Available Online at

http://www.ijcpa.in

April-June 2022

DOI: 10.21276/2395-2466.22.10.0082

International Journal of CHEMICAL AND PHARMACEUTICAL ANALYSIS

eISSN: 2348-0726 ; pISSN : 2395-2466

Short Communication | Volume-10 | Issue-2 | Article ID: 0082

EFFECTIVENESS OF ANTINEOPLASTIC DRUG FOR MALIGNANT DISEASES

Terkel Morte*

Department of Pharmacy, University of Tromso, Tromso, Norway

***Corresponding Author:** *Email:* morte_terkel@gmail.com

Received: 31-May-2022, Manuscript No. IJCPA-22-66779; **Editor assigned:** 03-Jun-2022, PreQc No. IJCPA-22-66779(PQ); **Reviewed:** 21-Jun-2022, QC No.IJCPA-22-66779; **Revised:** 29-Jun-2022, Manuscript No. IJCPA-22-66779(R); **Published:** 07-Jul-2022; DOI:10.21276/2395-2466.22.10.0082

DESCRIPTION

Any drug that is effective in the treatment of malignant, or cancerous, disease is known as an anticancer drug, also known as antineoplastic drug. Anticancer medications are divided into various categories, including antimetabolites, alkylating agents, natural compounds, and hormones. Furthermore, there are a number of medications that do not fall into those categories but have anticancer action and are therefore employed in the treatment of cancer. Chemotherapy is often confused with the use of anticancer medications, but it actually refers to the use of chemical compounds to treat sickness in general.

One of the first drugs that was used clinically in modern medicine for the treatment of cancer was the alkylating agent mechlorethamine, nitrogen mustard that in the 1940s was found to be effective in treating lymphomas. Many factors influence whether or not an anticancer medicine should be used, including the type and location of the cancer, its severity, whether surgery or radiation therapy can or should be employed, and the drug's side effects [1]. The majority of anticancer medications are given intravenously, however some can be taken orally and others injected intramuscularly or intrathecally (within the spinal cord). Treatment of cancer is complex, and the drugs used target human cells, even though they are genetically altered and dividing at an uncontrolled rate. However, certain anticancer drugs can distinguish between normal tissue cells and cancer cells to some extent, and in fact, the growth rate of cancer cells can affect the apparent selectivity of the drug [2].

The specificity of anti-cancer drugs plays an important role in reducing the severity of side effects associated with the use of the drugs. Indeed, because cancer cells resemble normal human cells, anticancer drugs are generally toxic to normal cells and can cause many side effects, some of which are life-threatening. These side effects include hair loss, mouth sores, and other mucous membranes. Membrane, cardiac abnormalities, bone marrow toxicity, and severe nausea and vomiting. The bone marrow toxicities can lead to anemia and decreased resistance to infections. Permanent infertility can also occur [3-4].

Side effects associated with anticancer drugs can be reduced by using multiple drugs. This allows you to reduce the dose of each drug. The use of multiple agents may also reduce the incidence of cellular resistance, a phenomenon that allows tumors to escape treatment and continue to grow after a period of remission. Anticancer drugs exert their effects in a specific part of the cell cycle (eg, cell growth phase, cell division phase, resting phase). Thus, one drug may be used to stop the growth of cancer cells at a certain phase, while another drug may work at a different phase. The number of cancer cells and with radiation therapy to destroy more cells [5].

CONCLUSION

Rarely, long-term use of anticancer drugs can lead to the development of secondary cancers. The type of drug, the primary cancer used for treatment, and the cumulative total dose given have some influence on the carcinogenicity of the anticancer drug. Frequent secondary cancers associated with antineotherapy are myelodysplastic syndrome and acute leukemia, and these risks are increased, especially with the use of alkylating agents and topoisomerase inhibitors.

REFERENCE

1. Mueller SA, Groenland SL, Scherf CO, van DM. Therapeutic drug monitoring of oral targeted antineoplastic drugs. Eur J Clin Pharmacol. 2021;77(4):441-464.
2. Shortridge LA, Lemasters GK, Valanis B, Hertzberg V. Menstrual cycles in nurses handling antineoplastic drugs. Cancer Nurs. 1995;18:439-444.
3. Guichard N, Guillarme D, Bonnabry P, Fleury-Souverain S. Antineoplastic drugs and their analysis: a state of the art review. Analyst. 2017;142(13):2273-2321.
4. Chabner BA, Wilson WY, Supko JE. Pharmacology and toxicity of antineoplastic drugs. Williams hematology. 2001;8:288-289.
5. Skov T, Maarup B, Olsen J, Rørth M. Leukaemia and reproductive outcome among nurses handling antineoplastic drugs. Occupational and Environmental Medicine. 1992;49:855-861.