Benign Cutaneous Neoplasms

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Objectives:

1. Identify common benign cutaneous neoplasms.
2. Identify the etiology, pathophysiology and treatment of common benign cutaneous neoplasms.
3. Synthesize the information to identify common benign cutaneous neoplasms.
4. Discuss pharmacologic management of common benign cutaneous neoplasms.
Disclosures:

- The speaker has no relevant conflicts of interest for this presentation.
Kathy’s rule number one

- My number one rule..
- If you don’t know what it is, do not treat or biopsy, REFER.
Kathy’s Rule Number 2

- You cannot learn the malignant without learning the benign.
Seborrheic Keratosis

Warty Like

Irregular borders

Stuck on appearance

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The most common cutaneous neoplasm.
Correlated with senescence and genetics.
Increase after age 40.
Associated with failure of keratinocyte repressor gene (FGFR3 and P13K genes).
Common sites face, chest, back, and friction sites.
Pigmented Seborrheic Keratosis

Deep Gyri and Deep Pigment

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These can be misdiagnosed do not miss a melanoma or other cutaneous neoplasm. Be sure before you treat.

Dermoscopy is an important adjunct in the evaluation of many seborrheic keratosis.
Reticulated Seborrheic Keratosis

Pearly

© Kathleen Haycraft
Again, confounding at times

- Easy to see that this one could be confused with a collision tumor
Cerebriform Seborrheic Keratosis

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Appearances vary

- Lovely example of the sulci and gyri associated with SK.
These occurred all of a sudden after a diagnosis
History of this patient

- This gentleman was diagnosed with genitourinary cancer (with mets). He developed this suddenly and did not have a history.
- This is controversial in the literature but in my personal practice, it certainly warrants a thorough H&P.
Appearance and etiology

- Stucco keratosis are usually found on the lower extremities.
- Frequently referred to as “barnacles”.
- More common in Caucasian and associated with lots of UV exposure.
Dermatosis Papulosa Nigracans

Pinpoint and small SKS in dark skin

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DPN

- Variant of SK.
- Smaller in size.
- More common in younger age and in black race.
Treatment of SK

- Treatment of SK include:
  - Cryotherapy should be used with care to prevent scarring
  - Cosmetic bars that include pumice, polyethylene glycol, and hydroxy acids to reduce size and prevent reformation.
  - No cure.
  - Laser therapy may be used.
Acanthosis Nigricans

Thick velvety darkened skin that is rough to touch

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Etiology and Pathophysiology

- Associated with hyperpigmentation and hyper-keratinization in skin folds and creases.
- Associated with metabolic syndrome, multiple endocrine including DM, hypothyroid, Addisons.
- More common with higher Fitzpatrick score.s
- The stratum spinosum is thickened on path.
- Patients feel they are dirty.
Treatment

- Exercise.
- DC offending medications e.g., oral contraceptives or growth hormone.
- If a malignancy is involved, excision or treatment of the tumor will resolve the lesions.
To improve the appearance of the skin, the following agents (not FDA approved) may be applied to the lesions:

- topical retinoids
- 20% urea, alpha hydroxyl acids, and salicylic acid
- Antibacterial soaps may help with odor.
- Oral retinoids, fish oil, and metformin have shown some promise but are not FDA approved.
- Laser and dermabrasion will improve the appearance of the skin but is usually not reimbursed by insurance.
Pearls

- Pearl: Signs of malignancy include:
  
  Rapid, pruritic, and extensive acanthosis nigricans in a patient of normal or low BMI
Sebaceous Hyperplasia

Multiple soft to the touch papules with central dell

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Etiology

- Common disorder of middle age adults.
- The sebaceous glands are enlarged.
- More prevalent in elderly, transplant patients, pregnancy, high UV exposure.
- Sebaceous hyperplasia has a higher prevalence in older individuals, transplant patients, pregnancy, and those with sun exposure.
- Cyclosporine is an etiologic agent in some cases of prominent sebaceous hyperplasia.
Pathophysiology

- Sebaceous glands become enlarged.
- Thought to be related to levels of circulating androgens associated with aging.
- Cofactors include excessive exposure to sun or other forms of radiation.
- The gland is enlarged with an increase number of basal cells.
- Histological examination reveals superficial sebaceous lobules surrounding a dilated pore or follicle.
Appearance

- Soft to the touch.
- Single or multiple lesions.
- Central dell or umbilication surrounded by crown vessels.
- BCCs are not as soft, do not have the dell and have vessels that are arborizing throughout.
- **Pearl:** Commonly confused with BCC.
Treatment

- Topical and oral retinoids (not FDA approved for this use).
- It is important to note that the lesions frequently recur after discontinuation of therapy.
- Phototherapy (with combined use of 5-aminolevulinic acid) is helpful in some cases. This is not FDA approved and often is not reimbursed by insurance.
- Destructive agents including: photo-therapy, laser, cryo-therapy, shave biopsy, cauterization or electro-desiccation, topical chemical treatments (BCA and TCA), laser treatment, shave excision, and excision.
- Complications of these nonspecific destructive therapies include atrophic scarring or transient or permanent changes in pigmentation that may be less desirable than the original lesion.
Syringoma

Soft fleshy translucent papules

© M Bobonich
Syringoma are located in the superficial dermis with numerous ducts embedded in a sclerotic stroma.

Syringoma are benign adnexal neoplasms eccrine (sweat gland) tumors.
Appearance

- Syringoma present as flesh, translucent or yellow color dermal papules.
- Usually small (often 1-3mm) and located on the eyelids, axilla, umbilicus, or vulva.
- Syringomas are more common in women and have an onset around puberty.
- Most are asymptomatic but patients may report pruritus.
Treatment

- Treatment is not necessary for these benign tumors.
- If treatment is requested for cosmetic enhancement, modalities include: scissor excision, electrodessication, electrocautery, laser, cryosurgery, trichloroacetic acid, dermabrasion, topical atropine, topical retinoids, and oral isotretinoin (not FDA approved).
Milia

Small keratin filled sebaceous cyst

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Etiology

- Milia are small keratin filled small sebaceous cysts that occur commonly in newborns (resolve spontaneously) and occur on adults predominately around the eyes. 1-2 mm domes.
- On the palate they are referred to as Epstein pearls.
- Eruptive milia are rare.
- Secondary milia may occur after trauma e.g., dermabrasion, sunburns, tattoos, contact dermatitis, radiotherapy, skin grafts, and blistering diseases.
Treatment

- Topical retinoids.
- Hyfrecation.
- Dermabrasion.
- Cosmetic procedure.
Acrochordae (Skin Tags)

Soft flesh colored pedunculated
Acrochorda
Appearance

- Small, soft, pedunculated, papules that are distributed in skin folds and friction sites. They may be hyperpigmented or flesh colored.
- Rare cases of melanoma have been reported at the base.
- Examine before removal.
- Asymptomatic unless irritated.
- Synonyms include skin tags.
- Prevalence 50% of population.
Etiology/pathophysiology

- Histological examination reveals a fibro vascular core covered by normal epidermis.
- The plural form is acrochorda.
- Have been linked to HPV 6 and 11. It is not known if this is pathogenic or opportunistic.
- A genetic component is thought to exist. There is a gender preference for females.
- Morbid obesity and metabolic syndrome
Rarely associated with

- Birt-Hogg-Dube
- PCOS
- Acromegaly
Fibro-epithelial Polyp

Very large skin tag

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Neurofibroma
Neurofibroma

- Isolated neurofibromas do not have a clinical significance.
- Buttonholing.
- Multiple neurofibromas are associated with neurofibromatosis
  3 NFs, more than 6 café au lait spots should prompt referral for evaluation for Albright's or Neurofibromatosis
Prurigo Nodularis
Appearance

- Solitary or multiple nodules may be distributed on the extremities or neck.
- Firm, reddish-purple and vary in size from pea-sized or larger.
- As the lesions progress, the lesions can coalesce or become fissured and verruciform.
- Lesions may be asymptomatic or be associated with variable levels of pruritus.
Etiology/Pathophysiology

- Prurigo Nodularis (PN) is a lesion that occurs due to repeated scratching or rubbing on the skin. It is also known as “picker’s nodules” or Hyde nodules.
- Associated with: atopic dermatitis, HIV, hepatic disease, anemia, renal disease, celiac disease, insect bites, stress, and lymphoproliferative disease.
- H&P may be indicated.
Treatment

- Treatment is challenging as the lesions last for years and are resistant to many treatment modalities.
- Repeated intra-lesional steroid therapy may be effective in some.
- Antihistamines therapy should be considered for PN with associated pruritus.
- Cryotherapy can soften the lesions and may be used adjunctively with other treatments. Steroid impregnated tape may be of some value. Vitamin D3 ointment, calcipotriene ointment, or calcineurin inhibitor ointments are utilized with some level of success. There is no FDA approved treatment for PN.
Cryotherapy can soften the lesions and may be used adjunctively with other treatments.

Steroid impregnated tape may be of some value. Vitamin D3 ointment, calcipotriene ointment, or calcineurin inhibitor ointments are utilized with some level of success.

There is no FDA approved treatment for PN.
Clinical Pearl

- If at a dermatome consider disc disease.
- If persistent consider neurotic excoriations.
- If it is resistant to treatment consider a thyroid, anemia, renal, lymphoma, leukemia, or other malignancy. These patients need a comprehensive work up.
Dermatofibroma

The lesion has outer pigment and inner stellate

Fitzpatrick sign

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Dermatofibroma

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Etiology/Pathophysiology

- Superficial benign histiocytoma.
- Round or oval soft tissue nodules composed of spindle cells that are haphazardly arranged and extend deep into the fat.
- Etiology is unknown however they are associated with minor trauma to the skin (i.e. insect bite, nick in the skin, etc).
- There is an increase incidence in women (this may be related to shaving of legs).
Appearance

- Asymptomatic but occasionally pruritic or tender.
- Small, firm, exophytic papule on the lower extremities of adults.
- The color may be flesh or have tan or brown pigmentation.
- Hypertrophy of the overlying epidermis may exist.
- Dermatofibromas characteristically have a dimple sign (Fitzpatrick sign) that occurs when placing lateral pressure with the thumb and forefinger.
Steroid injections and cryosurgery have had limited success in the treatment of DF.

If the lesion is removed, a complete deep excision is recommended to avoid recurrence.
Multiple dermatofibromas (greater than 6) are associated with an altered immune state. The most common is systemic lupus but other disorders include: myasthenia, AIDS, and malignancies.

Even though benign, overlying epidermis has increased risk for BCC.
Corn

Thick hyperkeratinization

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Both are thick hardened keratin layer that develops as a protective mechanism.

Calluses occur due to pressure across a broad tissue area.

Corns develop at more intense pressure points.

Corns may occur within calluses. They appear yellowish or gray and are rough and thick to the touch.

Calluses tend to develop on the hands, feet, elbows, and knees.
Callus

Broad Areas of Thickened Keratin

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Keloid

Scars extend beyond original border

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A keloid is a scar that is initially composed of type 3 collagen and later in its evolution is replaced by the proliferation of type 1 collagen.

- Keloids contain thicker collagen fibers that are tightly packed together.
- Hypertrophic scars exhibit randomly organized collagen in modules of fibroblasts and small vessels.
- Hypertrophic scars stay in the border of the original injury whereas keloids expand beyond the original injury site.
Hypertrophic Scar

Scar within border thickened and discolored

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Treatment for hypertrophic scar/keloid

- Intralasional steroids.
- Intralasional cryo.
- Cryo.
- Laser.
- Imiquimod.
- Specific locations can be challenging: Face, ears, chest (post CABG).
Chondrodermatitis Helicus Nodularis

Crusted ulcerated painful

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Etiology

- The ear has modest blood supply and very little subcutaneous tissue for cushioning.
- Predisposes the ear to ischemia from pressure.
- Gender preference for men on helical rim.
- The antihelix is more frequently involved in females.
- Sixty percent of lesions occur on the right ear.
Appearance

- a tender chronically inflamed nodule of the helical rim or anti-helix.
- The nodules may have a scale that when removed reveal a shallow central erosion.
A shave biopsy may be curative as well as diagnostic. The differential diagnosis includes squamous cell carcinoma, basal cell carcinoma, and actinic keratosis.

Emollients, broad rimmed UV hats and avoidance of the sun may be helpful.

Treatments may include change of sleep position or pillows with ear slots.
Angioma

Asymptomatic slowly developing

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Etiology/Pathophysiology

- Most common vascular malformation.
- Occur in the third decade and are common on the trunk.
- Increase during pregnancy and involute in postpartum.
- Lesions are formed from clusters of capillaries that create papules ranging from 3-5 mm. Red melanomas may present as a similar lesion. Examination with dermoscopy will assist in the diagnosis. If any angioma rapidly develops, it should be referred to a dermatology practitioner.
When the lesions are associated with hyperkeratosis of the overlying epidermis, they are referred to as angiokeratomas.

The most common distribution is the scrotum (Fordyce spots) and vulva.

The lesions may be removed by scissor excision, electrodessication, laser, or curettage.

Patients need to be reassured and few request treatment after reassurance.
Fibrous Papules (Angiokeratomas)

Hard papule
Treatment

- When lesions occur with hyperkeratosis they are referred to as angiofibromas (Fordyce spots of scrotum and vulva).
- The lesions may be removed by scissor excision, electrodessication, laser, or curettage.
Venous Lake

Easily compressible and blanches

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A venous lake (phlebectases) is a dilated venule that presents as a dark blue patch to papule.

The lesion can be easily compressed and when viewed under compression (glass slide or dermoscopy) it will blanch.

Venous lakes are most frequently distributed on the lips, face, neck, hands, and ears of patients over 50 who have had excess solar radiation.
Treatment and Pearl

- Treatments include electrodessication, excision, laser, and cryosurgery. They may be mistaken for melanoma.
- Any venous lake that develops rapidly should be referred to a dermatology practitioner.
Pyogenic Granuloma

Previous injury, rapid developing, collarette, bleeds easily
Vascular malformation preexisting new lesion, bleeds easily, collarette
Etiology

- Acquired vascular lesion of the skin and mucous membranes.
- When the lesion occurs on the gum (common in pregnancy) it is referred to as an epulis.
- Occur more often in children and young adults.
- Occurs in cysts of acne patients treated with isotretinoin.
- Often develops in response to injury or hormones.
Pathophysiology

- Trauma results in an inflammatory and hyperplastic reaction.
- Granulation tissue proliferates.
- Histologically it is a lobulated capillary hemangioma with septated connective tissue.
Appearance

- Rapidly growing dome shaped vascular lesion that usually follows a trauma.
- Lesions are prone to bleeding.
- PG is red, pink, or occasionally brown and appears to have a moist fragile surface.
- They have a collarette at the base of the lesion.
Treatment

- Excision (biopsied) with electrodessication of the base.
- Imiquimod under occlusion has been successful in some cases (not FDA approved).
- Laser therapy is helpful for recurrent lesions and oral steroids have been used to treat giant PGs that recur.
Clinical Pearls

- If PGs occur during pregnancy they will usually resolve postpartum.
- Reoccurrence is possible but is not common.
- Missed diagnosis of melanoma is the highest risk complication.
Epidermoid Cyst

Compressible expresses white discharge

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Etiology/Pathophysiology

- Lesion that develops due to excess keratin accumulation in the epidermis.
- The fatty, white, cheesy material found in the cyst is composed of keratin and not sebum.
- The term sebaceous cyst is often used. As the contents of the cyst are keratin and not sebum, this term is a misnomer. True sebaceous cysts are steatocystomas.
Appearance

- Compressible cyst that ranges from 5 mm to 2 cm.
- Surface is usually shiny and smooth due to the upward pressure.
- They are freely movable over underlying tissue.
- Pilar (Wen) cysts are epidermoid cysts of the scalp.
Etiology/Pathophysiology

- Predilection for the face, back, scalp, ears, upper arms, scrotum, and chest.
- Can occur anywhere except for the palms and soles.
- Hereditary causes include Gardner syndrome and basal cell nevus syndrome.
- May result from deep penetrating injuries.
- There is no racial predilection, male gender preference, and occur in the third or fourth decade of life.
Treatment

- Excision or punch.
- Need to remove all of the cyst sac.
- Multiple epidermoid cysts with actinic damage are very difficult to remove.
Favre Rocochet

Actinic comedones, deep epidermoid cysts

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Clinical Pearl

- If removed, all cysts need to be biopsied.
- The next example
Sebaceous Cyst with SCC

Rapid growth of cyst, painful, expresses white material

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Lipoma

Soft mobile subcutaneous mass

© Kathleen Haycraft
Digital Myxoid Cyst

Compressible near joint, deforming nail bed
Digital Myxoid Cyst

- Benign ganglion cysts of the digits.
- Occur more frequently on the hands but also occur on the toes.
- They appear as a solitary papule/nodule of a digit and are usually flesh colored. The lesions are firm but fluctuant and are dome shaped.
Treatment

- Patients may attempt to “drain” the lesion and a clear fluid may be extracted.
- Osteoarthritis is frequently linked.
- Treatment should be directed by experienced practitioners and may be supportive or surgical.
- The lesions may be injected with steroids or softened by cryo (not FDA approved).
Mucocele

Soft papule that is fluctuant

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Etiology/Appearance

- Mucoceles are benign mucous filled cysts of the mucosa.
- It is a swelling of the connective tissue and retention of mucin due to a ruptured salivary gland.
- The papules/nodules may vary in size from a mm to several centimeters.
- Upon palpation, they are fluctuant and can be firm. They have a slight bluish tinge under a transparent surface.
Treatment

- Practitioners need awareness of the lesion less they confuse them with a more serious lesion.
- Some resolve on their own and some require surgical excision.
Xanthelesma/Xanthoma

Yellowish patch or papule

Clear demarcations

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Etiology/Appearance

- Xanthomas develop from a deposition of cholesterol rich materials.
- Yellowish in color due to the yellow color of cholesterol. They are common
- Usually associated with hyperlipidemia. They can occur anywhere on the body and when a xanthoma occurs near the eyelids it is referred to as a xanthelesma. The lesion is soft and usually has sharp demarcations.
Appearance/Treatment

- The lesion is soft and usually has sharp demarcations.
- A biopsy (punch) may be done to confirm the lesion but they often recur. It is wise to check the patient’s lipid level.
REFERENCES:

Let’s Have Some Fun
Small red spot been there awhile

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Been forming over two years
Found on a mission trip
Can scrape off with fingernail and comes back
I feel dirty but it won’t come off
My itchy legs
Ear piercing sight...no longer uses

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Skin tags that I want off

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I have been itching this spot for one year

© Kathleen Haycraft
Rapidly grew after a trauma
Been there awhile...used to have acne

© Kathleen Haycraft
Slowly growing for years

© Kathleen Haycraft
White spot...is it ok?
Been there awhile...is it OK?

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Favorite Sites

- Websites for patients and providers:
  - [http://www.mayoclinic.com/health/DiseasesIndex/DiseasesIndex](http://www.mayoclinic.com/health/DiseasesIndex/DiseasesIndex)
  - [http://www.dermnetnz.org/sitemap.html](http://www.dermnetnz.org/sitemap.html)
Plans become a reality
Thank you.

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