

# PRISMA HEALTH®

**62<sup>nd</sup> Annual Greenville Postgraduate Seminar**  
**Spotlight: Primary Care**

Wifi: Greenville ONE Center  
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# Dermatology for Primary Care

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# Approach

- Morphology of the rash (describe it):
  - Papulosquamous
  - Urticarial
  - Hyperpigmented
- Distribution of rash
  - Photodistributed
  - Extensor surfaces
  - Symmetric
- Symptoms related to rash
  - Itching
  - Pain
  - Fever

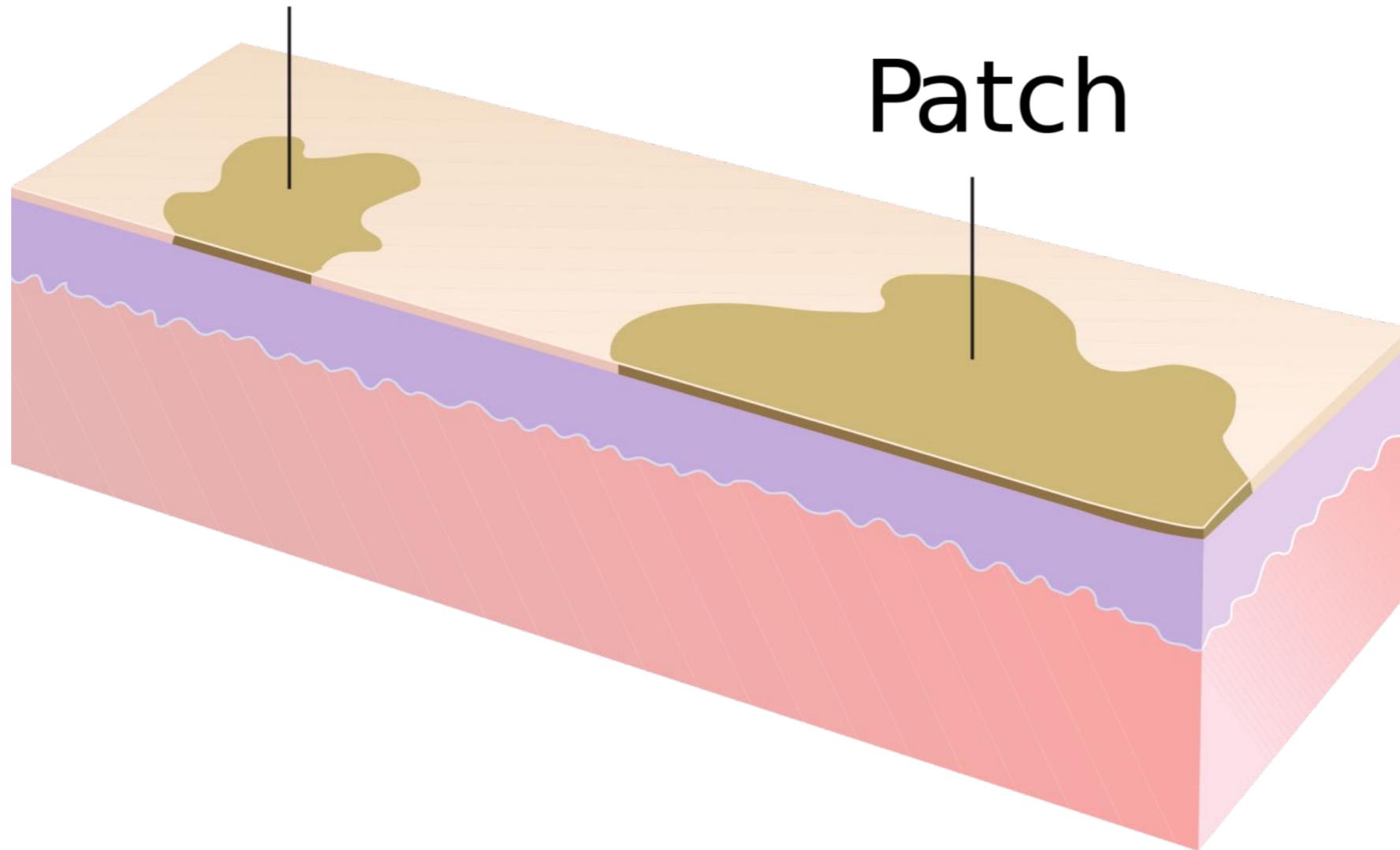
# Primary Lesions

- Macule versus Patch
- Papule versus Plaque
- Vesicle versus Bullae
- Urticarial

# Macules and Patches

Macule

Patch



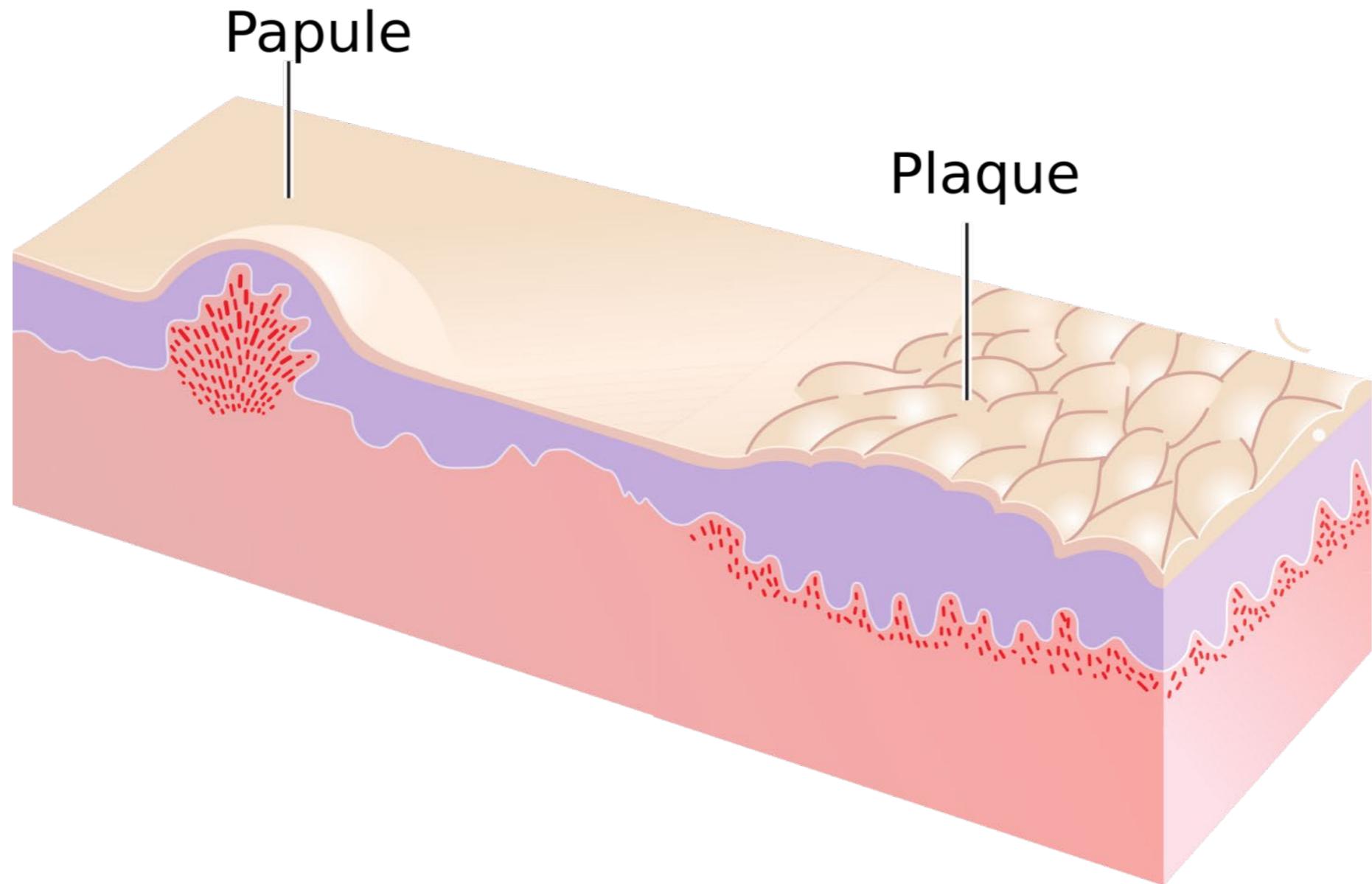
# Idiopathic Guttate hypomelanosis



# Phototoxic Drug Eruption



# Papules and Plaques



# Molluscum Contagiosum

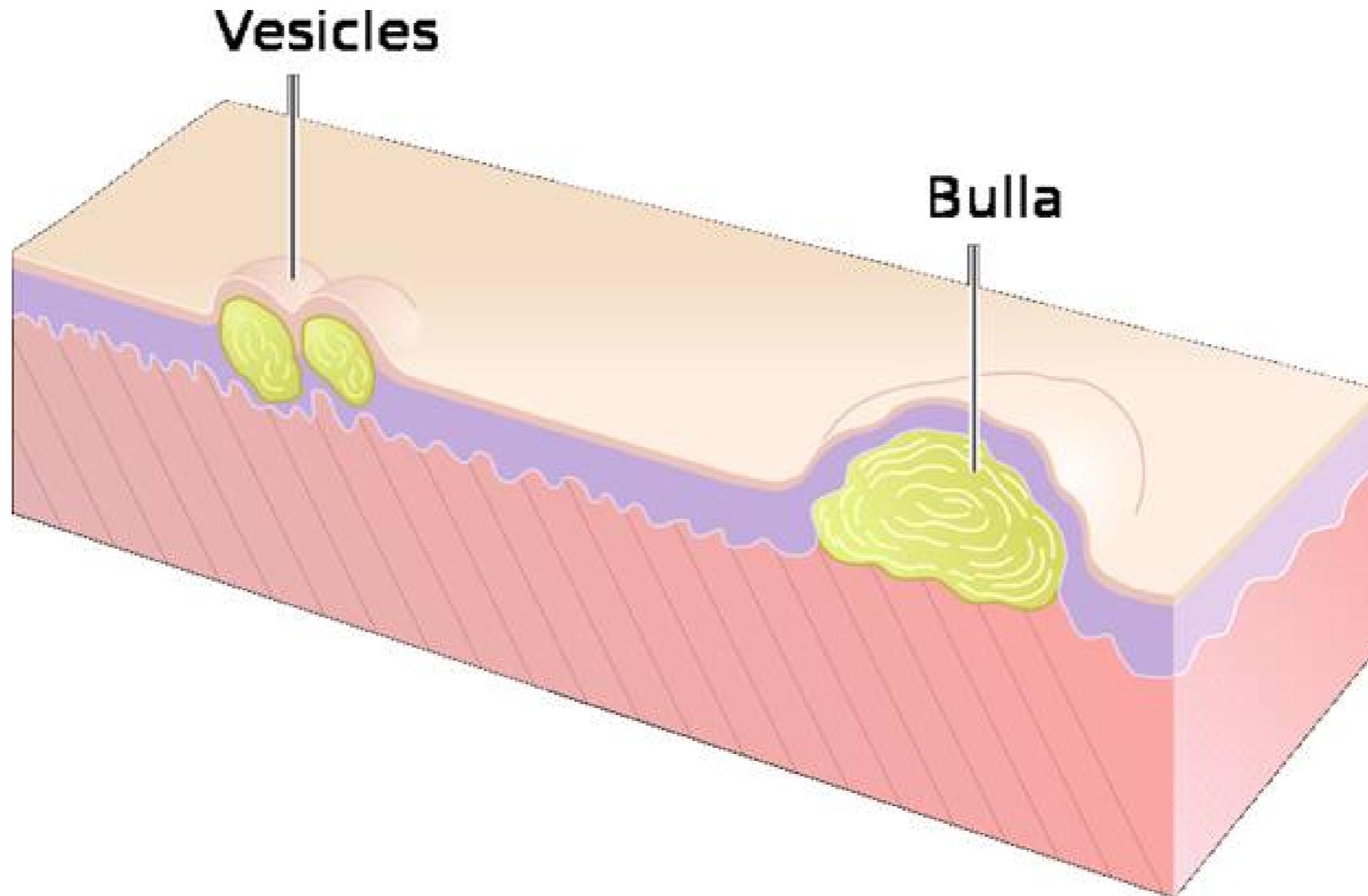


# Psoriasis

- Knees
- Elbows
- Umbilicus
- Gluteal Cleft
- Scalp
- Palms/soles



# Vesicles and Bullae

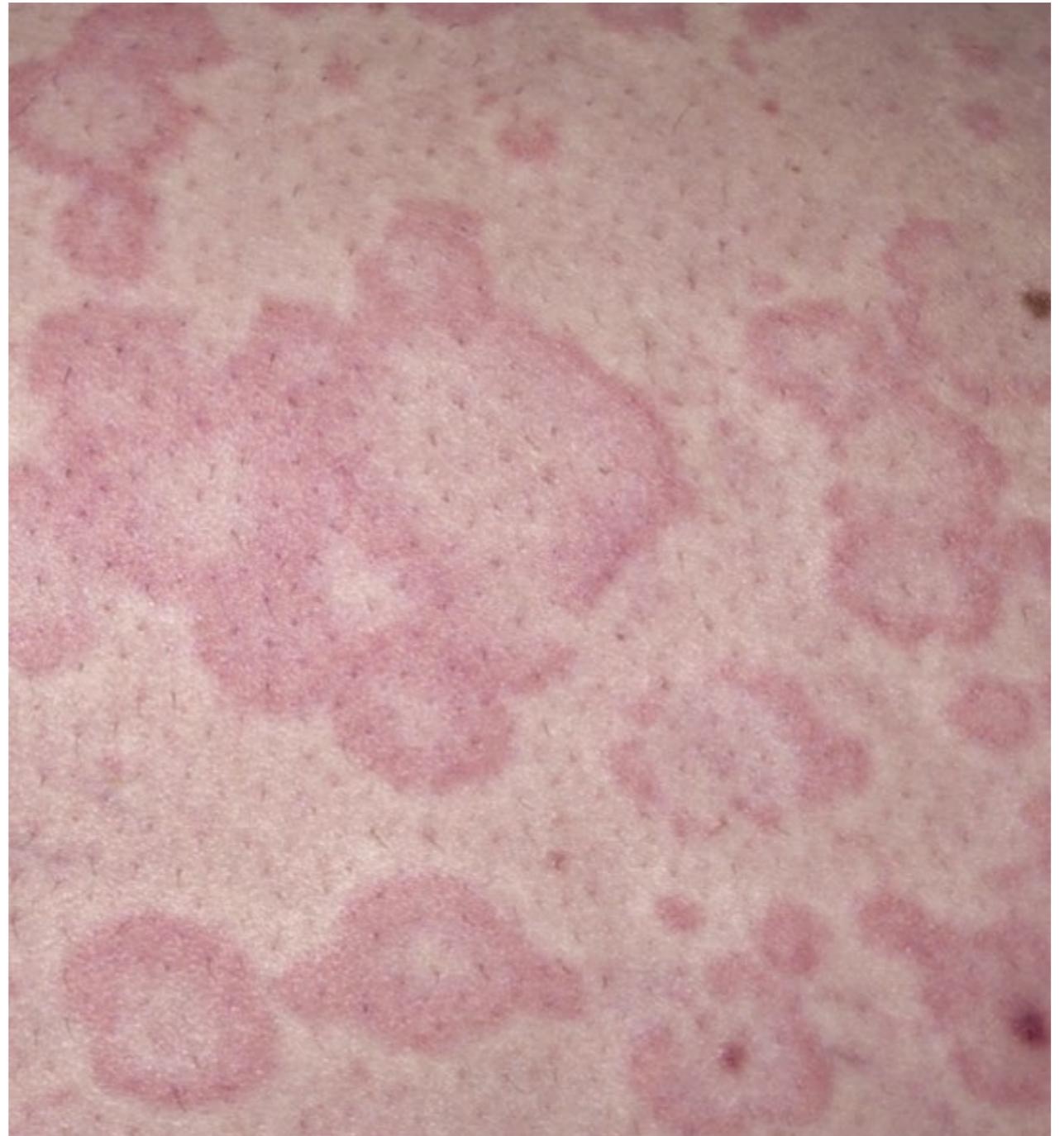


# Herpes Zoster



# Urticarial

- Fluid infiltrating into the dermis
- Itches
- Last only hours



# Secondary Lesions

- Scale
  - Excess dead epidermal cells (usually white)
- Crust
  - Dried serum/heme
- Erosion
  - Focal loss of epidermis (no scar)
- Ulcer
  - Focal loss of epidermis and dermis (may scar)
- Atrophy
  - Depression in the skin as a result of thinning of epidermis or dermis

# Pityriasis Rosea



# Distribution

- Widespread
- Scattered
- Acral
- Photodistributed
- Intertriginous
- Symmetric Extremities
- Extensor surfaces
- Trunk

# Dermatitis Herpetiformis

- Knees
- Elbows
- Buttocks
- Upper back
- Extremely pruritic

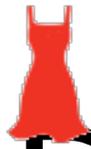


# Cases

# Case 1

- A 18-year-old woman with 1 week:
  - generalized rash
  - facial edema
  - fever
  - severe fatigue
- Treated for a UTI 2 weeks ago with Bactrim
- She has no previously known allergies.





# DRESS

- Exam:
  - generalized morbilliform eruption.
  - Not painful and no vesicles or bullae are present.
  - No ocular or mucosal involvement.
  - Cervical and Axillary LAD
- Labs
  - ALT 330 U/L
  - AST 355 U/L.
  - CBC: normal except for 16% eosinophils.



# DRESS



- Common Medications
  - Anticonvulsants (1 per 1000-10000)
    - Aromatic anticonvulsants (phenobarbital, phenytoin, carbamazepine)
    - Lamotrigene
  - Sulfonamides
- Other Medications
  - Minocycline, allopurinol, gold salts, dapsone



# Case 2

- A 55 year-old Brazilian woman comes to see you for a rash that has been longstanding.
- Despite extensive testing physicians have not been able to determine a cause for her rash.



# Hereditary Hemorrhagic Telangiectasia

- Additionally she reports that she had a adult sibling die of nose bleeds a few years ago.
- She is well-appearing with blanching red “spots” on her hands, skin, and also noticed on the tongue.



# Hereditary Hemorrhagic Telangiectasia

- An autosomal dominant disorder with varying penetrance and expression characterized by diffuse telangiectasias.
- Three characteristic features are:
  - Epitaxis
  - GI bleeding
  - Iron deficiency anemia
- Visceral AVMs are usually silent but may be present in the pulmonary, cerebral, or hepatic anatomy with associated possible complications.



# Case 3

- You are rounding in Africa and are seeing a 20-year-old female admitted to the ward the previous evening with altered mental status.
- She has had notable diarrhea.
- Also has what appears to be dry patches on her extremities.



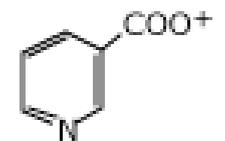
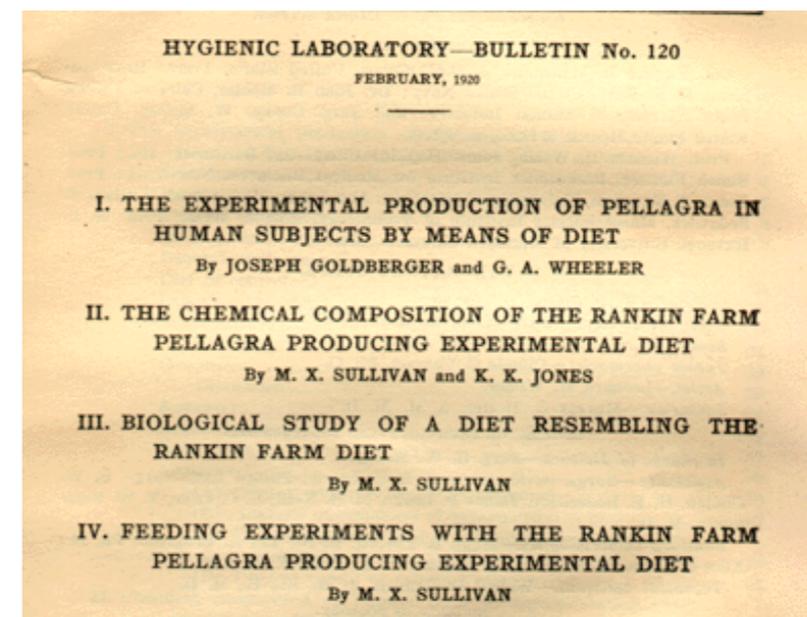
# Pellagra

- Exam reveals diffuse pruritic patches of the extremities and the trunk with associated thickening of the skin. Primarily distributed in photosensitive areas.



# Pellagra

- Niacin deficiency
- Vitamin B3 is widely distributed in plant and animal foods. Good sources include yeast, meats (especially liver), cereals, legumes, and seeds.
- Often results from diets rich in corn and therefore absent of Niacin (Dr. Golberger in the 1900's)
- Cardinal symptoms are the four "D's": diarrhea, dermatitis, delirium, and eventual death



Niacin  
(Nicotinate)

# Case 4

- While in Honduras a 55-year-old man presents to a walk in clinic with a non-painful ulcer of his foot that has not healed.
- He cannot remember injuring his foot but possibly bumped it on a log months prior.
- It started as a bump that progressed to a painless ulcer.



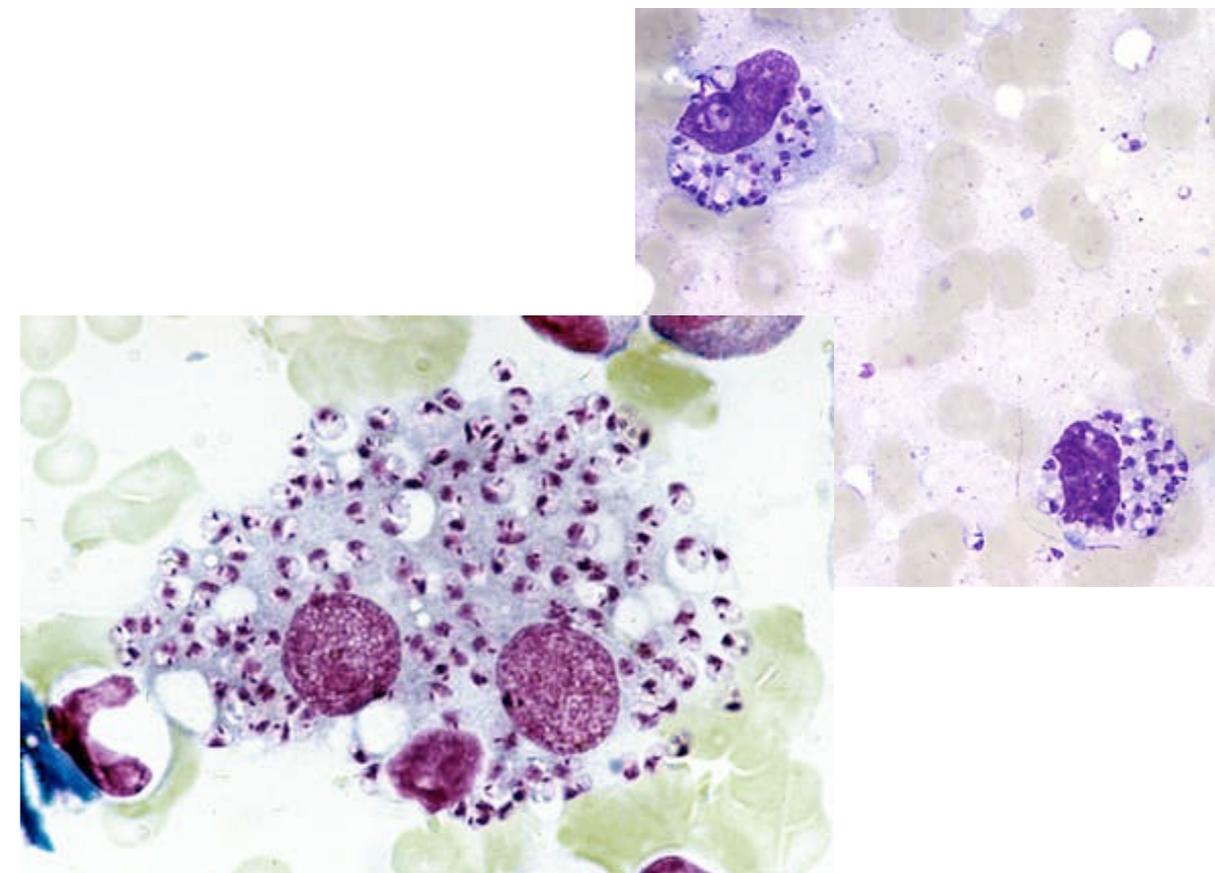
# Leishmaniasis

- Exam reveals what appears to be a painless superficial ulcer with white-yellow fibrinous material overlying the lesion.
- No other lesions seen and no signs of surrounding cellulitis appreciated.



# Leishmaniasis

- Caused by more than 20 different Leishmanial species
- Transmitted via the sand fly in exposed areas of the skin (as fly mouthparts cannot penetrate through clothing).
- Lesions may start as a pink-colored papule that enlarges into a nodule or plaque-like lesion.
- They usually ulcerate in center, spread outwards, and may resolve after months to years.
- Diagnosis: demonstration of Leishmania in biopsy or skin scraping



# Case 5

- 57 year-old Puerto Rican woman presents with an “infection” on her bilateral lower legs.
- It has been present for months.
- Her rash has not responded to ointments or OTC creams.



# Lipodermatosclerosis

- Exam reveals a warm, diffuse fibrinous plaque that is erythematous and present in both lower extremities.
- A course of antibiotics do not improve the rash.



# Lipodermatosclerosis

- Patients with venous insufficiency can develop a fibrosing panniculitis of the subcutaneous tissue
- Think twice about a diagnosis of bilateral cellulitis.
- Also described as an “inverted wine bottle.”
- As the fibrosis increases, it may be constrictive and strangle the lower leg, further impeding lymphatic and venous flow.



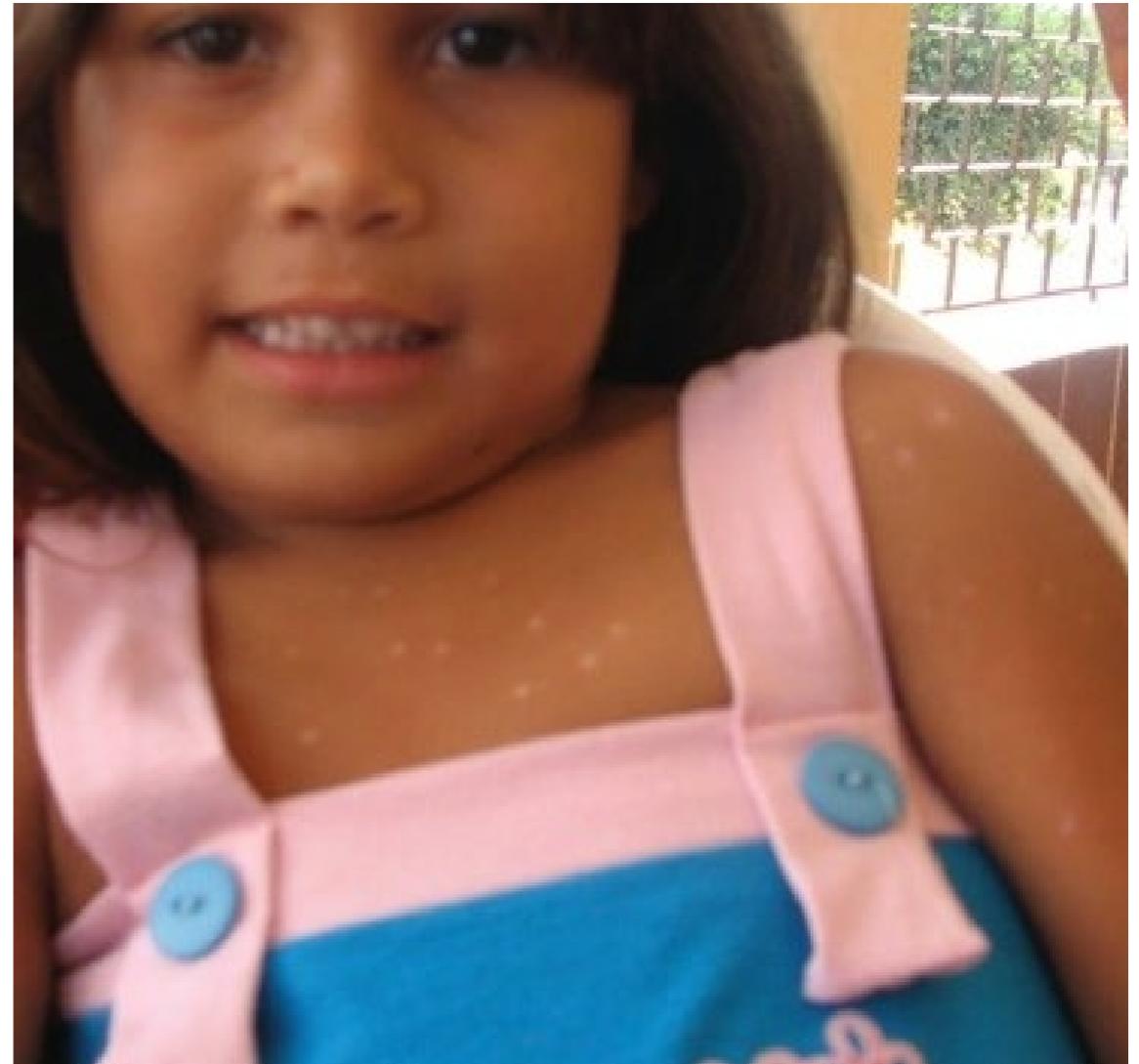
# Case 6

- Two sisters present to a walk-in clinic in Brazil worried about the appearance of their skin. They are concerned because it appears “unsightly.”
- Described as white spots that spread slowly across their upper torso and are otherwise completely asymptomatic and non-pruritic.



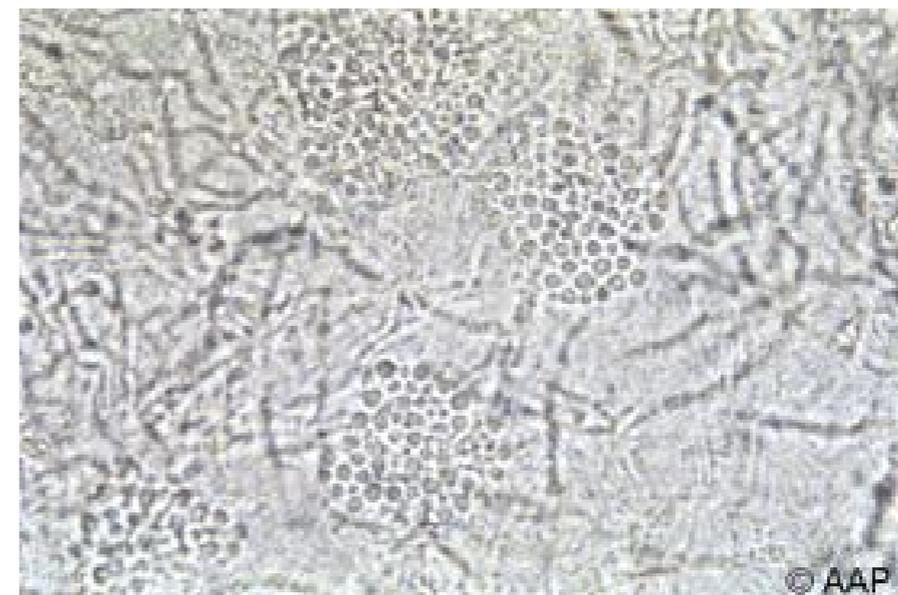
# Tinea Versicolor

- Exam reveals scattered white macules of the upper torso and extremities.



# Tinea Versicolor

- The causative organisms are saprophytic, lipid-dependent yeasts in the genus *Malassezia*.
- Lesions can be hypopigmented, hyperpigmented, or mildly erythematous.
- Confirm the diagnosis with a KOH preparation—described as "spaghetti and meatballs."
- In approximately one-third of cases, examination with a Wood's lamp will reveal yellow to yellow-green fluorescence.



# Case 7

- 22-year old male who graduated from college presents with a diffuse rash which is widespread and across his whole body.
- He reports that it is slightly pruritic.



# Guttate Psoriasis

- Patient has a diffuse rash across his body which has both papule and plaques.
- He does remember having a sore throat recently but has been otherwise well.



# Guttate Psoriasis

- Etiology not well understood. May resolve after weeks to months or progress to chronic plaque psoriasis.
- Think strep infection and test/treat for this.
- Patients may develop koebnerization from sunburns.



# Case 8

- A 63 year-old woman presents with several plaques of various sizes on her extremities.
- Nothing has seemed to help and she feels they are spreading.
- She also states that they are pruritic and steroid ointments do not seem to help.



# Lichen Planus

- She also notes some lesions in her mouth as pictured on exam.
- Plaques appear purple in appearance and are located primarily on her lower extremities.
- She thinks some new lesions are appearing on her legs since bumping them on her furniture.



# Lichen Planus

- The four “P’s:”
  - Pruritic
  - Purple
  - Polygonal
  - Papules or plaques
- There is an association with Hepatitis C.
- Possible association with Statins.
- Also demonstrates koebnerization.



# Case 9

- A 53-year-old woman with a 5-day history of an asymptomatic rash on the upper back and upper arms with appeared “suddenly.”
- The lesions grew and are neither pruritic nor painful. She has had some fevers.
- She reports a history of rheumatoid arthritis but otherwise generally healthy.



# Sweet's Syndrome

- On physical examination, the patient is febrile (102.0 °F) but vitals are otherwise normal.
- There are nodular and plaque lesions on the back and upper arms.
- CBC demonstrates a WBC count of 35,000/ $\mu$ L with a neutrophil predominance.
- Skin biopsy reveals a dense neutrophilic infiltrate throughout the dermis, with prominent papillary dermal edema.



# Sweet's Syndrome

- The pathogenesis is not well understood.
- May be associated with an underlying malignancy, particularly acute myeloid leukemia.
- Lesions often described as "juicy."
- Biopsy reveals evidence of a dense neutrophilic infiltrate without evidence of leukocytoclastic vasculitis (major criteria for diagnosis).



# Case 10

- A 73 year old presents with a few blisters on the upper torso of her chest. They have seemed to spread over the past few days.
- She denies any other symptoms and otherwise feels well.



# Bullous Pemphigoid

- Exam reveals tense blisters that do not easily rupture on palpation. Present only on the upper anterior chest.
- She states that are somewhat very pruritic and somewhat painful.



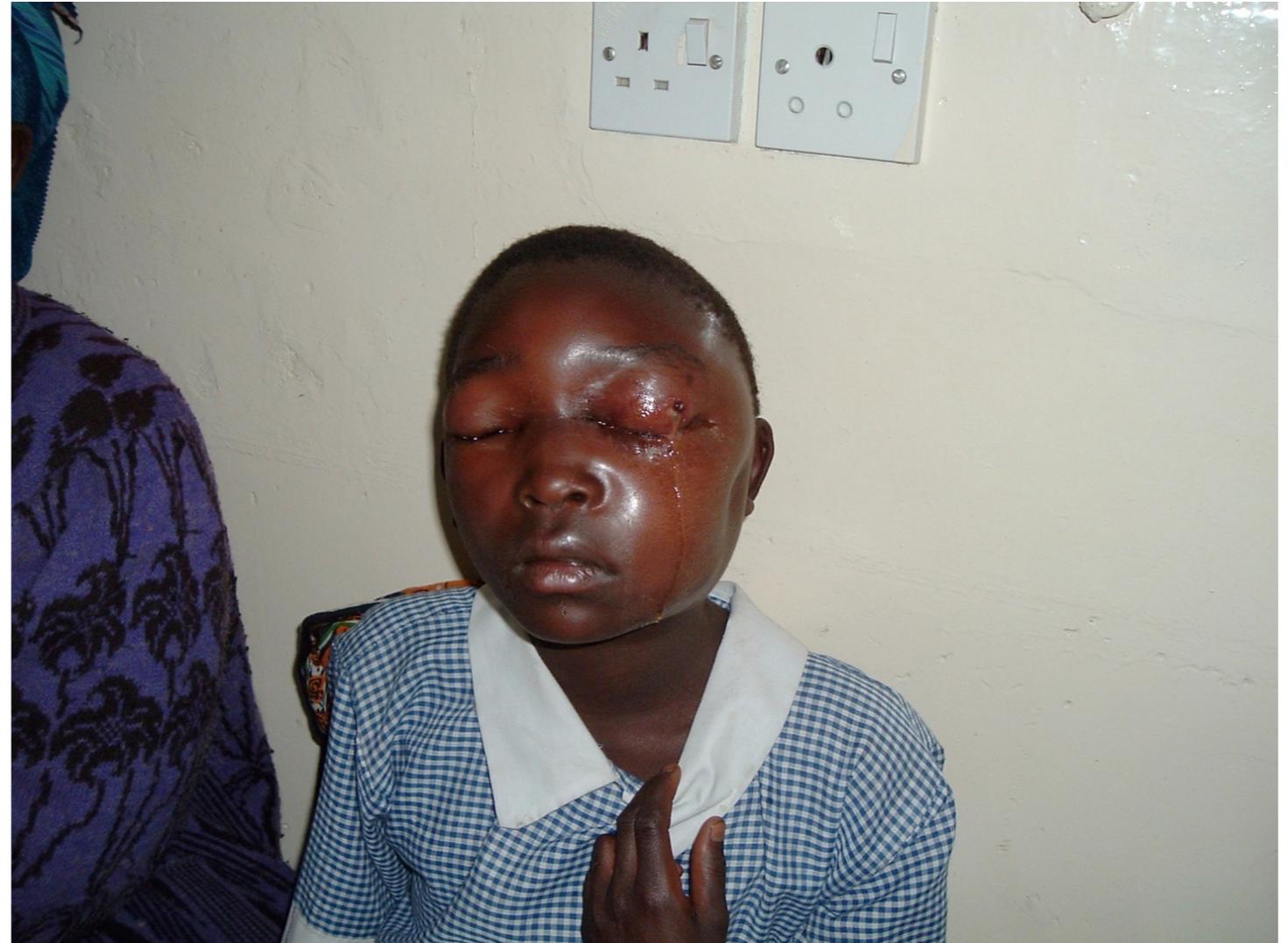
# Bullous Pemphigoid

- Characteristically, BP is an intensely pruritic eruption with widespread blister formation.
- Most common sub-epidermal autoimmune blistering disorder
- Elderly 60-80s
- Diagnosis relies on biopsy—particularly direct and indirect immunofluorescence microscopy.



# Case 11

- 11 year-old Kenyan girl presents with a draining lesion of her upper eyelid.
- There is associated redness and swelling of the eyelid, so it is difficult for her to open her eye completely.



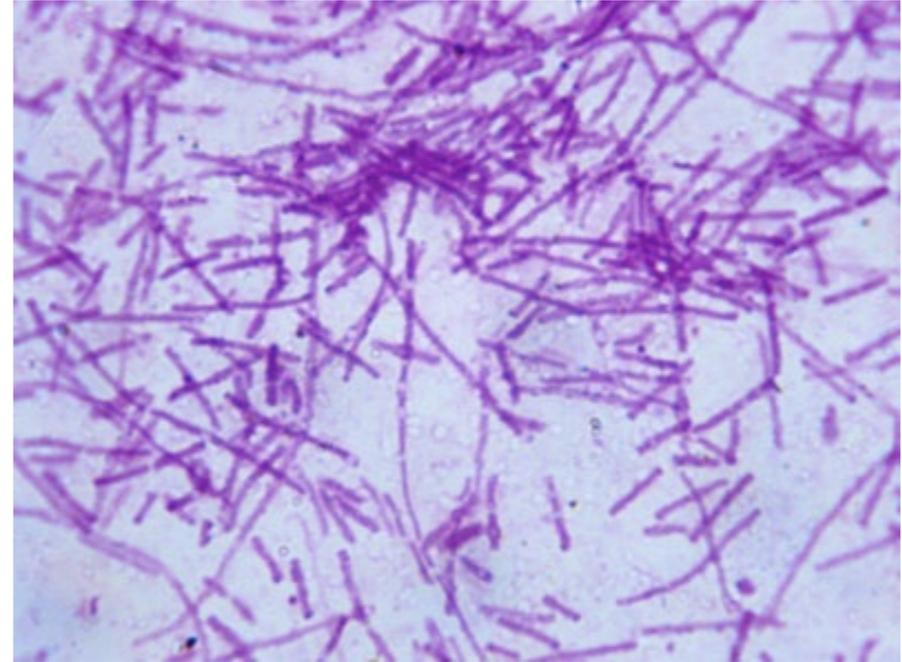
# Cutaneous Anthrax

- On further history, the family's cow had died a few weeks earlier and she had been sleeping on its hide.
- On exam a tender, ulcerating papule is seen on the upper eyelid with associated pre-septal cellulitis.



# Cutaneous Anthrax

- Large Gm+ spore-forming rod
- Spread by contact with infected animals and animal products
- Incubation: 12 hours-7 days
- Cutaneous disease is the most common (95%)
- Begins as pruritic painless papule and spreads to an ulcer with surrounding edema.



# Bad Rashes

- SJS/TEN
- RMSF
- Meningococemia

# SJS/TEN

- Dusky red macules coalescing to patches
- First on the trunk then spreads to neck/face/acral



# SJS/TEN

- Mucosal Involvement
- Blood in UA



# SJS/TEN

- Full thickness necrosis
- <10% SJS
- >30% TEN
- Best managed in burn unit



# SJS/TEN

- Common Medications
  - Sulfonamides, anticonvulsants, oxycam, NSAIDs, allopurinol, and chlormezanone
- Treatment
  - Supportive
  - IVIG, IV Cyclosporine, Infliximab
  - Do not give Steroids!!!
  - <10% = SJS
  - 10-30% = SJS/TEN Overlap
  - >30% = TEN





# RMSF

- Following tick bite (7 days)
- Starts on wrist then widespread viral exanthem and petichiae
- Fever



# Meningococemia

- Caused by *Neisseria meningitidis*
- Acute septicemia kills faster than any other infectious disease (hours)
- Fever/HA/Nausea/Neck pain
- Rash (70% of cases)



# Meningococccemia



# Purpura Fulminans



# Questions?

