Med D

Patient Care Conference

Presenters :-
Seniors - Apoorv Deotare (PGY-2) , Michael Graham (PGY-3)
Interns - Guy Greco (TY) , Macey Brandberry (TY)

History of Present Illness

History of Present Illness

57 Year Old Caucasian Female came to ACH ED with increasing left hand erythema, swelling, and pain with associated malaise for several days.

In ED patient's Vitals were
Temperature 102 F
HR -160
RR -15
BP - 190/90 mm/hg

ICU was consulted -**Acute encephalopathy** after receiving Benadryl ,Dilaudid and ativan for shivering. Patient initially was admitted to ICU for the above. ID , Wound care were also consulted . Patient was started on Broad spectrum abx initially and later transitioned to ertapenem. Ortho saw the patient and recommended against any surgical intervention. Patient transferred to General Medical Floor for further care after improvement in her mental status.

Medical History

Past Medical History

- Rheumatoid Arthritis
- Metabolic Syndrome (HTN , DM type 2 , HLD , Obesity)
- Psoriasis with arthropathy .
- Chronic pain (on methadone)
- Hidradenitis Suppurativa
- Pyoderma Gangrenosum (complicated by superimposed infections (history of breast abscess and osteomyelitis and prior wound cultures positive for pantoea agglomerans, group B strep, E. Coli, Pseudomonas) Was treated with infliximab (Remicade) in past but non compliant with it 2/2 Cost -lost her Job and insurance .

Past Surgical History

- Tonsillectomy
- Cyst Removal (Hidradenitis)

Family History

- Unknown

Social history

- Non-smoker
- Non Alcoholic
- Illicits - NO IVDU

Review of Systems

Review of Systems

- Unable to obtain 2/2 **Acute Mental Status Change - Initial Presentation**

Physical Exam

Physical exam

BP (!) 147/76 | Pulse 131 | Temp 102.9 °F (39.4 °C) (Oral) | Resp 15 | Ht 5' 6" (1.676 m) | Wt 227 lb (103 kg) | SpO2 96% | BMI 36.64 kg/m²

GENERAL APPEARANCE: WNL .

Lymphadenopathy: none on examination of the affected extremity(s)

HENT:

Head: Normocephalic and atraumatic.

Eyes: **Pale conjunctiva**

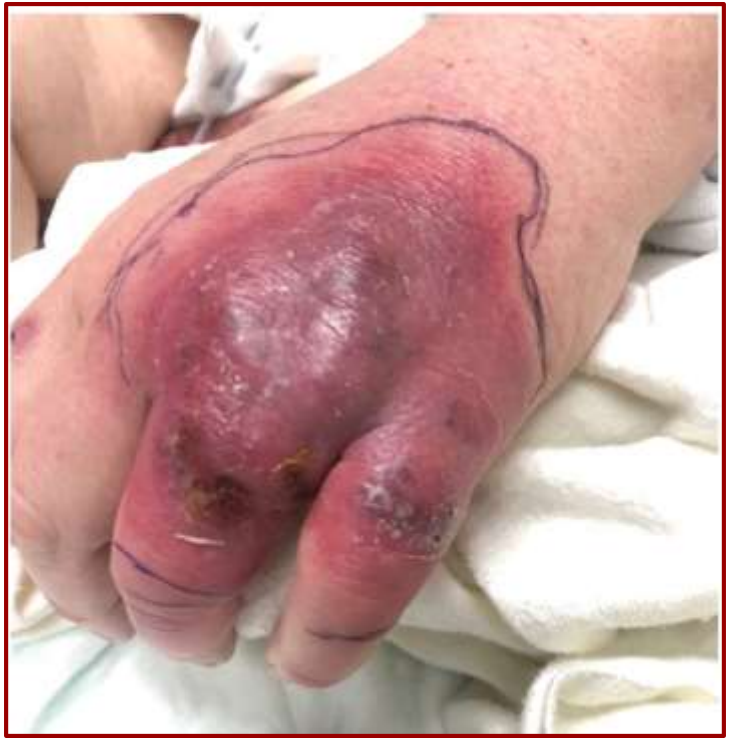
Cardiovascular: Normal rate, regular rhythm and normal heart sounds.

Pulmonary/Chest: Effort normal and breath sounds normal.

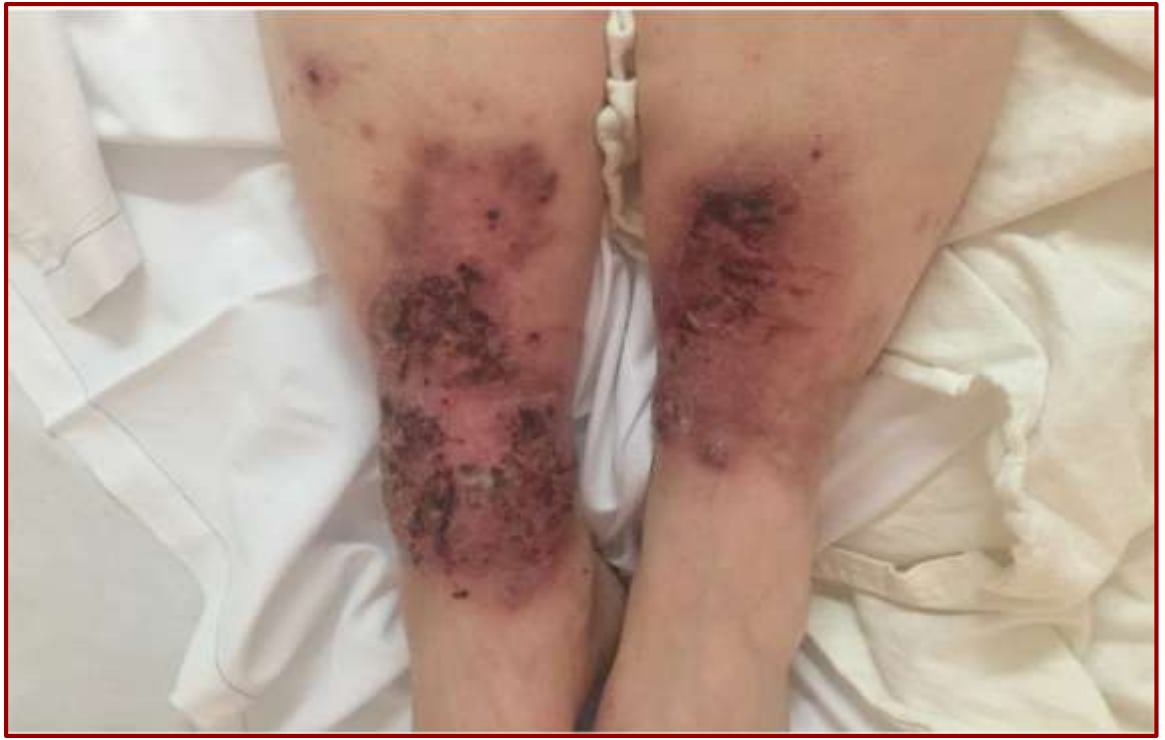
Abdominal: Soft.

Neurological: alert and oriented to person only

Skin:



Left Hand - Day -1



Bilateral Lower Extremities

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Perianal lesion erythema and inflammation

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Labs, Imaging

Labs

CBC:

Recent Labs

	08/06/19 1420
WBC	10.9*
HGB	9.5*
HCT	28.7*
PLT	381

BMP:

Recent Labs

	08/06/19 1420	08/06/19 1649
NA	137	--
K	3.3*	--
CL	96*	--
CO2	33*	--
BUN	9	--
CREATININE	0.62	--
GLUCOSE	190*	154
CALCIUM	9.0	--

HEPATIC:

Recent Labs

	08/06/19 1420
AST	25
ALT	9*
BILITOT	0.7
ALKPHOS	95

HEPATIC:

Recent Labs

	08/06/19 1420
AST	25
ALT	9*
BILITOT	0.7
ALKPHOS	95

LACTATE:

Recent Labs

	08/06/19 1420
LACTA	0.9

After 2 days of Abx

Procalcitonin	**2.17 (A)**

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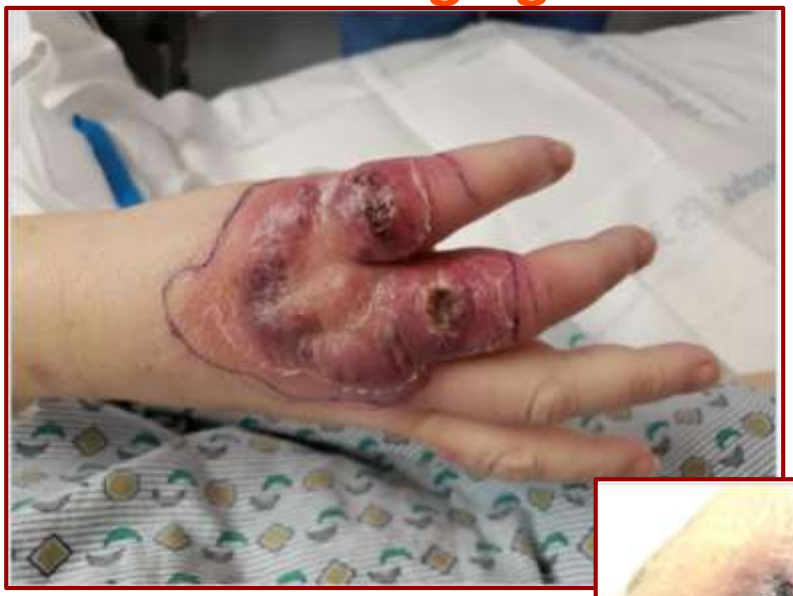
Procedure imaging



After I and D by Ortho

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Current Status

- seen by ID , Ortho .
-Wound care to see patient today
-ID recs ertapenem with plan to convert to augmentin at discharge.
-Rheumatology to see patient as OP in about 2 weeks. (appointment on 08/28)
-Mycophenolate 250mg BID with plans to increase to 500mg BID after abx completion.

Pyoderma Gangrenosum

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Pyoderma Gangrenosum

- Uncommon neutrophilic dermatosis that presents as an inflammatory and ulcerative disorder of the skin. In contrast to its name, **PG is neither an infectious nor gangrenous condition.**

- PG is a rare disorder with an estimated incidence of *3 to 10 cases per million* people per year .

- An average age of onset between 40 and 60 years . Between the sexes, women are more frequently affected .

- Being non-compliant with medication can result in severe flare ups of disease .

Differential

Vascular occlusion disorders
Venous disease
Vasculitis
Malignancy
Cutaneous infection, drugs, exogenous tissue injury
Ulcerative inflammatory disorders (eg, cutaneous Crohn's disease and ulcerative necrobiosis lipoidica)

Pathogenesis

Neutrophil-predominant infiltrates in the skin. The reason for the development of the inflammatory process that leads to PG **remains unclear .**

Some theories :-

Neutrophil Dysfunction - Abnormalities in neutrophil trafficking

Genetic factors - PAPA Syndrome and mutation of *PSTPIP1/CD2BP1* gene on chromosome 15q

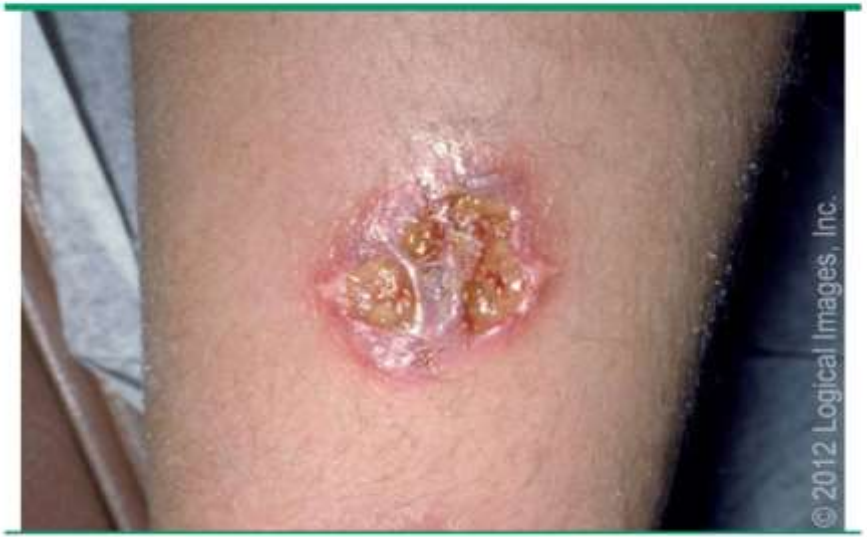
Systemic inflammation - Increase in IL-8 and IL -23 and TNF-Alpha (site of action for **infliximab (Remicade))**

All subtypes share a common clinical course. Appearance of inflammatory papule/pustule/vesicle/ or nodule -->expands and breaks down to form erosion or ulcer. Lesion development is often rapid and the pain is greater

Clinical Types

- **Ulcerative / Classic - Most Common**

Pyoderma gangrenosum



A purulent ulcer is present on the extremity.

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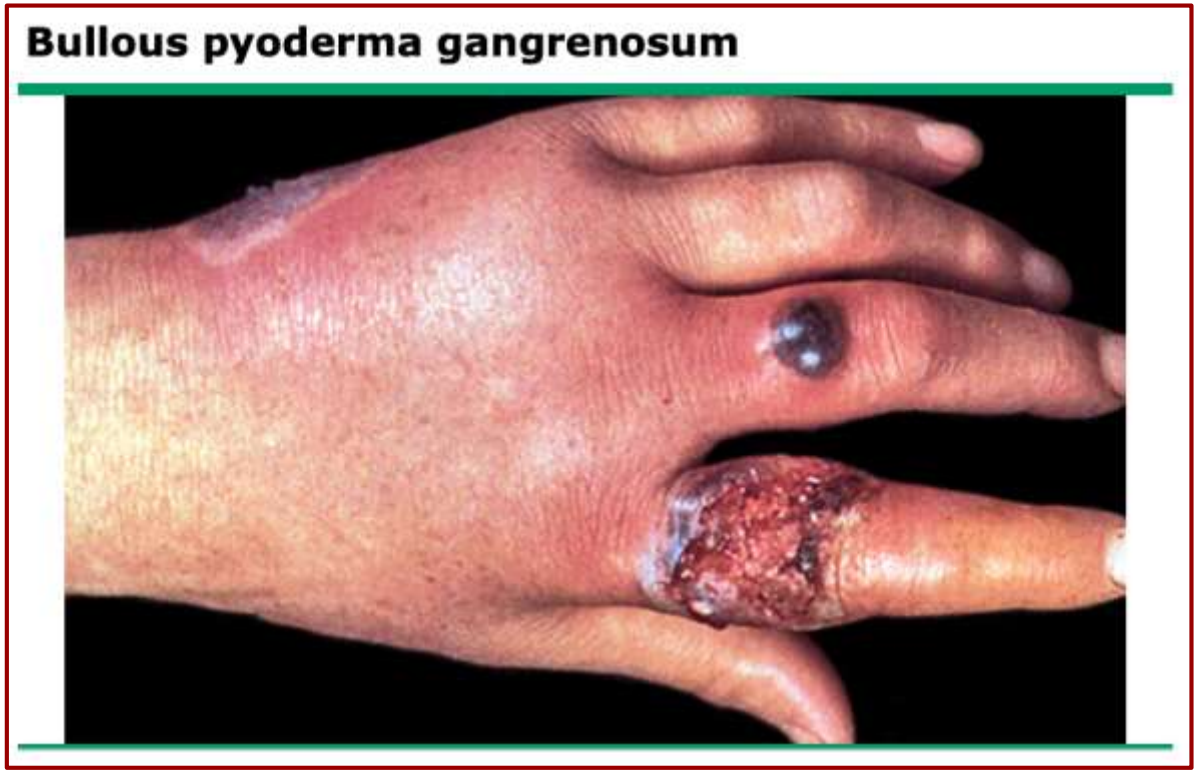
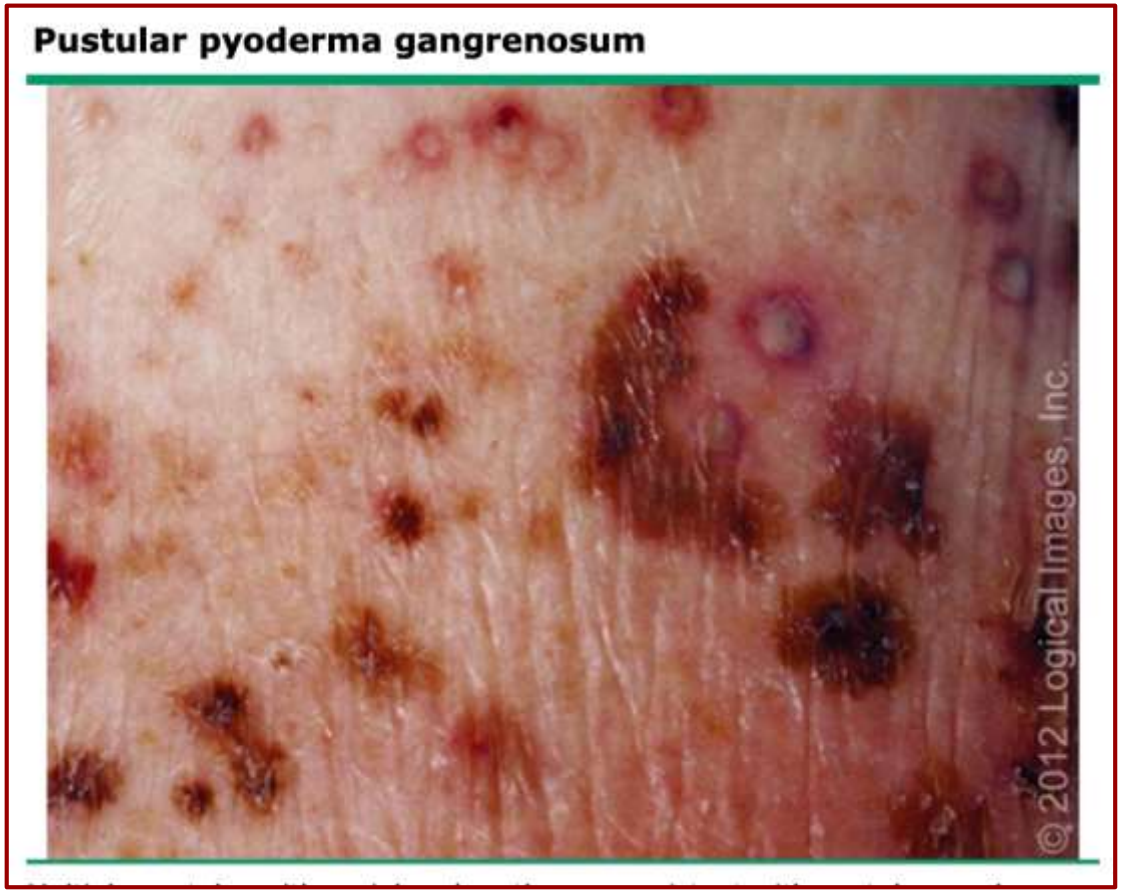
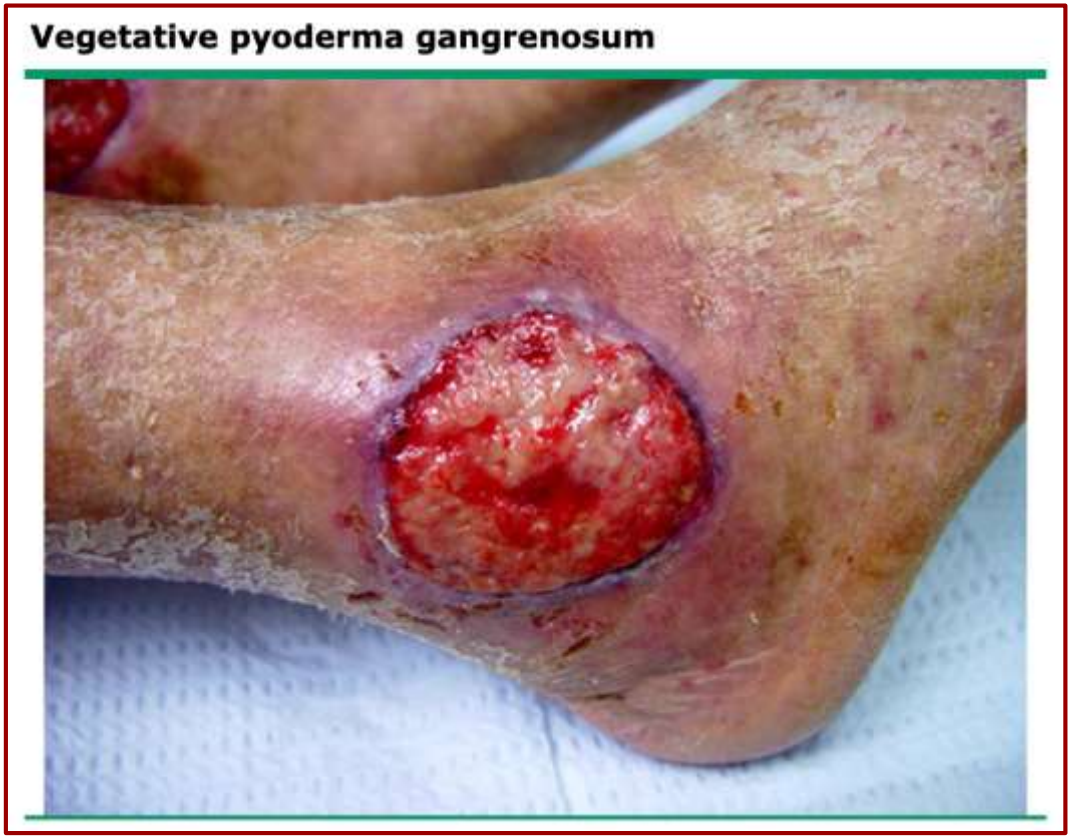
Bullous / Atypical Type



Pustular PG



Vegetative PG



Diagnostic Criteria

Major criterion:

- Biopsy of ulcer edge demonstrating a neutrophilic infiltrate

Minor criteria:

- Exclusion of infection
- Pathergy
- Personal history of inflammatory bowel disease or inflammatory arthritis
- History of papule, pustule, or vesicle that rapidly ulcerated
- Peripheral erythema, undermining border, and tenderness at site of ulceration
- Multiple ulcerations (at least one occurring on an anterior lower leg)
- Cribriform or "wrinkled paper" scar(s) at sites of healed ulcers
- Decrease in ulcer size within one month of initiating immunosuppressive medications

At least the major criterion and four minor criteria are necessary for diagnosis.

Labs to check

- **Complete blood count** (to evaluate for underlying hematologic disorders)
- **Comprehensive metabolic panel** (to evaluate for hepatic or renal dysfunction and glucose abnormalities prior to initiation of systemic glucocorticoids or immunosuppressive agents)
- **Antinuclear antibody titer** (to evaluate for the presence of systemic lupus erythematosus or collagen vascular disorders in association with PG)
- **Antineutrophilic cytoplasmic antibodies** (to evaluate for granulomatous vasculitis as a cause of ulceration)
- **Hypercoagulability studies** (antiphospholipid antibody screen to evaluate for antiphospholipid syndrome as a cause of ulceration; based upon clinical suspicion, other tests to evaluate for thrombotic states [eg, cryoglobulins, Factor V Leiden, methylene tetrahydrofolate reductase])
- **Hepatitis panel** (to evaluate for associated hepatitis B or C, particularly for patients in whom immunomodulatory therapy is considered)
- **Rheumatoid factor** (as a component of the evaluation for cryoglobulinemia and rheumatoid arthritis)
- Serum immunofixation electrophoresis (to evaluate for paraproteins)
- **Chest radiography** (to evaluate for presence of extracutaneous involvement and for possible infection prior to the initiation of immunosuppressive therapy)
- **Colonoscopy** (to evaluate for underlying inflammatory bowel disease unless another cause of PG is identified)

Treatment

- severity determines choice of initial therapy
  - Wound care
  - Surgery? NO...well maybe sometimes -> select cases where necrotic tissues poses a risk for infection or vital tissues like ligaments or tendons are exposed
  - Local disease = topical (high-potency) or intralesional steroids
  - Local calcineurin inhibitors (topical tacrolimus)
    - calcineurin = T cell activator that upregulates IL-2, sitmulates growth & differentation of T cell response

Treatment

- More extensive or rapidly progressing disease
  - Systemic glucocorticoids (topical/intralesional is often used as adjuncts)
  - Systemic Cyclosporine - careful of sife effect profile (renal toxicity, HTN -> limited to <1 year)

- 2nd line
  - anti-TNF - mycophenolate, azathioprine, and methotrexate (often not adequate as monotherapy, used in conjunction with systemic steroids)
  - Infiliximab - chimeric antibody against TNF-alpha
    - optimal treatment regimen is yet to be determined, varies amongst patients
  - Dapsone and Minocycline also shown to have some efficacy
- Refractory? IVIG

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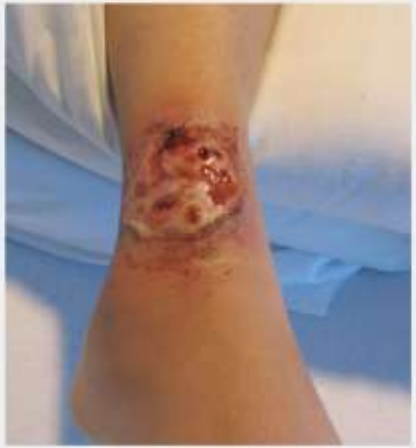
A 34-year-old woman is evaluated for a painful leg ulceration on her left anterior shin. The patient notes that the lesion began 2 weeks ago as a red papule after hitting her leg on her stairs at home. The initial papule expanded and ulcerated over the past 2 weeks. Medical history is significant for ulcerative colitis. Her only medication is mesalamine.

On physical examination, vital signs are normal. Skin findings are shown.



Which of the following is the most likely diagnosis?

A Acrodermatitis enteropathica

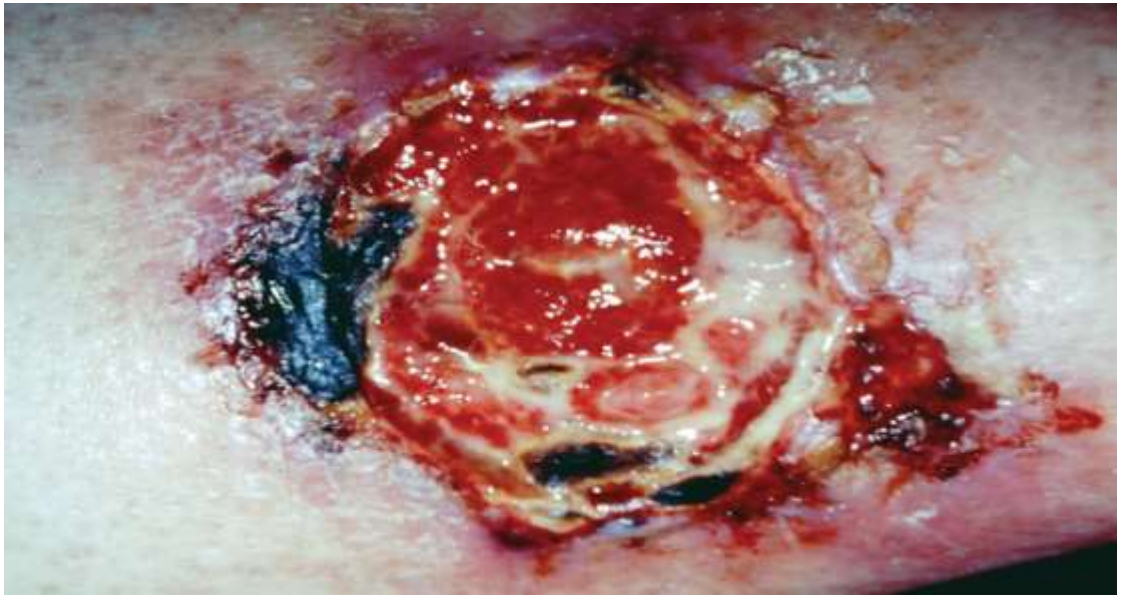
B Calciphylaxis

C Pyoderma gangrenosum

D Venous stasis ulcer

Pyoderma gangrenosum presents as a painful, exudative ulcer with a purulent base and ragged, edematous, violaceous, “overhanging” border; it may be idiopathic but it can be associated with an underlying disease.

A 52-year-old man is evaluated for a rapidly enlarging, painful ulcer on the leg. It started as a small red “pimple” approximately 2 weeks ago and has been expanding over the past week. Medical history is significant for ulcerative colitis. His only medications are sulfasalazine and folic acid. On physical examination, vital signs are normal. Skin findings are shown.



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Which of the following is the most appropriate initial treatment?

A. Compression dressings
B. Dapsone
C. Prednisone
D. Surgical debridement
E. Topical Hydrocortisone

Answer: C. Prednisone - preferred initial treatment for PG

Compression dressings? No way
Dapsone? Not first line therapy
Surgical debridement? Usually contraindicated unless absolutely needed
Topical hydrocortisone? Low-potency, would be of no benefit

Questions?

References

- Uptodate
- MKSAP 18

Summa Health

Med A PCC

8/13/19

Seniors: Groubert, Hill, Phangureh

Interns: Graham, Khullar, Velez

Case

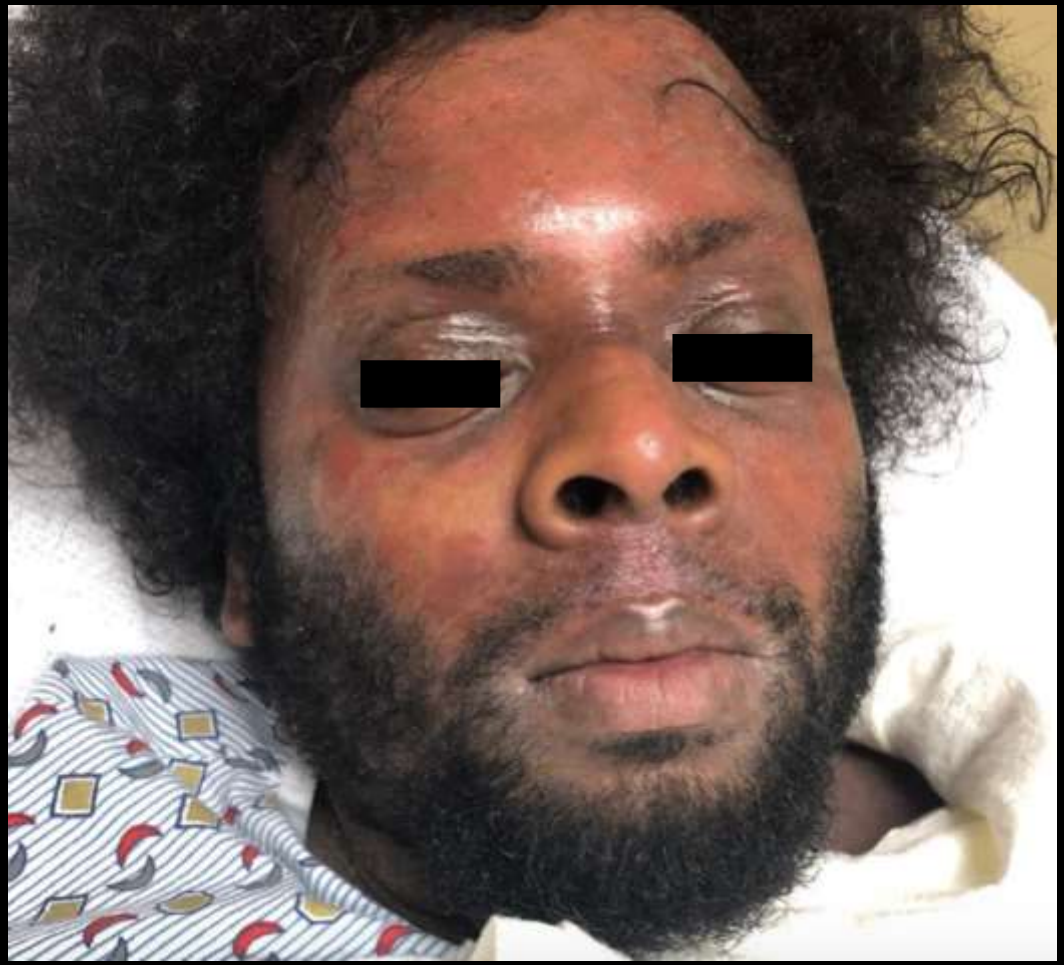
- HPI: 32 y/o male presents with a one day history of worsening weeping rash and skin exfoliation. Recently completed an outpatient steroid taper for atopic dermatitis. Denies any new topical agents or oral medications.
- PMH: Asthma, atopic dermatitis, cerebral palsy
- Surg: None pertinent
- Fam: mother with asthma and diabetes
- Social: former smoker, occasional alcohol use, occasional marijuana
- Allergies: NKDA
- Meds: Albuterol HFA, Advair, Atarax, hydrocortisone cream, triamcinolone cream, Dermaphor

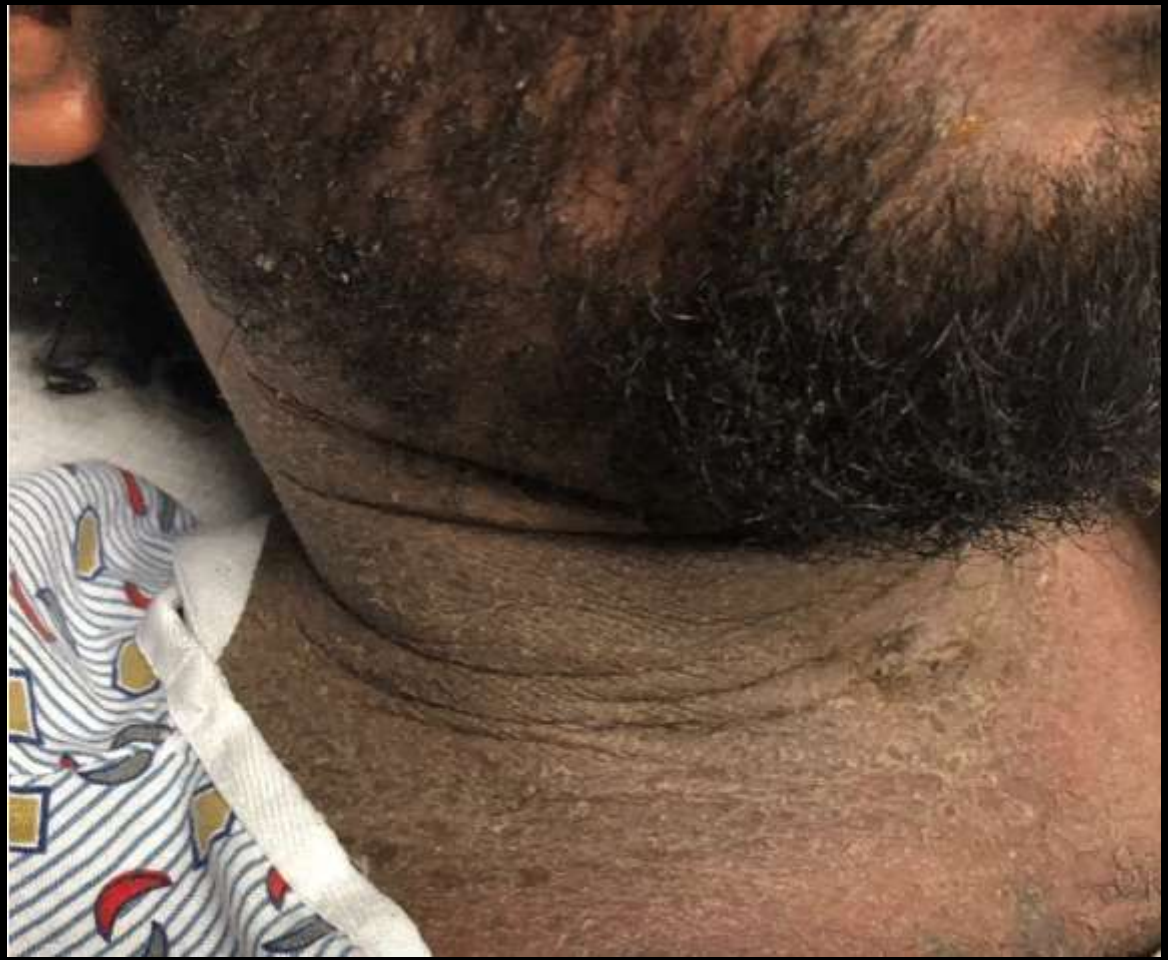
ROS

- Gen: positive for chills. Negative for fever, night sweats, fatigue, myalgias or arthralgias
- HEENT: positive for facial swelling. Negative for mouth sores, dysphagia or sore throat.
- CV: negative for chest pain, palpitations, leg swelling.
- Resp: negative for dyspnea, coughing, wheezing
- Abd: negative for abdominal pain, nausea, emesis or diarrhea
- UG: negative for hematuria, dysuria
- Skin: positive for color change and rash

Objective

- Vitals: T 98.1, BP 146/94, HR 103, RR 20, SpO2 100% on RA
- Gen: Appears in mild distress, ill but non-toxic, diffuse rash
- HEENT: Facial edema, periorbital swelling, no oral ulcers, moist mucus membranes, PERRL, EOMI
- Neck: Supple, no thyromegaly
- CV: Tachycardic, regular rhythm, no murmurs auscultated
- Resp: CTAB, no wheezes, rhonchi or crackles
- Abd: soft, non-tender, non-distended, + bowel sounds
- Skin: Erythema and exfoliation of > 90% of skin, few areas of denuded skin on forehead and b/l cheeks
- Psych: normal affect, judgement and thought process





Labs

- CBC
  - WBC 13.5
- CMP
  - No significant abnormalities
- HIV
  - Non-reactive
- Blood cultures drawn in the ED

Imaging

- None

Hospital Course

- Admitted to the GMF for monitoring and wound care recommendations due to the extent of skin involvement
- Skin biopsies were obtained (results pending)
- 2/2 Blood cultures returned positive for MSSA. Cefazolin was started and ID was consulted.
- TTE/TEE were negative for vegetations
- Marked improvement in the rash with topical steroids/emollients
- Repeat blood cultures with NGTD at the time of discharge
- Discharged home with IV cefazolin for a total of 2 weeks

Erythroderma

- Inflammatory skin reaction presenting with diffuse erythema and scaling involving > 90% of the skin
- Erythroderma is a clinical sign and may be a manifestation of many cutaneous or systemic diseases
- Epidemiology:
  - Annual incidence is approximately 1 in 100,000 in the adult population
  - Slightly more frequent in older adults (age 41-62) and in males

Erythroderma

- Etiologies
  - Exacerbation of pre-existing inflammatory dermatosis
    - Psoriasis (often occurs with abrupt cessation of systemic steroids)
    - Atopic dermatitis
    - Pityriasis Rubra Pilaris
  - Drug reactions (ex. DRESS, TEN, etc)
    - Penicillins
    - Sulfonamides
    - Carbamazepine
    - Phenytoin
    - Allopurinol
  - Other
    - T-cell lymphoma (Sezary syndrome)
    - Other hematologic and systemic malignancies
    - Infection
    - Immunobullous diseases (pemphigus vulgaris, bullous pemphigoid)
    - HIV
    - Scabies
    - Tinea
    - Idiopathic

Erythroderma

- Clinical manifestations
  - May occur acutely or onset may be over the course of weeks to months
    - Drug reactions typically develop quickly while systemic causes develop over time
  - Rash involving > 90% of the skin
    - Rash characteristics depend on the underlying cause
  - Erythematous skin that is warm to the touch
  - Peripheral edema, facial edema
  - Patient's often appear uncomfortable and will endorse constitutional symptoms
  - Signs/symptoms of high-output cardiac failure may be present

Erythroderma

- Diagnosis
  - Diagnosis is clinical
  - Determine the underlying cause
    - H&P: characteristics and appearance of rash
    - Skin biopsy with immunohistochemical staining

Erythroderma

- Complications
  - Electrolyte abnormalities
  - Dehydration
  - High-output cardiac failure
  - Protein loss
    - Negative nitrogen balance, hypoalbuminemia, edema, muscle wasting
  - Secondary infection
  - Temperature dysregulation

Erythroderma

- Management
  - Level of management depends on the underlying cause
    - Burn unit for SJS-TEN or for significant skin exfoliation
  - Monitor electrolytes and fluid status
  - Maintain euthermia
  - Treat secondary infections
  - Topical steroids (low-mid potency)
  - Wound care
  - Antihistamines

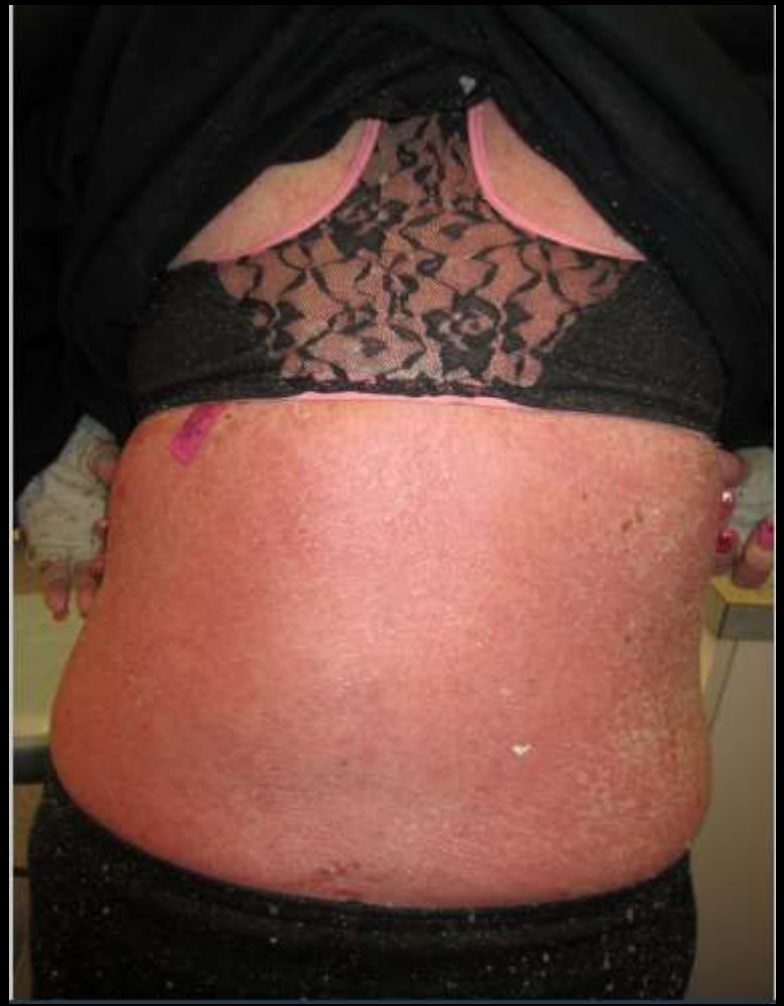
Erythroderma

- Specific treatments
  - Drug reaction
    - Withdraw offending medication
    - Systemic steroids
  - Erythrodermic psoriasis
    - Systemic therapies such as methotrexate, cyclosporine, acitretin or biologics
  - Erythrodermic atopic dermatitis
    - Systemic therapies such as corticosteroids, methotrexate, cyclosporine or azathioprine
    - Most patients will respond to topical treatment alone

A 52-year-old woman is evaluated in the emergency department for increasing redness, scaling, and itchiness of the skin. Over the last 2 days, it has expanded to cover most of her body. She complains of being cold and shivering. Her skin is flaking so badly she is embarrassed to go out in public. Medical history is significant for psoriasis since childhood and COPD for 5 years. She was treated for a COPD exacerbation last week with 5 days of 40-mg prednisone therapy. Medications are triamcinolone ointment, tiotropium, fluticasone/salmeterol, and albuterol as needed.

On physical examination, temperature is 37.8 °C (100 °F), blood pressure is 118/70 mm Hg, pulse rate is 100/min, and oxygen saturation is 97% breathing ambient air. BMI is 32. The patient is acutely uncomfortable, covered in many blankets and shivering. Her skin is leathery, indurated, and hot to the touch. Skin findings are shown.

There is active bleeding at a few sites where some scale has detached. Nail pitting is present on most of her fingernails. There are no conjunctival, oral, or genital lesions.



Which of the following is the most likely cause of the patient's new symptoms?

A) Drug reaction with eosinophilia and systemic symptoms (DRESS)

B) Prednisone

C) Sezary Syndrome

D) Stevens-Johnson Syndrome

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D) Stevens-Johnson Syndrome

Sources

- Uptodate
- MKSAP 18

PATIENT CARE CONFERENCE

COE, GOPEZ, ISLAM

OUTLINE

I. CASE OVERVIEW
II. DIFFERENTIAL DIAGNOSIS
III. DIAGNOSTICS
IV. HOSPITAL COURSE
V. LEARNING POINTS

HISTORY

CC: SOB

- 3 month history gradually declining health
  - LLE shooting pain, back pain, L hip pain (constant)
- 2 months
  - Progressive fatigue, weight loss, BOV
- 1 month
  - Dysphagia, R eye ptosis, diplopia, mydriasis
- Seen in Maine, told to have MG
- Persistence and worsening SOB prompted ED consult

- PMH: None
- PSH: None
- FMH: Lung cancer (mother)
- Social:
  - Smoking – 1 ppd for 44 years
  - Alcohol – 6 beers per week, not daily
  - Illicit drug use – None

ROS

Positive:

Fatigue, unexpected weight change
Dysphagia
Diplopia, BOV
Abdominal discomfort, constipation
Back pain, L hip pain
Weakness

Negative:

Chills, diaphoresis, fever
Congestion, sinus pressure, drooling
Photophobia, eye discharge/redness
Cough, choking, chest tightness
Chest pain, palpitations, edema, PND
Melena, hematochezia, hematuria
Arthralgias, joint swelling, gait problems
Dizziness, seizures, syncope

PE

Constitutional: He is oriented to person, place, and time. Appears ***cachectic***.
Eyes: Conjunctivae are normal.
R eye ptosis, no eye-lid fasciculations. Dilated R pupil, not reactive to light. R eye is outward, absent adduction, elevation and depression. (+) binocular diplopia.
Neck: Normal ROM, supple.
Cardiovascular: Normal rate, regular rhythm and normal heart sounds. No gallop, friction rub, or murmur heard.
Pulmonary: Effort normal and breath sounds normal. No stridor. No respiratory distress. No wheezes, rales, crackles.
Abdominal: Mild epigastric tenderness. No masses or distension. No rebound or guarding.
LAD: No cervical or axillary LAD.
Neuro: ***CN III deficit is present***. 5/5 motor strength all extremities, no sensory deficits.
MSK: Tenderness in lower back and L hip.

CASE SUMMARY

62 yo male with no PMH, FMH of lung ca, 44 py smoking history presenting with a 3 month history of progressive decline in health, weight loss, fatigue, dysphagia, R eye BOV, diplopia and ptosis, L hip and back pain, dyspnea on exertion, and worsening shortness of breath.

Pertinent PE findings revealed R eye ptosis, mydriasis, binocular diplopia, loss of CN III muscle movements, cachexia, clear breath sounds, mild abdominal tenderness, focal hip and back tenderness.

DIFFERENTIAL DIAGNOSIS

Shortness of breath
- ACS
- COPD in acute exacerbation
- Pneumonia

R eye ptosis
- Intracranial lesion of CN III (aneurysm or mass)
- Ocular myasthenia gravis
- Horner’s syndrome

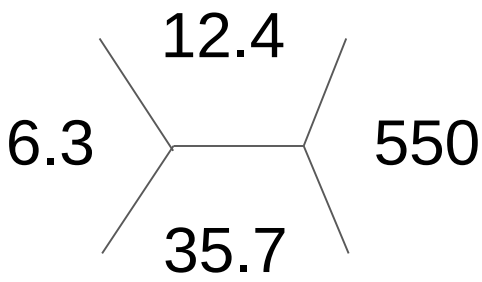
Constitutional symptoms
- Malignancy
- COPD

Back pain and L hip pain
- Trauma
- Metastatic

DIAGNOSTICS

Na	132
K	4.9
Cl	95
CO2	25
BUN	20
Cr	0.88

LA	1.0
Ca	9.2
Trop I	**<0.012**
Alb	3.7
ALT	13
AST	46



EKG
CXR
CT/MRI

HOSPITAL COURSE

Day 1: Admitted to GMF. Consults placed to Heme/Onc and Pulm

Day 2: Seen by Pulm, plan for EMB/EBUS. Seen by Heme/Onc, plan for MRI brain and bone scan. Consults placed to Palliative Care and Neurology. Neurology agree w/ current plan + CTA head/neck to r/o aneurysm

Day 3: EBUS w/subcarinal node biopsy – (+) for NSCLC. Await final path. NM bone scan (+) for bony mets

HOSPITAL COURSE

Day 4: MRI brain w/ three enhancing lesions concerning for metastasis/meningeal carcinomatosis. CTA head/neck (-) for aneurysm

Day 5: Rad Onc consult for possible palliative radiation

Day 6: WBRT per Rad Onc, MRI total spine ordered

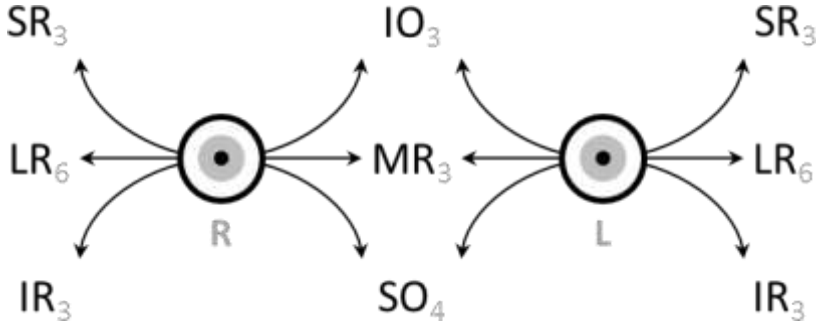
Day 7: Decadron per oncology. MRI C/T/L spine demonstrating diffuse bony/cord/soft tissue mets.

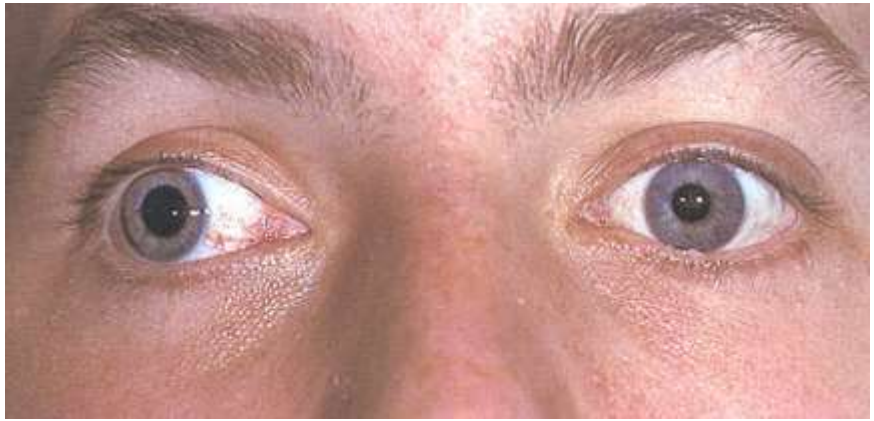
LEARNING POINTS

Oculomotor nerve palsy

- Oculomotor paresis
- Ptosis
- Mydriasis

- PE reveals:
  - Unreactive pupil
  - Paralysis of SR, IR, MR
  - “Down and out”

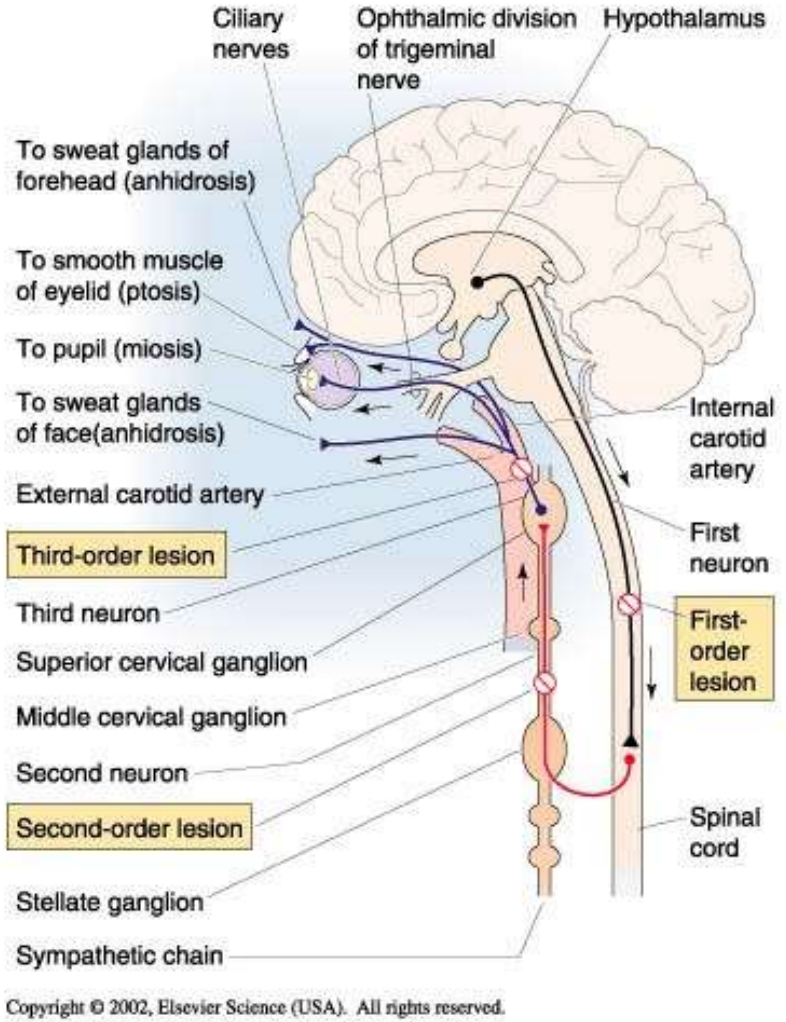


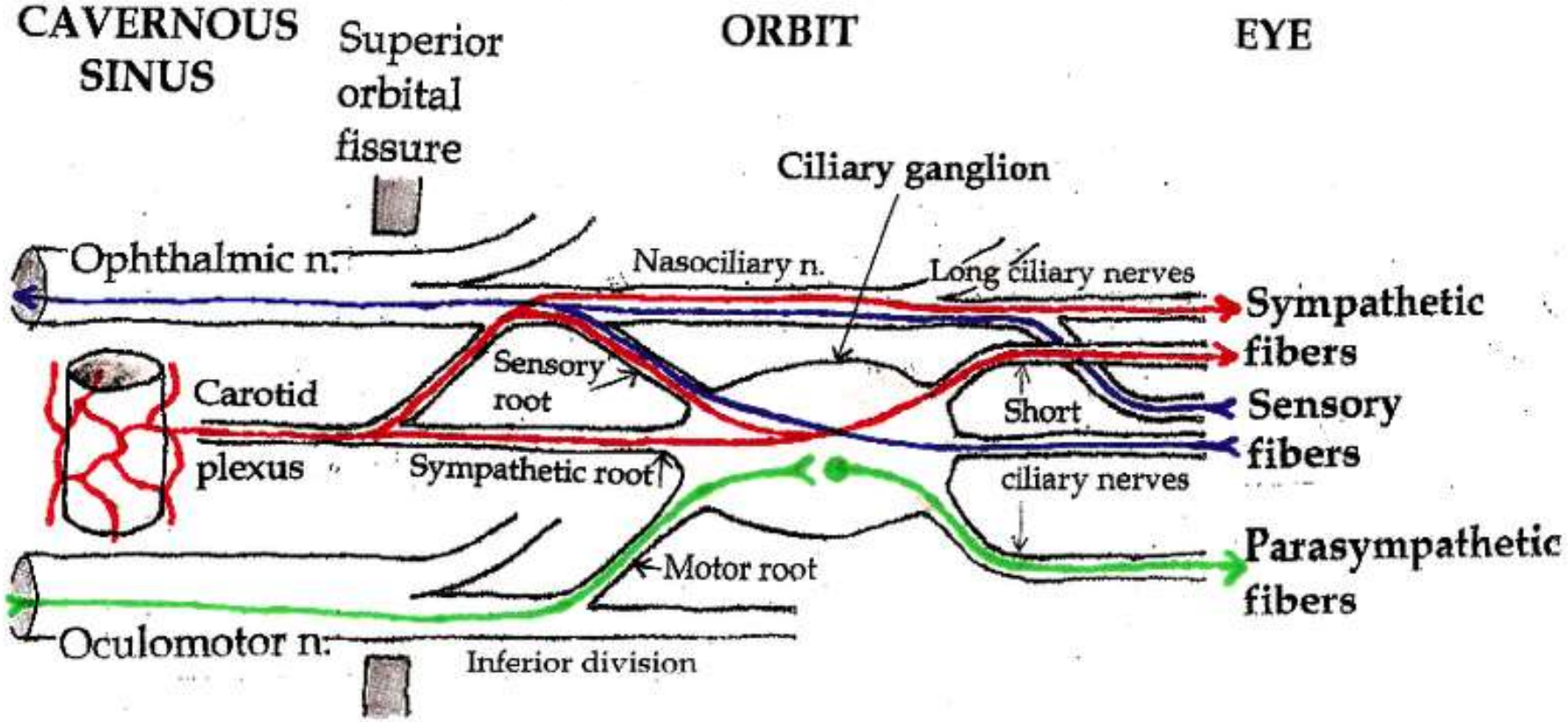


Oculosympathetic paresis

- Ptosis
- Miosis
- Anhidrosis

- Lesion anywhere along a three-neuron sympathetic pathway
  - Central
  - Preganglionic
  - Postganglionic




CAVERNOUS SINUS
Superior orbital fissure
ORBIT
EYE
Ciliary ganglion
Ophthalmic n.
Nasociliary n.
Long ciliary nerves
Sympathetic fibers
Sensory root
Carotid plexus
Short ciliary nerves
Sensory fibers
Sympathetic root
Motor root
Parasympathetic fibers
Oculomotor n.
Inferior division

Ocular Myasthenia Gravis

- Oculomotor paresis
- Ptosis
- Orbicularis oculi weakness

- Fluctuating, fatigable weakness
  - Eyelid fatigue
  - Eyelid curtaining

NSCLC

- Accounts for about 80% of lung cancers
- Adenocarcinoma
  - Non-smokers
  - Peripheral, solitary
- Squamous Cell
  - Smokers
  - Central location
- Large Cell
  - Undifferentiated
  - Peripheral, necrotic

Pulmonology & Critical Care Item #35

A 72-year-old woman is evaluated during a routine visit. She has a 30-pack-year smoking history and quit 5 years ago. She has a history of mild COPD and breast cancer diagnosed 15 years ago, currently in remission. A chest radiograph from 5 years ago showed no signs of disease recurrence. Medications are albuterol and tiotropium inhalers.

On physical examination, vital signs are normal. Lung examination reveals prolonged expiration and diminished breath sounds throughout. The breast examination is unremarkable.

A screening low-dose chest CT scan shows a peripheral 9-mm solid pulmonary nodule in the left upper lobe and emphysema but no mediastinal or hilar lymphadenopathy and no pleural effusion. A PET/CT scan using fluorodeoxyglucose (FDG) is performed and the nodule is intensely hypermetabolic. There is no evidence of distant uptake.

Pulmonology & Critical Care Item #35

A - Bronchoscopy with biopsy

B - Serial chest CT scans

C - Surgical wedge resection

D - Transthoracic needle aspiration

Questions?

How I picture your presentation going 😂

- MN