria, borax, Arsenicum album, natrum muriaticum⁽⁵⁾

NATUROPATHY:

It is a curative science system that uses the body's natural or instinctive abilities to restore health. Naturopathy is an integrative science that includes healing practices such as homeopathy and herbal medicine ⁽¹⁾. It is a drug-free system that cures disease by utilizing environmental forces such as air, temperature, and water. Naturopathy's treatment model is based on principles similar to Ayurveda and Homeopathy. Electrodermal screening, Contact Reflex Analysis, hypnosis, magnets, herbal plants, magnets, Homeopathy, therapies that use heat and cold, kinesiology, hydrotherapy, and other non-traditional techniques were used.^(2,4,5)

Some of these techniques, such as hypnosis, kinesiology, and craniosacral interventions, are used in dental practice in orofacial orthopedics. Hypnosis is commonly used to treat bruxism, obstructive sleep apnea, pain control of orofacial structures, and other conditions. Kinesiology is used to treat TMJ disorders, chronic and acute orofacial pain, and neck problems. ^(1,4)

Green tea is effective in lowering oral bacterial count as well as preventing plaque formation and halitosis. The main catechin found in green tea is epigallocatechin gallate (EGCG), which has an anti-inflammatory effect and can be used to treat periodontitis. It has been shown to destroy established *P. gingivalis* biofilms or plaques by producing hydrogen peroxide, which destroys the bacterial cell wall and inhibits biofilm formation. Catechin mouthwash was found to reduce bad breath or halitosis associated with periodontal disease⁽⁴⁾.

Vitamin C improves immune system function and influences infectious diseases, and it has antioxidant properties, enabling it to help to combat oxidative stress. Vitamin C protects human gingival fibroblasts from the tissue-damaging effects of *P. gingivalis*^(5,6). Vitamin D deficiency is common and increases the risk of a variety of diseases, including periodontitis. Vitamin D may influence tooth loss caused by periodontitis through its immunomodulatory or antimicrobial effects, calcium absorption, and/or bone metabolism effects. Vitamin D3 is essential in the treatment and prevention of a wide range of common conditions, including osteoporosis, which can lead to tooth loss ⁽⁷⁾.

Sanguinaria (bloodroot) has a wide range of antimicrobial and anti-inflammatory properties. It has been shown to reduce plaque formation by inhibiting bacterial adherence. Sanguinaria toothpaste and oral rinse have been shown to significantly inhibit gingivitis redevelopment. Pomegranate and Gotu kola promotes tissue healing and modulates immune responses, making them potentially effective as an adjunctive treatment for periodontitis ⁽⁵⁾.

TRADITIONAL ETHNIC SYSTEMS:

MASSAGE THERAPY

Massage is the manipulation of the soft tissues of the body. Massage techniques are often used with the hands, fingers, elbows, knees, forearms, feet, or a device. Massage is generally used to relieve stress or pain in the body. Massage benefits include pain relief, reduced trait anxiety, and depression, and temporarily reduced blood pressure, heart rate, and state of anxiety. Massage may promote skeletal muscle regrowth and remodeling, block nociception (gate control theory), activate the parasympathetic nervous system, which may stimulate the release of endorphins and serotonin, and prevent fibrosis or scarring. ⁽⁷⁾

MIND–BODY INTERVENTIONS:

YOGA FOR DENTAL CARE

Sirhasana helps in stimulates the blood flow to the pituitary gland to strengthen the bones and teeth to prevent periodontal problems, Shitali & Shitkar Pranayama in these teeth is occluded during breathing to intermittent force on teeth and correction of alignment of teeth, Sarvangasana helps in stimulating the thyroid gland to increase the blood circulation in the mouth for prevention of dental disorders, Bhujangasana posture is so therapeutic for practicing dental surgeons, as it tones up the whole spine. Thus, yoga is helpful in the prevention of dental diseases and the maintenance of good oral hygiene. ⁽⁶⁾

TRADITIONAL CHINESE MEDICINE AND DENTISTRY

Chinese medicine has a long history and has been in practice for >2500 years and includes treatment modalities such as Acupuncture, Herbal Medicine, Tai Chi, and qigong exercises. In Acupuncture, practitioners make use of very thin needles to activate certain points on the body which controls the flow of vital energy (Qi), stimulates the body's healing response, and restores the natural balance bringing relief to the patient thereby correcting the disturbed flow of Qi to the Zang–Fu. u.

ACUPUNCTURE

Acupuncture is used to correct postoperative dental pain, myofascial pain, headache, and musculoskeletal disorders associated with dental practice such as carpal tunnel syndrome, lumbar pain, cramps, and tennis elbow. Qigong is a stretching exercise that is popular in Chinese medicine. This technique aids in the restoration of the flow of vital energy (Qi), which can be beneficial in the relief of pain associated with the maxillofacial region. ⁽¹⁾

Physical therapies, in conjunction with dental therapies, are effective in the treatment of orofacial disorders. Acupuncture has been used to treat conditions associated with chronic orofacial pain, postoperative pain, and other temporomandibular disorders and also acts as an analgesic and anesthetic agent. ⁽⁵⁾

ACUPRESSURE

Acupressure is an ancient Chinese healing technique that involves applying pressure to specific points on the body to relieve pain. Acupressure is frequently used to reduce anxiety and pain during anesthesia. The mechanism of action includes pressing or massaging the body's acupressure points. A typical session lasts about an hour. Several sessions may be required to achieve the best results. Some proponents argue that acupressure treats not only the energy fields and the body, but also the mind, emotions, and spirit. ⁽²⁾

AROMATHERAPY:

Aromatherapy is a complementary therapy that employs essential oils extracted from medicinal plants or trees. It is effective for stress or anxiety-related disorders, migraine, and muscular, and jaw pain ⁽⁸⁾. The essential oils are either inhaled or applied topically to the skin. When the oils are inhaled, the scents stimulate the nerve cells in the nasal cavity, activating the limbic system ⁽⁹⁾. Thus, it is responsible for the dominant effect on moods and general state of mind, and it interacts with the kidney to control the heart rate and blood pressure. Aromatherapy has been shown to reduce fear and stress during typical dental treatments. ⁽¹⁾

MIND–BODY INTERVENTIONS

Mind–body interventional techniques such as hypnosis, yoga, and biofeedback method can be used to alleviate pain in the orofacial region. Biofeedback training is a process that teaches an individual control over involuntary body functions. Because the mind and body are made of the same basic substance, and if we can control the mind, we can control the body. This technique is used to prevent or treat migraines, headaches, chronic pain, high blood pressure, and other conditions.

Studies have shown that relaxation techniques such as yoga, deep breathing, and visualization techniques can help with pain control. ⁽²⁾Dental health professionals can use mind–body intervention techniques like yoga and relaxation techniques to address the issues like musculoskeletal pain associated with dental ergonomics and reduce stress. ⁽¹⁰⁾ Mind–body techniques may also be beneficial for patients experiencing dental treatment anxiety. ⁽³⁾

SPA DENTISTRY:

Spa Dentistry is a different phenomenon in dentistry that provides some traditional and non-traditional strategies that are not typically associated with dental care. Hand massage, head massage, and spa-like amenities appeared to provide relaxing environments for patients, easing the fear and anxiety that is frequently associated with dental visits. This facility runs under the supervision of a dental practitioner which combines routine restorative, cosmetic, and holistic treatment. ⁽¹²⁾

Spa services in a dental clinic could help patients to overcome dental anxiety, making the visit a pleasant and sweet experience. ⁽¹⁾ Some suggestions for incorporating a Spa-style dental clinic include, remote-controlled massage mats that allow you to customize the kneading pattern and heat intensity, refreshments such as coffee, tea, juice combinations, and bottled water, to distract the patient, there are cascading water fountains and a salt aquarium. Concierge services in hotel style and while the patient is receiving treatment, the staff can answer cell phones, babysits, orders food, or does almost anything the patient requests.

CONCLUSION

Complementary medicine combines the best of all traditions, emphasizing disease prevention, overall well-being, and a holistic approach to oral health care that may improve quality of life. Understanding each of these methods and how they can be used in oral health care is still an ongoing phenomenon. By considering the broadened scope and benefits with minimal side effects, it can be inculcated as an integrative technology along with professional dental care treatments. Researchers should be encouraged to explore and validate the hidden values of alternative medicines that can benefit a wide range of people.

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