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Herbal medicine traditionally uses for prevention treatment and cure of cancer

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Abstract

Herbal medicine is a complementary therapy that some people with cancer use to ease cancer symptoms and relieve treatment side effects. Mesothelioma patients should discuss herbal medicine with their doctor to avoid drug interactions and negative treatment consequences. Is Herbal Medicine Safe for Cancer Patients? Herbs may seem harmless, but sometimes they can interfere with cancer treatment. For example, some herbs can prevent chemotherapy and radiation therapy from killing cancer cells. Certain herbs enhance the effect of chemotherapy in a toxic way that leads to unwanted side effects. Doctors recommend patients avoid herbs during treatment. It won't be safe until research can identify which herbs are safe to combine with cancer treatment. Clinical trials that combine herbal medicine with cancer therapies are relatively new to the United States. China has performed such trials since the early 1900s. Cancer doctors rely on clinical trials to recommend treatments that are proven effective.

Keywords: Chemotherapy; Cancer; Herbal medicines; Inflammo-pharmacology

1. Introduction

The lack of clinical trials on herbal medicines has limited what doctors can safely recommend. People with cancer should get approval from their oncologist first before they take any kind of herbal medicine because some herbs may negatively impact the outcome of cancer treatment.Is Herbal Medicine Effective in Cancer Care? Research in a developing field of medicine known as integrative oncology is attempting to understand which complementary therapies, including herbal medicines, are safe and effective to combine with conventional cancer treatments. Some conventional cancer medicines contain active herbal ingredients. For example, the Mesothelioma chemotherapy drug Taxol (paclitaxel) comes from the bark of the yew tree. However, taking a yew tree bark herbal supplement does not produce the same effects as Taxol [1].

In general, herbal medicines are not as effective as conventional prescription medications. While some people get relief with herbal medicine for mild symptoms or side effects, many people get more relief from prescription medication. Prescription medications may come with unwanted side effects, and these side effects may motivate people to consider herbal medicine "[2].".

Herbal medicines often have a lower risk of side effects than standard-of-care drugs. This is partially because they are less potent than pharmaceuticals. For example, patients who use natural remedies for insomnia are less likely to experience dizziness, tremors or spasms than patients who use prescription pills such as benzodiazepines. The side effects that do occur with herbal remedies are typically mild. Constipation is the most common. The likelihood of dependency is also lower for herbal remedies.The U.S. Food and Drug Administration designate most herbs as GRAS, or generally recognized as safe. But patients must remember herbal remedies are still a type of medicine. Make sure to get

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approval first from your oncologist. Herbal medicine may come in the form of tablets or capsules, creams, teas or tinctures (an alcohol-based concentrate)[3].

2. Research on herbs suggests they may help to

- Boost the immune system
- Ease cancer symptoms
- Reduce treatment side effects
- Slow cancer spreading (metastasis)
- Attack cancer cells

Research does not indicate that herbal medicine can replace conventional cancer treatment. No herb has been proven to control or cure any kind of cancer.Most of the research has been conducted in test tube studies or mouse studies. Some research involving humans has been conducted, but no large, double-blind controlled clinical trials have been conducted in the U.S [4].

2.1. Research on Herbal Medicine and Cancer

Research indicates that some herbs may help cancer patients cope with cancer symptoms and side effects of cancer treatment. Studies conducted in test tubes and animals have shown some anti-cancer effects of various herbs, but these results haven't been replicated in human trials [4].

2.1.1. Astragalus

Research on astragalus shows that it may reduce side effects of platinum-based chemotherapy agents such as cisplatin and carboplatin. These are two of the most effective chemotherapy drugs for Mesothelioma. A 2012 Chinese study published in Medical Oncology found improved quality of life among lung cancer patients who received a combination injection of astragalus, cisplatin and vinorelbine compared to patients who only received cisplatin and vinorelbine. Patients who received astragalus had better physical function, improved appetite, and they experienced less fatigue, pain, nausea and vomiting. Make sure you discuss astragalus with your oncologist because it is a potent herb. It can alter the way your body processes chemotherapy in ways that may help or hurt depending on the patient [5].

2.1.2. Dong Quai

Traditional Chinese Medicine uses the herb dong quai to support overall wellness. The herb may offer additional benefits to cancer patients receiving doxorubicin, which is a chemotherapy drug used in the treatment of mesothelioma. A 2007 study published in Basic and Clinical Pharmacology and Toxicology found dong quai may protect against heart damage caused by doxorubicin. A 2006 study published in Oncology Reports found dong quai may protect against lung inflammation caused by radiation therapy [6].

2.1.3. Burdock Root

A 2011 review published in Inflammopharmacology discusses laboratory studies of burdock root that indicate the herb has anti-inflammatory, antibacterial, anti-cancer and liver-protecting properties. It hasn't been proven to treat cancer in humans, but it may reduce inflammation and help patients recover from liver damage after cancer treatment. It should be noted that a commercially available type of burdock root tea was found contaminated with atropine in the 1970s. Atropine is a chemical that causes irregular heartbeat and blurry vision. Cancer patients should closely monitor the effects of any herb they try [7].

2.1.4. Essiac Tea

An herbal tea blend known as Essiac tea contains herbs known for their immune-boosting effects, including burdock root. Research shows Essiac tea doesn't cure cancer, but it does contain more antioxidants than red wine or green tea. The Memorial Sloan Kettering Cancer Center conducted about 18 studies on Essiac in the 1970s and 1980s. These studies found Essiac did not boost the immune system or kill cancer cells [8].

2.1.5. Hypericin

This compound is found in St. John's Wort and it may help kill cancer cells. According to a 2000 study published in the Medical Journal of Australia, hypericin makes certain cancer cells more likely to die after photodynamic therapy, which is an experimental treatment for mesothelioma [8].

2.1.6. Ginger

This herb shows anti-inflammatory and anti-cancer effects in lab studies. It can also reduce chemotherapy-related nausea and vomiting, according to a 2000 review published in the British Journal of Anaesthesia. But ginger should be strictly avoided before and after surgery. It promotes bleeding and should be avoided by patients with a low platelet count [9].

2.1.7. Aloe Vera

Tking aloe vera during chemotherapy helped prevent mouth sores in some patients. Aloe vera crude extract (ACE) alone or in combination with cisplatin in human breast (MCF-7) and cervical (HeLa) cancer cells was studied by cell viability assay, nuclear morphological examination and cell cycle analysis. Effects were correlated with modulation of expression of genes involved in cell cycle regulation, apoptosis and drug metabolism by RT-PCR. Exposure of cells to ACE resulted in considerable loss of cell viability in a dose- and time-dependent fashion, which was found to be mediated by through the apoptotic pathway as evidenced by changes in the nuclear morphology and the distribution of cells in the different phases of the cell cycle [10].

3. Mistletoe Extracts

Also known as Iscador, research done in humans suggests that mistletoe reduces symptoms and improves quality of life. In some research in treatment of Cancer found that mistletoe reduces side effects of chemotherapy in lung cancer patients.Alternative Medicine found that cancer patients with advanced tumors were able to tolerate higher doses of gemcitabine (a chemotherapy drug used to treat mesothelioma) with the addition of mistletoe [11].

3.1. Turmeric

This herb contains a compound know as curcumin in Cancer Chemotherapy and Pharmacology shows that curcumin extract may be safe to combine with gemcitabine chemotherapy in pancreatic cancer patients.Turmeric is used as an anti-inflammatory. It may reduce bruising in surgery patients when combined with bromelain (an extract from pineapples) and arnica (an herbaceous plant) [12].

3.2. Moringa Tree

Therapeutics in Oncology found a compound in moringa tree effective at killing ovarian cancer cells. Other research suggests it may help cancer symptoms including difficulty breathing, cough, sore throat, fever and joint pain. A heart shaped bowl filled with fruit Free Mesothelioma Nutrition Guide Eating right and balancing your diet while undergoing mesothelioma treatment can ease your symptoms. Get Free Recipes and Tips Herbs That May Help Treatment Side EffectsSeveral herbs may help control the side effects of conventional cancer treatment. However, doctors do not recommend that cancer patients take herbal medicine while undergoing cancer treatment. If you want to try herbal medicine during cancer treatment, talk to your oncologist about it so they can monitor your response and warn you of potential drug interactions.Some of these herbs might be safe to take after cancer treatment is completed, but you should get approval from your oncologist first [13].

3.3. Side effects of herbal medicine

- **Nausea or vomiting:** Ginger, Marijuana, Grape Seed, Peppermint, Roman Chamomile
- **Appetite loss:** Marijuana, Dandelion, Devil's Claw, Lemon Balm, Siberian Ginseng
- **Diarrhea:** Bilberry, Blackberry Leaf, Chamomile, Huanglian, Marshmallow Root
- **Constipation:** Aloe Vera, Fenugreek, Ragweed, Senna, Psyllium
- **Fatigue Astragalus, Chlorella:** Ginkgo Biloba, Gotu Kola
- **Skin irritation:** Calendula, Holy Basil, Milk Thistle, Panax Ginseng

The effects of herbal medicine on oral mucositis caused by cancer treatment found several herbs effective at improving tissue swelling in the mouth. For example, curcumin, honey and chamomile were reportedly effective at preventing and treating swollen tissue and sores in the mouth.Herbs That May Help Cancer SymptomsCertain herbal medicines may help mesothelioma cancer symptoms such as pain and difficulty breathing. Some of these herbs have been studied in cancer patients, and some of them haven't [14].

4. Symptom herbal medicines

4.1. Pain

Marijuana, Boswellia, Curcumin/Turmeric, White Willow Bark, Arnica

4.2. Shortness of breath

Hawthorn, Eucalyptus, Lobelia, White Pine Bark

4.3. Coughing

Black Cohosh, Slippery Elm Bark, White/Western Yarrow

4.4. Anxiety or stress

Kava, Passionflower, Magnolia Bark

4.5. Depression

St. John's Wort, Valerian

4.6. Sleeplessness or insomnia

Passionflower, Valerian, ChamomileFind a Mesothelioma Cancer CenterAccess top mesothelioma cancer centers that have experience treating this rare disease.Get Help NowPrecautions for Using Herbal Medicine [15].

Herbal medicines may be less likely to cause side effects than traditional drugs. But patients can still experience complications. Some herbs can cause negative interactions with chemotherapy drugs. Others may prevent blood from clotting properly after surgery.Closely monitor how you feel before and after taking herbal remedies. Patients should always consult with their doctor before trying herbs to avoid complications.Dietary supplements do not have to undergo FDA testing before reaching the market. Some patients have unknowingly bought supplements contaminated with arsenic, lead and mercury.To avoid contaminated herbs, patients should only buy products from reputable companies with a United States Pharmacopeia (USP) label [16].

5. Patients can also look for one or more of the following quality labels on their herbal supplements

- GAP (Good Agricultural Practice)
- GLP (Good Laboratory Practice)
- GSP (Good Supply Practice)
- GMP (Good Manufacturing Practice)

Although some herbs may be able to slow cancer growth, patients should avoid herbal medicines that are marketed as cures for cancer. These remedies are often produced without any scientific evidence to support the manufacturer's claim. Talk with Your Oncologist The importance of discussing herbal remedies with your oncologist before buying or trying them cannot be stressed enough. All too often patients hide the supplements and herbs they want to take from their doctor. Your oncologist has your best interest at heart and only wants to protect you from potentially harmful interactions. In many cases, your doctor will give their approval to take herbal remedies after you complete treatment [18].

You can also inquire about joining a clinical trial that is investigating an herb in combination with cancer treatment. These trials are not common, but they do closely monitor patients for harmful interactions. They take the precautions necessary to prevent unwanted side effects such as testing herbs for contaminants before administration [19]. A common misconception is that natural products can't be harmful or that they are always safe to combine with pharmaceutical medications.Many natural substances, such as arsenic and tobacco, are poisonous and carcinogenic. The effects of herbs can range from mild to potent depending on the person taking them and the medications they are using. It is wise to thoroughly research the herbs you want to try and take your research to your oncologist. This allows your doctor to advise you with as much information as possible [20].

6. Conclusion

It is likely that a substantial number of people with cancer are taking herbal medicines at any one time. With such a high number of potential users and the potential for adverse effects, including adverse drug interactions, a robust evidence base for understanding all aspects of herbal medicine use by those with cancer is required. An understanding of the self-medication behaviours of these individuals is essential if health-care professionals are to support treatment adherence and avoid unwanted pharmacological interactions and compromised treatment efficacy. Health professionals need to be aware of which herbal medicines are being taken by their patients. The provision of relevant educational resources for both patients and health professionals is required.Providers of medicines, such as physicians, nurses, and pharmacists, often have little training in and understanding of how herbal medicines affect the health of their patients. Many of them are also poorly informed about these products and how they are being used. Adequate training is now very essential since most patients are almost often on other types of prescription or non-prescription medicines. In spite of the fact that the active involvement of orthodox healthcare professionals is continuously solicited and huge responsibility lies with them in terms of their valuable contributions to safety monitoring of medicinal products, it is also very important that all providers of herbal medicines are sufficiently empowered to play a role in monitoring safety of herbal medicines.

Compliance with ethical standards

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Disclosure of conflict of interest

The author has no conflicts of interests to declare.

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