

Adverse Effects of Cancer Chemotherapy

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Editorial

The side effects and long-term sequelae of anti-cancer chemotherapy remain a major source of concern for both patients and therapists despite the improved performance and improved survival provided by modern therapies. Current drugs or other methods to combat the side effects caused by the chemicals are often incomplete, often overlooking long-term sequelae or can cause other side effects that add to the patient's discomfort. Nausea and vomiting are some of the most feared side effects in patients undergoing chemotherapy for cancer treatment. Although current therapies for the treatment of acute nausea and vomiting (CINV) are effective for most patients, delayed CINV is more difficult to manage. Rapoport's review describes the pathogenesis, events and current treatment of delayed CINV, and emphasizes that this symptom is often underestimated and often poorly controlled, even if acute CINV is adequately controlled. The release of substance P and its effect on neurokinin-1 receptors (NK-1) is an important step in the development of delayed CINV. Author describes pre-clinical studies on a spread of animals (ferrets, house musk shrews) of 1 NK-1 antagonist, netupitant, as a broad antiemetic (i.e., not just CINV). In fact, these studies have paved the way for the introduction of this drug into the clinic. One of the drawbacks of rat species in the development of antiemetic drugs is that mice do not have an emetic reflex. However, indirect markers are often used (Andrews and Sanger) describes the new indirect marker of nausea-like behavior by monitoring the facial expressions in the mouse. These authors showed a correlation between eye size and axial length (eye opening index) decreased after cisplatin administration and this effect was prevented by standard antiemetics.

Chemotherapy-induced peripheral neuropathy (CIPN) is caused by a number of anti-cancer drugs including platinum-based agents, vinca alkaloids, taxis, proteasome and angiogenesis inhibitors. Chronic CIPN is related to high morbidity including depression, ataxia, insomnia Which provides a comprehensive review of the pathophysiological mechanisms, symptoms and risk factors of chronic CIPN caused by certain types of chemotherapy. However, the prevention and treatment strategies of long-term CIPN are not well developed and are urgently needed. Another shocking and exciting change in cancer treatment over the years has

been the emergence of therapeutic drugs aimed at enhancing a patient's body's response to its drug. Immune checkpoint inhibitors are now focused on the treatment of fatal melanoma and are rapidly increasing their role in treating many other tissues. However, while these agents do not cause severe nausea, vomiting or bone marrow associated with many cytotoxic agents, it is clear that they can lead to another range of side effects related to the immune system in many different organs. Such side effects are sometimes difficult to detect but can be life threatening. provide a detailed and timely review of current information about these adverse events related to the body and the clinical management framework. Alternative therapies, using cell-based therapies to improve the immune response to boils, are also actively followed. The interaction of host dendritic cells and cytokine cells are intended to target and kill cells that produce tumor antigens. As the authors explain, the specificity given by killing only the cells that produce tumor antigens can be a very powerful way to avoid side effects from other cytotoxic therapies. However, it is still too early to say whether the promising results from the first tests will be fulfilled.

Finally, the combination of natural bioactive chemicals with traditional chemotherapy can increase the ability to fight cancer and reduce the side effects of chemotherapy. In some cases, the addition of bioactive compounds may defeat the chemo- or radio-resistance of cancer cells. These effects of the combination of nutraceutical chemicals such as flavonoids, stilbenes, terpenes, curcumin, and others are discussed. The authors reviewed current information on the mechanisms underlying these compounds based on studies of spotted cancer cells, animal species and clinical trials. However, the use of illicit combinations of drugs and illicit drugs can lead to serious side effects and life-threatening toxicity.

In conclusion, the topic has already generated a lot of interest in high-quality and featured views, but there are still many aspects of this topic that need more attention. These include the impact of cancer chemotherapy on nerve function such as hearing, contraceptive methods during and after treatment and the long-term impact of anti-cancer treatment on health and aging cancer survivors. Finally, we hope that by identifying and reducing or preventing short-term and long-term toxicity from cancer

chemotherapy, treatment options themselves will be better tolerated and more effective, and the health and well-being of cancer survivors will be improved.

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Conflict of Interest

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