



433 Teams

DERMATOLOGY

Lecture (20)

Dermatologic Emergencies

derm433team@gmail.com



جامعة
الملك سعود
King Saud University



Objectives:

Not Given

Color index: slides, doctor notes, 432 notes

Definition

Emergency is:

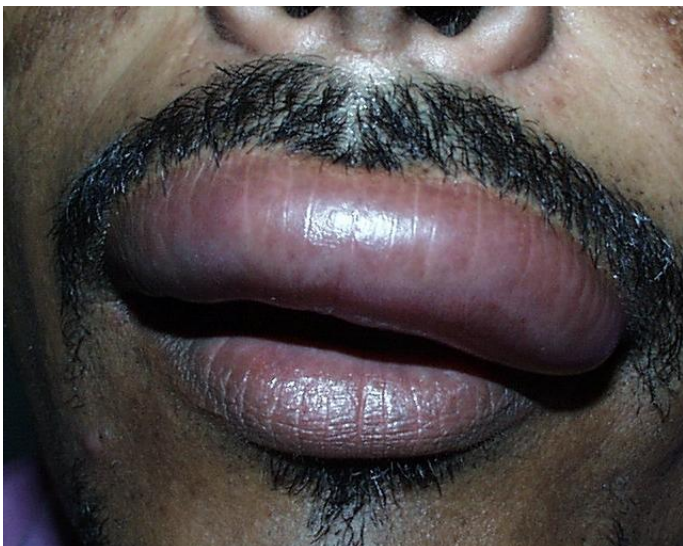
- Acute
- Unexpected
- Dangerous
- Requires quick action.

Alarming Morphological patterns.

- Urticaria / Angioderma
- Purpura / Echymosis
- Bullae / Sloughing
- Necrosis / Gangrene
- Exfoliative Erythroderma Syndrome
- Generalized/ widespread rashes in the acutely ill febrile patient.

Urticaria / Angioderma

- Transient swellings and erythema due to vasodilatation and fluid exudation.
- Manifest by weals that develop rapidly and clear within hours.
- Can be life threatening esp. when associated with angioedema of the larynx.
- May take years to resolve.



Purpura

- Bleeding into the skin (petechiae, purpura, Echymoses)
- Caused by pathology:
 1. Inside blood vessel (disorders of coagulation)
 2. Of blood vessel walls (Vasculitides)
 3. Outside blood vessels (affecting supporting stroma eg: aging, drugs, Vit C deficiency, amyloidosis)



Bullous Diseases

- Blisters are circumscribed fluid filled skin lesions.
- Burns, bullous impetigo, herpes simplex and zoster, severe contact dermatitis and insect bites are common examples.
- Skin diseases presenting mainly with blisters are relatively rare but may be fatal
- eg: autoimmune and mechanobullous diseases



Erythema Multiforme (EM)

- EM is a cutaneous reaction pattern to several provoking stimuli including herpes simplex, bacterial infection and drugs. May be idiopathic.
- The target (iris-like) lesions involve the hands and feet and less frequently the elbows and knees. There is now consensus that SJS and TEN are different from EM



Stevens Johnson Syndrome (SJS) – Toxic Epidermal Necrolysis (TEN) Spectrum

- Severe variants of an identical pathologic process (apoptosis of keratinocytes induced by a cell-mediated cytotoxic reaction: Haptens vs. Cytokines) and differ only in the percentage of body surface involved.
- Both can start with macular and EM-like lesions; however about 50% of TEN evolve from diffuse erythema to necrosis and epidermal detachment.
- **TEN may be defined as involving >30% of the total body surface area while SJS involves 10% or less of the total body surface area.**
- Rare and life threatening.
- Most common in adults more than 40 years
- Risk factors : SLE, HIV, HLA –B12
- Systemic Involvement: Respiratory, GIT, Renal, CV, Anaemia, Lymphopenia, Neutropenia, Eosinophilia

When there is diffuse tender erythema always think of Staphylococcal scalded skin syndrome (SSSS) And Toxic epidermal necrolysis (TEN).

Sloughing more than 30% of the skin lead to: loss of protection barrier, loss of thermal regulation and electrolyte imbalance.

Etiology

- Polyetiologic: Drugs (sulfas, anticonvulsants, allopurinol, NSAIDS, antibiotics), infections, immunization, chemicals and idiopathic.

Distribution

- Rash starts on face and extremities, may generalize rapidly (few hours/days).
- Scalp, palms, and soles may be spared
- Mucous membranes invariably involved, 85% have conjunctival lesions.
- Evolve later to:
 - Confluent erythematous macules with crinkled surface
 - Raised flaccid blisters
 - Sheet like loss of epidermis
 - Red, oozing dermis resembling second-degree burn

Sequelae

- Scarring, dyspigmentation, eruptive melanocytic nevi, abnormal nails, phimosis, vaginal synechiae, entropion, trichiasis, sicca syndrome, keratitis and corneal scarring, neovascularization, synblepharon, persistent photophobia, blindness.

Signs and Symptoms

- Usually start with prodromes: fever, malaise, arthralgias 1-3 weeks after drug exposure and 1-3 days before mucocutaneous lesions. There may be tenderness, itching, burning, pain or paresthesia, photophobia, painful micturition, impaired alimentation and anxiety.

Histopathology

Full thickness necrosis of the epidermis and a sparse lymphocytic infiltrate (**Diagnostic**)

Recovery

- begins within days, completed in 3 weeks.
- Pressure points and periorificial sites take longer
- Nails and eyelashes may be shed.

Mortality

- 30% for TEN
- 5 -10% for SJS
- Due to sepsis, GI hemorrhage and fluid/electrolyte imbalance.
- Re exposure more rapid recurrence and more severe.

DDX

- Exanthematous drug eruption, phototoxic eruptions, GVHD, Toxic shock syndrome, burns, SSSS, generalized bullous fixed drug eruption, exfoliative dermatitis.

Bad Prognostic Factors

- Body surface area > 10%
- Serum Urea >10mM
- Age > 40 years
- Heart rate >120
- Serum glucose > 14mM
- Serum Bicarbonate <20mM
- Malignancy

Management

- Withdrawal of suspected drug(s)
- in ICU or burn unit
- IV fluids and electrolytes as for a third degree burn.
- Symptomatic treatment
- IV glucocorticoids/ immunoglobulins/ pentoxifylline
- Treat eye lesions early because it can lead to blindness if left untreated (refer to ophth)
- **Treat TEN and SJS as third degree burn but remember don't do surgical debridement.**



Exfoliative Erythroderma Syndrome (EES)

- It is a serious, at times life-threatening reaction pattern of the skin characterized by:
 1. Generalized and uniform redness
 2. Scaling (branny/ lamellar)
 3. Fever, malaise, shivers, pruritis, fatigue anorexia and generalized lymphadenopathy
 4. Loss of scalp and body hair, nail thickening and onycholysis
- In EES >90% of total body surface area is erythematous with scale.
- Usually > 50 years
- Male > Female
- In children results from atopic dermatitis or Pityriasis Rubra Pilaris (PRP)

Etiology	Percentage
Pre existing dermatosis (psoriasis,eczema, id rxn, PRP, Pf)	50%
Drugs : (Allopurinol, CCB, carbamazepine, cimetidine, gold, lithium, quinidine)	15%
Lymphoma, Leukemia	10%
Undetermined (history/histology)	25%

- Acute is caused by drugs and is potentially fatal
- Erythroderma has profound effects on the entire body. eg: poikilothermia, fluid and electrolyte imbalance, high output cardiac failure,increased basal metabolic rate,hypoproteinemia, anemia due to reduced levels of iron, folic acid and other vitamins, endocrine, hepatic and renal complications, effects on hair and nails.

Investigations

- Histopathology is not always helpful
- History and physical examination for clues are important
- Chest X ray, immunoelectrophoresis, CT scans/ MRI and bone marrow aspiration
- Lymphnode biopsy
- Skin and blood bacterial cultures

Management

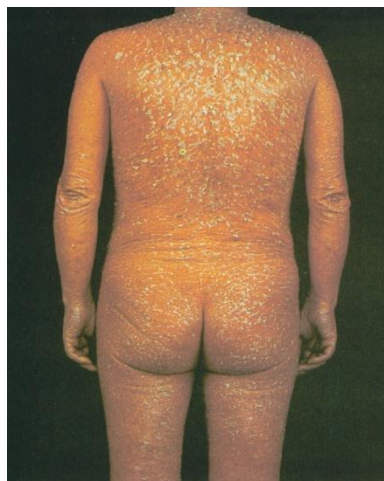
- supportive, including fluid electrolytes and albumin restoration, parenteral nutrition and temperature control.
- Topical: Water baths, bland emollients ± topical steroids.
- Systemic: Oral glucocorticoids for remission induction but not for maintenance.

Red Flags in Management

- Be aware of signs of sepsis, renal and cardiac failure.
- Watch for deleterious adverse effects of prolonged glucocorticoid therapy.
- Beware of ↑ absorption of topically applied medications eg: salicylism, methaemoglobinemia.
- Be cautious of irritant topicals eg: dithranol, tar
- Specific Systemic therapy for the underlying condition.

Clinical clues about etiology

Acute	Drugs
Areas of sparing	PRP
Massive hyperkeratosis and deep fissures of palms/soles	Psoriasis., CTCL, PRP
Sparing of scalp hair	Psoriasis, Eczema
Variable erythema and scale thickness/ brownish hue/ large lymphnodes	CTCL
Massive scaling of scalp with hair loss	CTCL, PRP
Dusky Red	Psoriasis
Yellow/orange – red	PRP
Lichenification/erosions/excoriations	Eczema
Typical nail changes	psoriasis
Ectropion	CTCL, PRP



Done By:

Abdulaziz Alsudairi	Abdullah Alghaiheb
Musab almasry	

