**Eyelid Lesions**

Blair Lonsberry, MS, OD, MEd., FAAO
Professor of Optometry
Pacific University College of Optometry
blonsberry@pacificu.edu

**Agenda**

- Benign vs. Malignant lesions
- Benign Eyelid Lesions
  - Various types
  - Diagnostic criteria and differentials
  - Treatment and management options
- Malignant Eyelid Lesions
  - Various types
  - Diagnostic criteria and differentials
  - Treatment and management options

---

**Aussie Patient Story**

- Male 59 Anglo Celtic heritage
- Asymptomatic, accidental detection by daughter following island holiday Bali and further sun exposure August 2016
- Hx: surfer and excessive sun exposure - coconut oils etc for first 2 decades of life.

**Aussie Patient Story**

- Initial dermatologist opinion – BCC (basal cell carcinoma)
  - BUT biopsy confirmed aggressive malignant melanoma, 2.2 mm thick, 5 mm cell growth rate

**Aussie Patient Story**

- Initial excision September 14 2016.
  - Found to have invaded sentinel axillary node –
- further surgery October 6 - complete axillary dissection right underarm - pathology clear.
- Final dx - stage 3 malignant melanoma.

---

**Eyelid Lumps and Bumps**

- 15-20% of periocular skin lesions are malignant
- Benign vs malignant:
  - Benign lesions are:
    - Well circumscribed and possibly multiple
    - Slow growing
    - Less inflamed
    - Look “stuck on” instead of invasive and deep
Benign Eyelid Lesions

- Most common types of benign eyelid lesions include:
  - Squamous papillomas (skin tags) - most common
  - Hordeola/chalazia
  - Epidermal inclusion cysts
  - Seborrheic keratosis
  - Apocrine hidrocystoma
  - Capillary hemangioma (common vascular lesion of childhood)

Is it Benign?

- H: loss of hair-bearing structures?
- A: asymmetrical?
- A: abnormal blood vessels (telangectasia’s)?
- B: borders irregular?
- B: bleeding reported?
- C: multicolored?
- C: change in the size or color of the lesion?
- D: overall diameter > 5 mm?

Benign Eyelid Lesions: Squamous Papilloma

- Most common benign lesion of the eyelid
  - Also known as fibroepithelial polyp or skin tag
- Single or multiple and commonly involve eyelid margin

Benign Eyelid Lesions: Squamous Papilloma

- Flesh colored and maybe:
  - sessile (no stalk) or pedunculated (with a stalk)
- Differentials:
  - seborrheic keratosis,
  - verruca vulgaris and
  - intradermal nevus
- Treatment is excision at the base of the lesion.
  - Radiosurgery
  - Cryotherapy
  - Chemical removal e.g. TCA

Benign Eyelid Lesions: Seborrheic Keratosis

- Also known as senile verruca
- Common and may occur on the face, trunk and extremities
- Usually affect middle-aged and older adults, occurring singly or multiple, greasy, stuck on plaques

Radiofrequency (RF) Surgery

- Radiosurgery is the passage of high frequency radio waves through soft tissue to cut, coagulate, and/or remove the target tissue
- Cuts and coagulates at the same time
- Nearly bloodless field
- Minimal biopsy artifact damage
- Quick and easy (to do and to learn)
  - Pressureless & bacteria-free incisions
- Minimal lateral heat
- Minimal Post-op pain
- Rapid healing
- Fine control with variety of tips
Benign Eyelid Lesions: Seborrheic Keratosis

- Color varies from tan to brown and are not considered premalignant lesions
- Differentials include skin tags, nevus, verruca vulgaris, actinic keratosis and pigmented BCC
- Simple excision for biopsy or cosmesis or to prevent irritation.

Benign Eyelid Lesions: Hordeola

- Acute purulent inflammation
  - Internal occurs due to obstruction of MG
  - External (stye) from infection of the follicle of a cilium and the adjacent glands of Zeiss or Moll
- Painful edema and erythema.

Benign Eyelid Lesions: Hordeola

- Typically caused by Staph and often associated with blepharitis
- Treatment includes:  
  - hot compresses (e.g. Bruder)
  - topical antibiotics (?)  
  - possibly systemic antibiotics
- Treat concurrent blepharitis

ARMOR

- Antibiotic Resistance Monitoring in Ocular Microorganisms (ARMOR)
- Approximately 42% of isolates were determined to be MRSA
- Newer fluoroquinolones have better activity than earlier generations
- Besivance has the lowest MIC values of all the fluoroquinolones
- Vancomycin is drug of choice if MRSA present
- Azithromycin had very poor activity against Staph

Benign Eyelid Lesions: Chalazia

- Focal inflammatory lesion resulting from obstruction of a meibomian or Zeis gland
- Results in a chronic lipogranulomatous inflammation

Benign Eyelid Lesions: Chalazia

- May drain spontaneously or persist as a chronic nodule
- Recurrent lesions need to exclude a sebaceous gland carcinoma
- Treatment varies from:  
  - hot compresses/massage.
  - intralesional steroid injection or
  - surgical drainage.
Benign Eyelid Lesions: Epidermal Inclusion Cyst

- Appear as slow-growing, round, firm lesions of dermis or subcutaneous tissue
- Eyelid lesions are usually solitary, mobile and less than 1 cm
- Maybe congenital or may arise from trauma

- May become infected or may rupture
- Differentials include:
  - dermoid cyst,
  - pillar cyst or
  - neurofibroma
- Treatment is complete excision to prevent recurrence.

Benign Eyelid Lesions: Capillary Hemangioma

- Most common vascular lesion in childhood (5-10% of infants)
- Females 3:2
- Periorbital may appear as a superficial cutaneous lesion, subcutaneous, deep orbital or combination
- 1/3 visible at birth, remainder manifest by 6 months
- 75% regress to some extent by 7 years

- Classic superficial lesion
  - strawberry lesion, appears as a red, raised, nodular mass which blanches with pressure
- Most common ocular complication is amblyopia
- Because regression is common, treatment is reserved for patients who have specific ocular, dermatologic or systemic indications for intervention.

Benign Eyelid Lesions: Capillary Hemangioma

- Recent evidence supports the use of oral propanolol and possibly topical timolol 0.25% for superficial hemangiomas

Benign Eyelid Lesions: Pyogenic Granuloma

- Most common acquired vascular lesion to involve the eyelids
- Usually occurs after trauma or surgery as a fast growing, fleshy, red-to-pink mass which readily bleeds with minor contact
Benign Eyelid Lesions: Pyogenic Granuloma

- Differential include Kaposi’s sarcoma
- Treatment can include use of steroid to reduce the inflammation or surgical excision at the base of the lesion.

Benign Eyelid Lesions: Xanthelasma

- Typically occurs in middle-aged and older adults as soft, yellow plaques on the medial aspect of the eyelids
- Hyperlipidemia is reported to occur in approx 50% of patients therefore screening recommended

Benign Eyelid Lesions: Xanthelasma

- Composed of foamy, lipid-laden xanthoma cells clustered around blood vessels and adnexal tissue within the superficial dermis
- Treatment includes:
  - surgical excision,
  - CO2 ablation and
  - topical trichloroacetic acid.
- Recurrence is common.

Benign Eyelid Lesions: Molluscum Contagiosum

- Common viral skin disease caused by a large DNA pox virus
- Infection usually from direct contact in children and sexually transmitted in adults
- Typical lesion appears as a raised, shiny, white-to-pink nodule with a central umbilication filled with cheesy material

Benign Eyelid Lesions: Molluscum Contagiosum

- Eyelid lesions may produce a follicular conjunctival reaction
- Patients with AIDS may have a disseminated presentation (30-40 each eyelid or a confluent mass)
- Usually spontaneously resolves 3-12 months but maybe treated to prevent spread by excision, incision and curettage, cryosurgery and electrodesiccation.

Benign Eyelid Lesions: Verruca Vulgaris

- Common cutaneous wart caused by the epidermal infection of the human papillomavirus
- More common in children and young adults and may occur anywhere on the skin
- Lesions appear elevated with an irregular, hyperkeratotic papillomatous surface
**Benign Eyelid Lesions: Verruca Vulgaris**

- Lesions along lid margin may cause papillary conjunctivitis
- Tend to be self-limiting but if treatment required cryotherapy or surgical excision.

**Lid Nevi**

- Lid nevi:
  - congenital or acquired
  - occur in the anterior lamella of the eyelid and can be visualized at the eyelid margin.
- The congenital eyelid nevus is a special category with implications for malignant transformation.
- With time, slow increased pigmentation and slight enlargement can occur.
- An acquired nevus generally becomes apparent between the ages of 5 and 10 years as a small, flat, lightly pigmented lesion.

**Congenital Nevus**

- The nevus is generally well circumscribed and not associated with ulceration.
- The congenital nevus of the eyelids may present as a "kissing nevus" in which the melanocytes are present symmetrically on the upper and lower eyelids.
  - Presumably this nevus was present prior to eyelid separation.

**Acquired Lid Nevi**

- Acquired nevi are classified as:
  - junctional (involving the basal epidermal-dermal junction), typically flat in appearance
  - intradermal (involving only the dermis), tend to be dome shaped or pedunculated
  - compound (involving both dermis and epidermis) tend to be dome shaped

**Pre-Malignant Eyelid Lesions: Keratoacanthoma**

- Appears as a solitary, rapidly growing nodule on sun exposed areas of middle-aged and older individuals
- Nodule is usually umbilicated with a distinctive crater filled with keratin
- Lesion develops over weeks and undergoes spontaneous involution within 6 mo to leave an atrophic scar
Pre-Malignant Eyelid Lesions: Keratoacanthoma

- Lesion on the eyelids may produce mechanical problems such as ectropion or ptosis.
- Differential SCC, BCC, verruca vulgaris and molluscum
- Many pathologists consider it a type of low grade SCC
- Complete excision is recommended as there are invasive variants

Pre-Malignant Eyelid Lesions: Actinic Keratosis

- Also known as solar or senile keratosis
- Most common pre-malignant skin lesion
- Develops on sun-exposed areas and commonly affect the face, hands and scalp (less commonly the eyelids)
  - Predominately white males

Pre-Malignant Eyelid Lesions: Actinic Keratosis

- Appear as multiple, flat-topped papules with an adherent white scale.
- Development of SCC in untreated lesions as high as 20%
- Management is surgical excision or cryotherapy (following biopsy)

Malignant Eyelid Lesions: Basal Cell Carcinoma (BCC)

- Most common malignant lesion of the lids (85-90% of all malignant epi eyelid tumors)
- 50-60% of BCC affect the lower lid followed by medial canthus 25-30% and upper lid 15%

Malignant Eyelid Lesions: Basal Cell Carcinoma

- Etiology is linked to excessive UV exposure in fair-skinned, ionizing radiation, arsenic exposure and scars
- Metastases is rare but local invasion is common and can be very destructive
- Diagnosis is initially made from its clinical appearance, especially with the noduloulcerative type with its raised pearly borders and central ulcerated crater
  - categorized into two basic types noduloulcerative and morpheaform
  - The morpheaform variant is typically diffuse, relatively flat with indistinct borders. This variant is more aggressive and can be invasive despite showing less obvious features.
Malignant Eyelid Lesions: Basal Cell Carcinoma

- Definitive diagnosis made on histopathological examination of biopsy specimens
  - Loss of adjacent cilia is strongly suggestive of malignancy and occurs commonly with basal cell carcinoma of the eyelid
- Surgery is generally accepted treatment of choice
  - Mohs’ surgery technique

Malignant Eyelid Lesions: Squamous Cell Carcinoma (SCC)

- Much less common than BCC on the eyelid but has much higher potential for metastatic spread
- Typically affects elderly, fair-skinned and usually found on the lower lid

Malignant Eyelid Lesions: Squamous Cell Carcinoma (SCC)

- Environmental and intrinsic factors initiate cell growth
  - Many SCC arise from actinic lesions

Malignant Eyelid Lesions: Squamous Cell Carcinoma (SCC)

- Presents as a erythematous, indurated, hyperkeratotic plaque or nodule with irregular margins
- Lesions have a high tendency towards ulceration and tend to affect lid margin and medial canthus

Malignant Eyelid Lesions: Sebaceous Gland Carcinoma

- Highly malignant neoplasm that arises from the meibomian glands, Zeis and the sebaceous glands of the caruncle and eyebrow
- Aggressive tumor with a high recurrence rate, significant metastatic potential and notable mortality rate
- Rates of misdiagnosis have been reported as high as 50%
Malignant Eyelid Lesions: Sebaceous Gland Carcinoma

- Relatively rare, 1/3 most common eyelid malignancy
- Uncommon in the Caucasian population and represents only 3% of eyelid malignancies.
  - Most common eyelid malignancy in Asian Indian population, where it represents approximately 40% or more of eyelid malignancies

- Upper lid origin in about 2/3 of all cases
- Typically affects older individuals, women more so than men
- Has also been reported in younger individuals who are immunosuppressed or who have received radiation treatment.

- Presents as a firm, yellow nodule that resembles a chalazion.
- May mimic:
  - Chronic blepharoconjunctivitis
  - Meibomianitis
  - Chalazion that does not respond to standard therapies

Malignant Eyelid Lesions: Malignant Melanoma

- MM of the eyelid accounts for about 1% of all eyelid malignancies
- Incidence been increasing and it causes about 2/3 of all tumor related deaths from cutaneous cancers
- Incidence increases with age

- Risk factors include congenital and dysplastic nevi, changing cutaneous moles, excessive sun exposure and sun sensitivity, family history, age greater than 20 and white.
- History of severe sunburns rather than cumulative actinic exposure thought to be
Malignant Eyelid Lesions: Malignant Melanoma

- Flat lesion with irregular borders and variable pigmentation typically occurring in sun exposed areas
- Confirmed diagnosis by biopsy

Malignant Eyelid Lesions: Malignant Melanoma

- Prognosis and metastatic potential are linked to the depth of invasion and thickness of the tumor
- Treatment is wide surgical excision confirmed with histological monitoring

The ABCDEs of Detecting Melanoma

A: Asymmetry
B: Border
C: Color
D: Diameter
E: Evolution

- Symmetrical
- Borders Are Even
- One Color
- Smaller Than 1/4 inch
- Ordinary Moles

- Asymmetrical
- Borders Are Uneven
- Multiple Colors
- Larger Than 1/4 inch
- Changing in Size, Shape and Color