

CANCER: A REVIEW

Muhammad Imran Qadir¹, Sumbal Javaid¹, Muhammad Kashan Javed^{2*}

¹Institute of Molecular Biology and Biotechnology, Baha Uddin Zakariya University, Multan, Pakistan

²Nishtar Medical University, Multan, Pakistan

OPEN ACCESS

Received: July 23, 2019

Accepted: July 31, 2019

Published: August 02, 2019

*Corresponding Author:

* MUHAMMAD KASHAN
JAVED

Nishtar Medical University,
Multan, Pakistan

E-mail: kashanjaved01@gmail.com

Abstract

There are many causes of the origin of cancer like x-rays, but the irreversible injury of respiration is the main cause of the origin of cancer now the question arises what is an irreversible injury of cancer? In reversible cell injury the cell, its component organelles start to disintegrate leading to the rupture of the cell. Cancer is the condition in which uncontrolled cell division occurs and the cancer cells damaging the genes. They directly start their cell cycle. They began their cycle with genetic changes which affect P-16 and cycling of cancer. The effect of inflammation which occurred due to the cancer is of important concern. In some kinds of cancer, the condition of inflammation is present before the occurrence of disease. Oppositely, there are some other kinds of cancer which are known as oncogenic changes cause an inflammatory microenvironment which encourages the development of cancer. Besides the origin inflammation of cancer. Now, cancer microenvironment which occurs due to inflammation of cells is indispensable in the process of neoplastic progression. In addition, cancer cells also play a role in some of signaling of the molecule in the innate immune system likes selectin also act as receptor for metastasis, invasion and migration. This research shows the static of cancer in the global area. Death occur b due to bladder cancer worldwide is 261000. Among these cases only 1/5th of the cases occurs in females. Similarly, death due to pancreatic cancer is 168. While death due to brain cancer and nervous system cancer are 127000 new cases of brain cancer while 95000 death occurs due to nervous system cancer. while cases of thyroid cancer are 87000. Melanoma is the cancer of skin, the cases of Melanoma 27.9 in men while 25 in woman DNA methylation is the best-known epigenetics. Cancer also occurs due to hypermethylation and identification of Increased methylation leads to the cancer suppressor genes which recently lead to the discovery of micro RNA by DNA methylation epigenetics also plays role in the therapy of cancer During the last seven months, computer-based program produced by linear programming has been used widely at Wisconsin University located in Madison use for the diagnosis of cancer related to breast. Nanotechnology is a field which covers diverse devices obtained from chemistry, biology, physics and engineering. These devices includes Nano vector, imaging contrast agent and anti-cancer drugs which are used for the treatment of cancer. Senescence defined as the changes of telomeres or with the help of different forms of stress events Neoplastic transformation events which plays a key role in the inhibition program of senescence. We know that the clear that cancer cell can be treated with chemotherapeutic.

Key Words: Disease, Cancer, Lethals

Introduction

Origin of Cancer Cells

There are many causes of the origin of cancer like x-rays, but irreversible injury of respiration is the main cause of the origin of cancer now the question arises what is irreversible injury of cancer? In reversible cell injury the cell, its component organelles start to disintegrate leading to the rupture of cell. It was concluded that when you notice the symptoms of cancer, just go for the treatment, because at the initial state, the treatment is easy and also cheap and most important effective. (1)

Cell Cycle of Cancer

Cancer is the condition in which uncontrolled cell division occurs and the cancer cells damage the genes. They directly start their cell cycle. They began their cycle with genetic changes which affect P-16 and cycling of cancer. These are the proteins that govern phosphorylation retinoblastoma protein which is referred to as RB. It also controls the exit from the G1 phase. It is so common in the body of human. Cancer is the term which inactivates the pathway which will be necessary for the development of tumor like the cancer suppressor protein, which is known as P53, it is the component of Retinoblastoma. Although there is no necessity for the cycle of self may participate in the functions that regulate hemostatic tissue renewal throughout the life. (2)

Inflammation

The effect of inflammation which occurred due to the cancer are of important concern. In some kinds of cancer, the condition of inflammation is present before the occurrence of disease. Oppositely, there are some other kinds of cancer which are known as oncogenic changes causes an inflammatory microenvironment which encourages the development of cancer. Besides the origin inflammation of the cancer. There are many cancers promoting effect which aid in the spreading of tumor cells. The path which causes cancer inflammation has been revealed now which result in the detection of new target molecules which leads to improved treatment and diagnosis. (3)

Swelling Due to Cancer

Recently data clarify that the inflammation is a dangerous component of cancer progression. There are many cancers which arise from infection site. Now, cancer microenvironment which occurs due

to inflammation of cells is indispensable in the process of neoplastic progression. In addition, cancer cells also play a role in some of signaling of the molecule in the innate immune system like selectin also act as receptor for metastasis, invasion and migration. It was concluded that anti-inflammatory agents are effective for the treatment of neoplastic progression. (4)

Global Statistics of Cancer

This research shows the static of cancer in the global area. Death occurs due to bladder cancer worldwide is 261000. Among these cases only 1/5th of the cases occurs in females. Similarly, death due to pancreatic cancer is 168. While death due to brain cancer and nervous system cancer are 127000 new cases of brain cancer while 95000 death occurs due to nervous system cancer. While cases of thyroid cancer are 87000. Melanoma is the cancer of skin, the cases of Melanoma 27.9 in men while 25 in woman. Skin cancer has a best rate of survival in developed area. These all information presents a real data. We come to conclude that after seeing the statistic of global cancer that every individual must go for screening of cancer because at early stages the treatment is easy and cheap as well. (5)

Role of Epigenetics in Cancer

DNA methylation is the best-known epigenetics. Cancer also occurs due to hypermethylation and identification of increased methylation leads to the cancer suppressor genes which recently lead to the discovery of micro RNA by DNA methylation epigenetics also plays a role in the therapy of cancer. They are not mutation, DNA methylation as well as histone modifications referred to as reversible. Hence epigenetics changes allow the tumor cells to change its microenvironment. They also hyper methylated cancer suppressor gene would be woke with the help of drugs. (6)

Diagnosis of Cancer with linear Programming

During the last seven months, computer-based program produced by linear programming has been used widely at Wisconsin University located in Madison use for the diagnosis of cancer related to breast. This program succeeds in the diagnosis of 165 cases out of 166 cases of breast cancer. This program is based on MSM referred to as multi surface method pattern separation. This method was proposed in 1968. (7)

Role of Nanotechnology in Cancer

Nanotechnology is a field which covers diverse devices obtained from chemistry, biology, physics and engineering. These devices are including Nano vector, imaging contrast agent and anti-cancer drugs which are used for the treatment of cancer. Nano cantilever are referred as the leading approaches which are under development for the diagnosis of malignant tumors. It was concluded that cancer nanotechnology also plays a vital role and the treatment and diagnosis of cancer. (8)

Role of Tumor Cell Senescence in the Treatment of Cancer

Senescence defined as the changes of telomeres or with the help of different forms of stress events Neoplastic transformation events which plays a key role in the inhibition program of senescence. We know that the clear that cancer cell can be treated with chemotherapeutic agents or drugs as well as cancer cell can be induced to process under senescence with the help of genetic manipulation. it was concluded that tumor cell sensation plays a key role in the treatment of cancer. (9)

Conclusion

It was concluded that the cancer is very lethal and spreading disease which increases globally like the roll of ball. Hence there is a need to control this disease. First of all, we have to educate the people about the importance of screening or diagnosis of cancer. Because at early stages, its treatment is easy and cheap. Then there are some methods available for treatment while some other are still in progress.

References

- 1) Warburg, O. (1956). On the origin of cancer cells. *Science*, 123(3191), 309-314. Warburg, O. (1956). On the origin of cancer cells. *Science*, 123(3191), 309-314.
- 2) Hartwell, L. H., & Kastan, M. B. (1994). Cell cycle control and cancer. *Science*, 266(5192), 1821-1828.
- 3) Mantovani, A., Allavena, P., Sica, A., & Balkwill, F. (2008). Cancer-related inflammation. *Nature*, 454(7203), 436.
- 4) Coussens, L. M., & Werb, Z. (2002). Inflammation and cancer. *Nature*, 420(6917), 860.
- 5) Jemal, A., Bray, F., Center, M. M., Ferlay, J., Ward, E., & Forman, D. (2011). Global cancer statistics. *CA: a cancer journal for clinicians*, 61(2), 69-90.
- 6) Esteller, M. (2008). Epigenetics in cancer. *New England Journal of Medicine*, 358(11), 1148-1159.
- 7) Mangasarian, O. L., & Wolberg, W. H. (1990). Cancer diagnosis via linear programming. University of Wisconsin-Madison Department of Computer Sciences.
- 8) Ferrari, M. (2005). Cancer nanotechnology: opportunities and challenges. *Nature reviews cancer*, 5(3), 161.
- 9) Roninson, I. B. (2003). Tumor cell senescence in cancer treatment. *Cancer Research*, 63(11), 2705-2715.