SKIN CANCER HAS BECOME A PUBLIC HEALTH PROBLEM

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Background

- All over the world, the incidence and mortality rates of skin cancer have significantly increased over the last few decades and thus have become a public health problem.
- Despite increased public awareness of the risks of skin cancer and even though skin cancer is one of the most preventable malignancies, the incidence continues to rise worldwide.

Results

Ageing changes in skin are caused by intrinsic factors, which are genetically determined and extrinsic factors which are environmental. Intrinsic or chronologic ageing leads to thinned epidermis, reduced pigmentation and fine wrinkles. By far the most common extrinsic factor is ultraviolet (UV) exposure which is referred to as photoageing. More than 90% of skin cancers are found in the areas of the body which are exposed to UV radiation. Both sun and indoor tanning devices are risk factors for the development and growth of melanoma and nonmelanoma skin cancers. Important determinants of the degree of risk and the type of skin cancer are the various forms of UV spectrum and timing of sun exposure.

The intermediate levels of cumulative or constant UV light exposure during lifetime are common in lifelong outdoor occupational exposure and result in development of actinic keratosis and squamous cell carcinoma. They occur in older population who had time to accumulate DNA damage in cells and in light-sensitive individuals with skin phototypes I and II who have less pigmented skin and a higher tendency to burn easily. On the other hand, intense intermittent UV exposure and particularly sunburns that occur in childhood and youth cause basal cell carcinoma (BCC) and cutaneous melanoma (CM). BCC tends to develop after the age of 50, however early onset of BCC is on the rise and results from frequent use of tanning devices. CM can occur at any age, especially if risk are everyone with a family history of melanoma or a personal history of bad sunburns.

Avoiding overexposure to direct sunlight during the peak daylight hours to prevent sunburns, wearing protective clothing, and applying broad-spectrum sunscreen with a sun protection factor of 30 or higher are ways to protect the skin. Primary care physicians play an important role in skin cancer prevention and should be familiar with recommendations on behavioral counseling and sun-avoidance strategies, especially for patients with a history of personal or family skin cancer. Although skin self-exams may result in increased skin procedures without detecting any malignant cancer, they are an important part of sun protection behavior. Even though sun protection interventions are slow at affecting behavioral change, increase in knowledge and awareness regarding sun exposure is important in order to achieve a decrease in the incidence of skin cancer. Due to cumulative effects of UV radiation, appropriate age groups to target for sun protection intervention are children and young adults because only change in their behavior will result in decreased incidence of skin cancer and healthy skin ageing in later stages of life.

Conclusion

Relationship between sun protection factor (SPF) and ultraviolet (UV) effect. Adapted source: Ostewalder U, Herzog B. 2009. 292

UVA and UVB radiation. Adapted by sunsmart.org

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