



Dermatologic Signs of Internal Disease

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Objectives

- Common things are common



Objectives

- Comparison and contrast



Objectives

- Learn to ask the right questions



Case Report #1

- 42 year old female
- History of inflammatory bowel disease (ulcerative colitis)
- Spontaneously develops a purple nodule on the shin
- Ulceration ensues with a **rolled purple border**



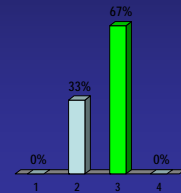
Differential Diagnosis

- A. Cellulitis (Staph. aureus)
- B. Neutrophilic vasculitis
- C. Pyoderma gangrenosum
- D. Venous stasis ulcer
- E. Diabetic ulcer

Your Diagnosis



- 1. Cellulitis (Staph. aureus)
- 2. Neutrophilic vasculitis
- 3. Pyoderma gangrenosum
- 4. Venous stasis ulcer

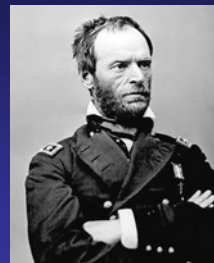


A. Cellulitis (Staph. aureus)



- Often precedent symptoms:
 - fever
 - chills
 - malaise
- Usually warm to the touch
- Poorly demarcated
- Usually unilateral
- Distribution:
 - children: head and neck
 - adults: lower extremities

Cellulitis (cont.)



"War is all hell."

Air syphilis

Erysipelas = "red skin"



www.nlm.nih.gov

Cellulitis: treatment

- 10-day course with an antibiotic with good Gram-positive coverage
- Parenteral antibiotics for cellulitis of the face



www.medicalhealthcareinfo

B. Cutaneous leukocytoclastic vasculitis



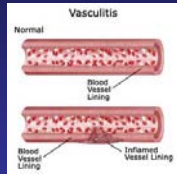
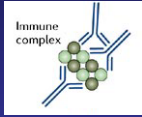
www.arthritis.co.za



library.med.utah.edu

- Affects cutaneous post-capillary venules
- Generally with diffuse ulcers
- Usually in areas prone to stasis
- 40-50% do not have systemic symptoms
- Etiology:
 - bugs: infections
 - drugs
 - thugs: connective tissue disease

Cutaneous leukocytoclastic vasculitis: etiology



vascular diseases. morefocus.com

Treatment: usually self-limiting

C. Pyoderma gangrenosum



- Usually unilesional
- Undermined purple border
- About 50% have underlying systemic disease
 - inflammatory bowel disease
 - arthritis (RA, OA)
 - hematologic disease:
 - leukemia
 - myelofibrosis
 - monoclonal gammopathies

Pyoderma gangrenosum:

Beware of "pathergy"



www.threeleggeddragon.com

Pyoderma gangrenosum: (treatment)

- Prednisone 1 mg/kg/day
- Cyclosporine 1 mg/kg/day

D. Venous stasis ulcer

- Other signs of stasis
- Post-inflammatory hyperpigmentation
 - Varicosities
 - Stasis dermatitis (erythema)
 - Almost always bilateral



Venous stasis ulcer



www.myfootshop.com



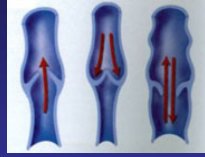
www.myfootshop.com

- Frequently associated with dermatitis

Venous stasis ulcer



www.raskraska.ru



www.georgetownuniversityhospital.org

Valvular incompetence

Venous stasis ulcer: treatment

- Dermatitis: topical steroids under occlusion
- Stasis: compression stockings and elevation



www.lymphomed.com



theelectricmonk.com

The Case of My Brother, Mark

- Symptoms:
 - Heat
 - Tenderness
 - Fever
- Treated with compression stockings and leg elevation for 7 days

Diagnosis?

Cellulitis

E. Diabetic ulcers

- 20% of 16 million people with diabetes in the U.S. will develop one
- 14-24% will require amputation
- Responsible for 85% of all amputations



www.podiatrypractice.com



lh5.ggpht.com

Diabetic foot ulcers: etiology

- Extrinsic muscles overpower atrophied intrinsic muscles of the foot
- Bony prominences occur
- Chronic pressure combined with decreased vascularization leads to poor wound healing

Diabetic foot ulcers

- Prevention:
 - Involve a good podiatrist
 - Aggressive debridement of calluses
 - 30% increase in pressure under a callus

Diabetic foot ulcers

- Treatment:
 - American Diabetes Association:
 - Wet wounds:
 - Saline-moistened gauze TID
 - Avoid astringents: Hydrogen peroxide, chlorhexadine
 - Dry wounds:
 - Hydrocolloid dressings
 - Enzymatic debridement

Case Report #2

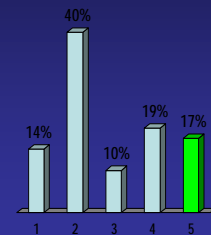
- 32 year old female with sudden onset of severe pruritus
- Unresponsive to antihistamines
- Getting about 2 hours of sleep a night

Differential Diagnosis

- A. Renal failure
- B. Hepatic insufficiency
- C. Hypothyroidism
- D. Polycythemia vera
- E. Hodgkin's lymphoma

Your Diagnosis

1. Renal failure
2. Hepatic insufficiency
3. Hypothyroidism
4. Polycythemia vera
5. Hodgkin's lymphoma



A. Renal failure

- 50% of patients on dialysis
- Relatively unresponsive to antihistamines
- Lack of a consistently effective treatment
 - Narrow band UVB treatment usually first-line at University of Utah



B. Hepatic insufficiency

- 20-25% of jaundiced patients
- Cause multifactorial:
 - Increased bile salts
 - Increased opioid peptides
- Treatment:
 - Cholestyramine or rifampin
 - Opioid antagonist (e.g. naloxone)



C. Hypothyroidism

- Pruritus can occur with both hypo- and hyperthyroidism
- Possibly secondary to xerosis in hypothyroidism



epod.usra.edu

D. Polycythemia vera

- Aquagenic pruritus:
 - Usu. occurs within 30 minutes of contact with water
 - Temperature and salinity of water irrelevant
 - Usu. begins on lower extremities and spreads cephalad



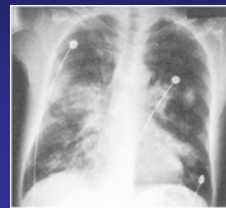
www.mayoclinicproceedings.com

E. Hodgkin's lymphoma

- Severe persistent generalized pruritus
- Almost always interrupts sleep
- Recurrence often heralds recurrence of the lymphoma
- The Story of Alice Quigley, MD

Work-up

- CXR: mediastinal lymphadenopathy



www.mayoclinicproceedings.com/ images

Case Report #3

- 69 year old female with insulin resistant diabetes
- Develops brown velvety epidermal thickening in the axilla and neck folds
- Asymptomatic



uspharmacist.com



jewishhospital.org

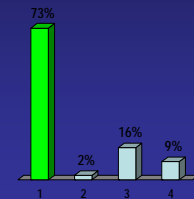
Differential diagnosis

- A. Acanthosis nigricans
- B. Atopic dermatitis of diabetics
- C. Cutaneous T-cell lymphoma
- D. Contact dermatitis

Your Diagnosis



- 1. Acanthosis nigricans
- 2. Atopic dermatitis of diabetics
- 3. Cutaneous T-cell lymphoma
- 4. Contact dermatitis



A. Acanthosis nigricans

- Velvety hyperpigmentation of intertriginous surfaces
- Neck and axilla most common sites
- More common in obese patients
- May also be associated with underlying malignancies
- Best treated by management of diabetes and weight loss

B. Atopic dermatitis



www.nytimes.com

- Often involves flexures
- Invariably pruritic



www.visualdxhealth.com/ images

Atopic dermatitis

- “Atopic” = without a place
- Multifactorial: (Anneli and appendicitis)
- “Pruritus” is the cardinal feature
- Is it a rash that itches or an itch that rashes?
- Secondary changes predominate:
 - Excoriation
 - Lichenification
 - Oozing

Atopic dermatitis



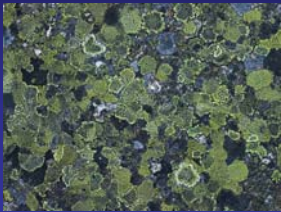

morgellonswatch.com



Excoriation

Atopic dermatitis

Lichenification

www.ubcbotanicalgarden.org missinglink.ucsf.edu

Eczema = Gr. "to boil out"

Atopic dermatitis



oozing




skywalker.cochise.edu eczema.skyeherbals.com

C. Cutaneous T-cell Lymphoma

"Mycosis fungoides"

Derm101.com dermatology.cdlib.org

- Involves a bathing trunk distribution
- Slight scaling
- Erythematous, not brown

Cutaneous T-cell lymphoma (MF)

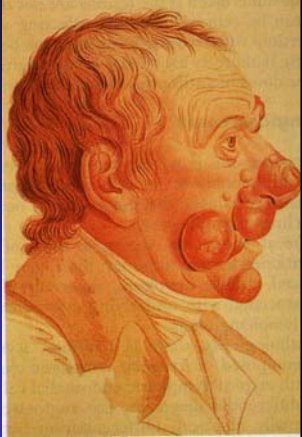
- Non-Hodgkin's lymphoma
- SALT = skin associated lymphoid tissue

Historical Background

1806: First reported case of (MF) by Alibert in France




Patient Lukas with pian fungoid is depicted in the *Atlas of Alibert* (1806)



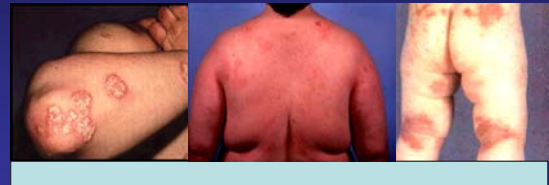
Historical Background

“Mycosis Fungoides”



Clinical Criteria

What does the disease look like?



D. Contact dermatitis

- Will generally be patterned



Dermatology.clib.org



content.answers.com

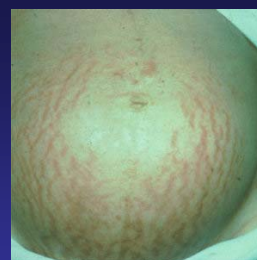
Contact dermatitis

- Delayed-type hypersensitivity
- Distinct from “irritant dermatitis”
- Involves memory cells



Case Report #4

- 25 year old primigravida female who is 36 weeks into pregnancy
- Spontaneously develops intensely pruritic papules within striae on abdomen
- Periumbilical sparing
- Progresses to involve buttocks, proximal arms and thighs, breast



images-cdn01.associatedcontent.com



Medscape® www.medscape.com

Differential Diagnosis

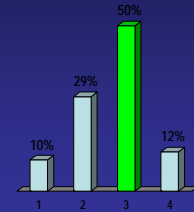
- A. Urticaria
- B. Papular eczema of pregnancy
- C. Pruritic urticarial papules and plaques of pregnancy
- D. Scabies



Your Diagnosis



1. Urticaria
2. Papular eczema of pregnancy
3. Pruritic urticarial papules and plaques of pregnancy
4. Scabies



A. Urticaria



www.neeteson.nl



missinglink.ucsf.edu/



upload.wikimedia.org/

B. Papular eczema of pregnancy

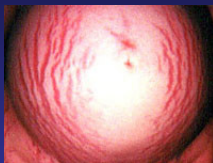


missinglink.ucsf.edu/



www.londonlaser.com

C. Pruritic urticarial papules and plaques of pregnancy



- Resolves fairly soon after delivery
- Probably a consequence of skin distension

PUPPP

- Occurs in 1 in 240 pregnancies
- Benign course
- Usu. resolves within hours of days after delivery

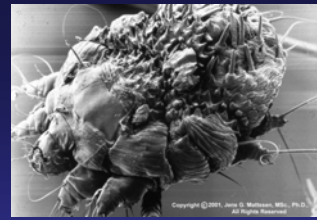
D. Scabies



www.clinical-virology.org



medimages.healthpedia.com



www.kcom.edu



weblogs.madrimasd.org



www.beliefnet.com

Case Report #5

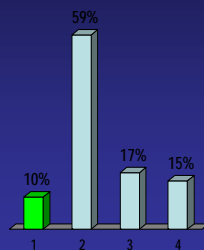
- 32 year old female is 3 months post-partum after her third child
- She reports accelerated hair loss diffusely over the entire scalp
- No loss of axillary or pubic hair noticed

Differential Diagnosis

- A. Telogen effluvium
- B. Post-partum alopecia areata
- C. Hypothyroidism
- D. Androgenetic alopecia

Your Diagnosis

1. Telogen effluvium
2. Post-partum alopecia areata
3. Hypothyroidism
4. Androgenetic alopecia



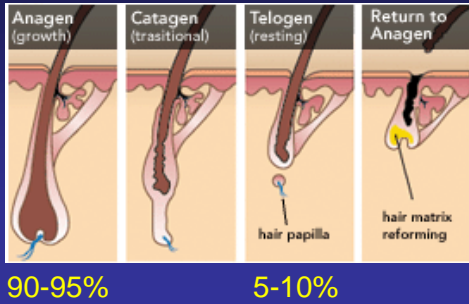
A. Telogen effluvium



www.revivogen.com

- Childbirth
- Severe illness
- High fever

The Hair Cycle

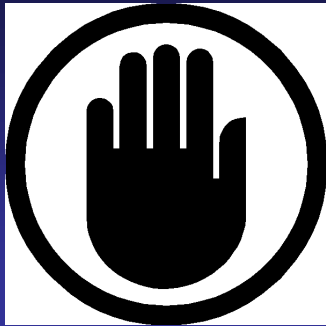


Hair Cycle

- Humans lose 50-100 hairs a day
- Hair cycles are staggered in humans



Halt!



Telogen effluvium

- 2-4 months after insult:
Mass shedding



B. Post-partum alopecia areata



farm3.static.flickr.com



www.cfpc.ca

C. Hypothyroidism

- Both hyper- and hypothyroidism can be associated with hair loss

D. Androgenetic alopecia



www.scalp-hair.co.uk



www.hairtherapyforwomen.com

Female Hair Loss

- Genetic
- Androgenetic
- Without androgen excess
- Iron deficiency
- Thyroid disease

2% topical minoxidil



E. Telogen Idiocy



- Hair loss due to being a blithering idiot
- No known effective treatment

Case Report #6

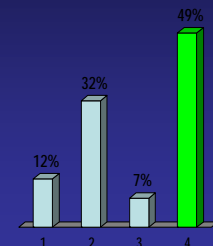
- 27 year old male presents with a low-grade fever, dry cough, and a sore throat
- Azithromycin begun
- 48 hours later there is a spontaneous cutaneous eruption
- Erythematous annular macules with a "targetoid" appearance

Differential Diagnosis

- A. Cutaneous mycoplasma pneumonia
- B. Cutaneous drug eruption
- C. Systemic lupus erythematosus
- D. Erythema multiforme minor

Your Diagnosis

1. Cutaneous mycoplasma pneumonia
2. Cutaneous drug eruption
3. Systemic lupus erythematosus
4. Erythema multiforme minor



A. Cutaneous mycoplasma pneumonia

- Causes no known primary cutaneous lesions
- Can secondarily cause:
 - Erythema nodosum
 - Erythema multiforme

Erythema nodosum

- A panniculitis of subcutaneous fat
- About 50% of cases are idiopathic



www.ispub.com

B. Cutaneous drug eruption



rad.usuhs.mil



missinglnk.ucsf.edu

Fixed Drug Eruption

- Frequently targetoid with purple centers and red haloes
- Occur in the same place with each drug challenge
- Go figure!

Fixed Drug Eruption



dermatology.cdlib.org



bp1.blogger.com

C. Systemic lupus erythematosus



hdighthouse.org



www.csmc.edu

Drug-Induced Lupus

- May cause either
 - Systemic lupus erythematosus
 - Subacute cutaneous lupus

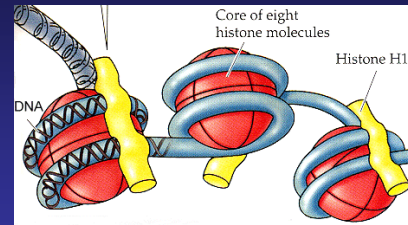


apps.uwhealth.org



www.images.md

Drug-induced Lupus



biology.kenyon.edu

95% of cases have anti-histone antibodies

D. Erythema multiforme minor



elc.skh.org.tw/elc



Erythema multiforme minor: etiology



Bugs!



Drugs!



Thugs!

Bugs!

- Infections:
 - Mycoplasma
 - Mononucleosis
 - Herpes simplex (most common cause of recurrent EM)

Drugs!

- Drugs:
 - Penicillins
 - Sulfonamides
 - Phenytoin
 - Allopurinol
 - Tremethoprim-sulfamethoxazole

Thugs!

- Irregulars:
 - Connective tissue disease
 - Sarcoid
 - Pregnancy
 - Immunizations

Summary

- The skin is often a window of what may be going on systemically
- Knowing the common dermatoses (the horses) will help you spot the zebras
- Help is only a mouse click away



I got away with it for awhile.



Thanks.

It's good to see you again!