

Traditional Medicine Plants for the Treatment of Cancer

Avni Subhash*

Department of Environmental Health Sciences, Mailman School of Public Health, Columbia University, New York, USA

Introduction

Nearly 10 million people will die from cancer worldwide in 2020, making it one of the top causes of mortality. One in five people will experience some form of cancer during their lives, and one in ten people will sadly pass away from the disease. There is a 20 percent lifetime risk of having a cancer and a 10 percent lifetime risk of dying from the condition. By 2040, the International Agency for Research on Cancer predicts that 30 million cases of the disease will exist, and more than 16 million people will die from it. In 2020, breast cancer had the third-highest rate of diagnoses, after lung, colon, and rectum, prostate, skin (non-melanoma), and stomach cancer [1].

The most lethal forms of cancer are by far lung cancer, followed by liver and stomach cancer. Reduced exposure to risk factors, particularly those linked to sedentary lifestyles (e.g., increased body mass index, low intake of fruits and vegetables, and lack of physical activity), bad habits and addictions (including tobacco and recurrent alcohol consumption), or continued exposure to domestic mutagenic agents, could prevent between 30 percent and 50 percent of cancers, according to the World Health Organization (e.g., ultraviolet or ionising radiation and air pollution exposure) [2].

Description

According to the beginning, inducer, and unique genetic profile, cancer not only exhibits heterogeneous cell and tissue-specific behaviour but also an unpredictable and varied progression that makes treatment difficult. Chemotherapy, radiation, and surgery are common components of conventional cancer treatment methods. Chemotherapeutics have a cytostatic effect by altering the expression of cell cycle mediators, causing microtubule disruption, or acting as apoptosis inducers. The use of radiotherapy and chemotherapy is nevertheless accompanied by a number of side effects, ranging from mild gastrointestinal changes and nausea to severe gut mucosa dysfunction, cardiovascular toxicity, or immunity disorders. This is because these treatments do not distinguish between healthy cells and cancer cells. When choosing and using treatments, these side effects, which might last for a long time after therapy, present a significant problem [3,4].

Researchers are searching for novel sources of anticancer chemicals in natural sources, including plants, as a result of the ongoing interest in the development of new therapeutic cancer agents. All civilizations have historically employed plants to treat a variety of illnesses and enhance wellbeing. Additional studies showed that traditionally utilised herbs contain bioactive components that, when taken in appropriate levels, have beneficial impacts on health. These benefits are linked to the chemicals' biological characteristics, including their antioxidant, anti-inflammatory, antibacterial, and anticancer capabilities. Nowadays, both conventional medicine and experimental studies

***Address for Correspondence:** Avni Subhash, Department of Environmental Health Sciences, Mailman School of Public Health, Columbia University, New York, USA; E-mail: as-2020@columbia.edu

Copyright: © 2022 Subhash A. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

Received: 02-April-2022, Manuscript No. aim-22-68196; **Editor assigned:** 04-April-2022, Pre QC No. P-68196; **Reviewed:** 18-April-2022, QC No. Q-68196; **Revised:** 23-April-2022, Manuscript No. R-68196; **Published:** 30-April-2022, DOI: 10.37421/2327-5162.2022.11.391

have extensively documented the potential of plants as sources of anticancer chemicals. The development of chemicals utilised in contemporary medicine, especially anticancer treatments, has frequently involved the chemical modification or direct usage of phytochemical substances. More than 60% of the medications used to treat cancer, according to the Food and Drug Administration (FDA), come from natural sources [4].

Generally speaking, plant-anticancer chemicals have been suggested as a potential approach to create new chemotherapeutics and also improve the efficacy of the traditional ones. These chemicals do, however, have a number of disadvantages, including limited stability or solubility, difficulties in extracting from natural sources, and potentially unfavourable side effects. As a result, there are still many obstacles to overcome before these compounds may be applied, and more research is required. This study will cover the most recent data on phytochemical substances being used clinically to treat cancer as well as promising substances being studied in both pre-clinical and clinical settings. The fundamental obstacles to using these substances as medicinal agents will also be discussed, along with potential solutions [4,5].

Conclusion

Traditional plants have traditionally been thought of as a never-ending supply of fresh ingredients for the creation of brand-new medications and drugs. As a result, today's researchers have access to a wealth of ethnomedicinal and ethnopharmacological data on a wide variety of plant species, which they may use to narrow down the field of options and focus their research on the most promising plants. The requirement for more extensive clinical studies and standardised practises to support phytochemicals in anticancer treatment. To fully comprehend the availability, effectiveness, safety, mechanism of action, and synergistic effects of these novel medications, it is crucial that interdisciplinary fields like medicinal chemistry, pharmacology, biochemistry, and biology coordinate their research.

Conflicts of Interest

The authors declare no conflict of interest.

References

1. Ferlay, Jacques, Murielle Colombet, Isabelle Soerjomataram, and Donald M. Parkin, et al. "Cancer statistics for the year 2020: An overview." *Int J Cancer* 149 (2021):778-789.
2. Litzenburger, Ulrike M., Jason D. Buenrostro, Beijing Wu, Ying Shen, et al. "Single-cell epigenomic variability reveals functional cancer heterogeneity." *Genome Biol* 18 (2017):1-12.
3. Qin, Si-Yong, Yin-Jia Cheng, Qi Lei, and Ai-Qing Zhang, et al. "Combinational strategy for high-performance cancer chemotherapy." *Biomater* 171 (2018):178-197.
4. Iqbal, Javed, Banzeer Ahsan Abbasi, Tariq Mahmood, and Sobia Kanwal, et al. "Plant-derived anticancer agents: A green anticancer approach." *Asian Pac J Trop Biomed* 7 (2017):1129-1150.
5. Mao, Qian-Qian, Xiao-Yu Xu, Ao Shang, and Ren-You Gan, et al. "Phytochemicals for the prevention and treatment of gastric cancer: Effects and mechanisms." *Int J Mol Sci* 21 (2020):570.

How to cite this article: Subhash, Avni. "Traditional Medicine Plants for the Treatment of Cancer." *Alt Integr Med* 11 (2022): 391.