

Cutaneous Drug Eruptions

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There are 32 Zombieland rules but **ONLY ONE** drug eruption rule.....

- **Always** ask the patient if they have any drug allergies and if you don't know prior to writing the prescription ask them.....



Drug eruptions: a detective story

Sometimes a mystery



Sometimes obvious



Cutaneous Drug Eruptions

Most cutaneous drug eruptions occur within 10-21 days of starting a medication but not always...

Mild



Severe
S=Severe
C=Cutaneous
A=Adverse
R=Reaction

(Skin alone)

(Skin and other organs)

Mild cutaneous drug eruptions

- **Most common pattern**
- Due to
 - Antibiotics
 - Penicillins
 - Cephalosporins
 - Non steroidal anti-inflammatory
 - Allopurinol
 - Anti epileptics
 - And many others...

Morbiliform (measles like)



Mild cutaneous drug eruptions

- Due to
 - Penicillins
 - Non steroidal anti-inflammatory
 - Angiotensin converting enzyme inhibitors (ACE inhibitors)
 - And many others...

Urticaria "Hives"



Mild cutaneous drug eruptions

Skin dyspigmentation (colour change)

- Due to
 - Minocycline (blue)
 - Hydroxychloroquine (grey)
 - Amiodarone (Blue/grey)
 - And many others...

Minocycline pigmentation



Mild cutaneous drug eruptions

Skin dyspigmentation (colour change)

- Due to
 - Combined oral contraceptive
 - IUD/Contraceptive implants
 - (Also pregnancy)

Melasma



Mild cutaneous drug eruptions

Vasculitis (inflammation of blood vessels)

- Due to
 - Antibiotics (eg penicillin)
 - Antiepileptics
 - Allopurinol
 - NSAIDs

Vasculitis "Palpable purpura"



(Can be systemic- watch kidney function)

Mild cutaneous drug eruptions

Photosensitivity (sensitive to sunlight)

- Due to
 - Antibiotics (eg doxycycline)
 - Diuretics (eg hydrochlorothiazide)
 - Oral hypoglycaemics (glipizide)
 - NSAIDs



Mild cutaneous drug eruptions

Drug induced cutaneous disease

- Acne
 - Systemic steroids
 - Anabolic steroids
 - Lithium
 - Contraceptives



Mild cutaneous drug eruptions

- A 22 year old woman
- Every month gets a rash at exactly the same place on her skin.

Diagnosis?

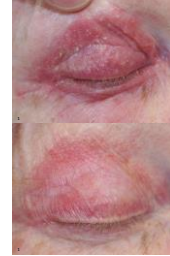
Fixed drug eruption due to mefenamic acid



Mild cutaneous drug eruptions

Drug induced cutaneous disease

- Peri-oral dermatitis
 - Potent topical steroids
- Telangiectasis
 - (dilated blood vessels)



Severe Cutaneous Adverse Reactions "SCAR"

Severe Cutaneous Adverse Reactions "SCAR"

- Drug hypersensitivity syndrome
 - Drug Reaction with Eosinophilia and Systemic Symptoms "DRESS"
- Stevens-Johnson Syndrome/Toxic Epidermal Necrolysis (SJS/TEN)

Severe cutaneous adverse reactions

- 52 year old woman
- C/o: A rash and feeling generally unwell 4 days
- PMH:
- Diabetes mellitus-retinopathy, nephropathy
 - Ischaemic heart disease
 - Hypertension
 - Dylipidaemia

Severe cutaneous adverse reactions

- OE
 - Febrile 38.5 °C
 - Rash
 - Extensive - morbilliform & peel
- Initial differential diagnosis?
- Infection ?viral ?bacterial



Severe cutaneous adverse reactions

Hemoglobin	241	g/L	120-150
Hct	6.89	%	37.0-51.9
Hematocrit	6.43	%	35.0-50.46
Mean Cell Volume	190	fL	80-100
Mean Cell Hemoglobin	28.9	pg	27-32
RDW	16.3	%	11.6-15.4
Platelets	222	x10 ⁹ /L	150-400
WBC	9.3	x10 ⁹ /L	4.0-10.0
Neutrophils	76.3	%	47.0-73.0
Lymphocytes	2.6	%	19.0-27.0
Monocytes	2.2	%	2.0-8.0
Eosinophils	6.5	%	0-5.0
Neutrophils	6.2	x10 ⁹ /L	0-6.2
Monocytes	1.9	x10 ⁹ /L	0.2-1.0
Lymphocytes	6.9	x10 ⁹ /L	0.8-4.8
Basophils	6.2	x10 ⁹ /L	0.0-0.68

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Remarks: RED CELLS - normal morphology WHITE CELLS - neutrophil toxic changes
platelets - reactive lymphocytes present.
Reported by: BR12 DGH1; MLT

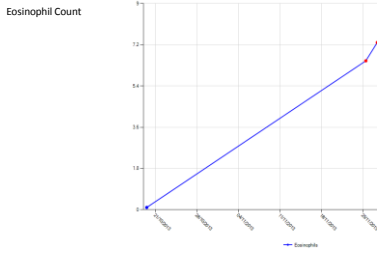


Severe cutaneous adverse reactions

- Given IV antibiotics but fever and rash did not settle
- Infection screen -ve
 - MSU
 - Blood culture
 - CXR



Severe cutaneous adverse reactions



Severe cutaneous adverse reactions

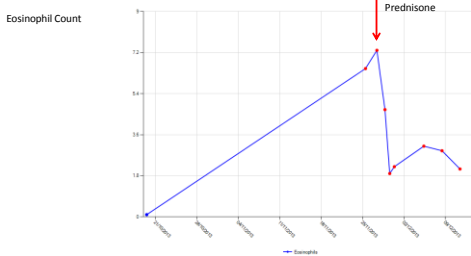
- Re took a drug history
- Started allopurinol 100mg od 2 weeks prior to admission...

Diagnosis:
Drug Reaction with Eosinophilia and Systemic symptoms (DRESS)



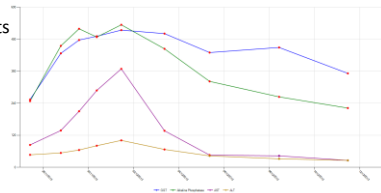
Also: liver function can be deranged, lymphadenopathy

Severe cutaneous adverse reactions



Severe cutaneous adverse reactions

Liver function tests

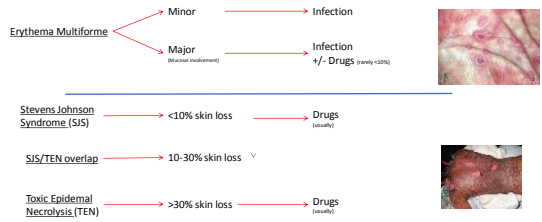


Severe cutaneous adverse reactions

- DRESS
 - Stop allopurinol
 - Give prolonged course of systemic steroids
 - Fever abruptly stops
 - Exclude infection



Erythema multiforme/Steven Johnson syndrome and Toxic Epidermal Necrolysis

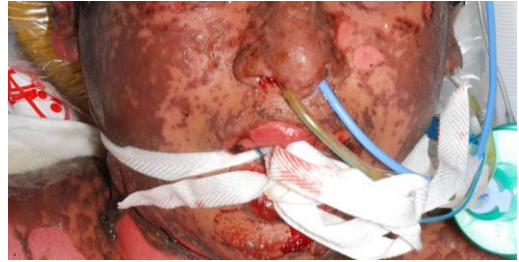


- 66 year old woman
- C/o
 - 4 days of ulcers on lip and mouth
 - Rash
 - 16 days earlier started carbamazepine
- PMH
 - Complex partial seizures



- Diagnosis
 - Stevens Johnson syndrome secondary to carbamazepine (<10% epidermal loss)
- Treatment
 - STOP Carbamazepine
 - Supportive
- NB: Pharmacogenetics
 - HLA-B*1502 confers a greater risk of SJS/TEN due to carbamazepine in all Asian (esp Han Chinese) patients
- TEST FOR IT!

- 15 year old boy.
- C/O
- 3 days of a rash and feeling unwell
 - Hx of URTI symptoms
 - Self medicated
 - Took one of his brother's amoxicillin/clavulanic acid tablets
- O/E
 - Unwell
 - Hypotensive
 - Extensive rash



Thank you

Photograph Attributions

- 1=Sourced from the internet
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- 3= Clinical photograph with patient's consent