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Medicinal Herbs Affecting Cancers in Iran and the World

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Abstract

Objective: In many countries, cancer is the second leading cause of fatality after cardiovascular disease. Cancer is a growing problem worldwide and is one of the most important reasons for fatality in human societies. The problems of chemotherapy and radiation therapy and the many side effects that result from their use for the patient, as well as the resistance of cancer cells to common treatments, have led researchers to new drugs with greater effectiveness and less toxicity. One of the best ways to reduce the risk of cancer is to use natural materials. The purpose of this study is the effect of medicinal herbs on cancer in Iran. This study aims to search the types of herbs that are beneficial for the health of body tissues concerning cancer, in order to be able to provide a suitable way to prevent the types of cancer that are more common in humans which has become a major problem in the medical world.

Material and Methods: Articles were related to searching keywords such as medicinal plants, cancer and chronic diseases. PubMed, Google Scholar and SID databases were used as search sources.

Results: In the treatment of cancers from medicinal plants such as *Trachyspermum ammi*, *Crocus sativus*, *Silybum marianum*, *Nigella sativa*, *Cornus mas*, *Aloe vera*, *Zingiber officinale*, *Urtica dioica*, *Allium cepa*, *Glycyrrhiza glabra*, *Peganum harmala*, *Plantago ovate*, *Thymus vulgaris*, and *Elkhorn fern*. Some of the most important traditional natural anti-cancer substances include *Catharanthus roseus*, *Podophyllum peltatum*, *Combreturn cafrum*, *Campetotheca acuminate*, and *Brucea antidysenterica*.

Conclusion: The use of herbal medicines with anti-cancer properties can be used as a substitute or supplement to chemical drugs in treating cancers. Many unique plant species need to be further studied to find anti-cancer compounds.

Dear editor;

Cancer is a disease that begins with an unnatural increase of cells in the body. The human body is made up of millions of cells that are grouped to make different tissues and organs [1]. Cells grow naturally and are distributed into newer cells based on the body's needs. When cells to be old, they die and new cells are replaced. They sometimes disrupted this natural process. When the body does not need them new cells exist

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again and new cells that need to be destroyed, continue to live. This excessive gathering of cells creates tissue masses that are called a tumor [1]. In many countries, cancer is the second leading cause of fatality after cardiovascular disease [2]. Cancer is a growing problem worldwide and is one of the most important reasons for fatality in human societies [2]. Cancer is unnatural and uncontrolled cell proliferation. Carcinogens cause DNA damage and loss of function of tumor suppressor genes, resulting in tumor formation and metastasis. Some carcinogens are physical factors such as ultraviolet radiation, chemical factors such as cancer-inducing chemical compounds, cigarette smoke, unbalanced diet, occupational factors, hereditary, hormonal, metabolic, and biological factors, especially some bacteria and viruses [2]. Herbal medicines have fewer side effects than chemical medicines are more important in preventing types of cancer [3]. The problems of chemotherapy and radiation therapy and the many side effects that result from their use for the patient, as well as the resistance of cancer cells to common treatments, have led researchers to new drugs with greater effectiveness and less toxicity. One of the best ways to reduce the risk of cancer is to use natural materials [4].

Today, the most important available treatment for cancer is chemotherapy, which in addition to numerous side effects, also creates drug resistance in the patient. Some plants have long been considered reliable and excellent sources for the development of anti-cancer drugs. Some plants have a protective and therapeutic role in cancer and others reduce the side effects of chemotherapy and radiotherapy and in addition, these are also economically viable [4, 5]. Current problems in the use of chemotherapy and radiation therapy and the numerous side effects that result from their use for the patient, as well as the resistance of cancer cells to common treatments, bring researchers to new drugs with greater effectiveness and less toxicity [5].

Nature is an amazing source of suitable new medicinal compounds with great chemical diversity. The purpose of this study is the effect of medicinal herbs on cancer in Iran. This study aims to search the types of herbs that are beneficial for the health of body tissues from cancer, today to be able to provide a suitable way to prevent the types of cancer that are more common in humans and has become a major problem in the medical world.

In the treatment of cancers from medicinal plants such as *Trachyspermum ammi*, *Crocus sativus*, *Silybum marianum*, *Nigella sativa*, *Cornus mas*, *Aloe vera*, *Zingiber officinale*, *Urtica dioica*, *Allium cepa*, *Glycyrrhiza glabra*, *Peganum harmala*, *Plantago ovate*, *Thymus vulgaris* and *Elkhorn fern* [6]. Some of the most important traditional natural anti-cancer substances known in different parts of the world include *Catharanthus roseus*, *Podophyllum peltatum*, *Combreturn cafrum*, *Campetotheca acuminate*, *Brucea antidysenterica* [7].

The mechanism of the anti-cancer effect of most of these substances is related to their antioxidant properties and inhibition of tumor cell growth. Many of these materials are traditionally used in different parts of the world [6-8]. Herbal remedies have been used for centuries to treat a variety of ailments, and most people consider this treatment as an alternative or complementary method that helps them to be in better physical and mental condition. Herbal remedies are often used as a natural way to protect calm and relieve depression, anxiety, and other illnesses, physical and mental disorders. But separate all the worries and diseases, herbal medicines are even used as a complementary or replacement treatment for cancer. The use of herbal medicines with anti-cancer properties can be used as a substitute or supplement to chemical drugs effective in treating cancers [9, 10]. Many unique plant species need to be further studied to find anti-cancer compounds.

Conflict of interest

None of the authors have any conflict of interest to declare.

Consent for publications

All authors approved the final manuscript for publication.

Availability of data and material

Data are available on request from the authors.

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