Dermatology Pearls for the Internist

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I have no relevant disclosures
I will talk about off-label medication use

I will not discuss much pathophysiology

Goal= practical tips, new info

The ED calls:

"68 y/o M with cellulitis, admitting for IV antibiotic therapy"

Not an emergency, but especially common

- Cellulitis admissions per year in US: 537,000
- The total cost for all cellulitis discharges (2013): $3.74 billion (95% CI, $3.65 billion–$3.83 billion)
- Many mimics of cellulitis

Peterson et al. Open Forum of Infectious Disease 2017

Pseudocellulitis

Contact dermatitis

Psoriasis

Atopic dermatitis

Gout

Tinea

Lymphedema

Venous stasis

Peripheral artery disease

Pseudocellulitis

Approximately 30% of patients **admitted** with a diagnosis of **cellulitis** received an **alternative diagnosis** prior to discharge or within 30 days

Raff et al. J of Am Acad Derm, 2017

Is there a better way to diagnose cellulitis?

- 840 adults admitted via ED with LE cellulitis
- Excluded if:
  - Not leg
  - Penetrating trauma/ surgery/ ulcer
  - Osteomyelitis
  - IV antibiotics

Raff et al. J of Am Acad Derm, 2017

ALK-70 Score

4 variables

>4 pts: ≥82.2% likelihood of **true cellulitis**

<3 pts: ≥83.3% likelihood of **pseudocellulitis**

Raff et al. J of Am Acad Derm, 2017

SPEED ROUND:
5 MINUTE DERM CONSULTS

INPATIENT PEARLS

If you think it's a drug rash . . .

Morbilliform

DDx will be viral exanthem vs. medication reaction

A skin biopsy may not be helpful

Most drug rashes are benign and go away with removal of the drug

Onset 1-2 weeks after the med and several days on re-exposure

Danger Zone: Drug Hypersensitivity Syndrome (formerly DRESS)

2-8 weeks after med started, usually 1st exposure

Morbilliform rash- many morphologies

Facial and ear swelling

May have mucosal lesions

Not in standard morbilliform drug eruptions

Ill-appearing

Treat J Cancer Therapy Advisor

DHS Meds:

carbamazepine, phenobarbital, phenytoin, lamotrigine

allopurinol

olanzapine

sulfamethoxazole, sulfasalazine

minocycline

dapsone

abacavir

Can they go home with a drug rash?

Assessing patients with drug rash:

- Feeling well – Drug hypersensitivity syndrome patients appear ill
- Fevers or nodes – Seen in DHS
- Mucosal lesions- In SJS/TEN mucosal lesions usually precede rash
- Skin pain- seen in SJS/TEN
- Blisters

So is this a dangerous rash?

Erythema Multiforme- a benign mimic

- Hypersensitivity rxn
- **NOT** on SJS/TEN spectrum
- >90% caused by infection
  - HSV1 most common
  - Mycoplasma
- 3 part morphology:
  - Dusky center
  - Pale ring
  - Red ring
- Erupt over 72hrs starting on dorsal **hands, feet**

Mucosal Involvement

20% with oral lesions after rash

Bullae → erosions

Supportive cares

No admission needed unless for pain control/ IVF

Have you heard of this?

- yo with h/o cough, fever
- Treated with TMP/SMX
- Day 4: skin lesions and oral erosions
- Admitted w/ concern for SJS

Photo courtesy of Dr. Sheilagh Maguiness and Kristen Hook

CXR with patchy infiltrates

Mycoplasma IgM+

Diagnosis?

Photo: courtesy of Dr. Sheilagh Maguiness and Kristen Hook

Mycoplasma pneumoniae-induced rash and mucositis (MIRM)

Features that help to distinguish MIRM from erythema multiforme or SJS/TEN include:

- Children, teens, younger adults
- ++ mucosal involvement
- Sparse cutaneous involvement
- **Warning:** Same concerns as SJS/TEN in relation to blindness, strictures

Canavan et al. JAAD. 2015

MIRM

- If clinical suspicion:
  - Antibiotic coverage
  - Mycoplasma titers
  - Eye exam

OUTPATIENT PEARLS

34 y/o F with this rash for 3 days. How do you treat?

~~Prednisone~~

Instead try targeting the histamines:

Schedule a non-sedating 2nd generation H1 bocker (↑ doses)

H2 blocker

Leukotriene receptor blocker

Zuberier et al. Allergy 2009

Hand dermatitis 101:

Atopic dermatitis vs contactant

What are the hands touching?

- Soaps
- Wipes
- Cleaning supplies
- OTC products

Use a stronger steroid- thick skin

Moisturizers

It’s just psoriasis, right?

Obesity is a risk factor for psoriasis

Psoriasis as an independent cardiovascular risk factor:

- HTN
- HLD
- DM2
- NASH
- Metabolic syndrome
- CKD

Other comorbidities:

- Depression
- Inflammatory bowel disease
- Lymphoma

Takeshita et al JAAD 2017

- Risks are proportional to severity of skin disease
- Does treatment alter these risks?

Bruises on my legs:

- Pigmented purpuric dermatoses:
- Ascorbic acid 500 mg BID
- Rutoside (bioflavinoid) 50 mg BID

Arms?

Actinic purpura- different etiology

Topical arnica oil, retinol, ceramides, niacinomide, vit K

Plachouri et al J dermatology treat 2018 , Laufer J Drugs Dermatol 2006

Is it a fungus and what should I do?

- Many causes of nail dystrophy
- Clinical clues

Treatments

Oral terbinafine 66% clinical cure, 76% mycologic cure

Oral itraconazole 70% clinical cure, 63% mycologic cure

Ciclopirox clinical cure rate 6%-9% clinical cure

Efinaconazole (48 wks) 18% complete cure, 55% mycologic cure

Tavaborole (48 wks) 9% cc, 40% mc

Laser (12% cc)

Saunders et al. J Pharm Practice 2017

83 y/o F with itch

Iron metabolism- ferritin, CBC
Uremia- BMP
Hepatic disease- LFTs, hep B, C serologies
Infection- HIV, parasites
Malignancy- Cancer screens, CXR, CT
Meds: Opioids, ACEI, statins
Heme dyscrasias- SPEP/UPEP
Endocrinopathy- TSH, A1C, Vit D,
Neurological diseases- Nerve conduction studies,
CHF
Psychological factors
Pruritus of elderly

Millington et al. BJD 2018

What do I do?

- Gentle skin cares
- Moisturize
- Non-sedating antihistamines
- Other options?

- Thank you!
- Questions?

References

- Raff AB, Weng QY, Cohen JM, Gunasekera N, Okhovat JP, Vedak P, Joyce C, Kroshinsky D, Mostaghimi A. A predictive model for diagnosis of lower extremity cellulitis: A cross-sectional study. Journal of the American Academy of Dermatology. 2017 Apr 1;76(4):618-25.
- Peterson RA, Polgreen LA, Cavanaugh JE, Polgreen PM. Increasing incidence, cost, and seasonality in patients hospitalized for cellulitis. InOpen forum infectious diseases 2017 Jan 1 (Vol. 4, No. 1). Oxford University Press.
- Canavan TN, Mathes EF, Frieden I, Shinkai K. Mycoplasma pneumoniae-induced rash and mucositis as a syndrome distinct from Stevens-Johnson syndrome and erythema multiforme: a systematic review JAAD. 2015 Feb;72(2):239-45.
- Drug HypersensitivityJames Treat, Cancer Therapy Advisor
- Zuberbier T, Asero R, Bindslev-Jensen C, et al.; Dermatology Section of the European Academy of Allergology and Clinical Immunology; Global Allergy and Asthma European Network; European Dermatology Forum; World Allergy Organization. EAACI/GA(2)LEN/EDF/WAO guideline: management of urticaria. *Allergy*. 2009;64(10):1427–1443.
- Takeshita J, Grewal S, Langan SM, Mehta NN, Ogdie A, Van Voorhees AS, Gelfand JM. Psoriasis and comorbid diseases: epidemiology. Journal of the American Academy of Dermatology. 2017 Mar 1;76(3):377-90.
- Plachouri KM, Florou V, Georgiou S. Therapeutic strategies for pigmented purpuric dermatoses: a systematic literature review. Journal of Dermatological Treatment. 2018 May 17:1-5.
- Saunders J, Maki K, Koski R, Nybo SE. Tavaborole, Efinaconazole, and Luliconazole: three new Antimycotic agents for the treatment of Dermatophytic fungi. Journal of pharmacy practice. 2017 Dec;30(6):621-30.
- Millington GW, Collins A, Lovell CR, Leslie TA, Yong AS, Morgan JD, Ajithkumar T, Andrews MJ, Rushbook SM, Coelho RR, Catten SJ. British Association of Dermatologists' guidelines for the investigation and management of generalized pruritus in adults without an underlying dermatosis, 2018. British Journal of Dermatology. 2018 Jan;178(1):34-60.