

## **Periocular Malignancies**

Marc D. Myers, O.D., F.A.A.O.

Andrew S. Gurwood, O.D., F.A.A.O., Dipl.

**Description:** This presentation explores the diagnosis, management, and prevention of skin cancer. The importance of gross observation and slit lamp biomicroscopy of the adnexa cannot be undervalued as a means of detecting, diagnosing, and managing malignancies. Treatment modalities including surgical and non-surgical options are discussed.

### **Objectives:**

1. Epidemiology and the most common periocular premalignant and malignant lesions.
2. Develop the ability to clinically identify the signs of the most common lesions.
3. Understanding of when to make the appropriate referral for treatment.
4. Awareness of current treatment options.
5. Discussion of patient education to promote skin cancer awareness.

## **I. INTRODUCTION**

### **A. Objectives of discussion**

1. Awareness of the most common periocular malignant lesions
2. Develop the ability to clinically identify the signs of the most common lesions
3. Understanding of when to make the appropriate referral for treatment
4. Awareness of current treatment options
5. Discussion of patient education to promote skin cancer awareness

### **B. Epidemiology of skin cancer in the United States**

1. It is the most common type of cancer in the United States.
2. Over 2 million patients develop skin cancer each year.
3. Most common among fair-skinned adults between ages 50 and 80 years old.

### **C. Risk factors associated with the development of skin cancer.**

1. Chronic sun exposure, age, and fair skin are known risk factors.
2. Eye color is a relatively weak risk factor.
3. Others include exposure to ionizing radiation, infectious agents, scars, and immunosuppression.

## **II. CLINICAL DESCRIPTION AND IDENTIFICATION OF LESIONS.**

### **A. Terminology.**

1. Malignancy- a neoplasm or tumor that is cancerous opposed too benign.

2. Carcinoma- new growth or malignant tumor that occurs in epithelial tissue. May infiltrate surrounding tissue or may give rise to metastases.
3. Macula- flat lesion.
4. Papule- a superficial elevation.
5. Nodule- deep, does have some elevation above the skin that moves easily.
6. Ulcer- open sore.
7. Sessile- having a broad base, directly attached to the skin.
8. Pedunculated- having a stalk.
9. Indurated- hardened.
10. Ulcerated- sloughing of inflamed necrotic tissue from an open sore.
11. Excoriated- abrasion involving epidermis.
12. Telangiectatic- vascular lesion formed by the dilation of small blood vessels.
13. Acanthotic- increased thickness of a skin cell layer.

#### **B. Recognition of suspicious skin lesions.**

1. Lesion that patient reports as being "new" or only recently noticed.
2. An existing lesion that grows in size.
3. Any pigmented lesion, especially if it is new or enlarged.
4. Pearly telangiectatic nodule.
5. Area of diffuse hardening or ulceration.
6. Lid notch or retracted area.
7. Madarosis.

#### **C. The "A-B-C" (D-E) rule.**

1. **A**symmetric shape.
2. **B**orders are irregular.
3. **C**olor is mottled, not uniform.
4. **D**iameter of the lesion.
5. **E**levation of the lesion.

### **III. THE MOST COMMON PERIOCCULAR MALIGNANCIES.**

#### **A. Basal cell carcinoma (BCC).**

**1. The most common of the periocular malignancies. (90% of all cases)**

- a. 99% of cases involve Caucasians.
- b. 95% occur in patients' age 40 to 79 years.
- c. 80 to 90% of cases involve the head and neck. 10% of those involve the eyelids.
- d. 60% of cases have a second lesion elsewhere on the face.

**2. Patient symptoms and the signs of BCC.**

- a. Symptoms may include a crusted lesion that may bleed, eye irritation, FBS due to entropion or ectropion, and epiphora.
- b. Most common location of the lesion, LL > medial canthus > UL > lateral canthus.
- c. Lesions tend to be slow growing, low incidence of METS.

**3. Clinical sub-types of BCC.**

- a. Nodulo-ulcerative is the most common.
- b. Sclerosing (morpheaform).
- c. Pigmented.
- d. Fibroepithelioma.
- c. Superficial.

**4. Differential diagnoses.**

- a. Premalignancy such as keratoacanthoma (KA).
- b. Other malignancies such as squamous cell carcinoma, sebaceous cell carcinoma, and melanoma.

**B. Squamous cell carcinoma (SCC).**

**1. Accounts for 9% of eyelid malignancies.**

- a. Fair skin, elderly, excessive UV exposure over the course of a lifetime.
- b. Younger patients, consider UV sensitivity or immunocompromised.

**2. Patient symptoms and signs of SCC.**

- a. Symptoms may include pain, burning and numbness.
- b. The lesion may appear as an indurated, opaque nodule, with or without ulceration.
- c. Location UL : LL (1.4 : 1.0).
- d. Most commonly involves the conjunctiva, cornea, and mucous membranes.
- e. Lesion may involve lymph glands and/or nerves of the head and neck. Signs of nerve involvement may include facial paralysis, reduced corneal reflex, and numbness. The Trigeminal and Facial nerves are commonly involved.

### **3. SCC and METS.**

- a. Rate of involvement is 1.3% to 21.4%.
- b. Usually a late development in advanced cases.
- c. Rate depends on depth of invasion, lesion size, location, histology, etiology, growth rate, immunosuppression, and perineural invasion.
- d. More associated with non-actinically induced lesions.

### **4. Differential diagnoses.**

- a. Premalignancies such as actinic keratosis (AK), KA, and Bowen's disease.
- b. Other malignancies such as BCC, sebaceous cell carcinoma, and melanoma.

## **C. Sebaceous cell carcinoma.**

### **1. Accounts for 1% to 5% of eyelid malignancies.**

- a. Generally isolated to the ocular adnexa.
- b. Most common in the 6<sup>th</sup> and 7<sup>th</sup> decade of life.
- c. Effects women > men.
- d. No predilection to race.

### **2. Patient symptoms and signs of sebaceous cell carcinoma.**

- a. Patients may complain of a slow growing, firm, painless lesion.
- b. Most common on the UL.
- c. Signs may include madarosis, unilateral blepharitis, irregular lid margin, increased vascularity, any lesion associated with lymphadenopathy.
- d. May arise from meibomian gland, gland of Zeiss, sebaceous gland, or caruncle.

### ***3. Sebaceous cell carcinoma and METS.***

- a. Highly metastatic and must be considered lethal.
- b. The presence of METS is associated with a 50% to 67% five-year mortality rate.
- c. Even in the absence of METS there may be up to a 15% five-year mortality rate.

### ***4. Differential diagnoses.***

- a. Must differentiate from recurrent chalazion and chronic blepharitis.
- b. Other malignancies such as BCC, SCC, and melanoma.

## **D. Malignant melanoma (MM).**

### ***1. Accounts for 2% to 3% of eyelid malignancies.***

- a. Almost exclusive to Caucasians.
- b. The incidence of the cancer seems to be increasing, doubling every decade.
- c. 20% of patients are younger than age 40 years.

### ***2. Patient symptoms and signs of MM.***

- a. Patient may complain of a bleeding or ulcerated sore.
- b. Lesion may be nodular or superficial spreading.
- c. May be sessile or pedunculated.
- d. Melanoma is defined as a darkly pigmented mole or tumor of the skin.
- e. A pigmented eyelid neoplasm is 10 times more likely to be a pigmented BCC.
- f. 40% of MMs are non-pigmented.

### ***3. MM and METS.***

- a. May occur as a primary lesion or may metastasize from a distant melanoma.
- b. Lesions involving the margin of the eyelid seem to have a worse prognosis.
- c. Prognosis also correlates with depth of invasion and type of melanosis.

### ***4. Differential diagnoses.***

- a. Benign lesions of the skin including solar lentigo, melanocytic nevi, nevus of Ota.
- b. Non-pigmented BCC.

#### **IV. TREATMENT OPTIONS**

##### ***A. Making the appropriate referral.***

1. Dermatologist.
2. Oculoplastics or plastic surgeon.

##### ***B. Diagnostic testing.***

1. Incisional, excisional, or punch biopsy.
2. Biopsy with lipid stain.

##### ***C. Treatment modalities.***

1. Surgical excision- Mohs micrographic surgical technique, "modified Mohs", or frozen section biopsy.
2. Radiation therapy.
3. Cryotherapy.
4. Chemotherapy.
5. Newer therapy including PDT and interferon.

#### **V. PATIENT EDUCATION.**

##### ***A. Early warning signs associated with suspicious lesions.***

##### ***B. Skin cancer prevention.***

1. Limit exposure to strong sunlight by avoiding sun exposure between 10 AM - 4 PM.
2. Keep infants out of the sun completely.
3. Sunburns on children are the most hazardous.
4. Regular use of sunscreen with at least an SPF of 15.
5. When outdoors for prolonged periods of time use sunscreens with an SPF > 30.
6. In people with a known history of sun sensitivity use a SPF > 35.
7. Reapply sunscreens frequently (every 2 hours) and liberally.
8. Realize that there is no such thing as healthy sunburn. This includes tanning beds.

9. Wear protective clothing when exposed to sun light. May include, a shirt with long sleeves, a broad brimmed hat, or sunglasses.
10. Seek medical attention for severe sunburns.