Update on Ocular Dermatology

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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

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

Dermoid Cyst

Milia (Whiteheads)

• Common in acne.
• 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 Palmaris**

**Eruptive Xanthoma**

**Infectious Lesions**

- Impetigo
- Verruca
- Molluscum contagiosum

**Impetigo**

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

**Impetigo**

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

**Impetigo**

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

**Verruca**

- Verruca plana (flat)
- Verruca vulgaris
Filiform Wart
- Small base with elongated shape
- May have associated conjunctivitis

Molluscum Contagiosum
- Epidermal viral infection
- Common in children and immunocompromised
- 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 seborheic keratosis.

Keratoacanthoma

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

Keratoacanthoma

- 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

- A red indurated base suggests SCC.
- A flat or sl raised base suggests AK.
- A well-defined warty base suggests seborheic keratosis.
Actinic Keratosis
- Management
  - Cryotherapy
  - Surgery
  - Topical therapy (5-fluorouracil)
  - Photodynamic therapy
  - Solar protection & sunscreens

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
Conjunctival SCC

Lymph Nodes of Eyelids

MOHS

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

Basal Cell Carcinoma

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

Nodular BCC
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
- A = Asymmetry / Avascular
- B = Borders / Bleeding
- C = Color / Changes
- D = Diameter / Distribution
- 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.

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