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Conventional Medicine in the Treatment of Different Diseases as a Complementary and Alternative Medicine

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ABSTRACT

Traditional medicine is still the only treatment in many rural areas especially in the rural communities of east. Due to limited access to modern medicine, local people use medicinal plants to treat most diseases. Some herbs contain powerful contents and must be treated with the same precautionary care as in the case of drug, we do. In fact, a lot of drugs are basically based on artificial verities of natural composite in plants. For example, the heart drug Digitalis comes from a foxglove plant. Some drugs are single active substance derived from botanical sources. Herbalists believe that if the active ingredient is isolated from other parts of the plant, its action may be lost or its safety may be reduced. E.g., salicylic acid is present in a plant of meadowsweet which is used for aspirin production. Aspirin may cause bleeding in the gastric mucosa, but meadowsweet contains some other compounds naturally that interfere with the stimulation of salicylic acid. According to many researches, herbs contain active ingredients that can be used to treat many diseases. So, with the other drugs, herbs should also be prescribed by doctor.

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Introduction

Tropical herbs have grown popular in the last 10 years, with 20% of the population being used. The fruits of the plant have a complex substance of chemical substances that can be obtained from non-released or released plants, such as leaves, stems, flowers, roots and seeds. According to the current rules, the plants identified as food intake allow consumers to produce and sell plants without first showing safety and strength. People have a lot of drug abuse, due to less knowledge (Bent, 2008). The herbs contain a complex mixture of organic compounds that can vary due to many factors associated with the growth, production and processing of plant products. While many manufacturers seek to ensure a constant level of suspected medicine for a product by using a process called standardization. This technology has an indefinite effect on the safety and efficacy of the final product. Because herbs are considered supplements in the United States. So, they are subjected to very limited supervision and control. The herbs are generally considered natural and safe, but recently there have been numerous and dangerous side effects, including direct toxic effects, allergic reactions, environmental pollution, and other herbicides. There are evidence that herbs contain powerful biologicallyactive substances that are commonly used in the treatment of certain diseases, many people believe that they must follow the strictest rules, as well as over-the-counter drugs. Further research is needed to determine the pharmacology, stability and bioavailability of these products to improve the safety and consistency of the herbs. (Bent and Ko, 2004). Many women use these herbal products during their pregnancy period. The dilemma of most regulatory bodies is that the public views about these products as traditional medicines

and natural supplements. The user believes that there is no reason to monitor. Most countries have laws on food, medicine and cosmetics. In most countries, alternative medicines are considered food if the label does not include medical information (Rousseaux and Schachter, 2003).

Herbal Medicine for the Treatment of Obesity

Obesity is a widespread global health problem and known to be associated with cardiovascular diseases. In western methods of treating obesity have many disadvantages, including effects on monoamine neurotransmitters, as well as drug abuse and dependence. We need to increase the safety of these drugs. Traditional Chinese medicine has been used to treat diseases for more than 2.000 years. Many studies have confirmed that herbal medicine is effective in treating obesity, but the mechanism is unknown (Liu et al., 2017). The number of overweight patients is increasing worldwide (Arroyo-Johnson and Mincey, 2016). It is recommended to change your lifestyle and lose weight. But sometimes drug intervention is required. Obesity drugs can be divided into five categories: central anorectic agents, digestive absorption inhibitors, metabolic enhancers, inhibitors of the obesity gene products, and other agents for the treatment of obesity. However, slimming drugs prescribed in essential drugs mainly affect monoamine neurotransmitters, causing many side effects that cause drug abuse or addiction (Dietrich and Horvath, 2012). For example, it has been reported that sibutramine often causes adverse effects, such as thirst, insomnia, anorexia, constipation, thrombus formation and neurological symptoms. Surgery is often performed in patients with overweight and in patients with concomitant diseases such as high blood pressure, diabetes and obstructive sleep apnea, deep vein thrombosis, Given the risk of obesity and the disadvantages of Western medicine, alternative medication should be further investigated.

Herbal Medicines for Treating HIV Infections and AIDS

The use of herbal medicines has become very popular in many countries, especially in Western Europe, where public health and safety is a big problem, especially when used in combination with traditional medicines. The devastating effects of the HIV / AIDS epidemic, combined with a significant shortage of health workers, that force other primary health care sources to develop coping mechanisms. By including herbs in the current medical program, future doctors will be able to better communicate with patients through this evolving healthcare system (Orisatoki and Oguntibeju, 2010). Despite the evidence, it can be effective and have serious side effects. Many health departments in Africa are currently promoting traditional medicines to treat HIV and related illnesses. In South Africa, the Ministry of Health actively promotes the use of traditional antiretroviral therapy. The two main African plant compounds that are used to treat HIV / AIDS in Sub-Saharan Africa are Hypoxias hemerocallidea (the immune-stimulating potato in Africa) and Sutherlandia. These two herbs are currently recommended by the Department of Health of South Africa to treat AIDS (Mills et al., 2005). We believe that physicians and researchers should understand the use of herbs for the treatment of AIDS and other complex diseases as part of their medical history and clinical evaluation. If this is not done, health care workers may negligently ignore the potential interactions of various herbs that can occur in AIDS patients. For example, a Canadian study found that more than 53% of outpatients with HIV taking traditional herbs. In addition, it has been reported that recipients of antiretroviral therapy use herbs to mitigate some of the negative side effects of antiretroviral drugs (ARVs), such as nausea and eosinophilia (Langlois-Klassen et al., 2007).

Herbal Medicine Use During Pregnancy

The use of herbs is increasing with time. The most commonly used herbs are ginger, cranberry, valerian, raspberry, chamomile, mint, thyme, fenugreek, green tea, sage, fennel, garlic, and bitter cola. The use of herbs during pregnancy depends on the woman's education, family income and woman's age. Traditional Chinese medicine is used to treat nausea and vomiting during pregnancy to reduce the risk of preeclampsia, to shorten the time of birth, and to treat colds and urinary tract infections. The use of herbs sometimes causes problems (Ernst, 2002). Heartburn, premature birth, miscarriage, increased blood loss, miscarriage and allergic reactions are common problems when using herbs during pregnancy. The use of herbs during middle and late pregnancy is not safe for the fetus. Pregnant women should consult their physician before taking herbs. The consequences of using herbs during pregnancy require further research on various herbs. Therefore, it is necessary to conduct clinical trials to determine the adverse effects of using herbs during pregnancy (Laelago, 2018).

Promising Modulatory Effects of Herbal Medicine in Alzheimer's Disease

Alzheimer's disease (AD) is a progressive and persistent neurodegenerative disease characterized by memory loss and cognitive dysfunction. This has a serious impact on the quality of life of the victim. In recent years, the prevalence of asthma has increased. Therefore, it is important to find out the pathogenesis of AD and find effective methods of treatment. It has been shown that autophagy is an important intracellular agent for the degradation of aggregated proteins and damaged organelles in the pathological changes of AD. In recent years, significant progress has been made in the search for modulators of autophagy of natural products, which provide a new understanding of therapeutic strategies for the development of AD with targeted autophagy. In China, herbal medicines were used to treat dementia thousands of years ago (Bnouham et al., 2006). Modern pharmacological studies have included several herbal activities for the manifestation of anti-AD effects, including cholinesterase inhibiting activity, antioxidant neuroprotection, anti-apoptotic and anti-neuro-inflammatory, neurogenic activity and modulation of Aβ and β. Tau metabolism by targeted autophagy. Recently, an increasing number of natural products has caused the detection of autophagy regulators. Numerous studies have identified compounds modulating autophagy, active saponins, alkaloids, flavonoids, polyphenols, and other

structural processes that provide alternative methods for treating neurodegenerative diseases in vivo and in vitro. The main ingredients or monomers of herbal medicines can decrease the symptoms of AD by aiming at autophagy (Zeng et al., 2019).

Neuroplasticity Related Underlying Antidepressant Effect of Traditional Herbal Medicines

Traditional herbs are an effective and safe alternative to depression. The ability of herbs to induce adaptation processes in the nervous system may improve neuronal plasticity and cell elasticity in response to chronic stress as antidepressant potential. So, it is suggested that the treatment of such cases may possible through herbs.

Neurotrophic element obtained from the brain (BDNF) have potential to protect the human response in many conditions such as in cell survival, neurogenesis and spinal formation. These all the conditions are associated with plasticization mechanisms. That may influence by the herbs (Bent, 2008). Preclinical trials showed 30 traditional herbs that help in such cases. Because of their ability to improve neuropathic conditions, it is said that herbs are suitable for clinical trials in patients with depression. If their tolerability and safety are confirmed, then these can be used in place of conventional antidepressants. (Hirshler and Doron, 2017).

Conclusion

Herbs have been used for many years due to their few side effects. Chinese medicine is usually in the back seat compared to traditional treatment methods. It offers many health benefits. In the modern world, herbs are mainly used to treat strong and long-lasting diseases. Therefore, further in vitro studies are needed to determine the effectiveness of antidiabetic agents.

References

Arroyo Johnson C, Mincey KD. 2016. Obesity epidemiology worldwide. Gastroenterol. Clin., 45: 571-579.

Bent S. 2008. Herbal medicine in the United States: review of efficacy, safety, and regulation. J. Gen. Intern. Med., 23: 854-859.

Bent S, Ko R. 2004. Commonly used herbal medicines in the United States: a review. Am. J. Med., 116: 478-485.

Bnouham M, Ziyyat A, Mekhfi H, Tahri A, Legssyer A. 2006. Medicinal plants with potential antidiabetic activity-A review of ten years of herbal medicine research (1990-2000). Int. J. Diabetes Metab., 14: 1-25.

Dietrich MO, Horvath TL. 2012. Limitations in anti-obesity drug development: the critical role of hunger-promoting neurons. Nat. Rev. Drug Discov., 11: 675.

Ernst E. 2002. Adulteration of Chinese herbal medicines with synthetic drugs: a systematic review. J. Intern. Med, 252: 107-113.

Hirshler Y, Doron R. 2017. Neuroplasticity-related mechanisms underlying the antidepressant-like effects of traditional herbal medicines. Eur. Neuropsychopharmacology., 27: 945-958.

Laelago T. 2018. Herbal Medicine Use during Pregnancy: Benefits and Untoward Effects. In: Herbal Medicine. Page Number: 103–119.

Langlois Klassen D, Kipp W, Jhangri GS, Rubaale T. 2007. Use of traditional herbal medicine by AIDS patients in Kabarole District, western Uganda. Am. J. Trop. Med. Hyg., 77: 757-763.

Liu Y, Sun M, Yao H, Liu Y, Gao R. 2017. Herbal medicine for the treatment of obesity: An overview of scientific evidence from 2007 to 2017. Evid. Based Complement Alternat. Med., 2017.

Mills E, Cooper C, Seely D, Kanfer I. 2005. African herbal medicines in the treatment of HIV: Hypoxis and Sutherlandia. An overview of evidence and pharmacology. Nutr. J., 4: 19.

Orisatoki R, Oguntibeju O. 2010. The role of herbal medicine use in HIV/AIDS treatment. Arch. Clin. Microbial, 1.

Rousseaux CG, Schachter H. 2003. Regulatory issues concerning the safety, efficacy and quality of herbal remedies. Birth Defects Res. B Dev. Reprod. Toxicol, 68: 505-510.

Zeng Q, Siu W, Li L, Jin Y, Liang S, Cao M, Ma M, Wu Z. 2019. Autophagy in Alzheimer's disease and promising modulatory effects of herbal medicine. Exp. Gerontol., 119: 100-110