

« Letter to Editor »

A review of the world-wide researches on the therapeutic effects of ginger during the past two years

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Abstract

Ginger is an Indian and Chinese herb, and people of these countries have extensively used it for more than four thousand years. The edible part of ginger is an underground swollen stem called rhizome, compounded of starch, resin and essence. Indian medicine experts believe that ginger is an international drug. Apparently, the nonvolatile pungent compounds (phytochemicals) are causer of antioxidant, anti-inflammatory, antiemetic, and gastro protective effects of ginger. Many digestive, antinausea, cold, and flu dietary supplements sold in the United States contain ginger extract as an ingredient. In Iran, this herb has been traditionally used, and nowadays, in addition to culinary uses it is applied as a herbal medicine. This article attempted to investigate the therapeutic effects of ginger explored around the world throughout the past two years. The results of these studies would pave the path for more exhaustive researches on the curing effects of ginger.

Keywords: ginger, zingiber, herbal drugs, medicinal plants, plant extracts

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Introduction

We are actually back to the first step.” These are the words of the first sentence of an article named “herbal medicine” published in the USA in 2000. The historical background of using herbs as medicine goes back to more than 60,000 years ago. According to the statistics of the World Health Organization, even today 80% of the world population treat herbs as medicine, and at least 30% of industrial medicines originate from herbs. The historical background of herbal medicine in Iran is rooted back to “Trita”, c. 2000 BC, the first Aryan physician who was absolutely well-informed of the medical characteristics of herbs, and did the herbal extraction, himself.

Although, the side effects and the kinetic profile of most of the traditional herbal medicine has not yet been recognized, the legacy of using herbal medicine along side of the accessibility and the abundance of various combinations of herbs has lead Iranian people to overwhelming use of this type of drug. Nevertheless, the belief that disease cure by herbs is the best flawless way of treatment is invalid, and leads to disturb modern medical foundations. Traditional medicine would not be a novel and functional field of science, effective in elimination of physical problems, without being coordinated with the modern medicine; since none of them are independently inclusive.

Positive consequences resulted from researches on herbs and their medical effects have drawn the attention for a more exhaustive range of researches, even of those countries known for being mother of modern medicine. A true evidence of this statement is the profusion of herbal supplements, proved to be efficient and made in these countries, in drugstores.

One of the herbs named in Quran (76:17) is ginger: “Therein (paradise) they shall be watered by chalices whereof the mixture is of ginger.” In this verse, God has said that he will reward those who will rest in heaven with a wine having the taste of

ginger. There would be two outlooks to this verse. One outlook is that Quran has mentioned the names of ginger and other fruits associating with the Arabic taste of that historical period, as Mulana Mududi wrote: “The Arabs were used to mingle ginger with their drinks.” And also, in Mazhari exegesis it is declared that the Arabs were utterly interested in ginger. Therefore God has named of ginger according to their taste. For this reason, there would be no superiority for Quranic fruits. However, another outlook takes Quran as a miracle, and therefore states that any individual concept pointed out in Quran by the Almighty God is connotated with special purposes and functions. These fruits could be asserted as materials attributed with specific characteristic lacking in other fruits (1). This research purposed to review some features of this world-wide medicine.

Historical background of ginger

Ginger is made out a yellowish plant with the scientific name of “Zingiber Officinale”. Although, the root of this plant is usually counted as the main part, however, the part being used is its inflated underground stalk, called “rhizome”. The medical treatment of ginger goes back to the ancient China and India. Indians have been using ginger as medicine for more than 2000 years, and signs of its usage have been found in medical books of ancient China. During the Middle Ages, ginger was regarded as a considerable cure for regurgitation and abdominal bloating. Likewise, in ancient Persia this herb has been used for many years in the name of Zhangavir. Cultivation of this plant is common in the West Asia, North Africa, Jamaica, Mexico, and Japan (2).

Curing effects of ginger

Ginger is one the most commonly used flavors, all around the world (1), possessing a long history of treatment of different diseases such as cold, fever,

vertigo, stomach upset, rheumatoid arthritis and gastrointestinal tract diseases (2). This internationally important flavor is commonly used in many countries such as India, China, Saudi Arabia, Tibet, and Greece as a medicine for the abatement of feeling nauseous and regurgitation (3).

For so many years, ginger has been used as an efficient medicine for the treatment of nausea and vomiting in pregnancy women (4). Several studies, in respect of comparing ginger effectiveness with other medicine ordinarily used as subsidence of pregnancy nausea, have not shown similar results (5). But undoubtedly, short-term usage of ginger, either as a supplement with other common anti-nausea medicine or as a substitute for pregnant women who cannot take anti-nausea medicine, can be safely effective for diminution of morning sickness (4).

Though, brilliant developments have advanced disease curing, cancer is still the second most important cause of death, around the world. Different strategies in curing this disease, depending on the stage in which the cancer has been diagnosed, like radiotherapy, and systemic cures such as chemotherapy and hormonal therapy may bring numerous side effects into line (2). Despite of the meaningful growth of anti-nausea medicine production, this issue is still a chief problem of chemotherapy, as severe nausea can decrease patients' survival and their subjugency from nutritious orders. (3). Studies' results have shown that everyday taking 1.5gr ginger, supplementing standard cure of nausea for developed breast cancers, have efficiently alleviated nausea during the first 6 to 24 hours after the chemotherapy (6). Moreover, it was recommended that the ginger can be used as postoperative anti-nausea, and also motion disease (7).

It is believed that taking herbs during cancer cure can alleviate cancer symptoms in patients, and at the same time as not having toxic effects promote the immune system. Recent studies in the field of cancer cure have shown that ginger, while

having anti-neoplastic effects, can protect intact body cells against side effects of chemotherapeutic medicine by controlling glycoprotein C that causes the emission of anti-cancer medicine outside the cells (2).

It has been recently reported that polyphenols existed in ginger, while being able to annihilate malignant cells in lung cancer, can be protective against destructive side effects of chemotherapy on intact cells, too (8). Furthermore, one of the products of ginger named Zerumbone can cause Apoptosis (causing death in cancer cells via consumption of the DNA of the cell by andonocleas) in cancer cells of pancreatic carcinoma, making this phenomenon a promising development in curing this cancer (9).

For so many years, herbs and their extractions have been proved to be an important efficient element in curing many disease-causing infections. The increase of the defiance of anti-biotics to disease-causing elements (pathogens) has forced us to find other not resistant combinations for curing infectious diseases. The outcomes of studies show that the extract of ginger has curbing effects on the resistance of disease causing bacteria, and this paves a way for using ginger as a supplement and preventive medicine against increasing drug resistance (10).

Another attribute of ginger is its anti-inflammatory effects in different diseases particularly those related to muscles and joints, such as rheumatoid arthritis. The existence of nonvolatile combinations of Phytochemicals in ginger can cause anti-oxidants, anti-inflammatory, and anti-nausea effects. Studies show that taking ginger can significantly lessen the psychological experience of pain in this disease (11).

Inflammatory procedures in central nerve system are one of the most important factors in appearance of neuro degenerative disease. It has recently been reported that using one of the products out of ginger named 6-shogaol in these patients can have anti-inflammatory effects

and can be used as an efficient factor in neuro degenerative diseases cure (12).

Researches done in the field of the effects of ginger on kidneys in renal failures have shown the supportive and protective effects of ginger on acute and chronic renal failure (13).

Also results of the studies in weight loss have indicated that ginger through the enhancement of heat in the body, and also decline of the feeling of hunger can be effective in weight management (14).

The importance of dysmenorrhea and its effect on life quality, and also the side effects initiated by taking NSAID (Non Steroid Anti-inflammatory Drugs) in this disease have increased the interest in using supplement, substitution medicine, and herbs. In a research done in respect of analyzing ginger effect on the decrease of primary dysmenorrhea, it has been observed that the intensity and duration of pain in primary dysmenorrhea in the group using ginger are meaningfully less than those who take placebo (15).

The intention in asthma curing is to reach clinical control and move toward natural

function of lungs. Reaching this aim in some patients suffering from constant asthma is not possible with a little dosage of inhalant corticosteroids plus long-acting Beta-2 agonists. The result of a study with the purpose of analysis of the effects of using ginger capsule as a controlling medicine on two groups of asthmatic patients has shown that taking the capsule of powder made of ginger root company with inhaled corticosteroids and long-acting Beta-2 agonists as a supplement can be a standard cure for patients suffering from uncontrolled constant asthma (16). In Conclusion although studies on alleviative effects of ginger on nausea caused by chemotherapy, pregnancy, post surgery and motion disease and also its anti-inflammatory effects in osteoarthritis, rheumatoid arthritis and lessening of muscle-joint pain have not yet shown similar results, the optimistic findings of these researches and ginger's very little side effects have shed light on curing effects of ginger, and encourage us for more studies in this ground.

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