Dermatology Board Review

A 39 yo man presents with a painful rash on his shins . This has been present for the past two weeks. He has also had ankle pain and fevers. Slide as shown. What would be the most appropriate test?

A) Chest X-Ray

B) Blood cultures

C) ANA

D) ESR

E) CBC

Erythema Nodosum Etiology

- Sarcoid
- IBD
- Drugs- OCP, Sulfa
- Post Strep
- Primary TB
- Deep fungal infections (Cocci,histo)
- Idiopathic

Lofgren's Syndrome

- Fever
- Erythema Nodosum
- Arthralgias/arthritis
- Bilateral hilar adenopathy

Erythema Nodosum Treatment

- NSAIDS
- Prednisone
- Potassium Iodide

A 29 yo man presents with rash on his hands and arms. He reports similar episodes 4 other times in the past 18 months. What is the most useful intervention to help prevent future episodes?

A) Penicillin

B) Stop all NSAID use

C) Acyclovir

D) Prednisone

E) Phlebotomy

Erythema Multiforme
Etiology

- In children, about 50% due to infection trigger
- In adults, most cases between 20-40
- Drugs
  - Penicillin
  - Dilantin
  - Sulfa
- HSV
- Mycoplasma

A 47 yo man with a history of alcohol abuse presents with skin lesions (Slide). These have been present for the past 3 months and are worse when he has increased sun exposure. Which of the following tests should be obtained?

A) ANA

B) FA for HSV

C) Colonoscopy

D) Hepatitis C

E) SPEP

Porphyria Cutanea Tarda Hepatitis C

- HCV antibodies in 60-80% of non-familial PCT
- Trigger factors and enzymatic defect needed for clinical PCT
  - alcohol, estrogens, iron overload and HCV
- Patients with PCT should be tested for HCV

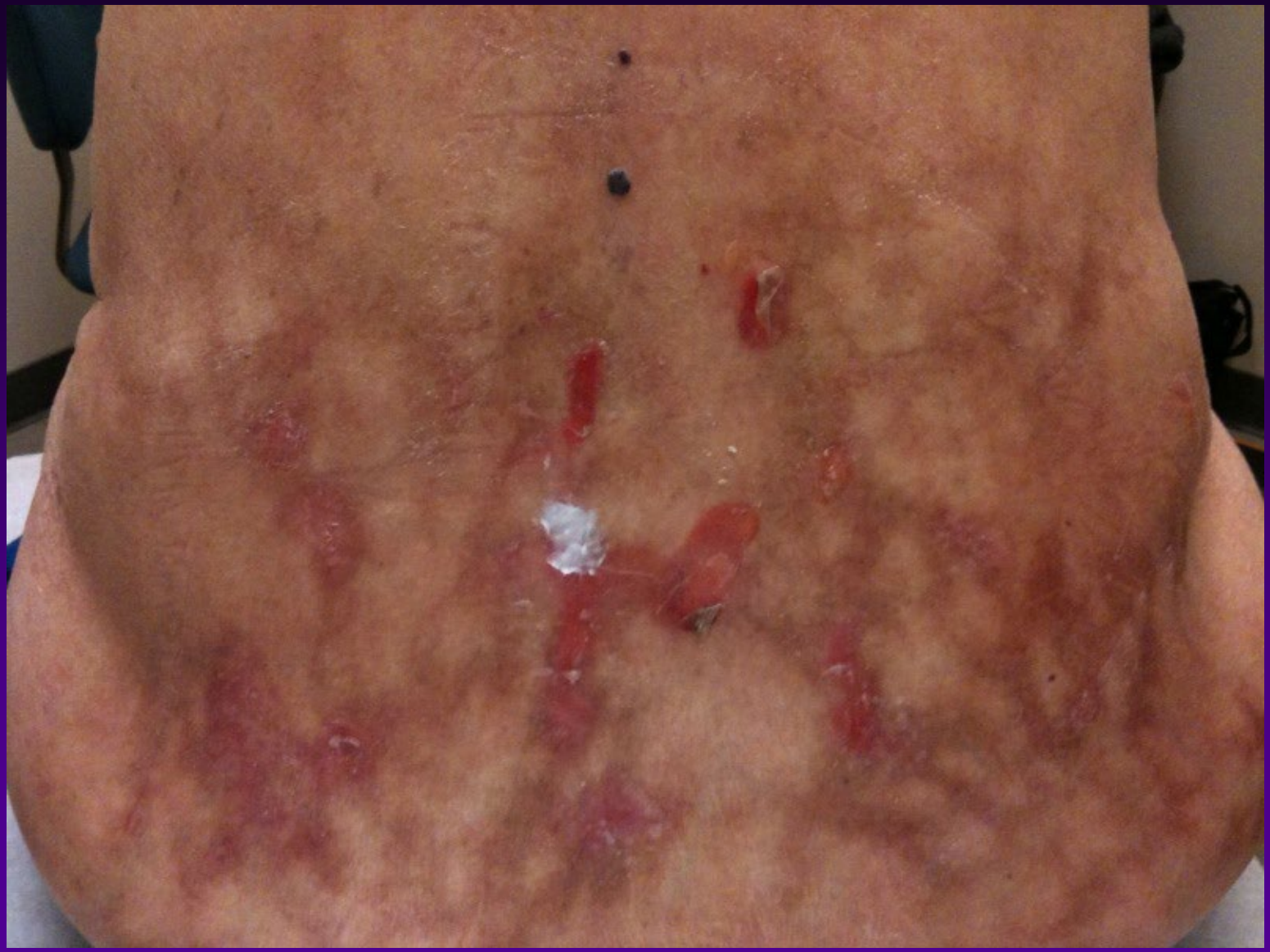
Cryoglobulinemia Hepatitis C

- Mixed cryoglobulinemia found in ~50% of Hep C patients
- 2-5% of chronic active Hepatitis C patients develop cutaneous vasculitis

- A 50 yo woman presents with back pain . On exam you see this finding.

- What would be the most appropriate next step?

A) Check ANA
B) Check anti cardiolipin antibodies
C) Start prednisone
D) Check Hepatitis C antibody
E) Effective treatment for back pain



Erythema Ab Igne

- “Redness from the fire”
- Occurs with heat exposure, usually heating pads, hot water bottles or space heaters. Now also described with lap tops
- Most important history is recent heat exposure

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Erythema Ab Igne From a Laptop

- A 46 yo man has noticed a painful lump for the past week. He has had the lump for over a year , but this has been the first time he has noticed discomfort.

What Do You Recommend?

A) Trimethoprim –Sulfa
B) Cephalexin
C) I and D
D) Schedule excision
E) Topical mupirocin

Epidermal Cysts

- Most are asymptomatic, do not need treatment
- Pain and erythema is usually from inflammation caused by cyst rupture and is not an indication for antibiotics
- Incision and drainage does not cure the problem, only removal of the entire cyst will

- A 60 yo man presents with increasing redness and discomfort in his leg. He reports pruritus for the past several months and redness with minimal swelling. He has not had any fevers or chills. What is the most appropriate therapy?

A) Cefazolin

B) TMP/Sulfa

C) Vancomycin

D) Triamcinolone Ointment

E) Prednisone

Stasis Eczema

Stasis eczema

- Occurs on the lower extremities, at the ankle and just above
- Pruritic
- Treat underlying venous stasis and treat the eczema with mid to high potency corticosteroid creams

Asteatotic Dermatitis

Asteatotic Dermatitis (Eczema Craquele)

- Common in the elderly during winter months
- Legs, hands often involved, with fissuring, slight scale. Pruritus present
- Due to frequent bathing in hot ,soapy baths or living in heated rooms with high temp/low humidity
- Treatment- avoid overbathing, increase humidity, bath oils, emollients, mid potency steroids

Dyshidrotic Eczema

Dyshidrotic Eczema

- Lesions on hands and soles, sides of fingers
- Pruritic vescicles which leads to gradual desquamation
- Diff Dx- Tinea Pedis and Contact Dermatits
- Treatment – medium to high potency corticosteroid

A Primer on Using Dermatologic Preparations

- Cream- may irritate inflamed skin. Patients often ask for as less “messy”
- Ointment- More potent than cream base, more soothing to inflamed skin. Greasier- patients may not like
- Gel- Can be very drying to skin. Can sensitize skin, uncomfortable on inflamed skin. Best used on non inflamed skin
- Foam- Best vehicle for hair bearing areas
- Solution- Useful on scalp, and to cover large areas- drying if alcohol based

How to Use Topical Steroids

- Pick one from each class(weak, mid potency, potent) to be your go to steroid
- Weak steroids- 1 and 2.5% hydrocortisone
- Mid potency steroids- Triamcinolone acetonide .1% (ointment more potent than cream)
- High potency steroid- Betamethasone dipropionate (.05%), Clobetasol propionate (.05%)

Topical Steroids

Steroid	Generic *	Cost	Brand	Cost
High (I to III)	I: Clobetasol 0.05% II: Fluocinonide 0.05% III: TAC 0.5%	$15 (30 gm) $20 (30 gm) $25 (30 gm)	Fluocinonide 0.1% (Vanos) Halcinonide 0.1% (Halog)	$200 $80
Medium (IV, V)	TAC 0.1-0.025%	$25 (30 gm)		
Low (VI, VII)	VI: Desonide 0.05% VII: Hydrocortisone 1-2.5%	$25 (30 gm) $15 (30 gm)	Aclomethasone 0.05% (Aclovate)	$60

* Least expensive in each category and available in the most vehicle formulations

- A 55 yo black woman has concern over hair loss. She has noticed hair loss over the past 5 years, and for many years has noticed that the hair on the crown of her scalp was thinner. She does not have any pain, had not had any inflammatory lesions in the past on the scalp.

What is the Most Likely Diagnosis?

A) Cutaneous sarcoid
B) CCCA
C) Androgenic alopecia
D) Discoid lupus
E) Traction Alopecia

Central centrifugal cicatricial alopecia (CCCA)

- Very common cause of alopecia or hair loss in black women.
- Hair loss from CCCA occurs primarily in the central (crown) part of the scalp
- Cause- unknown- likely has strong hereditary component
- Treatment- early treatment more effective- topical/injected steroids

- A 22 yo woman presents with severe anal pruritus. She reports an 8 week duration of worsening symptoms. She is having problems sleeping, the pruritus is so bothersome. She has tried Preparation H, Anusol, Triple antibiotic ointment and 1% hydrocortisone. Her physician recently treated her with a 2 week course of miconazole with no improvement.

What is the most appropriate therapy?

A) Fluconazole X 3 weeks
B) Mupirocin 2% BID X 3 weeks
C) Ciprofloxacin 500mg po BID X 14 days
D) Clobetasol .05% ointment BID X 6 weeks
E) Stop all therapies

Lichen Sclerosis

- More common in women, most (80%) of lesions are genital
- Chronic inflammatory disorder characterized by the presence of porcelain white, atrophic plaques on the skin
- Treatment- High potency topical steroid (i.e- clobetasol)

Contact Allergy
When to think about it

- Vesicles
- Geometric shapes

Contact Allergy
Common Offenders

- Nickel
- Latex
- Plants
- Lotions

Fixed Drug Eruption

- Clinical features - circular lesion up to 3-5 cm in diameter. Color red to purple. Sharp borders
- Frequent offenders - Penicillin, Tetracycline, Dilantin, Sulfonamides, Barbituates, Phenolthalein

A 29 yo woman comes to clinic for evaluation of facial rash.She has had this problem for the past six months.She has tried several over the counter cleansers and natural products without any benefit. What would you recommend for treatment?

A) Metronidazole .75% gel

B) Hydrocortisone cream 1%

C) Desoximetasone (Topicort) .05% cream

D) Ketoconazole 2% cream

E) Benzoyl peroxide 5% gel

Perioral Dermatitis

- Epidemiology – onset age 16-45 usually women
- Worsened by use of potent topical steroids
- Clinical features- initial lesions usually around the mouth with a rim of sparing around vermillion border. Erythematous micropapules on a patchy erythematous background. Scaling may occur
- Treatment- Topical metronidazole or erythromycin. Oral mino, tetra or doxycycline

A 25 yo man presents with a rash(slide). He has tried OTC hydrocortisone cream without any improvement. This rash has worsened over the past 9 months, and is now effecting his scalp and axilla. What would you recommend?

A) CBC

B) HIV test

C) Back films including SI joint

D) Oral antifungal

E) Light therapy

Seborrheic Dermatitis Therapy

- Shampoo's with sulfur
- Ketoconazole shampoo (88% response)
- Low potency steroid creams

Seborrheic Dermatitis Disease Associations

- HIV
- Parkinson's Disease

- A 45 yo woman has been bothered by facial redness and flushing for the past 2 years. She has not gone through menopause. She has tried several natural products which haven’t helped. She saw he physician who prescribed topical metronidazole for her, which has only been minimally helpful.

ByeByeDoctor.com

What Do You Recommend?

A) Oral Doxycycline
B) Topical benzoyl peroxide
C) Topical clindamycin
D) Topical brimonidine
E) Topical isotretinoin

Acne Rosacea

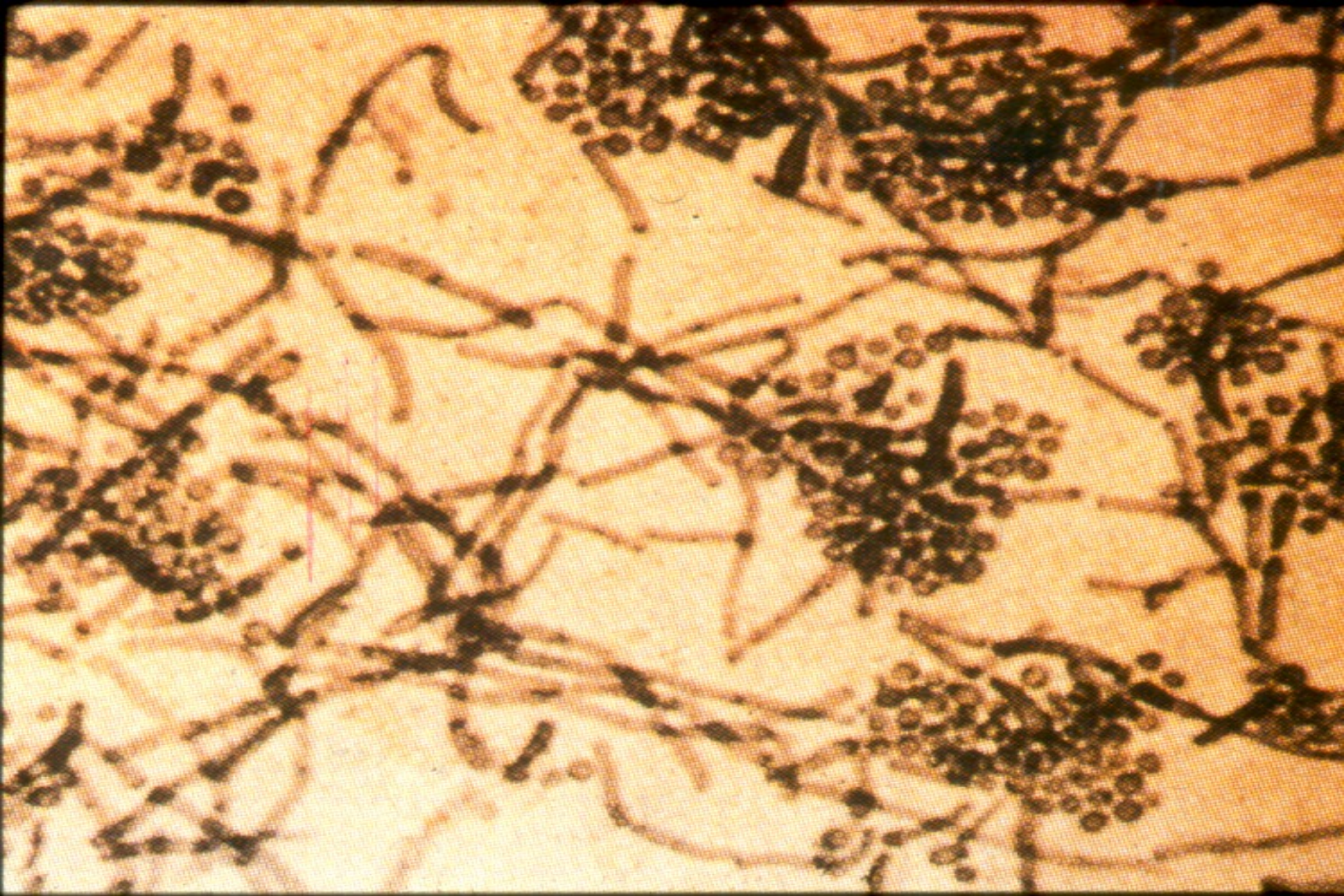
- More common in women, much more common in fair skin individuals of celtic/northern European heritage
- Sun damaged skin at higher risk
- Erythema,flushing,papules,pustules, telangectasias

Acne Rosacea- Treatment

- Photoprotection/gentle skin cleansing/skin moisturization
- Camouflage makeup (green base)
- Papules/pustules- metronidazole gel / topical azelaic acid/ topical ivermectin. Severe disease oral doxycycline
- Erythema/flushing- topical brimonidine or oxymetazoline

- A 35 yo man presents with 3 month history of rash. The rash has not been pruritic. He has not been on any new medications. Meds: Enalapril, Sertraline, Omeprazole. What is the most likely diagnosis?

A) Tinea corporis
B) Drug reaction
C) Eczema
D) Tinea versicolor
E) Viral exanthem



Tinea Versicolor

- Etiology - Pityrosporum furfur
- Clinical findings - round, red-to-coffee colored lesions on back/chest/neck/upper arms. Hypopigmented when exposed to sun

Tinea Versicolor Therapy

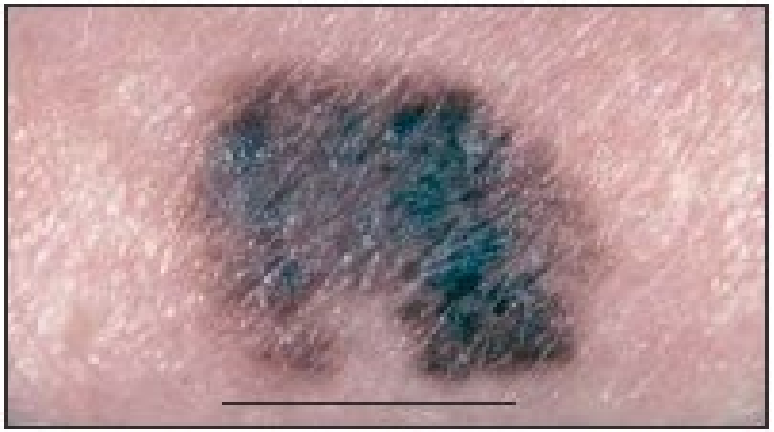
- Shampoo - Selenium sulfide 2.5% (selsun) X14 d or ketoconazole 2% shampoo single dose or X3d
- Oral ketoconazole - 400 mg followed by exercise to induce sweating
- Fluconazole 300-400 mg single dose

Pigmented lesions: Decision to Biopsy

- ABCD(E) criteria
- E = Evolving
- Age
- Presence of additional risk factors
- “Ugly Duckling Sign”

Figure. Cutaneous Melanomas

Asymmetry

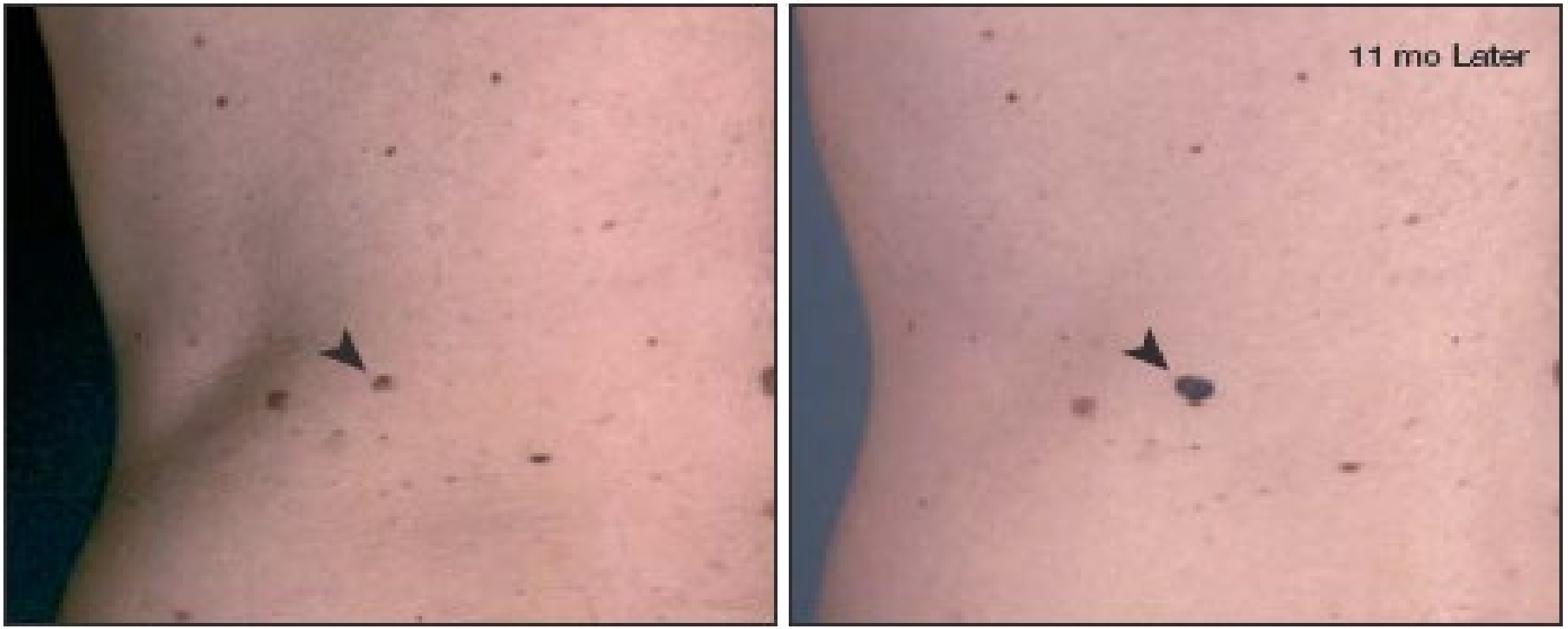


Border Irregularity

Color Variegation

Diameter > 6 mm

Evolving



Pigmented lesions: Decision to Biopsy

- ABCD(E) criteria
- Age
  - Changing nevi more likely to be melanomas in patients age 50 and older
  - Number of benign lesions needed to treat to excise one malignant one

    NNT 83 in young patient

    NNT 11 in pts > 70 yrs old
- Presence of additional risk factors
- “Ugly Duckling Sign”
  - A nevus markedly different from all others on a patient

Summary of Key ABCD(E) Sensitivity and Specificity Studies

Criteria Tested	Sensitivity	Specificity
≥ 1 criteria	97%	36%
All 5 criteria	43%	100%

JAMA. 2004;292:2771-2776

Seborrheic Keratosis vs. Melanoma

In which patient(s) are you worried about melanoma?

A. 65 yo male. Multiple waxy appearing lesions on face, chest and back

B. 20 yo male. Stuck-on appearing lesion on back. Doesn't know if it has changed.

C. 55 yo female. Waxy lesion on shoulder. Didn't resolv after cryotherapy.

D. 45 yo female. Stable, irregularly shaped lesion on abdomen. Keratin pearls noted with hand lens.

Seborrheic Keratosis vs. Melanoma

In which patient(s) are you worried about melanoma?

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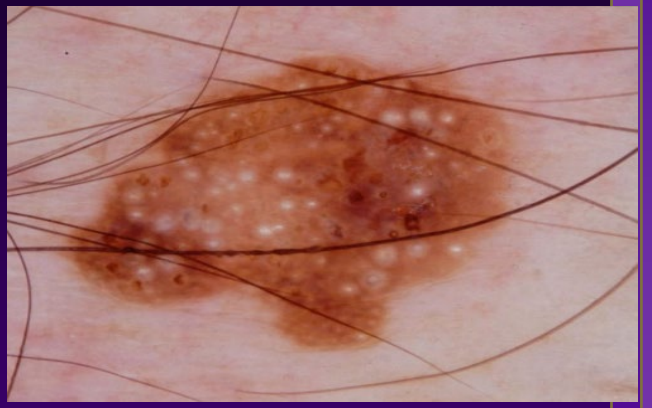
Is it a Seborrheic Keratosis or a Melanoma

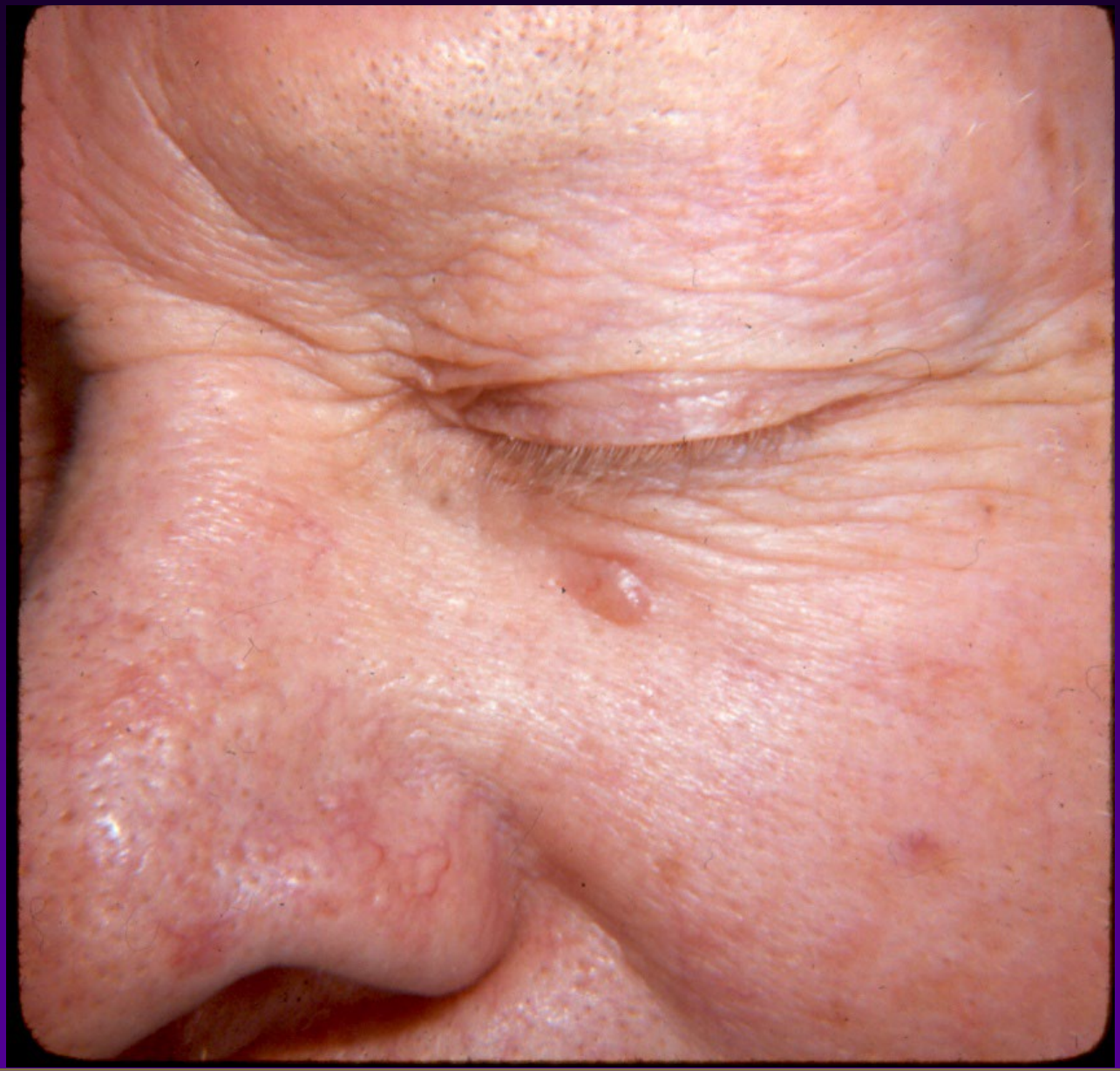


Seborrheic Keratosis

- Associated with aging
  - Usually develop after age 50
  - Rarely occur before age 30
- SK-appearing lesion in younger person requires additional scrutiny
- "Waxy" "Stuck on" appearanc
- Might visualize keratin pearls

C. B.

You are seeing a patient of one of your colleagues in urgent care clinic for management of worsening hyperglycemia.
In talking with the patient, you notice a small papule under the left eye, and comment on it. The patient says, *"I've had that for many years. No one has ever mentioned it before."*



What should you tell the patient about the lesion?

A. It is benign and requires no monitoring
B. It is related to sun exposure and the patient should wear sunscreen
C. It is an atypical nonpigmented mole and should be biopsied
D. It is a concerning lesion that could be cancer and should be biopsied

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Basal Cell CA

- Sites: most commonly sun-exposed areas - face, especially nose, upper trunk, occasionally multiple
- Clinical: four types
  - most common is waxy semi-translucent nodule with a central depression that may ulcerate, crust and bleed; rolled edge
  - telangiectasias course through lesion, extend to normal skin
  - some lesions are pigmented
  - May be morpheaform (scarlike/ hypopigmented) or scaly plaque

You completed a 6 mm punch biopsy on a patient

What is your next step?

A. Close with nylon suture
B. Hemostasis with gel foam
C. Close with rapidly absorbing vicryl suture
D. Any of the above

To suture or not to suture?

Does this biopsy need a stitch?

RCT comparing primary (suture) vs secondary healing with gel foam in 4mm and 8 mm punch biopsies

- Doctors: No difference in healing or cosmesis
- Patients: Better cosmesis w/ suture in 8 mm bx

Sutures

- Monofilament nylon (Ethilon®, Dermalon®)
- Polypropylene (Prolene®)

What about absorbable sutures?

- Polyglactin 910 (Vicryl®) fast absorbing
  - equal to nylon sutures in infection, redness, dehisence, scar, hypertrophy, pt satisfaction

D.

Should I use a topical antibiotic?

- Not necessary
- No difference in infection rates
  - RCT. 922 pts. Bacitracin vs. petroleum jelly
- Risk of allergic contact dermatitis (ACD)
  - 1% ACD in bacitracin group
  - 0% in petroleum jelly group
- Common contact allergens
  - Neomycin: 3rd most common in U.S.
  - Bacitracin: 7th most common in U.S.

- A 58 yo man is seen for a new raised pigmented lesion on his arm. An eliptical bx is done and 2 sutures are placed. What advice do you give him?
- A) Keep the sutured wound dry for 3 days
- B) Keep the sutured wound dry for 6 days
- C) No need to keep the wound dry

Is it OK For Sutures To Get Wet?

- Comparison trial of keeping sutured wounds dry and covered vs allowing them to get wet and be uncovered
- 857 patients following minor skin excisions randomised to either keep their wound dry and covered (n = 442) or remove the dressing and wet the wound (n = 415).
- The incidence of infection in the intervention group (8.4%) was not inferior to the incidence in the control group (8.9%) ($P < 0.05$)

- BMJ 2006;332:1053

Review