Benign Skin Growths and Skin Biopsy Techniques
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No disclosures to report.

Objectives

- Identify common benign skin lesions.
- Perform local anesthesia with minimal pain and maximum effectiveness for patients.
- Evaluate options for skin biopsy, including shave, punch, excisional and incisional biopsies.
- Compare appropriate biopsy selections for skin lesions depending upon the type of lesion and its expected depth.

Choosing the Type of Biopsy

- Shave
- Punch
- Fusiform (Ellipse)
- Incisional (incomplete)
Local Anesthesia

- To decrease pain of injection:
  - Stretch skin
  - Use smallest gauge needle
  - Aerosol refrigerant
  - Inject through pore, scar, or follicle
  - Pause after insertion, ask patient to speak
  - Buffer with NaHCO₃ at 10:1 to 4:1 ratio
  - Inject slowly
  - Not cold

Common Benign Tumors/Growths

- Seborrheic keratoses with dermatosis papulosis nigra
- Keloids
- Chondrodermatitis nodularis chronica helicis
- Cutaneous horns
- Acrochordons -- skin tags
- Cherry angiomas
- Pyogenic granulomas
- Dermatofibromas
- Sebaceous hyperplasia

Seborrheic Keratoses

- Stuck-on appearance
- Back, trunk, face, abdomen, extremities
- Dermatosis papulosa nigra
- Horn cysts, surface cracks
- What is the differential diagnosis?

Courtesy of E.J. Mayeaux, Jr., MD
Differential Diagnosis of SK

- Melanoma
- Pigmented BCC
- Solar lentigo
- Wart
- Pigmented actinic keratosis

Seborrheic Keratoses - Diagnosis

- High suspicion of melanoma
  - Full thickness biopsy
  - punch, excision, incision
  - Shave biopsy if it appears thin and you can get under the pigment (or just shave one part)
- Low suspicion melanoma
  - Believe it is a SK or another benign dx
  - Shave

What is the differential diagnosis?
Seborrheic Keratoses - Treatment

- OK to treat with destructive method if you are certain of the diagnosis
- Cryotherapy with 1 mm halo - fast and easy
- Electrodessication/Curettage - assures complete removal without taking the normal tissue below
- Shave excision - best technique if there is a doubt about the diagnosis
- Send to the pathologist
Dermatosis papulosa nigra

- Seborrheic keratosis
- Face and cheeks
- African-Americans and dark-skinned Asians and Polynesians

Keloids or Hypertrophic Scars

- Keloids - grow beyond the original injury
- Keloids - more likely to be symptomatic
- Same treatment modalities

Keloids - Injection

- Steroids – triamcinolone 10mg to 40mg/cc
- Use 25 - 27g needle with Luer-lok Syringe
- Get right into the center of the keloid
**Keloids - Injection**

- Start with lower triamcinolone 10mg/cc
- Titrate up to 40mg/cc in subsequent injections if the initial injections were not fully effective and no atrophy occurred
- Can repeat injections every 2 - 4 weeks

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**Keloids - Excision**

- 1% lidocaine with epinephrine
  - Shave excision
  - Aluminum chloride and/or electrosurgery for hemostasis
  - Inject Kenalog 40mg/cc - to prevent regrowth at time of excision and in one month
- Or
  - Elliptical excision
  - Inject Kenalog 40mg/cc - to prevent regrowth at time of excision and in one month

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**Chondrodermatitis Nodularis Chronica Helicis**

- **Painful** 2 to 6-mm nodular lesions on the pinna or helix
- Often one only
- Develops a central keratosis
- 90% in men over 40
- **Shave bx** if diagnosis is uncertain

*Courtesy of Richard Usatine, MD*
Chondrodermatitis nodularis helicis treatment

- **Intralesional** triamcinolone (5-10mg/cc)
- **Curettage** and desiccation
- **Surgical excision** with curettage or cutting of the involved cartilage then close with 5-0 sutures

Courtesy of Richard Usatine, MD
Cutaneous Horn

- Benign, premalignant or malignant
- Associated with
  - Warts
  - Seborrheic keratosis
  - Actinic keratosis
  - SCC

Courtesy of Scott Bergeaux, MD

Cutaneous Horn

Cutaneous Horn - Treatment

- *Shave* excision and send to pathologist
- If benign may *freeze the remainder* of the lesion

Courtesy of Scott Bergeaux, MD
Skin Tag Removal

- **Freeze** them – cryotherapy with forceps or Cryotweezers
- **Snip** them - snip excision with sharp iris scissors
- **Zap** small ones - electrosurgery
- **Cut** off the large ones – scalpel or dermablade
Snip Excision of Skin Tags

- Snip excision - reliable method
- Snip it off with sharp iris scissors
- Hemostasis with aluminum chloride or Monsel's solution
Eyelid Acrochordons

- Electrosurgical loop excision
- Cryotweezers

Courtesy of Richard Usatine, MD
Fibroepithelioma Removal

- If it has a large base
  - Use lidocaine with epinephrine
  - Shave off with #15 scalpel or Dermablade
  - OR
  - Perform narrow margin excision and closure
Cherry Angiomas

- Cherry angiomas are common with aging
- Completely benign
- Cosmetic issue only unless bleeds (often with scratching)

Cherry Angioma Treatment

- Electrosurgery
  - At lowest setting can do without anesthesia
- Shave excision with aluminum chloride or electrocautery
- Curettage and electrodesiccation
- Pulsed dye laser with a green light source
- Cryotherapy – less controlled
Pyogenic Granuloma

- Lobular capillary hemangioma
- Very vascular
- Cut off and burn the base
- Send to path
  - Rule out amelanotic melanoma

Pyogenic Granuloma (Lobular Capillary Hemangioma)

Pyogenic Granuloma
**Pyogenic Granuloma**

- Often have a tendency to recur so may be difficult to "cure".

**Dermatofibromas**

- Benign scar-like nodules
- Often have a hyperpigmented halo
- Most commonly found on the legs of adults
- Pinch sign - central retraction with pinching

**Courtesy of Richard Usatine, MD**
Dermatofibromas - Treatments

- Punch excision for small lesions
- Larger lesions may require a fusiform excision
- Cryotherapy is one alternative

Leaving a Punch Biopsy Open

- When accompanied by careful instructions regarding wound care and the use of occlusive dressings, healing of 4 mm or smaller punch biopsies by secondary intention was just as good as suturing.
- Blinded observers saw relatively little difference, but unblinded patients preferred suture closer of the larger 8 mm punch biopsy sites.
- InfoRetriever 2006
Sebaceous Hyperplasia

- On the face of adults
- Increase with aging
- Yellow coloration
- Stable size
- Umbilication without ulceration

Differentiating Sebaceous Hyperplasia from Nodular BCC

- Squeeze to look for sebum
- Are there many in a cluster?
- Shave biopsy if not certain
- If many, shave the most suspicious one
Sebaceous Hyperplasia

- Electrodesiccation
- Cryotherapy
- Shave
- Pulse dye laser
- Isotretinoin (Accutane) if severe

Courtesy of Richard Usatine, MD

Sebaceous hyperplasia

Courtesy of Richard Usatine, MD

Sebaceous hyperplasia

Courtesy of Richard Usatine, MD
Less Common Benign Tumors

- Pilomatricoma
- Eccrine poroma
- Juvenile xanthogranuloma
- Syringoma
- Trichoepithelioma
- Spiradenoma
- Hydrocystoma
Pilomatricoma

Composed of nevoid tissue

Histologically:
- Epidermal inclusion
- Melanin pigmentation
- Sebocyte-like cells

Differential diagnosis:
- Nevoid basal cell carcinoma syndrome (NBCCS)
- Ankylosis spondylitis

Clinical considerations:
- Criteria for malignancy:
  1. Depth of invasion
  2. Pigmentation
  3. Millimeter rule

Management:
- Surgical excision
- Radiation therapy
- Chemotherapy

Prevention:
- Educate patients on early detection
- Regular skin examinations

References:
- American Academy of Dermatology
- American Cancer Society

Images courtesy of Richard Usatine, MD.
It is important to recognize the variety of benign tumors/growths that exist. A biopsy may be needed to confirm your impression and rule out a malignancy. Use various surgical and destructive methods to treat these benign growths.