NAEVI AND TUMORS

Nevus

- Circumscribed, non-neoplastic skin or mucosal lesion,
- usually present at or soon after birth.
- Term should always be qualified according to the cell or tissue of origin, for example “connective tissue nevus” or “vascular nevus”.
- Nevi generally represent clones of genetically altered cells arising from mosaicism.

Benign tumor

- A localized proliferation of cells of one type,
- which has some degree of autonomous control of growth,
- but a normal differentiation.

In situ tumor

- A localized collection of morphologically malignant epidermal cells,
- which have still not invaded the basement membrane
- so it essentially applies to epidermal tumors.

Malignant tumor

- A collection of morphologically malignant cells
- with full capacity to metastasize to lymph nodes and other organs.

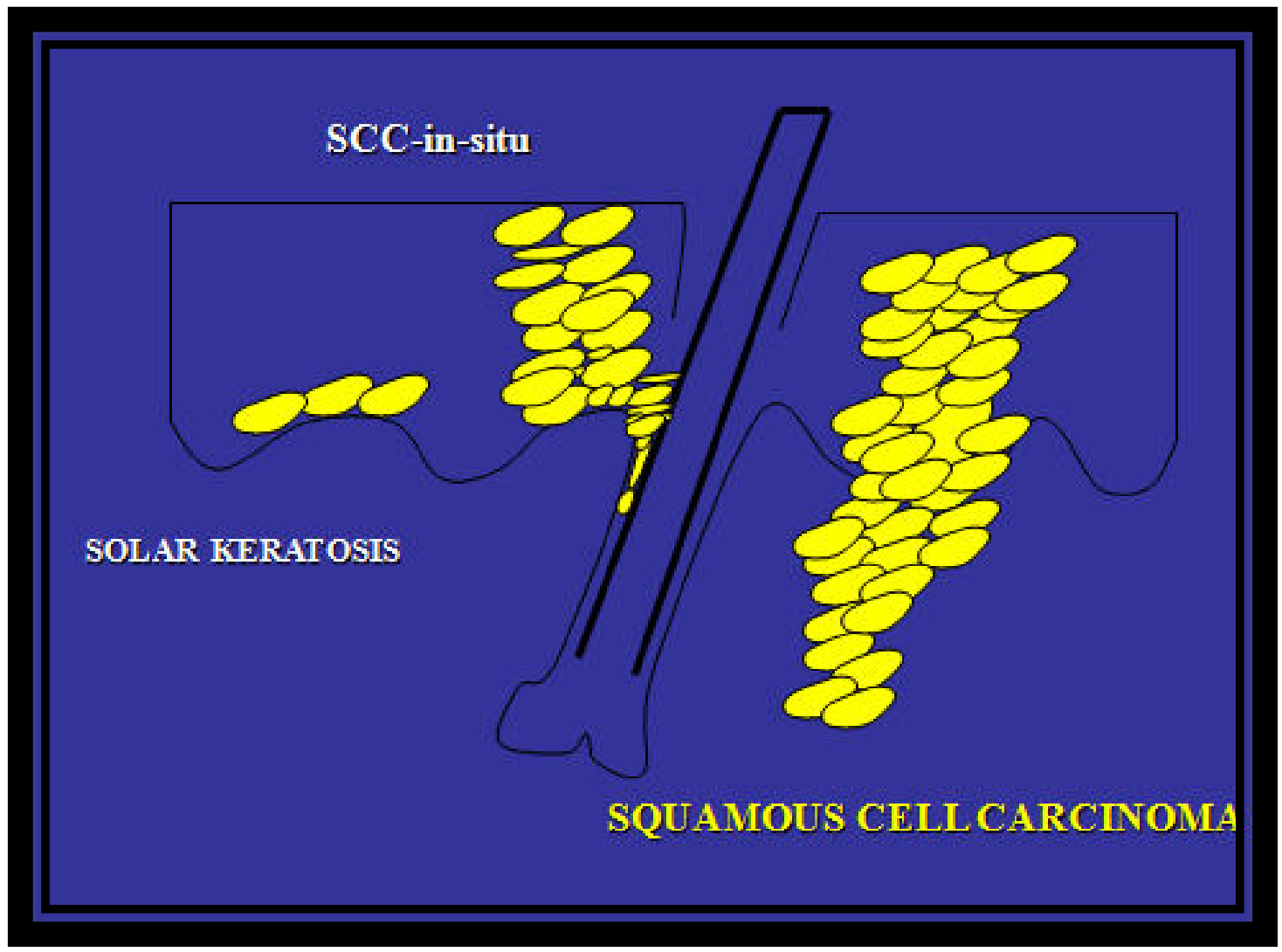


Table 17.1. Factors in etiogenesis of skin tumors

Chemicals	Arsenic
	Coal tar
Ultraviolet rays	UVB rays
	Psoralens + UVA
Viruses	Human papilloma virus 16 and 18
	Human T-cell lymphoma/leukemia virus
Oncogenes	p53 ras genes
	Tumor suppressor gene expression

- Others:
- Underlying skin diseases
- oculocutaneous albinism
- Xeroderma pigmentosum
- Epidermodysplasia verruciformis
- Chronic venous ulcers

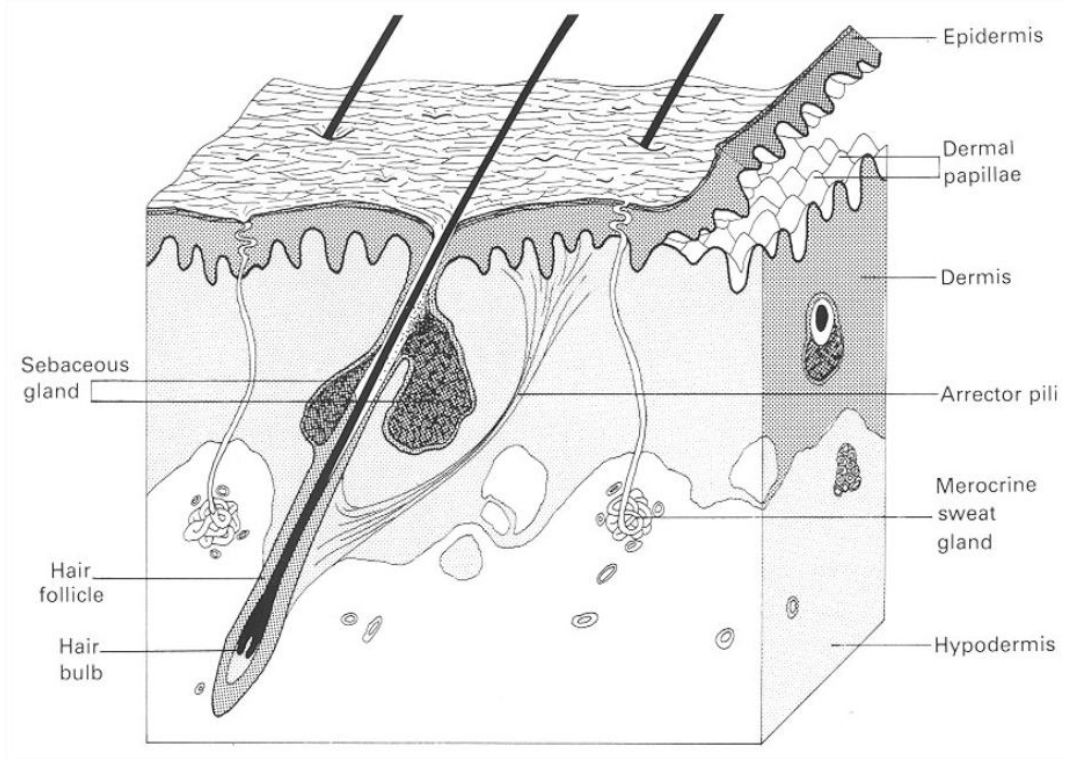
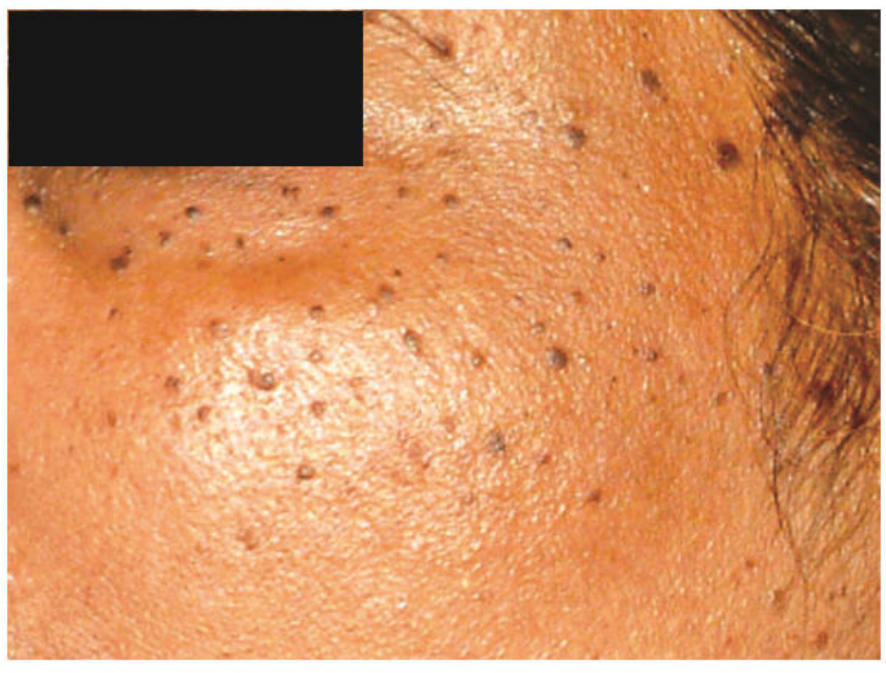


Table 17.2. Tumors and nevi of the skin

Source	*Epidermal*	*Appendageal*	*Dermal*
Benign	Seborrheic keratoses Skin tags Melanocytic nevi Verrucous epidermal nevi Becker's nevus Epidermoid and trichelemmal cysts Milia	Trichoepithelioma Syringoma Nevus sebaceous	Vascular malformations Vacular tumors Keloids Leiomyoma Lipoma Dermatofibroma
Premalignant	Cutaneous horn Bowen's disease Actinic keratoses Arsenical keratoses	Keratoacanthoma	Large plaque parapsoriasis
Malignant	Basal cell carcinoma Squamous cell carcinoma Malignant melanoma	Paget's disease	Cutaneous T-cell lymphoma Langerhans cell histiocytosis Reticuloendothelial malignancies Kaposi's sarcoma Cutaneous metastases

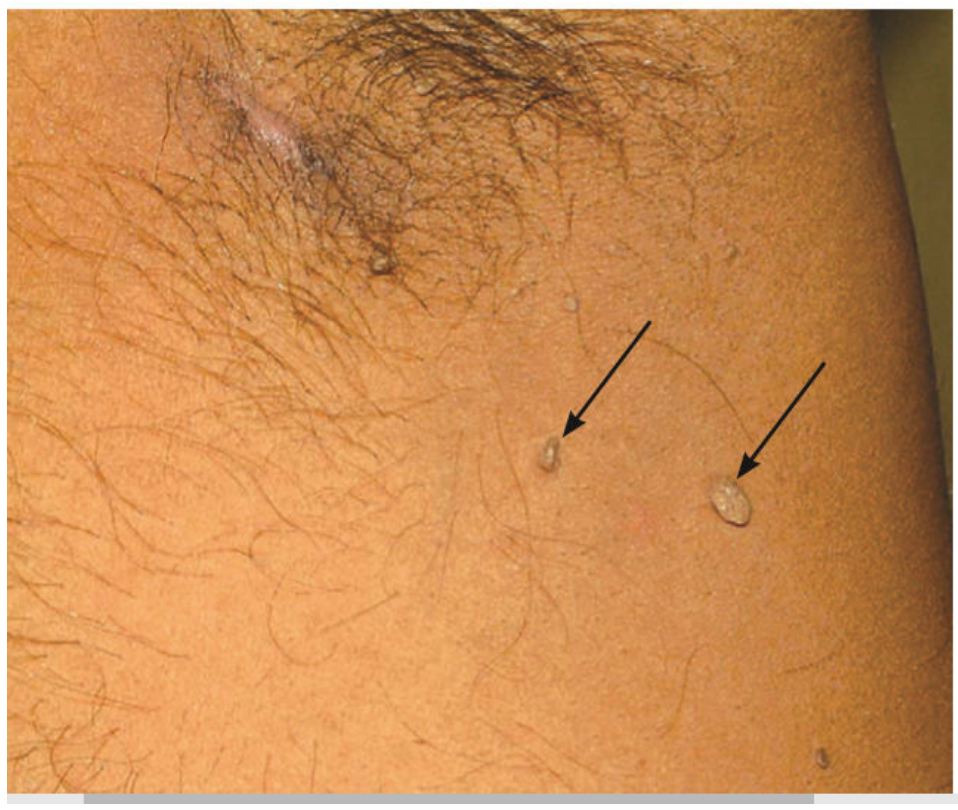
EPIDERMAL TUMORS AND NEVI

- SEBORRHEIC KERATOSIS
- Benign epidermal tumor,
- seen after age of 50.
- Morphology: Multiple, well-defined, hyperpigmented papules with a "stuck on" appearance, a greasy surface, and keratinous plugs.
- Sites: Face, trunk, and upper extremities.
- Treatment: Can be left alone, remove if cosmetically disfiguring. Biopsy if diagnosis is in doubt (to rule out malignant melanoma).
- Biopsy- horn pseudocysts



- small black papules, limited to the upper part of face.

?



Skin Tags

- Familial
- Associated with obesity.
- Acanthosis nigricans.
- Diabetes.
- Soft, skin-colored or pigmented, pedunculated papules
- Neck, axillae, and groins.
- radiofrequency

Melanocytic Nevus

Congenital melanocyte nevi
Acquired melanocytic nevi
Junctional nevus Compound nevus Intradermal nevus
Less common nevi
Spitz nevus Mongolian spot Nevus of Ota Speckled and lentiginous nevus Dysplastic nevus

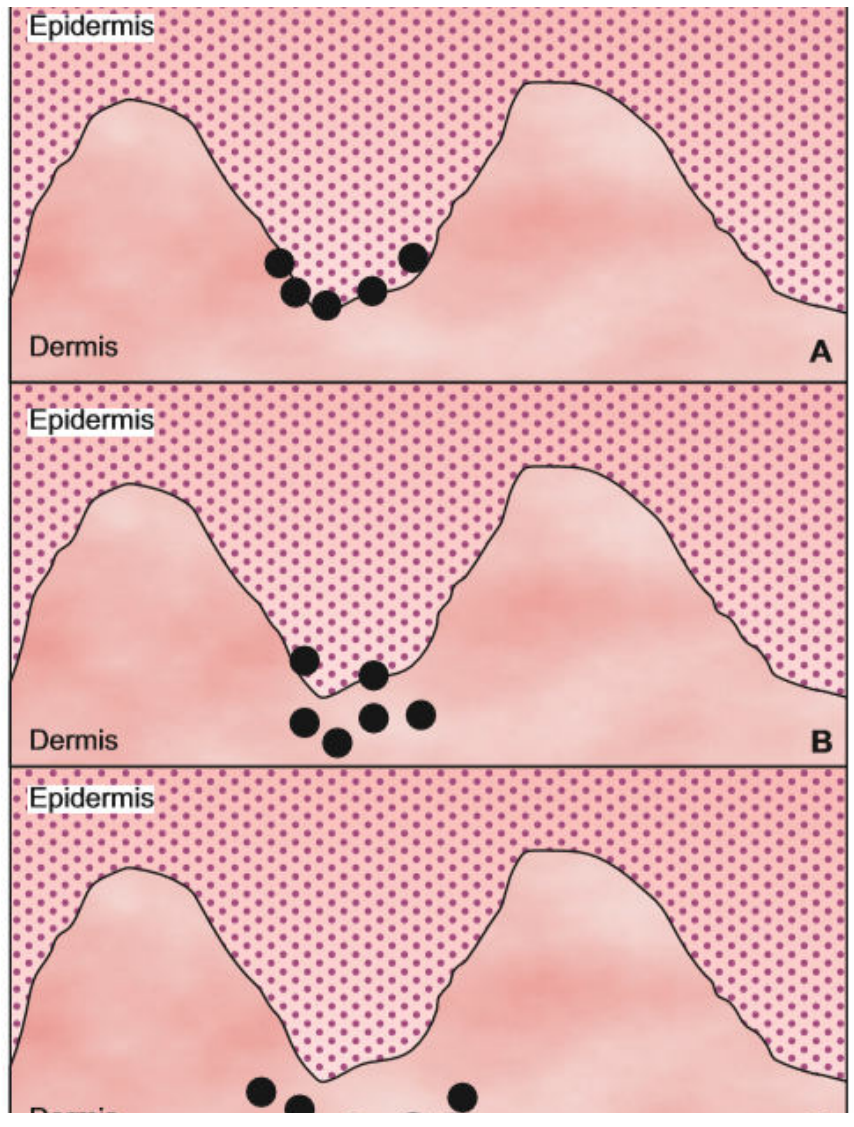
Congenital melanocytic nevi

- Derived from epidermal melanocytes and nevus cells have a predilection for deeper penetration.
- Present at birth.
- single,multiple.
- Color varies from brown to black
- lesions darken and enlarge as the child grows.
- With age, the lesions also become raised and develop rugosities (cerebriform appearance).
- Coarse hair develops in 90% of lesions
-

- Giant lesions are usually seen on the trunk and because they may cover large areas of the trunk, are called “bathing trunk nevi”.
- Complications: potential for malignant transformation is definitely more in giant congenital melanocytic nevi (bathing trunk nevi).
- Meningeal involvement and spina bifida, seen in lesions located over vertebral column.

Fig. 17.5. Giant congenital melanocytic nevus: large, hairy hyperpigmented plaque.

ACQUIRED MELANOCYTIC NEVI



JUNCTIONAL MELANOCYTIC NEVUS

Fig. 17.6. Junctional melanocytic nevus: dark brown macule that shows color variation even within the lesion.

COMPOUND MELANOCYTIC NEVUS

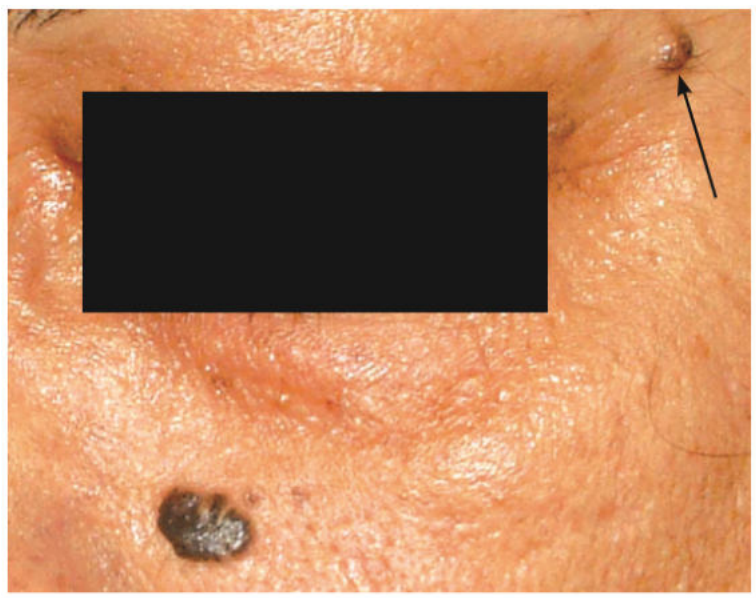


Fig. 17.7. Compound melanocytic nevi: brown pigmented dome-shaped nodules, which has developed irregularity of surface. The one on temple bears hair.

INTRADERMAL MELANOCYTIC NEVUS

Fig. 17.8. Intradermal melanocytic nevus: skin-colored nodule with telangiectasia.

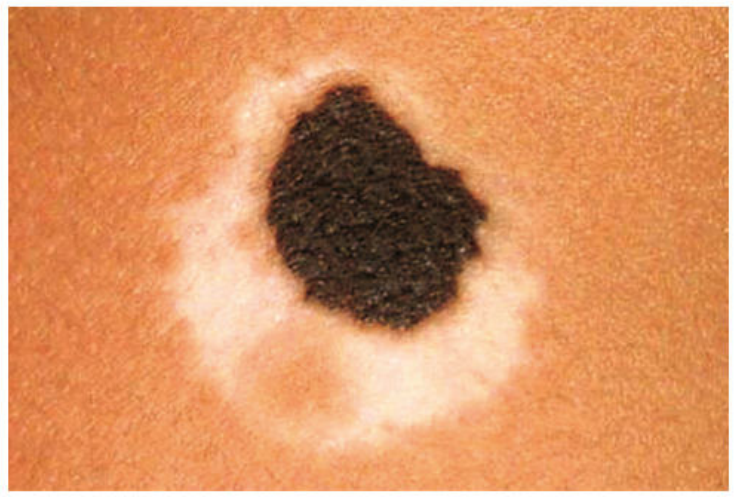
OTHERS

- MONGOLION SPOTS
- Bluish ill-defined macules
- Lumbosacral region.
- Regress by age of 4 years

?

- NEVUS OF OTA
- Present at birth.
- Or appears in infancy.
- Macular pigmentation, which has two components: More prominent slate grey hyperpigmentation due to dermal melanocytes. Brownish epidermal pigmentation.
- Distribution along the maxillary division of the trigeminal nerve.
- Pigmentation of sclera (slate gray) and conjunctiva (brown) often present

?

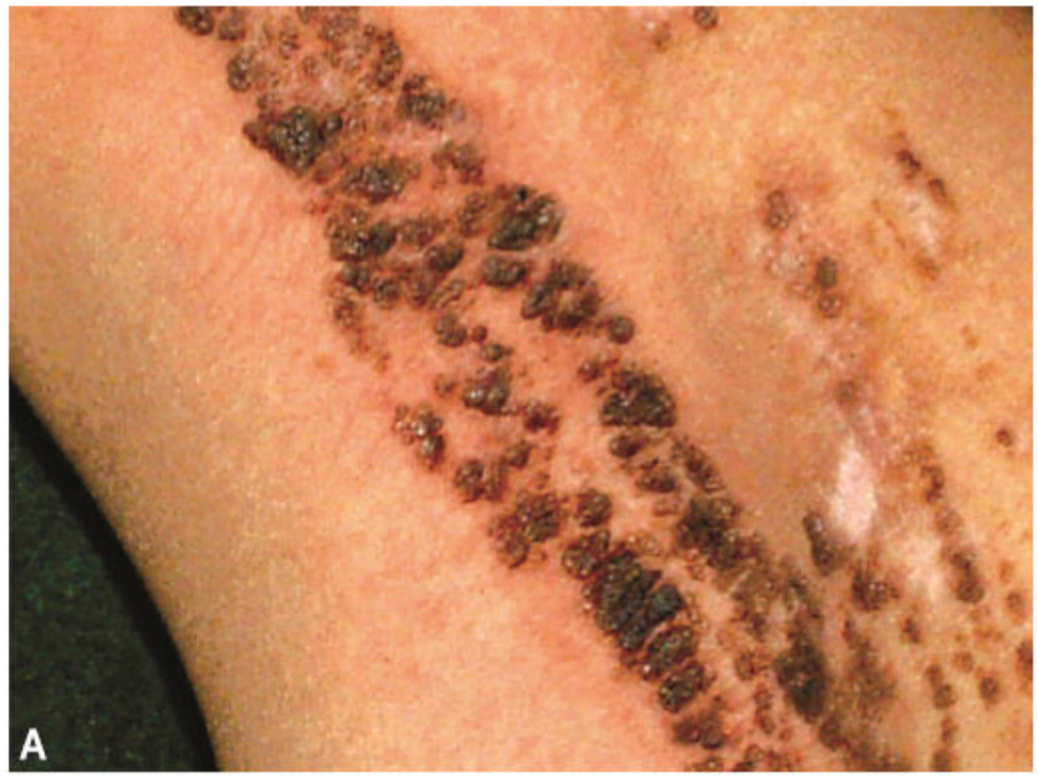


- Halo nevus or Sutton’s nevus:
- Melanocytic nevus which develops a halo of depigmentation
- over period of many years, the nevus involutes and
- the depigmented halo repigments.

COMPLICATIONS

- INFLAMMATION
- MALIGNANT CHANGE-
- The following changes in a melanocytic nevus are suspect and warrant a biopsy:
- Change in size and pigmentation.
- Change in shape and contour.
- Itching, inflammation, ulceration, and bleeding.

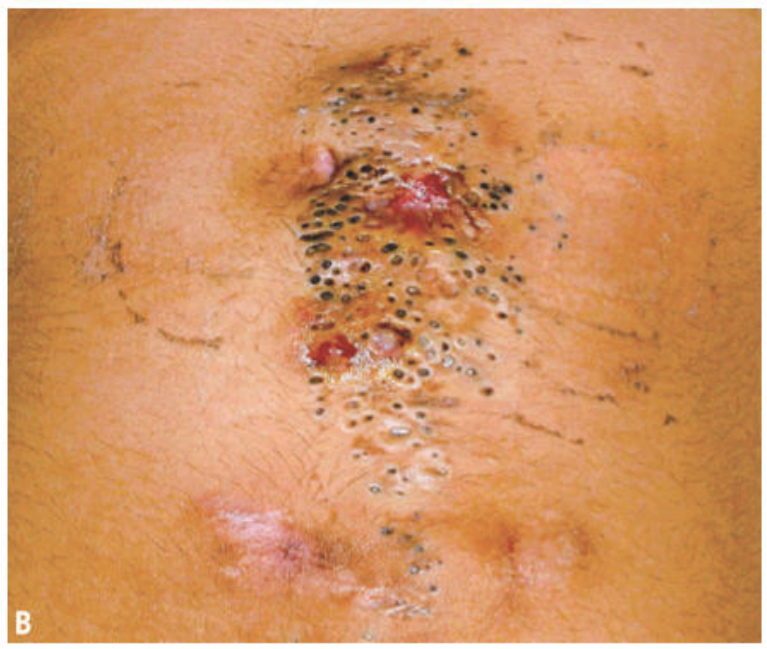
?



Verrucous Epidermal Nevus – localised/ generalised

Variants

- ILVEN



- NEVUS COMEDONICUS

- NEVUS SEBACEOUS

?

Becker’s Nevus

- Common condition.
- More frequent in men.
- Begins shortly before, at or after puberty.
- Appears as a hyperpigmented (light-dark brown) patch, which has a characteristic splashed appearance.
- Over period of time, coarse dark hairs appear on the lesion
- Chest and shoulders.

Epidermoid and Trichelemmal Cysts

- freely mobile over underlying structures
- tethered to the skin.
- Characteristically, have a central punctum through which cheesy material can be expressed

- <u>Sites</u>
  - Epidermoid cyst: Face, upper back, and retroauricular region
  - Trichilemmal cyst : Most frequent on the scalp.

- <u>Complications</u>
  - Secondary infection.
  - Rupture in the dermis and induce a foreign body reaction.
  - Dystrophic calcification

- MILIA:
- small subepidermal keratin cysts.
- small, firm, white papules, which are less than 2 mm in diameter.
- De novo on the face
- At sites of healed subepidermal blisters e.g., bullous pemphigoid

Premalignant Lesions

- cutaneous horn
- keratoacanthoma
- Bowen’s disease
- actinic keratoses
- arsenical keratoses

cutaneous horn

➢Cutaneous horn (cornu cutaneum)

- **A conical hypertrophic protuberance emanating from a skin-colored to erythematous papular base**

- **Height at least one-half of the largest diameter**

- **Thirty-eight percent to 40 percent of all cutaneous horns represent AKs**

- Is a morphological diagnosis.
- Occurs secondary to:
- Epidermal nevus.
- Warts.
- Seborrheic keratoses.
- Rarely, underlying squamous cell carcinoma.

keratoacanthoma

Fig. 17.19. Keratoacanthoma: keratotic papule with central horny plug.

- Rapidly growing, skin-colored nodule, which develops a central horny plug ; the plug falls off to leave a crater.
- Most lesions resolve spontaneously, leaving a depressed (cosmetically unacceptable) scar.
- Few (very few!!) transform into squamous cell carcinoma.

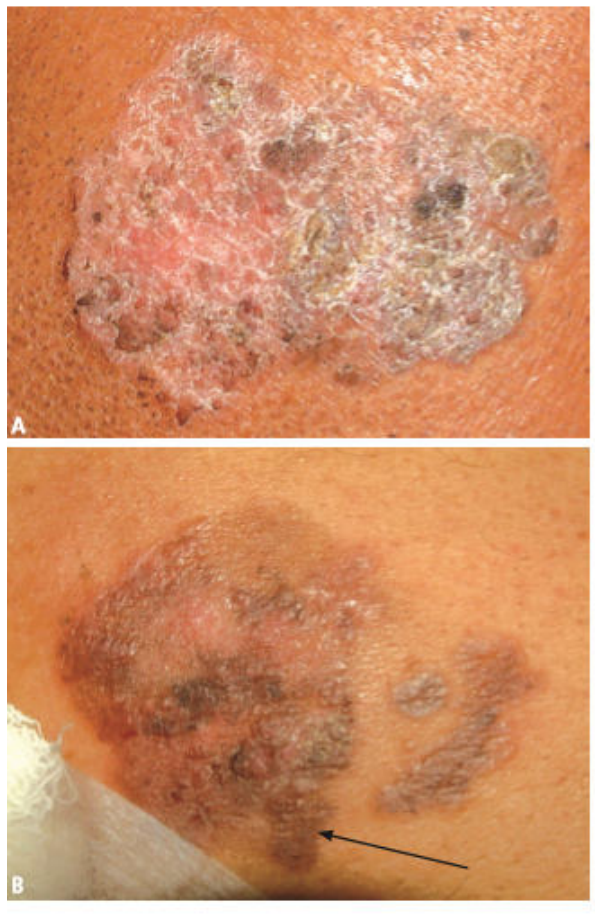
Keratoacanthoma

- Solitary or multiple
- rapid growth
- 1 to 2.5 cm
- ulcer with keratinous material
- spontaneous resolution

Bowen’s Disease

- Carcinoma in situ
- erythematous plaque
- irregular borders
- enlarging psoriasiform plaque
- indentations (reniform margin)

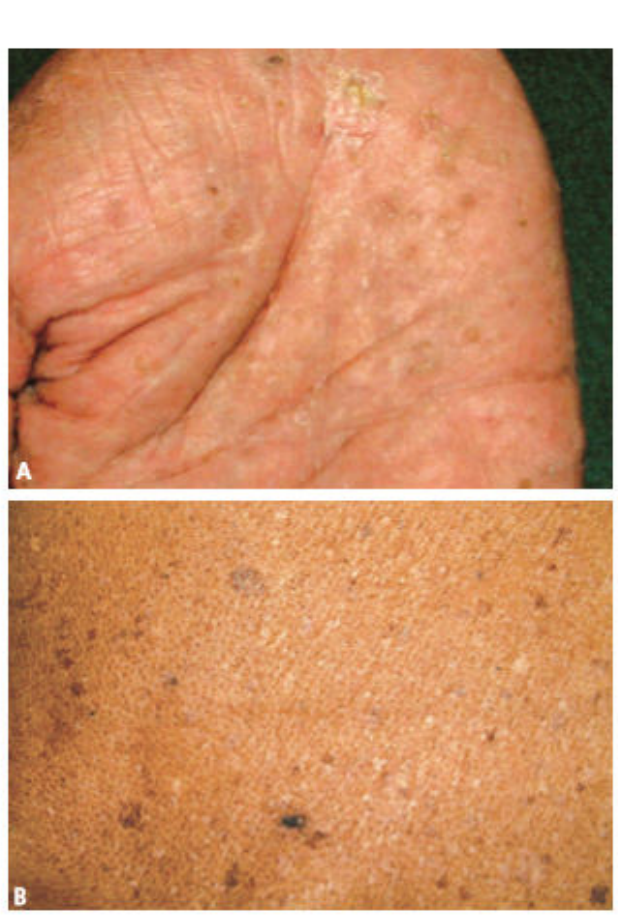
BOWEN’S DISEASE



- A: psoriasiform plaque, showing irregular indentations.
- B: infiltration of the lesion indicates development of squamous cell carcinoma

- Treatment
- Excision,
- cryotherapy, or
- topical 5-fluorouracil (5-FU).

- Actinic keratoses: pink irregular macules and papules with dry adherent scales.
- middle aged and elderly.
- Face, scalp, and dorsae of hand.
- Suspect transformation into squamous cell carcinoma (a rare occurrence), if the lesion enlarges rapidly, ulcerates or bleeds.



- arsenic keratoses: multiple corn-like papules.
- rain drop pigmentation

MALIGNANT EPIDERMAL TUMORS

- BASAL CELL CARCINOMA
- SQUAMOUS CELL CARCINOMA
- MALIGNANT MELANOMA

1. BASAL CELL CARCINOMA

- The most common cancer affecting humans
- Slow growing
- At least 75% first tumours are on the face
- Relatively ‘benign’ in most cases – but if left untreated can be disfiguring and life threatening

Basal Cell Carcinoma

- Raised, with pearly border
- prominent vasculature
- ulceration
- nodular most common

TYPES OF BCC

NODULAR

- Usually begin as a small pink ‘pearly’ papule
- Develop a depression in the centre
- Rolled edge
- Overlying telangiectasia

Superficial Basal Cell

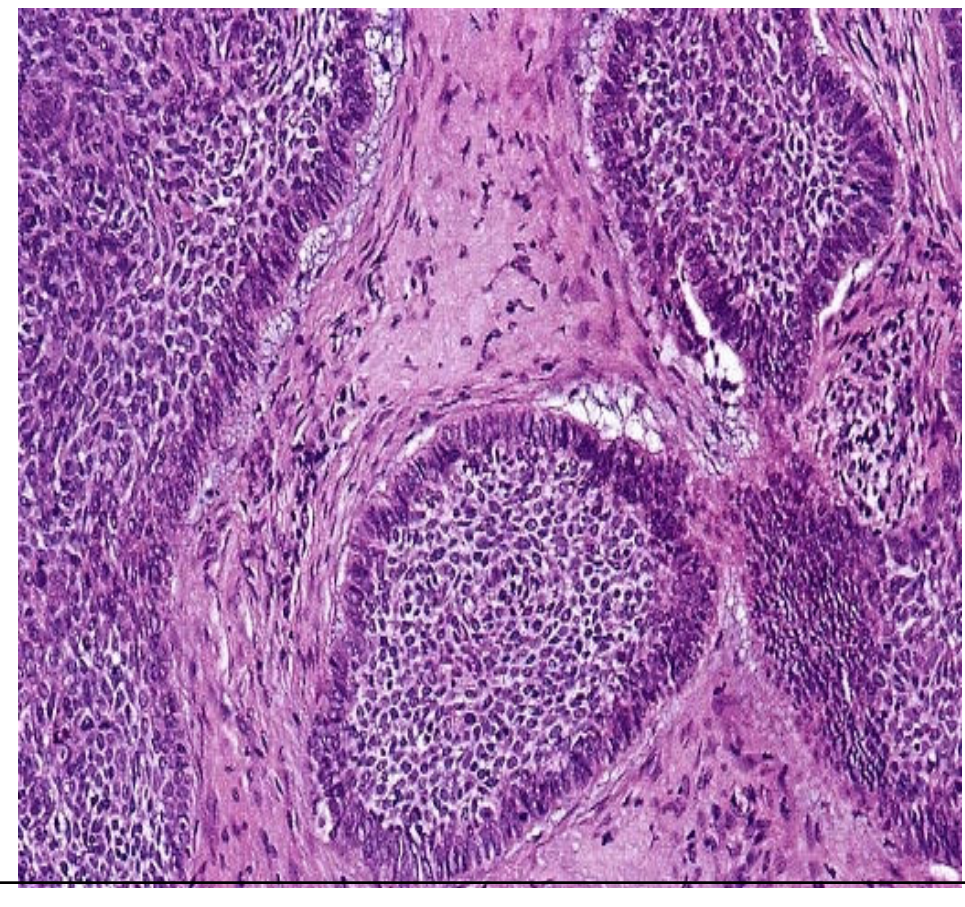
- Scaly patches
- irregular borders
- extremities, less common in head and neck

MORPHOEIC

- White or waxy
- Always on face
- Presents as a spontaneous ‘scar’
- Margins are usually much wider than what is clinically visible

Pigmented BCC

- Basal Cell Carcinoma---- histopathology is diagnostic
- Cells resemble those of stratum basale
- peripheral palisading
- stromal retraction



- Course
- Slowly progressive,
- locally invasive (especially noduloulcerative variant) neoplasm,
- eating into underlying structures like cartilage or bone, if left untreated.
- Lymphadenopathy and distant metastasis do not occur.

- Surgical excision is treatment of choice in most cases.

- All variants of BCC except the morphoeic variant are excised with a 0.5 cm of skin margin.

- Morphoeic variant is excised with wider margin (up to 2 cm) because the lateral extent is often indistinct.

Squamous cell carcinoma

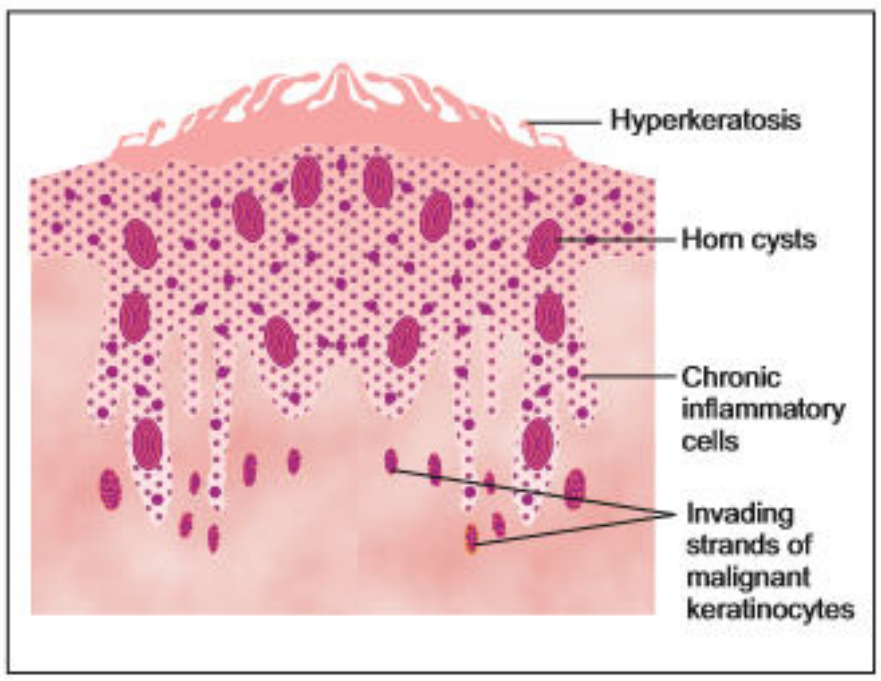
- Etiology:
- Damaged skin (photodamaged/scarred/ulcerated skin/leucoplakia/ erythroplasia),
- topical and systemic carcinogens- Pitch tar, mineral oils, and inorganic arsenic
- human papilloma virus
- immunosuppression - HIV
- Certain rare genetic disorders, with defective DNA repair mechanisms, such as xeroderma pigmentosum

- A: raised ulcer with indurated base and everted margin (cauliflower-like) on the lower lip.
- B: raised ulcer with indurated base and everted margin at site of radiation dermatitis.

- Metastases
- Lymphadenopathy: Regional lymphadenopathy. Nodes hard and sometimes fixed to underlying structures and tethered to skin.

- Visceral metastases: Infrequent.

- SCC



- characteristic histology.

Malignant Melanoma

- Etiology:
- Multifactorial.
- Actinic damage important.
- Evidence of nevi in 25% of patients with MM.

Clinical variants :

lentigo maligna melanoma,

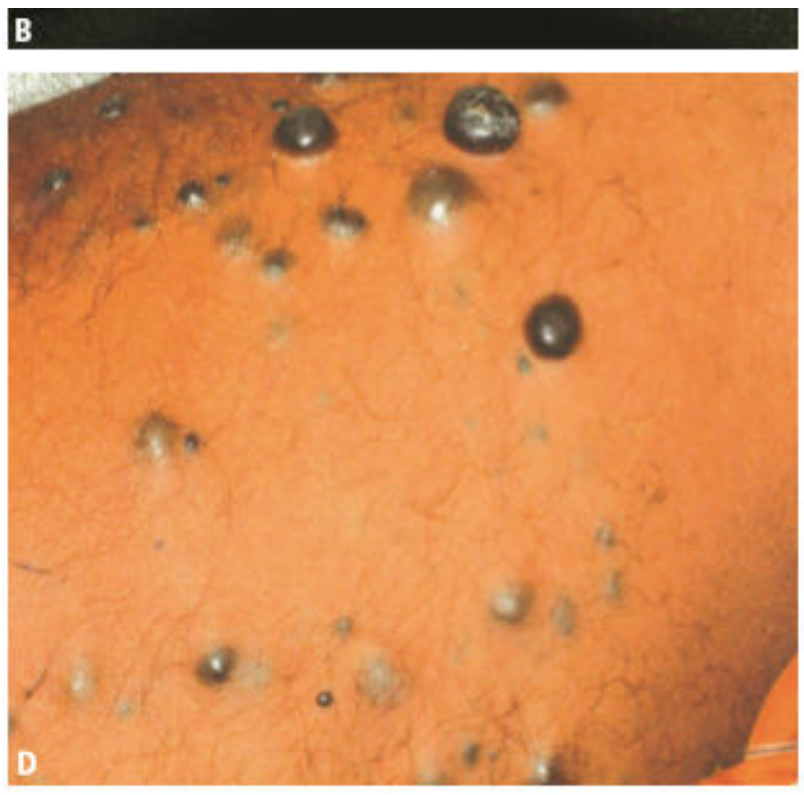
superficial spreading melanoma (SSM),

acral lentiginous melanoma, and

nodular malignant melanoma (NMM).

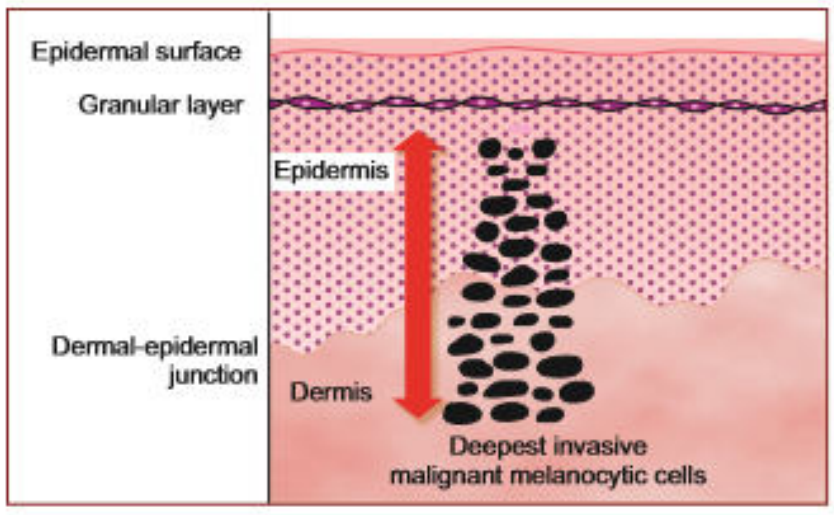
SSM most frequent while NMM is the most aggressive.

- Asymmetrical pigmented nodule,
- Border irregularity,
- Color variability,
- Diameter >0.5 cm,
- Elevation irregularity.



Metastatic melanoma

Subungual melanoma



- histological grading using Breslow's method.
- measures the vertical distance (in mm) from granular cell layer to the deepest part of tumor, using a microscopic micrometer.
- prognostic predictor.

Benign Tumors of Skin Appendages

Fig. 17.32. Syringoma: flat topped, angulated yellow papules around the eyes.

Fig. 17.33. Trichoepithelioma: multiple, dome-shaped translucent papules.

Malignant Tumors of Skin Appendages
Paget's Disease

- Paget's disease of breast:
- sharply marginated plaque with a slightly raised edge and an irregular outline.
- If the crusts are removed, a red, glazed, moist surface is revealed.
- Note destruction of nipple.

Benign Tumors and Nevi of Dermis

Table 17.7. Types of vascular nevi

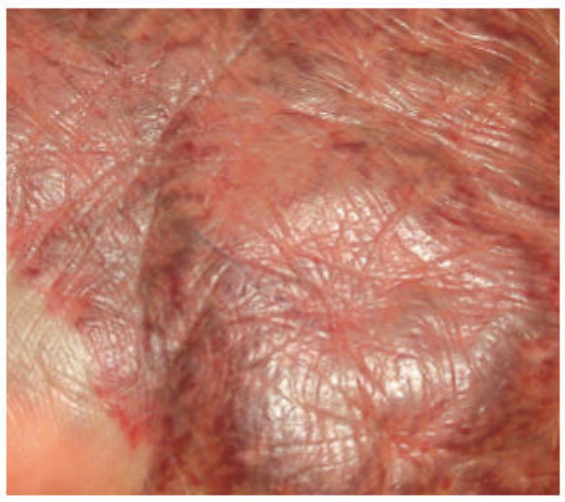
Malformations	*Hemangiomas*
Capillary (CM) ❖ Salmon patch ❖ Port-wine stain	Capillary
	Cavernous
	Mixed
Venous (VM)	
Arteriovenous (AVM)	
Lymphatic (LM)	
Mixed	

Table 17.8. Differences between vascular malformations and hemangiomas

	Malformations	*Hemangiomas*
Onset	Always present at birth	Usually develop after birth
Evolution	Growth proportionate to growth of child and then persists (except salmon patch)	Initial growth and then involution
Skeletal defects	Frequent	Infrequent

- Port-wine stain: deeply erythematous, telangiectatic slightly bosselated lesion on the face.
- Usually present at birth.

- Salmon patch
- Is a capillary malformation
- Commonest vascular malformation present at birth.
- salmon patch involutes by the age of one.
- Presents as telangiectatic macules.
- Nape of neck, forehead, and eyelids.
- Treatment None required.



- Venous malformation: a soft compressible bluish swelling, which increases in size when dependent

- Lymphatic malformations
- Usually present at birth.
- Characterized by a cluster of thin walled vesicles (resembling frog spawn).

Infantile hamangioma

- Lesion appears within a few weeks of birth and grows for a few months.
- Spontaneous regression occurs with minimal atrophy in most patients.
- Soft, brightly red (strawberry colored) nodule with pale stippling indicating resolution

- Complications:
- Large swellings near orifices (oral, nasal, anogenital) interfere with function.
- Bleeding may follow trauma.
- Ulceration especially in large lesions and in intertriginous area.

- Treatment
- Small lesions: Resolve spontaneously.
- Large symptomatic lesions:
- Systemic steroids
- Propranolol
- Lasers: pulsed dye laser in residual lesions.

Beningn acquired hemangioma/ pyogenic granuloma

Fig. 17.42. Keloid: irregular firm-hard nodule with claw-like projections in presternal area; patient denied history of trauma.

Fig. 17.43. Leiomyoma: painful, erythematous soft-firm nodule. Note the multiplicity of lesions.

Fig. 17.44. Lipoma: soft, lobulated subcutaneous nodule.

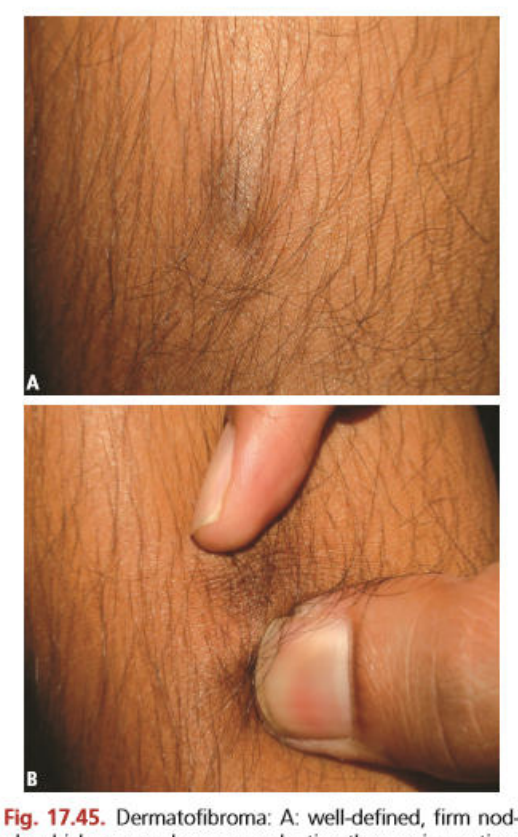


Fig. 17.45. Dermatofibroma: A: well-defined, firm nodule which appears larger on palpation than on inspection. B: dimpling on pinching.

Malignant Tumors of Dermis
Cutaneous T Cell Lymphoma (Mycosis Fungoides)

- Lymphoma of helper T cells.
- Initial patch stage of well-defined, bizarre shaped, atrophic patches; poikiloderma
- later infiltrated plaque stage and then
- tumor stage with aggressive course.
- Characteristic histology with presence of atypical cells (Pautrier's microabscesses); epidermotropism
- Treatment: Early stage: Topical steroids, topical nitrogen mustard, PUVA, acitretin and electron beam treatment.
- Tumor stage: Chemotherapy.

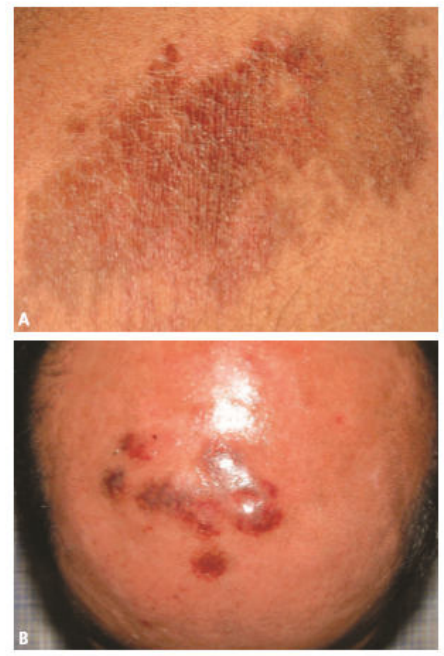


Fig. 17.46. Mycosis fungoides: A: plaque stage: erythematous plaques. B: tumor stage: firm to hard nodules which often ulcerate.

- Others:
- LCH
- Kaposi sarcoma

QUESTIONS (please answer in one word)

- 1. Horn pseudocysts are a feature of –
- 2. Virus which is implicated in the pathogenesis of skin malignancies-
- 3. Bathing trunk nevus is a type of-
- 4. melanocytic nevus surrounded by a depigmented halo is
- 5.Name a premalignant lesion of skin
- 6.Pautrier microabscesses are seen in
- 7. What is the diagnosis in case of pigmented macules present over left cheek distributed over maxillary division of trigeminal nerve-
- 8. Which of the malformation is most likely to involute spontaneously?
- 9. Grouped open and closed comedones arranged linearly are seen in
- 10. . Breslow's method is used for histological staging of