

## Update on Ocular Dermatology

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- No Financial Disclosures

## Benign Eyelid Lesions

- Epithelial & adnexal tumors
- Vascular tumors
- Xanthomatous tumors
- Infectious

## Epithelial & Adnexal Tumors

- Squamous papilloma
- Seborrheic keratosis (SK)
- Cutaneous cysts
- Sweat gland (eccrine & apocrine)
- Fibrous tissue

## Squamous Papilloma

- Aka skin tags, achrochordons; fibroepithelial polyps
- Common around eyelids, neck, or near flexures
- Assoc with obesity and insulin resistance



## Periorbital Papillomas



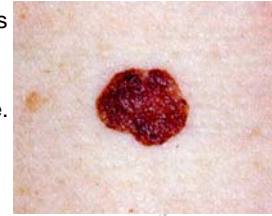
## Seborrheic Keratosis

- Abnormality of epidermal basal cell maturation that results in a well-defined, raised, rough-surfaced papule or plaque.
- Classic waxy or "stuck-on" appearance.
- Usually asymptomatic but may itch or become inflamed.



## Seborrheic Keratosis

- Is the most common differential diagnosis of a malignant melanoma.
- Patient reassurance.
- Surgery vs. cryotherapy.



## Seborrheic Keratosis



## Cutaneous Cysts

- A cyst is a closed cavity or sac containing fluid or semi-solid material within an epithelial, endothelial or membranous lining.
- Epidermoid cyst: a cutaneous or subQ cystic swelling of the skin, often with a central punctum, derived from squamous epithelium
- Dermoid cyst: a developmental cyst resulting from inclusion of embryonic epithelium at sites of embryonic fusion
- Milia (whiteheads): small epidermoid cysts that presents as a white or cream-colored papule

## Epidermoid Cyst

- Most occur spontaneously, can be assoc with acne.
- Multiple cysts occur in Gardner's syndrome.
- Usually asymptomatic but can be inflamed.



## Epidermoid Cyst



## Epidermoid Cyst



## Dermoid Cyst

- Often present at birth.
- Occur most commonly on the face, midline of the neck and the mastoid area.



## Milia (Whiteheads)

- Common in acnes.
- Asymptomatic.
- Usually occur on face but can develop anywhere when related to a blistering process.
- Often disappear spontaneously in you after a number of months.
  - Formerly I&C
  - Laser ablation



## Sweat Gland Tumors

- Eccrine hidrocystoma: rare disorder of the eccrine sweat duct that results in several small swellings, usu adjacent to the eyelids. It occurs particularly in hot climates.
- Syringomata: a benign tumor of sweat ducts; usually occurs as multiple lesions

## Eccrine Hidrocystoma

- Multiple small swellings that increase in size with heat & become almost imperceptible in the winter.
- Occur mainly around the eyes.
- Most common in females.
- Air-conditioning helpful.



## Syringomata

- Common in Asians & Afro-Caribbeans; can be familial; occur in Down syndrome.
- Occur symmetrically, particularly around the eyes in females.
- Reassurance vs gentle cautery.



## Apocrine Gland Tumors

- A benign cystic tumor of the apocrine secretory glands (gland of Moll).
- Slow growing, appears in middle age.
- Solitary dome-shaped.
- No seasonal variation.



## Fibrous Tissue Tumors

- Hyperproliferative responses of connective tissue to trauma resulting from an imbalance between collagen synthesis and lysis.
- Hypertrophic scars: confined to the area of trauma.
- Keloids: spread beyond the area of trauma - has a worse prognosis.

## Keloid vs Hypertrophic Scar



## Vascular Tumor

- Pyogenic Granuloma: common benign vascular papule occurring in youth, possibly as a response to injury.
- Sudden onset & tend to bleed.



## Xanthomatous Lesions

- Accumulations of xanthoma cells – macrophages containing droplets of lipids
- May be a symptom of a general metabolic disease or a local cell dysfunction
- Classification:
  1. Due to hyperlipidemia
  2. Normolipidemia

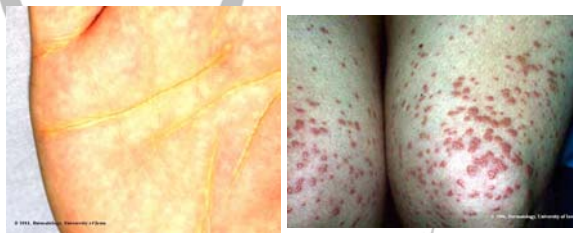
## Xanthelasma

- Most common of all xanthomas
- Age of onset: over age 50
- Labs: fasting cholesterol and triglycerides
- 50% of patients have no metabolic disease



## Xanthoma

**Striatum Palmare**                      **Eruptive Xanthoma**




The left image shows yellowish-orange streaks on a palm, characteristic of Striatum Palmare. The right image shows multiple small, raised, yellowish-red lesions on the back of a hand, characteristic of Eruptive Xanthoma.

## Infectious Lesions

- Impetigo
- Verruca
- Molluscum contagiosum

## Impetigo


- Common in the young
- Outbreaks occur in institutions (nurseries)
- Predisposing factor
  - Insect bite
  - Trauma
  - Eczema



A close-up photograph of skin showing several small, round, yellowish blisters with red, crusting centers, typical of impetigo.

## Impetigo

- Blisters remain for few days (yellow pus visible)
- Blister ruptures & golden crust forms
- Spreads rapidly
- Ulceration if infection is deeper




A close-up photograph of a child's forehead showing several small, yellowish blisters with red, crusting centers, typical of impetigo.

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## Impetigo

- Topical antibiotics
- Systemic antibiotics for 5 days; they are effective within 24 hours




A close-up photograph of a woman's face showing several small, yellowish blisters with red, crusting centers, typical of impetigo.

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## Verruca

**Verruca plana (flat)**                      **Verruca vulgaris**




The left image shows a cluster of small, flat, reddish-brown warts on a hand, characteristic of Verruca plana. The right image shows a single, larger, raised, cauliflower-like wart on a hand, characteristic of Verruca vulgaris.




### Filiform Wart

- Small base with elongated shape
- May have associated conjunctivitis




### Molluscum Contagiosum

- Epidermal viral infection
- Common in children and immuno-compromised
- Histopathology
  - Basophilic molluscum bodies




### Molluscum Contagiosum

- May be associated with chronic follicular conjunctivitis



### Molluscum Contagiosum

- Management: excision, curettage, cryotherapy, trichloroacetic acid



### Solar Damage and Skin Cancer

- The propensity for solar damage depends upon:
  - Skin type
  - The cumulative exposure to UV light
  - The intensity of exposure
  - The exposure in childhood
  - Residence nearer to the equator

	Fitzpatrick Skin Types
	1) Always burns, never tans **
	2) Always burns, sometimes tans **
	3) Sometimes burns, always tans
	4) Never burns, always tans
	5) Black skin

### Non-Melanoma Skin Cancer

- Cutaneous Horn
- Actinic (Solar) Keratosis
- Keratoacanthoma
- Squamous Cell Carcinoma
- Basal Cell Carcinoma

### Cutaneous Horn

- Marked keratin cohesion that gives rise to a horny outgrowth.
- May be caused by a wart, solar keratosis, keratoacanthoma or squamous cell carcinoma.
- Surgical excision with histologic eval.

### Cutaneous Horn

- A red indurated base suggests SCC.
- A flat or sl raised base suggests AK.
- A well-defined warty base suggests seborrheic keratosis.



### Keratoacanthoma

- Well-defined uniform nodule, either red or flesh colored.
- Central keratin-filled crater.
- Usually 1.5-2.0cm in diameter (or more)
- Involutesc & leaves scar (~4 months)



### Keratoacanthoma



### Keratoacanthoma



Atlas of Clinical Dermatology, du Vivier. Figures 10.49, 10.50


### Actinic Keratosis




- A premalignant disorder of the epidermis vs variant of squamous cell carcinoma.
- Often multiple lesions on chronically solar-exposed skin (face, ears, back of hands)

### Actinic Keratosis


- Management
  - Cryotherapy
  - Surgery
  - Topical therapy (5-fluorouracil)
  - Photodynamic therapy
  - Solar protection & sunscreens



### Actinic Keratosis




### Squamous Cell Carcinoma



- A malignant tumor arising from keratinocytes that may metastasize.
- Twice as common in males.
- UV irradiation most common cause.


### Squamous Cell Carcinoma

- SCC starts as a thickening of the skin & becomes an indurated plaque.
- Grows laterally & vertically, becomes fixed & nodular
- Surface may be crusted, eroded or ulcerated.



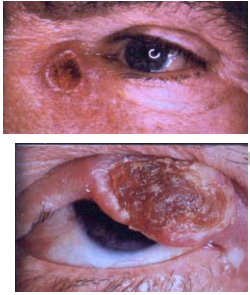
### Squamous Cell Carcinoma

- Most occur on sun-exposed areas. The surrounding skin usu has signs of actinic damage.
- Ear & lip lesions often metastasize

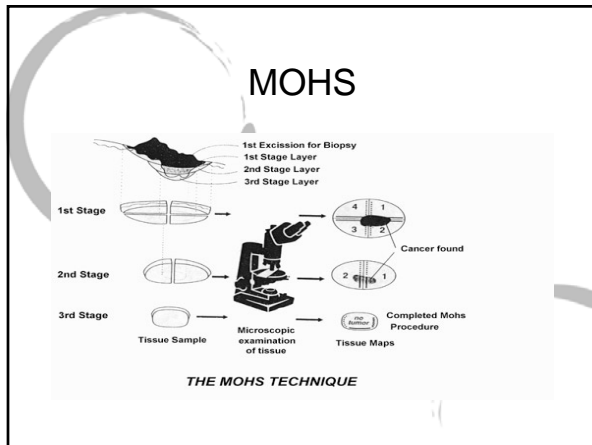
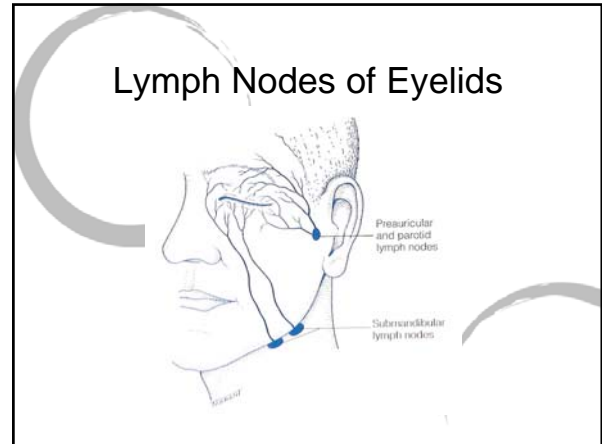
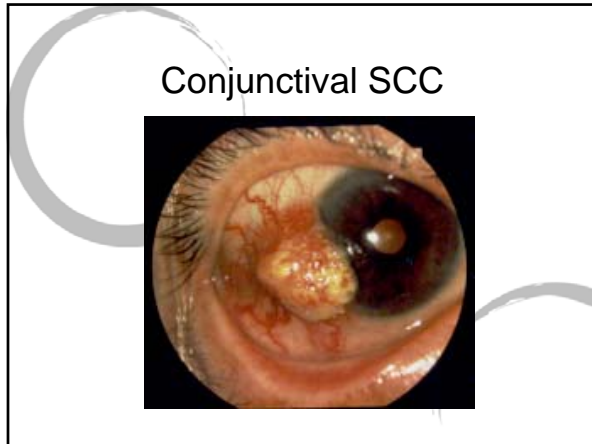


### Squamous Cell Carcinoma

- Perineural infiltration of SCC of the eyelids facilitates spread into the orbit, intracranial cavity and periorbital structures via:
  - Trigeminal nerve branches
  - Extraocular motor nerves
  - Facial nerve







### Basal Cell Carcinoma

- A common, locally destructive, malignant cutaneous tumor derived from the basal cells of the lower epidermis.
- Subtypes include: rodent, pigmented, cystic, superficial spreading

A clinical photograph showing a basal cell carcinoma on the nose. The tumor is a small, reddish, pearly nodule with a central crumbly area.

### Basal Cell Carcinoma

- Occurs most commonly on face.
- Tend to bleed, scab, painless.
- Rarely metastasize but is locally invasive.
  - \*Danger Zones (eye, ear & nose)

Two clinical photographs showing basal cell carcinoma. The top image shows a tumor on the eyelid, and the bottom image shows a tumor on the nose.

### Nodular BCC

Two clinical photographs showing nodular basal cell carcinoma. The left image shows a tumor on the eyelid, and the right image shows a tumor on the forehead.

### Basal Cell Carcinoma / Traction

### Rodent Ulcer BCC

### Pigmented BCC

- Features similar to a rodent ulcer but the margins are heavily pigmented.
- May be mistaken for a Malignant Melanoma.

### Superficial BCC

- Solitary patch on the trunk or limbs; often mistaken for psoriasis or eczema.
- Well-defined slightly raised, red plaque with adherent scale.
- Pearly borders.

### Cicatricial BCC

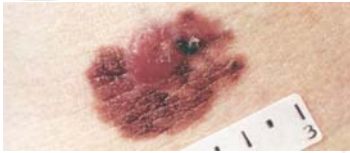
- Most often misdiagnosed as a scar.
- Telangiectasia and pearly color.
- Spreads insidiously and is larger than appears.

### H-ABCDs

• H = Hair / History	• C = Color / Changes
• A = Asymmetry / Avascular	• D = Diameter / Distribution
• B = Borders / Bleeding	• S = Surface / Symptoms

## Malignant Melanoma

- May arise spontaneously or from pre-existing lesions.
- Metastasis likely.



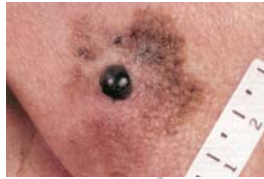
## Lentigo Maligna

- Flat, pigmented lesion on the face that gradually enlarges.
- Aka Hutchinson's freckle.
- Variable colors & irregular margin.



## Lentigo Maligna Melanoma

- LM is a precursor of LMM
  - 30% to 50% of LM progress to LMM
- Focal papular & nodular areas signal invasion into the dermis.



## Lentigo Maligna Melanoma



## Superficial Spreading Malignant Melanoma

- Flat patch of pigmentation that becomes palpable. Spreads laterally & horizontally and has an irregular border.



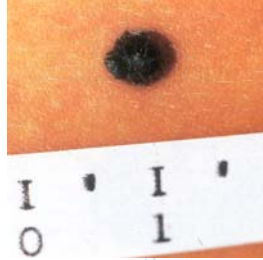
## Superficial Spreading Malignant Melanoma

- Tumors > 3mm thick have a poor prognosis.
- Nonlinear relationship between depth of invasion and survival rate.



## Nodular Malignant Melanoma

- Has no horizontal growth phase.
- Grows vertically ab initio.



## MM - depth of lesion

- Lesions <0.75mm in thickness have ~90% survival rate at 10 yrs
- Lesions <0.75mm in thickness have ~100% survival rate at 5 yrs
- Lesions >1.5mm in thickness have ~50% to 60% survival rate at 5 yrs



## MM Testing

- Blood work: liver panel (LDH, GGT, SGOT, SGPT, alkaline phosphatase)
- Chest x-ray



## Recommend

- Color Atlas of Clinical Dermatology, 4th edition. Fitzpatrick et al.

