Common and uncommon Skin Cancers

Abstract: Cancer of the skin accounts for the bulk of all carcinomas that affect humans. Most are easily visible from the naked eyes and if treated early, should not cause death. However, we still find advanced cases from patients who neglect themselves. The sun induced neoplasms affect mainly fair skin people and a lot of emphasis is laid on them. However, there are several other primary skin cancers that affect all races and are equally as important as Melanomas. Fortunately, these are rare and can be treated easily if detected early.

Not only the skin is the biggest organ of the body, it is also the most exposed to numerous harsh external factors which can result in diseases. As one ages, the skin seems to become more fertile, whereby unwanted growths tend to crop up in various regions. Luckily most are benign; however few can be malignant and if left untreated, can lead to death. Actinic keratosis, Basal cell carcinoma, Squamous cell carcinoma and the dreaded Melanoma are well known and account for the commonly encountered lesions. However, there are several other types of carcinomas that can afflict our skin, notwithstanding the fact that metastasis from any internal organ can find its way to the skin.

A brief description of the common metaplastic lesions as well as some of the uncommon but important primary skin carcinomas follow.

Actinic keratosis (previously known as solar keratosis) is very commonly seen on sun-exposed fair skin. The incidence increases with age and amount of exposure to UV-light. It is per se a precancerous lesion and has a rate of 0.075 per year, transformation into Squamous cell carcinoma. It presents as a rough area, scaling and slightly warty and the clue to its diagnosis is the presence of a background of sun damage e.g. dyspigmentation, telangiectasias and wrinkles. More advanced lesions are thicker with more erythema and hyperkeratosis. Visual inspection is best performed with simultaneous palpation, as early lesions can easily be missed. Tenderness should arouse suspicion for a malignancy.

Treating actinic keratosis is usually simple and most cases can be cured by cryotherapy, cautery and curettage or Efudix cream. Other lesions that are considered as precursors or early Squamous cell carcinomas are: Bowen's disease, Keratoacanthomas, Giant condylomas and Bowenoid papulosis.

Invasive Squamous cell carcinomas (SCC) can arise from any epithelial tissue on the body. Since Sir Percival Pott made the association of chimney soot to the occurrence of scrotal carcinoma, many other carcinogenic factors have been identified. Cumulative sun exposure, Ionising radiation, Arsenic, Human papilloma viruses, genetic diseases like Xeroderma pigmentosa, Albinism, Chronic non-healing skin ulcers, previous burn scars, Immunosupression as well as cigarette smoking are some of the risk factors for developing SCC of the skin.

The common presentation for SCC is a warty nodule which may be tender or ulcerated. Depending on the precipitating factors, SCC tends to develop from pre-malignant lesions as described above. Most lesions metastasize late however one should be careful of areas of the lips and ears. Cancers from these areas tend to spread early and more aggressive treatment is warranted. SC can be easily cured by excision or sometimes less invasive treatment like Efudix cream, cryotherapy and cautery and curettage may help.

Basal cell carcinomas (BCC) are more common than the total number of visceral cancers added together. As one get older, the incidence rises and more than one in five Caucasian will develop a BCC during their lifetime. This growth tends to grow slowly over many years, causing local destruction and very rarely metastasizing. Though it is widely accepted to arise from the basal layer of the epidermis and does not have precursor lesions, some believe that it may arise from hair cells.

The rodent non-healing ulcer with rolled out edges is the typical type of BC. However, one must bear in mind that this carcinoma has many different subtypes. It can also be nodular, superficial and also look like an erythematous plaque on the body. At times a biopsy is required to differentiate the different subtypes. Most BCCs are easily treated by cryotherapy, curettage, Efudix cream or Aldara cream, excision, phodynamic therapy and radiotherapy, however a few (especially the morpheaform type may need more advance treatment like Moh's micrographic surgery. A new treatment called Vismodegib is showing excellent results in advanced BCCs.

Metastatic melanoma has been discussed several times and there are great awareness campaigns going on. These carcinomas arise from melanocytes in the epidermis can metastasise early. Sun-exposure and genetics tend to play the highest role in the pathogenesis of melanomas. Moles have a very low incidence of forming melanomas, with most starting from normal skin and progressing there-on. These lesions can be very difficult to identify as they can be of any colour, shape or sizes, however, the typical melanoma, is usually dark-brown, flat, asymmetrical, more than 6 mm in diameter and rapidly evolving. The ABCDE rule applies in most cases, where A- asymmetry, B- ill-defined borders, C- abnormal colour, D- diameter of more than 6 mm and E- rapid evolution.

The treatment of melanoma is more specialised, depending on Staging and usually requires a team approach.

Any other cell-types present in the epidermis or dermis can turn malignant. There are several different types of B and T-cell lymphomas arising in the skin. Mycosis fungoides (MF) can lead to a lot of confusion as it is not a fungal infection. MF is a low-grade cutaneous T-cell lymphoma than can be challenging to diagnose. Most cases are diagnoses as eczema for years and several biopsies are often required to reach the diagnosis. It can present as patches, thick plaques, tumourous growths or erythroderma.

Once diagnosed, MF should be properly staged as this is of great prognostic value. Early stages can have great survival rates, with treatment involving topical corticosteroids, Psoralen and ultraviolet light therapy. Later stages need radiotherapy and chemotherapy.

Sebaceous cell carcinoma does not have a distinctive presentation. As the name implies, it arises from sebaceous glands and usually presents as erythematous nodules or plaques that may be crusted or ulcerated with at times a yellowish coloration. The diagnosis is made on histology and this carcinoma can metastasize early. Aggressive surgical management is warranted.

Carcinoma of apocrine lineage is quite rare. Patients tend to present with a history of a recent rapidly enlarging nodule which can ulcerate and bleed. Prior to the explosive growth, these lesions may have stayed stable for many years. They are most commonly located around the lips and thus can be identified and surgically treated early. Fortunately they tend to be low grade and locally invasive.

There are several varieties of vascular neoplasms that can arise from the vessel in the skin. The typical angiosarcoma is relatively rare. It constitutes less than 1% of all sarcomas and is seen mainly on the head of elderly. Once diagnosed, this type of sarcoma carries a very poor prognosis with less than 15% survival over five years.

Nerve tissue present in the skin also contributes to rare carcinomas that may warrant aggressive management. More common ones are the malignant peripheral nerve sheath tumours and Merkel cell carcinomas. The later presents as a solitary rapidly growing nodule, on the head and neck region of the elderly. Diagnosis can only be made on histology where special stains can identify Merkel cells with high mitotic rates. Merkel cell carcinomas can show aggressive behaviour and prompt surgical management it required.

Mastocytosis represents a spectrum of disease can be confined to the skin. The lesions arise from mast cells and can present as tan coloured plaques or even small tumours. Again diagnosis is confirmed histologically by special stains. The patients should then be thoroughly investigated to exclude involvement of internal organs.

The disease can remain in the skin or can result in mast cell leukaemia, which carries a very high mortality rate.

These are several different types of skin cancers that are rarely encountered in a dermatology practice. A high index of suspicion and an experienced pathologist can be very helpful in reaching a diagnosis. The original port of entry still remains the general practitioners and if a lesion arouses any suspicion, the patient needs to be referred immediately to a Dermatologist.

CME questions: True T or False F

1. There are only three types of skin cancer
2. Basal cell carcinomas never metastasize
3. Apocrine carcinomas arise from mast cells
4. Mycosis fungiodes is caused by a fungal infection
5. Dark-skinned people can get skin cancers

Answers 1. F 2 F 3. F 4 F 5 T

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