OPINION ARTICLE Significant Role of Drug Therapies in the Treatment of Cancer

Enrico Main*

Department of Pharmacology, Huazhong University , Wuhan , China

ARTICLE HISTORY

Received: 05-Jan-2023, Manuscript No. AJPBP-23-88825; Editor assigned: 09-Jan-2023, PreQC No. AJPBP-23-88825 (PQ); Reviewed: 23-Jan-2023, QC No AJPBP-23-88825; Revised: 30-Jan- 2023, Manuscript No. AJPBP-23-88825 (R); Published: 07-Feb- 2023

Open Access

Description

The transit of a drug through the body, the concentrations (or amounts) of a drug that reach a specific bodily space or tissue, and the drug's residence period therein are all described by pharmacokinetics. A first-line drug might be a single drug or a class of drugs. Different anticancer drugs destroy cancer cells in various ways. Your age, the kind and stage of your disease, how you responded to past treatments, and other factors may influence the sort of medication. One medicine can successfully treat some blood malignancies [1]. A medication that is the first choice for treating a specific ailment because it is thought to be the most effective treatment for that condition with the lowest risk of side effects. However, a lot of established and experimental pharmacological therapies contain substances that target cancer cells at various stages of their life cycles. This strategy frequently improves the efficacy of therapy and lessens the possibility that the cancer cells will develop drug resistance. More people are consequently experiencing permanent remissions or cures.

Antimetabolites are structural analogues of either purine and pyrimidine bases by an equivalent nucleosides or folate cofactors, which are involved at various levels of purine and pyrimidine biosynthesis. Antimetabolites are described as preventing the synthesis of the DNA constituents [2]. A metabolite, a different molecule that is produced as part of regular metabolism, can't be used if an antimetabolite is present. Antimetabolites can have toxic effects on cells, such as halting cell growth and cell division, so these substances are used as chemotherapy for cancer.

A class of medications known as bisphosphonates slows bone loss. They lessen the chance of spine and hip fractures. Although bone regeneration is a gradual process, many patients can measure an improvement in bone density after five years of therapy [3]. To treat and prevent osteoporosis, also known as bone thinning, which happens when the bones lose calcium and other minerals that keep them strong and compact, bisphosponates include risedronate (Actonel), alendronate (Fosamax), ibandronate (Boniva), zoledronic acid (Reclast), and pamidronate (Aredia). Drugs are used for a variety of purposes, including symptom relief; infection treatment, illness risk reduction, and selective cell destruction are such as in the chemotherapy treatment of cancer.

Chemotherapy is a medicinal therapy that uses potent chemicals to kill your body's rapidly proliferating cells. Chemotherapy is most frequently used to treat cancer because cancer cells reproduce and develop considerably more quickly than the majority of body cells [4]. Chemotherapy side effects can be excruciating and include mouth sores, headaches, muscle and stomach pain, as well as burning, numbness, and tingling or shooting pains in the hands and feet.

DNA-Repair Enzyme Inhibitors of DNA-repair enzymes target the proteins (enzymes) that typically repair DNA damage in cancer cells. Within the cell, DNA repair is an essential and normal activity [5]. The cancer cell cannot proliferate and is far more vulnerable to injury without this repair process.

Conclusion

Cancer cells may occasionally be resistant to the first medications administered or may develop resistance to the medications over time. The doctor may recommend various medications in this situation to find and eradicate the malignant cells. The use of any substance other than food in the prevention, diagnosis, treatment or relief of a disease or other abnormal condition's symptoms.

References

 Brodie DC, Parish PA, Poston JW. Societal needs for drugs and drug-related services. Am J Pharm Educ. 1980; 44(3):276-278.

Contact: Enrico Main, E-mail: enricomain@gmail.com

Copyrights: © 2023 The Authors. This is an open access article under the terms of the Creative Commons Attribution NonCommercial ShareAlike 4.0 (https://creativecommons.org/licenses/by-nc-sa/4.0/).

- [2] White R, Ashworth A. How drug therapy can affect, threaten and compromise nutritional status. J Hum Nutrn Diet. 2000; 13(2):119-129.
- [3] Smith CP, Christensen DB. Identification and clarification of drug therapy problems by Indian Health Service pharmacists. Ann Pharmacother. 1996; 30(2):119-124.
- [4] McDonough RP, Doucette WR. Drug therapy management: An empirical report of drug therapy problems, pharmacists' interventions, and results of pharmacists' actions. J Am Pharm Assoc. 2003; 43(4):511-518. [Crossref] [Google Scholar] [Pubmed]
- [5] Wigle WW. Problems in drug therapy. Can Fam Physician. 1969; 15(3):47.