

Remedies

Herb-Nutrient-Drug Column

Chemotherapy Support and Cautions

By Karolyn A. Gazella

According to the American Cancer Society, of the more than 2.5 million people diagnosed with cancer each year in the United States, most of them are given one or more chemotherapy drugs at some point in their treatment [1, 7]. Presently, there are more than 50 different chemotherapy drugs used to treat cancer [2, 3, 7]. While the type of chemotherapy used depends on the type of cancer, some of the more common chemotherapy drugs include carboplatin, cisplatin, paclitaxel, fluorouracil, and doxorubicin [#4].

Simply stated, the goal of chemotherapy is to kill rapidly dividing cells, which is a common characteristic of cancer development. Unfortunately, chemotherapy drugs also kill other rapidly dividing healthy cells resulting in side effects [2, 7]. In some cases, chemotherapy can even cause secondary cancers [2, 7].

“Side effects of chemotherapy vary depending on the agent used and the person’s sensitivity to the drug,” explains Dr. Lise Alschuler who is the Director of Naturopathic Medicine at Midwestern Regional Medical Center, a Joint Commission accredited regional hospital specializing in comprehensive integrative cancer care. “Side effects can range from mild and manageable to severely debilitating and in some cases life-threatening.”[#2, #4]

Common side effects of many chemotherapy drugs include: [2, 4, 5, 6]

- nausea and vomiting
- hair loss
- mouth sores or dry mouth
- constipation or diarrhea
- fatigue and weakness
- bleeding, blood count issues, or anemia
- taste impairment or loss of appetite
- cardiovascular damage
- infection
- neuropathy (numbness and tingling)

Quality of life issues associated with chemotherapy have received special attention from conventional medicine researchers and have always been an issue with natural medicine proponents. In the past, chemotherapy dosing was primitive and imprecise. Chemotherapy was given at the highest dose the body could tolerate, bathing the cancer cells and the patient in the toxic substance. While the cancer cells died, sometimes so did the patient. Today, lower and pulsed doses are more frequently used, as well as drugs that are designed to target a specific cancerous cellular action, making them a little easier to tolerate and hopefully more effective [4, 6].

Support

“Advances in chemotherapy research has created drugs and dosing strategies that are better tolerated, however, side effects still often occur,” explains Dr. Alschuler. “The

incorporation of natural complementary therapies can help make chemotherapy more tolerable and less frightening and dangerous.”

As with any drug, a cautious and individualized risk-to-benefit analysis is important. Given the risks associated with most chemotherapy drugs, it makes sense to find ways to reduce those risks, as well as ease uncomfortable side effects. This is a new and exciting area of interest among integrative oncology researchers. Many studies exist to support the use of some herbs and nutrients during chemotherapy [7]. Some examples include: [7]

- Coenzyme Q10 and L-carnitine can help protect the heart
- Coenzyme Q10 can help with fatigue
- Vitamin E, L-glutamine, and vitamin B6 can help prevent nerve damage

(neuropathy)

• Fish oil can help prevent malnourishment and cachexia, a wasting syndrome associated with cancer and chemotherapy usage

• Vitamin E, L-glutamine, honey, and deglycyrrhizinated licorice (DGL; glycyrrhizin in licorice can potentially raise blood pressure so it is important to take DGL) can help ease the discomfort of mouth sores

- Acupuncture and ginger may help reduce nausea
- L-glutamine and probiotics can alleviate diarrhea
- Zinc can help minimize changes in the sense of taste
- Melatonin can help reduce cancer-related sleep disturbances

Anemia is a common side effect of chemotherapy, however, it is typically not related to low iron levels. While supplemental iron is very effective at correcting anemia due to iron deficiency, it won't be helpful if iron deficiency is not the cause and it may even be harmful if taken with some chemotherapy drugs [5, 7].

“Too much iron can promote tumor growth and can actually worsen chemotherapy side effects,” warns Dr. Alschuler. “Supplemental iron is only recommended when iron deficiency has been confirmed by blood tests.”

Dr. Alschuler says you should not assume your anemia is caused by an iron deficiency. Unless recommended by your oncologist, you should not take supplemental iron [4].

For more information on some of the most commonly used chemotherapy agents, refer to the chart.

Interactions

Use of herbs and nutrients to support chemotherapy has great potential but this is an extremely complex area of study that requires more research. It is absolutely critical to inform all of your doctors about every nutritional supplement you are taking.

Preliminary research shows us that some herbs and nutrients can interfere with some chemotherapy drugs [7]. Here are some examples:

- N-acetylcysteine can interfere with the anticancer effects of several chemotherapy agents (refer to chart)
- While vitamin B6 can help prevent neuropathy, dosages higher than 300 mg daily may interfere with cisplatin
- Curcumin and quercetin are strong anti-cancer flavonoids, but they may interfere with the anti-tumor activity of cyclophosphamide

There are not a lot of studies demonstrating conclusive safety regarding the use of herbs with chemotherapy drugs. For this reason, some herbs should be used with caution when taking chemotherapy. Examples include silymarin, kava, willow bark, and St. John's wort. Herbs should be avoided completely with irinotecan, etoposide, and doxorubicin.

For more information on some of the most commonly used chemotherapy agents, refer to the chart.

[Chart]

Chemotherapy Support And Interaction Chart

Note: The information in this chart has been adapted with permission from the book *Definitive Guide to Cancer: An Integrated Approach to Prevention, Treatment, and Healing* (Celestial Arts 2007)

Chemotherapy = carboplatin

Trade Name = Paraplatin

Cancer(s) Treated = ovarian, testicular, bladder, lung

Helpful Nutrients and Herbs = alpha-lipoic acid to reduce nerve toxicity and protect hearing; ginger to reduce nausea; vitamins C, E, and D to support anticancer effects

Nutrients and Herbs to Avoid = N-acetylcysteine, L-glutathione, silymarin (used with caution)

Chemotherapy = cisplatin

Trade Name = Platinol, Platinol-AQ

Cancer(s) Treated = ovarian, testicular, bladder, lung, cervical, breast, stomach

Helpful Nutrients and Herbs = magnesium to reduce kidney and muscle toxicity; L-carnitine to reduce damage to nerves and kidney and may help with fatigue; astragalus to help prevent decreased blood cell counts; PSK (from *Coriolus versicolor* mushroom) to reduce kidney damage

Nutrients and Herbs to Avoid = black cohosh, N-acetylcysteine, doses of B6 above 300 mg, ginkgo in combination with regular-strength aspirin, silymarin

Chemotherapy = doxorubicin

Trade Name = Adriamycin, Doxil (liposomal Adriamycin)

Cancer(s) Treated = breast, ovarian, bladder, lymphoma, sarcoma, multiple myeloma

Helpful Nutrients and Herbs = L-carnitine and CoQ 10 to protect the heart; green tea (especially concentrated to theanine) to protect healthy tissue and enhance anti-tumor effects; melatonin to reduce side effects

Nutrients and Herbs to Avoid = N-acetylcysteine

Chemotherapy = fluorouracil, capecitabine

Trade Name = 5-FU, Xeloda

Cancer(s) Treated = colon, breast, stomach, head and neck

Helpful Nutrients and Herbs = melatonin to improve treatment tolerance; vitamin B6 to protect against hand-foot syndrome; aged garlic extract to protect the digestive tract; probiotics to help prevent digestive tract toxicity

Nutrients and Herbs to Avoid = beta-carotene; probiotics should be avoided in patients with low white blood cell counts

Chemotherapy = methotrexate

Trade Name = Amethopterin, Folex, Mexate

Cancer(s) Treated = breast, bladder, colon, blood, bone, lymphoma, head and neck

Helpful Nutrients and Herbs = soy and folic acid from food sources may protect against digestive tract toxicity; fish oil and vitamin E may increase anticancer effect

Nutrients and Herbs to Avoid = kava and willow bark

Chemotherapy = paclitaxel, docetaxel (taxanes)

Trade Name = Taxol, Taxotere

Cancer(s) Treated = breast, ovarian, lung, stomach, bladder, head and neck

Helpful Nutrients and Herbs = vitamin B6 and L-glutamine to prevent nerve damage; melatonin, fish oil, and green tea to enhance anticancer actions

Nutrients and Herbs to Avoid = all herbal supplements during treatment; quercetin may interfere with anticancer activity

Selected References:

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