Benign and Malignant skin tumors

Prof. Hayder Al-Hamamy
Squamous cell carcinoma (SCC)

- A common malignant tumor of keratinocytes arising in the epidermis, usually from a precancerous condition:
  - UV induced actinic keratosis, usually of low grade malignancy.
  - Human papilloma virus induced (oncogenic viruses) in genital warts.
• Ionization radiation induced skin lesions.
• Chronic inflammation, chronic ulcers, and sinuses usually SCC of high malignancy e.g. old burn scars, skin tuberculosis chronic venous ulcers.
SCC after irradiation
SCC in chronic ulcer
Clinical presentation

- Two types:
  1. Slowly evolving, keratotic (scaly) papule or nodule may become ulcerated with a granulating base and indurated edge.
  2. Rapidly evolving lesions do not show signs of keratinization appear fleshy and soft (more malignant).

- Lesions on the lower lip arise from actinic cheilitis are highly malignant.
SCC
SCC
SCC
Course and prognosis

- SCC causes local tissue destruction, metastasize to regional lymph nodes especially if large, recurrent or involving a nerve.
- SCC can metastasize through the blood.
- Metastasis is detected in 3-4% of SCCs.
- SCC arising in scars following X-ray treatment, chronic osteomyelitis show more metastasis.
- SCC in immunosuppressed patients in organ transplant patients on immunosuppressive therapy show increased incidence 40 to 50 times the general population and the lesions are highly malignant.
SCC in immunocompromized
Dermatopathology

The tumor is composed of keratinocytes which show atypia, increase mitoses and abnormal mitoses. They start in the epidermis, disrupt the dermo-epidermal junction, invade and proliferate irregularly in the dermis.
Dermatopathology
Treatment

- Same as BCC but usually more radical treatment.
Malignant melanoma (MM)

- MM is the most malignant skin tumor.
- The incidence is doubling every 10 years in certain countries such as UK and USA.
- Early detection is very important.
- Signs of suspicion of MM in any pigmented skin lesion (ABCDE)
ABCDE

• A: Asymmetry in shape, one half of the lesion is unlike the other half.
• B: Border is irregular
• C: Color is not uniform; mottled, different shades of black, grey red and white.
• D: Diameter more than 0.7 mm
• E: Enlargement, increase in size of the lesion.
Etiology

1. Genetics: fair skinned individuals with red hair, there are familial cases.
2. Sunlight: UVR, related to intense exposures that causes sun burn.
3. Pre-existing skin lesions such as congenital melanocytic nevi, especially if large and dysplastic melanocytic nevi.
Dysplastic melanocytic nevi are special types of acquired melanocytic nevi. They are larger and more numerous than the ordinary melanocytic nevi and continue to appear throughout life.

There is histological evidence of preexisting nevus in 30% of MM. The tumor starts at the epidermis near the dermoepidermal junction and then invades the dermis.
Dysplastic nevus
Clinical types

1. Lentigo maligna melanoma:
   - Affects the face in elderly people, irregular in shape and pigmentation grows for years in situ before invasion.

2. Superficial spreading melanoma:
   - There is a radial growth phase into the epidermis before invading the dermis.
Lentigo maligna melanoma
Lentigo maligna melanoma
Lentigo maligna melanoma
Superficial spreading
Superficial spreading
Acral lentiginous
Acral lentiginous
Acral lentiginous
3. Nodular melanoma:
   - No radial growth phase, early invasion, very aggressive.

4. Acral lentigenous melanoma:
   - Most common type in Iraq, affects the palms and soles, presents as irregularly pigmented macule or patch. Presence of nodule indicates invasion.
Dermatopathology

- Malignant melanocytes show atypia, invade the dermis and scattered throughout the epidermis.
**Staging**

- **TNM**
  - **T**: Tumor
  - **N**: Lymph Node
  - **M**: Metastasis

- Tumor: depends on thickness measured on histological examination after excision.
- Breslow's method: Measures the vertical distance from the granular layer to the deepest part of the tumor.
Prognosis

• MM is a lethal disease, prognosis depends on the staging at the time of diagnosis.
Management of MM

1. Prevention:
   - Protection from Sunlight: Avoid exposure, Clothing and hat, Sunscreens.

2. Early detection: Examination of any suspected pigmented lesion with a biopsy if indicated.
   - Dermoscopy: a hand held device for the examination of pigmented lesions to detect MM.

3. Treatment.
Treatment

- Total excision with a free margin, if the lesion is excisable with histological exam.
- Or incisional biopsy if the lesion is not excisable with histological exam then total excision at a second surgery.
- During the second operation the tumor is excised with a safe margin of 1cm for each 1mm tumor thickness.
- Regional lymph node dissection is indicated if they are palpable.
- Elective lymph node dissection if not palpable and the tumor is of medium thickness.
Mycosis Fungoides (MF)

- It is T-cell lymphoma first detected in the skin. There is clonal proliferation of CD 4 positive T-cells while CD 8 positive T-cells represent the antitumor response.
Clinical manifestations

- The disease arises in mid to late adulthood.
- Stages
  1. Patch stage: Randomly distributed usually scaly patches.
  2. Plaque stage: Plaques of different shapes; round, oval or bizarre-shaped, persistent and randomly distributed.
  3. Tumor stage: tumors arise sometimes with ulceration.
  4. Erythroderma: Generalized erythema and scaling that involves most of the skin surface.
- Symptoms: pruritus, st severe.
Mycosis fungoides
Dermatopathology

- Atypical lymphocytes with large cerebriform nuclei are gathered in the dermis at the dermo-epidermal junction. Some of these cells invade the epidermis in collections called Pautrier's micro-abscesses.
Staging: TNM
Treatment

- According to the stage
- Limited patches sand plaques: topical steroid.
- Extensive disease: Phototherapy; PUVA, narrow-band UVB
- topical carmustine
- Combination chemotherapy if lymph nodes or bone marrow is involved.
Course and prognosis

- The course is slow. The prognosis depends on the stage
- Survival st for 10 to 15 years.