Extended Abstract

International Journal of Inflammation, Cancer and Integrative Therapy

2019

Vol.6 Issue.2

Genetics of Skin Cancer Diagnostics and Treatment

Dr. Muzamil S

Abstract:

Diseases evolve side by side with human evolution and play significant role in health. Along with the societal and technological development, mankind also faces great challenges in health sector. One of these challenges is the changes in disease manifestation, its cure and obviously its effect on living organisms especially humans, which has worsen as time progresses. Some of the diseases are easily treatable now while other still poses complications. Skin cancer is one of the most common and widespread cancers despite technological and medicinal advancements and demands persistent attention. It is categorized into different types according to its location of origination and usually these cancers do not spread to other body parts. Various environmental and genetic factors contribute in its occurrence, development and metastasis. People with blonde skin tone are at supreme risk to be affected by melanoma. Considering the importance of this disease, the current review concentrates on the various types of skin tumors, its manifestations, the causes behind disease development and treatment. Genetical mutations in somatic cells or at fetus level play major role in its establishment. Furthermore, environmental factors also affect the normal cellular pathways by bringing about the alterations at gene level. Prudent analysis of the genetics may lead to better understanding of the key genes involved in its establishment and thus, the pertinent knowledge can be utilized in designing painless and accurate diagnostic approaches and advanced targeted therapies.

Keywords: Skin cancer; Diagnosis; Treatment; Genetic factors; Metastasis

Introduction:

Skin cancer is basically damaged skin cells which keep on growing abnormally. Upon every expose to UV radiation, hazardous material and corrosive chemicals, there is a fair chance of structural and functional alterations in skin cells, which in turn leads to skin cancer. With the passage of time, these damages become more serious and worse. Repetitive exposures further increase the cancer risk. At any age, many sun protection products help in prevention of skin cancer and melanoma [1]. Skin cancer is named after the cell type in which the cancer expands. There are three major types of skin cancer:

1. Basal cell carcinoma
2. Squamous cell carcinoma
3. Melanoma

Basal and squamous cell carcinomas are cancers other than melanoma, but melanoma is the most serious type of skin cancer. Melanoma includes a Merkel cell tumor and dermato-fibrosarcomaprotruberans. Like all cancers, an early diagnosis of skin cancer results in better treatment. The area of skin affected by cancer is different from other parts of the body. Even a small defect should be taken seriously and it is important to check it. Skin cancer usually looks like a new blemish. Sometimes it appears as a spot presented which takes different colors, shapes or sizes. In the white population, melanoma skin cancer (MSC) and non-melanoma skin cancer (NMSC) are the main types of skin cancer. The prevalence of skin cancer has reached an epidemic scale. Recent population studies have shown that the incidence rate of basal cell carcinoma in humans is over 2% while that of squamous cell carcinoma is 1%, and the rate of new cases of melanoma is around 50 per 100,000 inhabitants.

No melanoma

Basal cell carcinoma is a widespread but not dangerous type of cancer. It mainly resembles a dry scale or a piece of pale or red color with a slow growth rate. It is generally seen on the neck, head and upper torso. With progressive growth, it leads to an ulcer that does not heal completely. Even during recovery, there is a good chance of a second outbreak. Squamous cell carcinoma is also not a major health threat compared to other forms of cancer. If neglected, it can spread to other parts of the body. Growth takes months when exposed to the sun. It appears as a scaly patch of red color. This imperfection can bleed or ulcerate easily. These two melanoma-free skin cancers (NMSC) are not dangerous like melanoma skin cancer (MSC).

Conclusion:

With each passing day, skin cancer becomes the leading cause of many common deaths. One of the main causes of its appearance is exposure to UVR, which in most cases cannot be avoided. So instead of suggesting ideas to minimize sun exposure like using sunscreens that do more harm than good, the scientist must find natural sources that neutralize the UVR effect. In this regard, vitamin D has proven experimentally very effective in minimizing the chances of developing a skin tumor and also in suppressing tumor growth. Treatment and diagnostic strategies also need to be improved as early detection of the tumor has its advantages in providing appropriate treatment in a timely manner. In addition, chemotherapy and radiotherapy are traditional methods of treating cancers that are not specific and patients have to undergo many physical changes that are very bothersome and discouraging for them. This not only reduces the patient's self-esteem, but also affects the recovery rate. Modern methods of treatment include topical creams and immunotherapy which are less painful and are more tumor-specific. Further improvements are still needed in the treatment of skin cancer.

This work is partly presented at Joint Event on 2nd Global Summit on Oncology & Cancer March 12-14, 2018 Singapore