

Main Critical Side Effects Associated with Chemotherapy Used in Cancer Treatment

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Introduction

Cancer has become a major killer in the world which almost surpasses the cardiovascular diseases and will become the main lethal cause in this century. Although the global war against cancer leads to remarkable gain in understanding the main molecular mechanism for the cancer cell, this progress is still considered as slow and not enough especially in case of treatment of common solid tumor in adults. Besides that there are so many types of serious side effects caused by the tumor itself be it solid cancer or hematological cancer. Moreover these side effects are not only caused by cancer itself but also from the chemotherapy treatment which is used for it and the most critical side effects are associated with the chemotherapy treatment more than the cancer disease. Therefore it became an obligate matter for all clinicians to be aware of these chemotherapy side effects.

Chemotherapy Background

Chemotherapy was developed and used since the World War I from the chemical weapon program of the United State of America (USA), since that era it became one of the most important treatment for cancer disease. The main mechanism for its working is by attaching and destroying the cancer cells which are characterized by their high multiplication and growth speed [1,2]. Even though when comparing chemotherapy with other types of treatments, it still remain potentially high risk with many side effects which are difficult to manage. Chemotherapy requires the involvement of various clinical professionals during its various stages of administration and enormous patient health care is needed to overcome its side effects [1,3].

Chemotherapy Side Effects

The goal of chemotherapy is to be as effective as possible with tolerable side effects, since the dose of chemotherapy will be toxic to the cancer cells as well as to the normal cells. A proportion of the cancer patients suffer from only mild side effects whereas others may suffer from serious side effects. Occurrence of specific side effects will vary according to the chemotherapy or medications used. The most common side effects experienced are nausea and vomiting, anemia, hair loss, bleeding (thrombocytopenia), hyperuricemia, bone marrow depression, alopecia and mucositis. So different parameters must be taken into consideration to prevent, reduce and overcome these side effects [3-5].

Classifications of Chemotherapy Side Effects

The side effects commonly associated with chemotherapy treatment are classified as:

1. Acute, which develop within 24 hours after chemotherapy administration.
2. Delayed, which develop after 24 hours and up to 6 to 8 weeks after chemotherapy treatment.
3. Short term, combination of both acute and delayed effect.

4. Late/ long term, which develop after months or years of chemotherapy treatment.
5. Expected, which developed among 75% of the patients.
6. Common, occurred in 25%-75% of the patients.
7. Uncommon, happened is less than 15% of the patients.
8. Rare, occur in only 5% of the patients.
9. Very rare, occur with less than 1% of the patients [3-5].

Conclusion

Therefore it is an obligate matter for all clinicians to follow up all the cancer patients who receive chemotherapy in order to prevent or palliate any of these side effects which may appear. Moreover it is important to focus on research within this field in order to detect the proper ways which can help to overcome these side effects.

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