Short Communication

CLINICAL INVESTIGATION

Skin Cancer: Melanoma

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Skin cancer is the most common malignant cancer that affects a wide spectrum of people. Every year, more than a million instances of skin cancer are reported around the world. Exposure to UV (ultraviolet) radiation from the sun, dysplastic nevi syndrome, and a family history of melanoma are all risk factors for the development of melanoma. Melanoma incidence has been steadily increasing, resulting in a significant public health crisis. There are numerous risk factors that can raise a person's chances of developing melanoma. Melanoma develops when something goes wrong with the melanin-producing cells (melanocytes) that give your skin its colour. When certain cells develop DNA damage, however, new cells may begin to proliferate out of control, eventually becoming a mass of cancer cells. It's unclear what causes DNA damage in skin cells or how it contributes to melanoma. Melanoma could be caused by a number of reasons, including environmental and hereditary causes

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Introduction

With more than a million cases reported each year, skin cancer is the most common malignant form of cancer occurring in a wide spectrum of people. There are two major forms of skin cancer, which are distinguished by their genesis and clinical characteristics. Skin cancer can be

1. Non melanocytic skin cancer
2. Malignant melanoma

Basal Cell Carcinoma (BCC) and Squamous Cell Carcinoma (SCC) are two kinds of non-melanocytic skin cancer (SCC).

1. Basal Cell Carcinoma: This is the most frequent type of skin cancer in which the cancer cells resemble epidermal basal cells and are so referred to as carcinoma epithelioma.
2. Squamous Cell Carcinoma: This type of cancer starts in epidermal squamous cells, which are present in the epidermis, internal organ linings, and respiratory and digestive system passages.
3. Melanoma: Melanoma is the most lethal kind of skin cancer due to its proclivity for rapidly spreading throughout the body. Skin neoplasia is the common term for them [1,2].

Melanoma

Malignant melanoma is a severe, therapy-resistant cancer of melanocytes. Melanoma incidence has been steadily increasing over the world, resulting in a significant public health crisis. Solar UV (Ultra Violet) radiation, dysplastic nevi syndrome, and a family history of melanoma are all significant risk factors for the development of melanoma. Studies are being carried out to look at the links between genetic and environmental risk factors that promote melanomagenesis.

Reduced UV exposure and better care of high-risk patients can minimise the risk of melanoma in the general population. Biopsies of the main tumour and samples of draining lymph nodes are thought important for optimal diagnosis and staging. There are several pathogenic subgroups that must be distinguished. Early disease treatment is predominantly surgical, with adjuvant therapy proving to be of poor effect [2,3].

Risk Factors

There are numerous risk factors that can raise a person's chances of developing melanoma [4]. The following are some of the most common risk factors:

- Excessive UV exposure
- Manu moles
- Family history of melanoma
- Race or ethnicity
- Age
- Immune system that is weakened as a result of a medical illness or drugs
- Specific inherited genetic situations

Melanoma's Causes

Melanoma develops when something goes wrong with the melanin-producing cells (melanocytes) that give your skin its colour.

Healthy new cells force older cells to the surface of your skin, where they die and eventually fall off, in a regulated and structured manner. When certain cells develop DNA damage, however, new cells may begin to proliferate out of control, eventually becoming a mass of cancer cells.

It's unclear what causes DNA damage in skin cells or how it contributes to melanoma. Melanoma could be caused by a number of reasons, including environmental and hereditary causes. Exposure to Ultraviolet (UV) light from the sun, tanning lamps, and bedding, according to doctors, is the major cause of melanoma. UV light isn't responsible for all melanomas, especially those that develop in areas of the body that aren't exposed to the sun. This shows that additional factors play a role in your melanoma risk [5].

Prevention Techniques

If you have hereditary risk factors, you should do more frequent self-inspections and visit your dermatologist for full professional skin examinations [6].

Begin early: Children from melanoma-prone families require extra attention. Some doctors recommend skin exams during puberty and adolescence. The good news is that familial melanoma has a substantially higher survival rate than non-familial melanomas, owing to the fact that they are closely monitored by these families and melanomas are often found when the cancer is still in its early stages, when it is more likely to be cured.

UV protection: You can lower the risk of melanoma caused by UV radiation by implementing simple, effective preventive measures. Even if the weather is gloomy, protect your skin from the sun every day. Indoor tanning should be avoided at all costs.

Treatment Methods

Although numerous types of treatment are employed for melanoma patients, five conventional treatments are most commonly employed [7].

- Surgery
- Chemotherapy
- Radiation therapy
- Immunotherapy
- Targeted therapy

Conclusion

As we enter the new century, the fundamental goals in the fight against this illness remain prevention and early detection, anticipating possibly significant improvements in the treatment of advanced malignant melanoma. With increased clinical education, public awareness, patient education, and scientific discoveries, we may be able to reduce the incidence and death of malignant melanoma. However, as the frequency rises, a multidisciplinary strategy utilizing the finest knowledge of individuals affected is our best defense against this potentially fatal tumor.

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