In the name of GOD

Cutaneous Drug Reactions

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Cutaneous drug reactions

1- What is Cutaneous drug reaction?

2- How many particle should be in CDRs

3- What is clinical presentation?

4- What is typing of CDR?

5- What is main cause of CDR?

6- What is the staging of patients?

7- How to make Diagnosis deferential?

8- What is long term side effects?

9- How to follow?

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Definitions

- *Any dermatologic condition or rashes that appears within 2 weeks of starting a medication should consider it as a CDR or ADR.*
- Occur in 2% to 3% of hospitalized patients
  in US 6 to 30%
- Less correlation between the development of an adverse reaction and the patient's age, diagnosis, or survival
- The drugs most often responsible are
  - **antimicrobial agents**
  - **antipyretic/anti inflammatory analgesics**
  - **Anti-epileptic**

Description

1- F > M

2- Old > Young

3- Hospitalized Kids > Non-Hos

4- Weak immune systems happen more

Who is high risk patient

1- kidney, liver and metabolic disorder
2- Patient under treatment with different medicine
3- New patient with new Medicine
4- Immune deficient patient
5- Below 5 and above 50 years old patients
6- Patient under chemo
7- Patient with under lying disorder
8- Psychological disorder
9- Combination therapy
10- Light (sun exposed patient)

Patient Assessment

1- Age
2- Sex
3- Type of lesion
4- Location of lesion
5- Distribution
6- Body involvement percentage
7- Mucus membrane involvement
8- Nail and Hair condition
9- Systemic condition
10- Para-clinical finding (blood, liver, kidney)

Main Challenge as DD

Viral Rashes

Food Poison

Insect Bite

Contact Dermatitis

Other Dermatitis and Bullous Disorder

1- differentiation
viral and drug exanthema

1- First affected area and progress

viral: central to peripheral

drug: peripheral to central

2- Time Duration

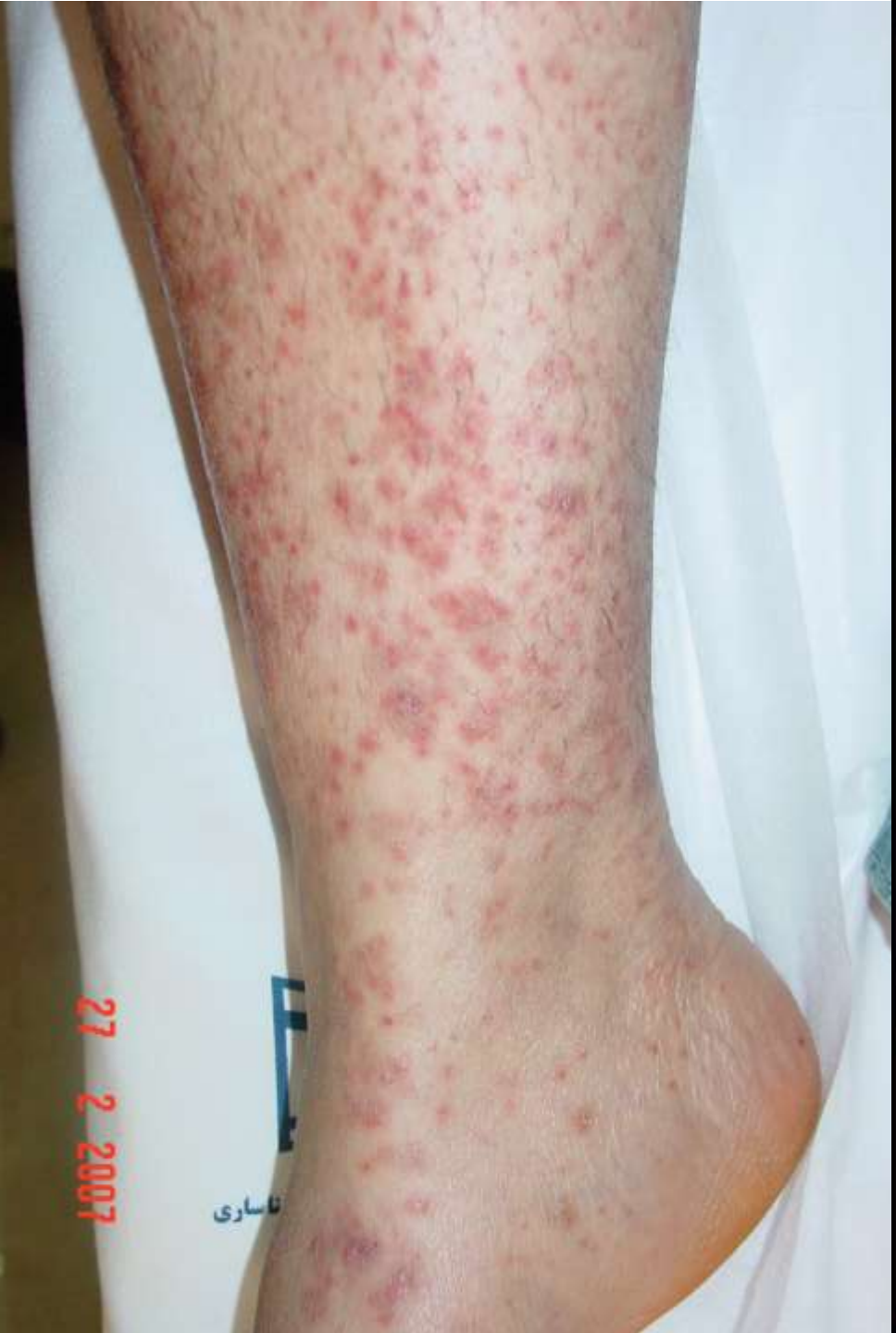
viral: definite time

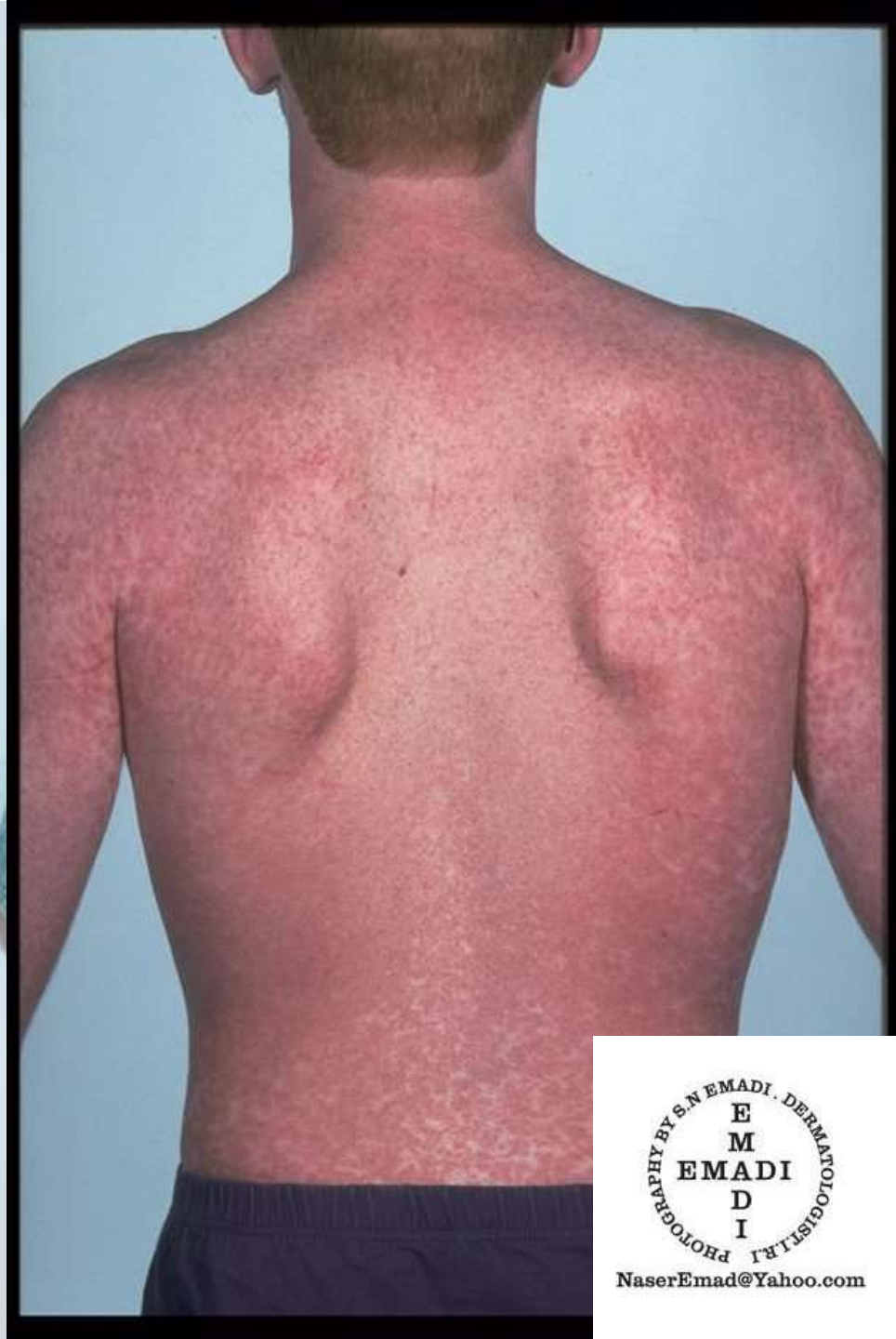
drug: no definite time, depends time of medication

3- Systemic situation

viral: initiates with systemic condition then skin

Drug: in early stage without flu like SY





Progress of Viral vs Drug reaction

Viral:

Systemic illness THEN Skin illness

Drug:

Skin illness THEN Systemic illness

Measles

First disease, morbilli

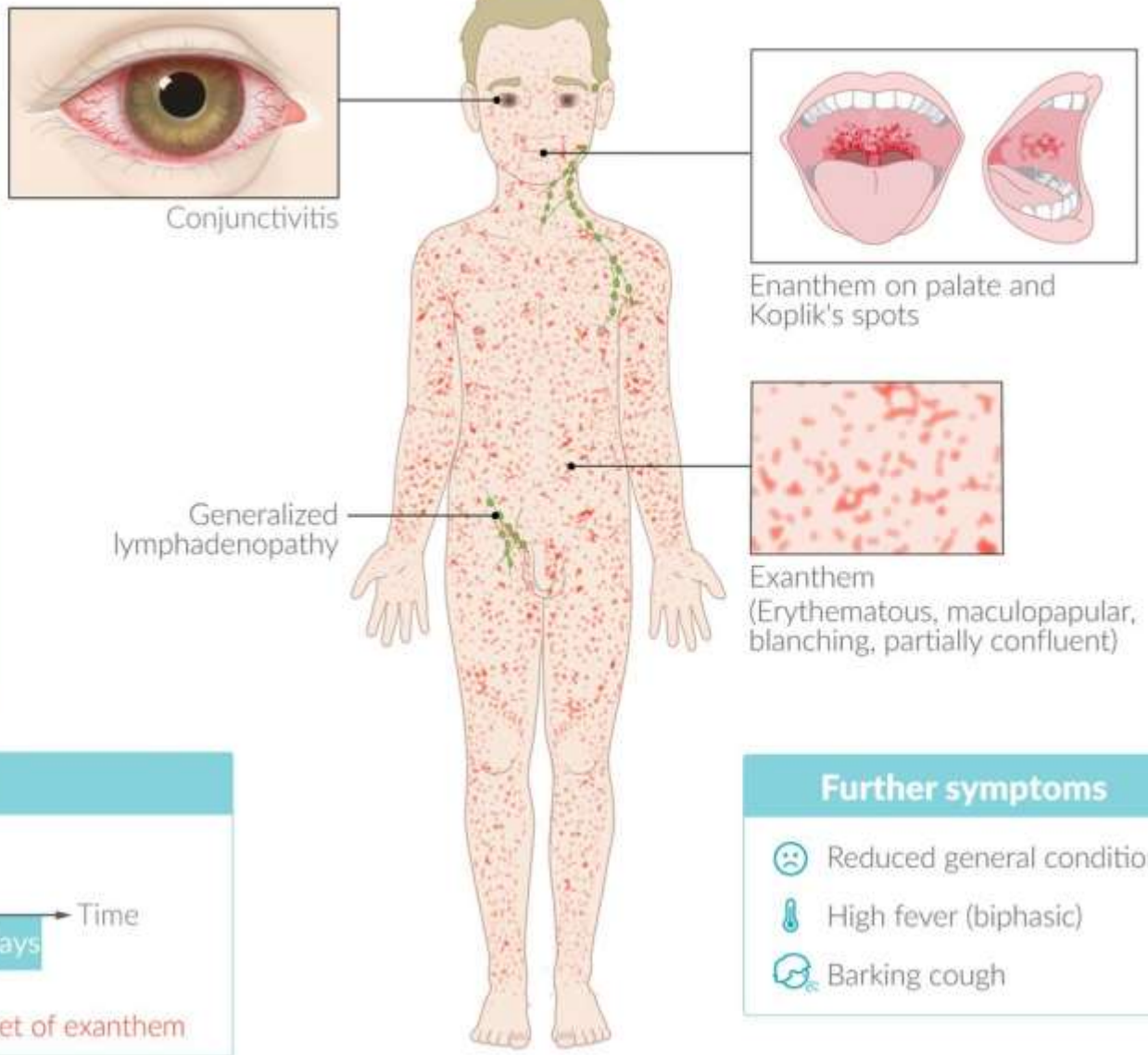
Pathogen
Paramyxovirus

Course
Improvement of exanthem with fine desquamation after 4–5 days

Complications
Subacute sclerosing panencephalitis (SSPE)
Measles encephalitis

Treatment
Symptomatic

Vaccine
Yes



Course of disease

Further symptoms

- Reduced general condition
- High fever (biphasic)
- Barking cough

Monomorphic or Polymorphic

M.M: likes measles

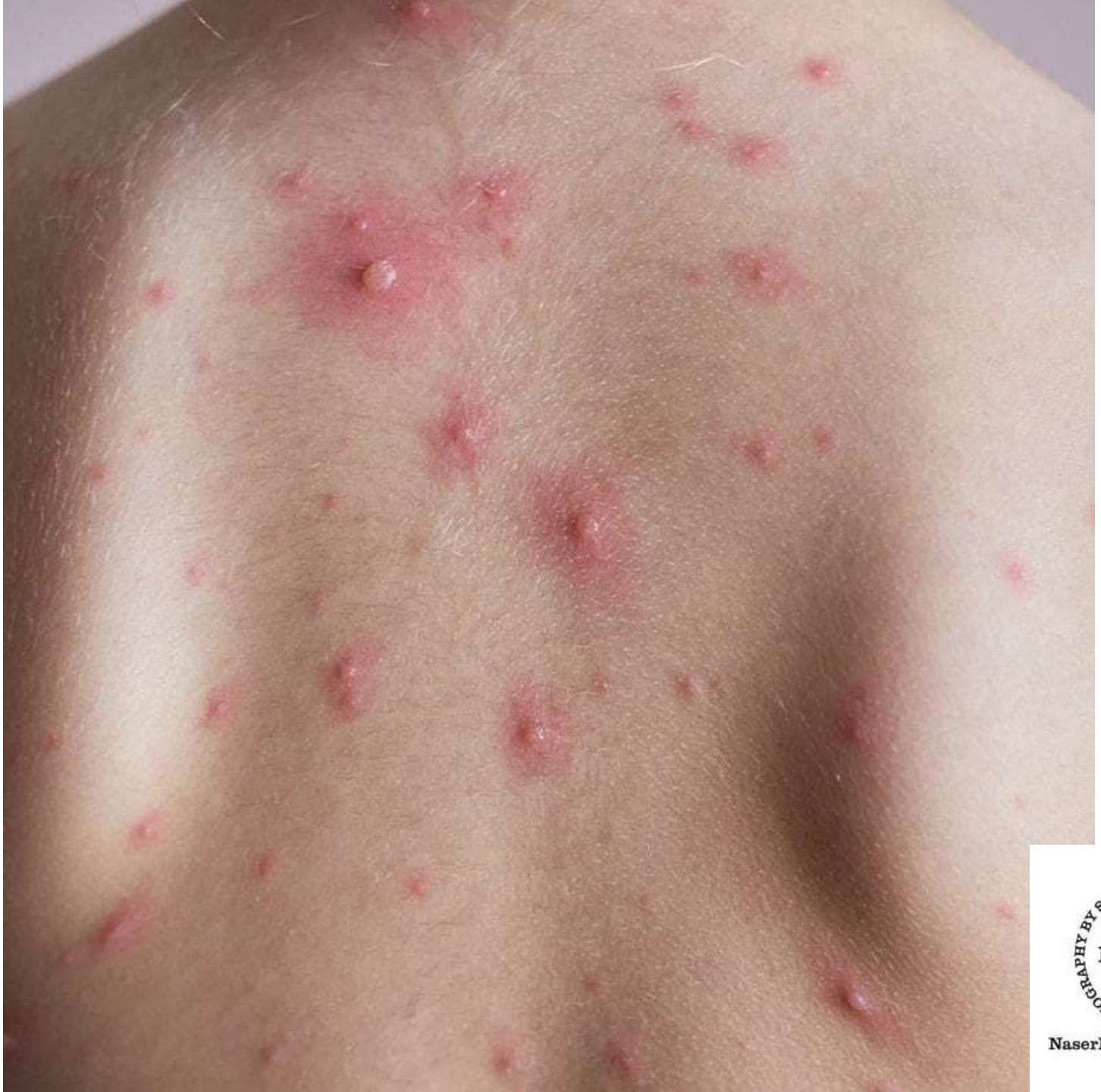
all type of lesions are the same

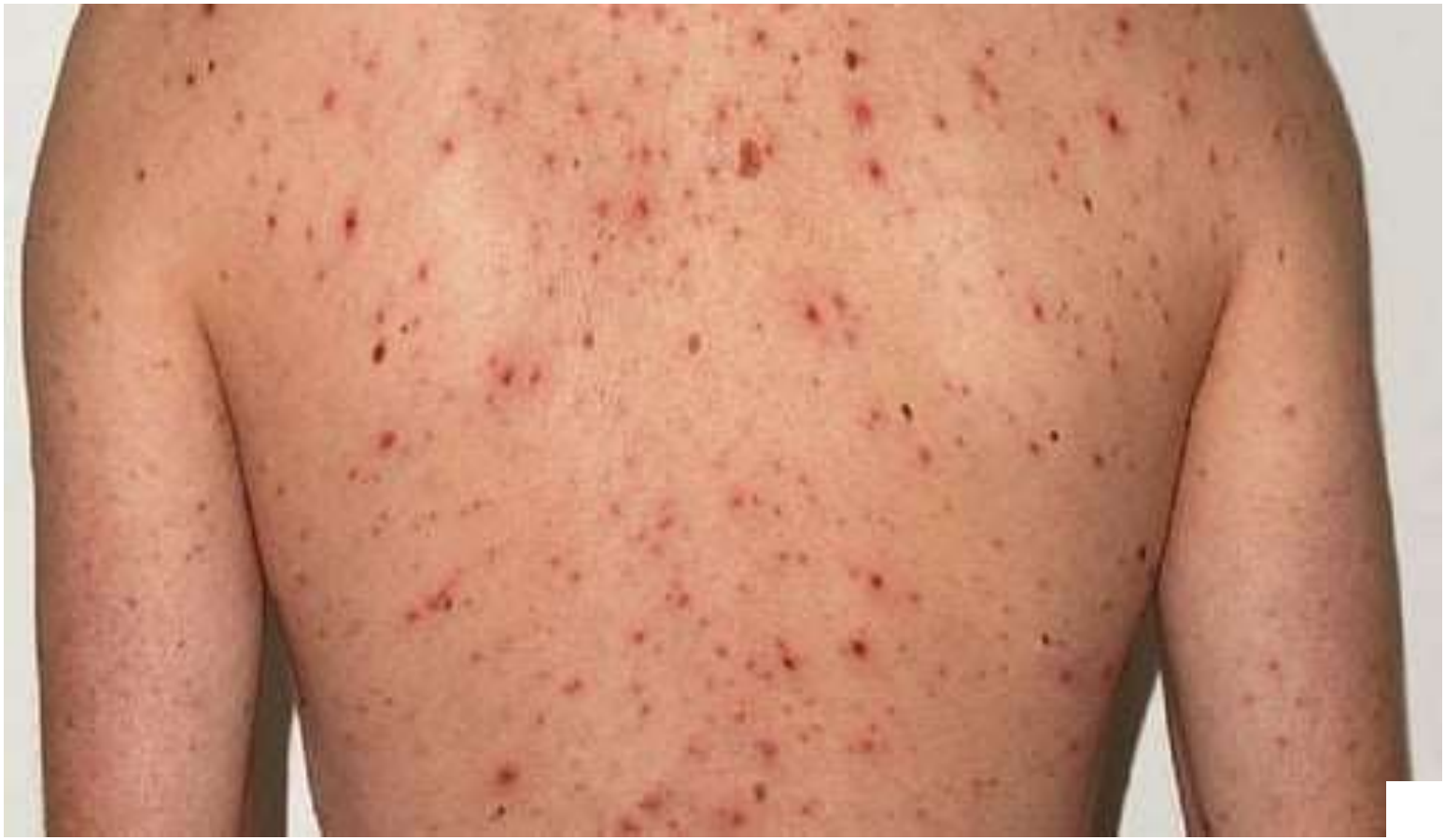
micro papules

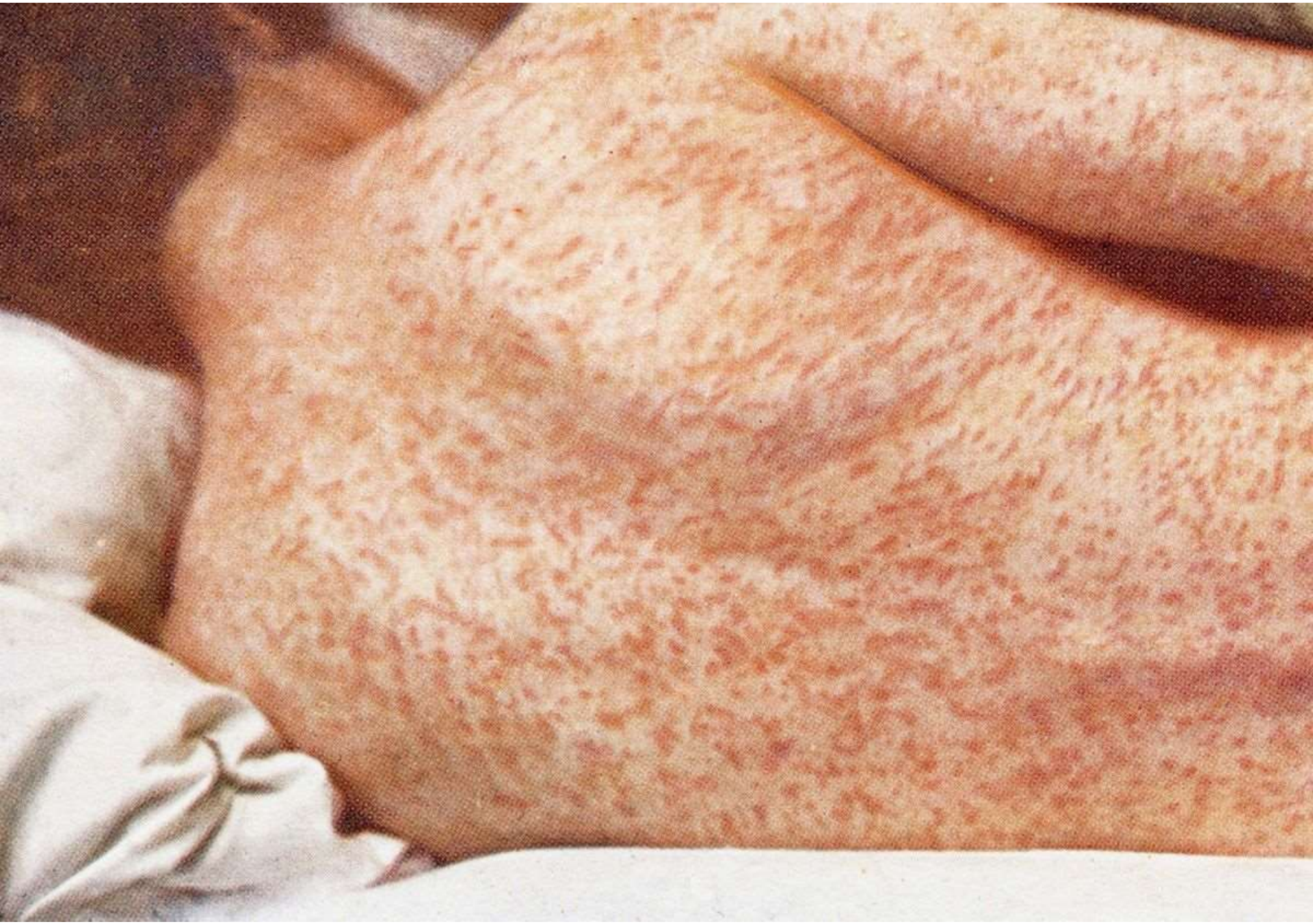
P.M: likes chicken pox

different lesions

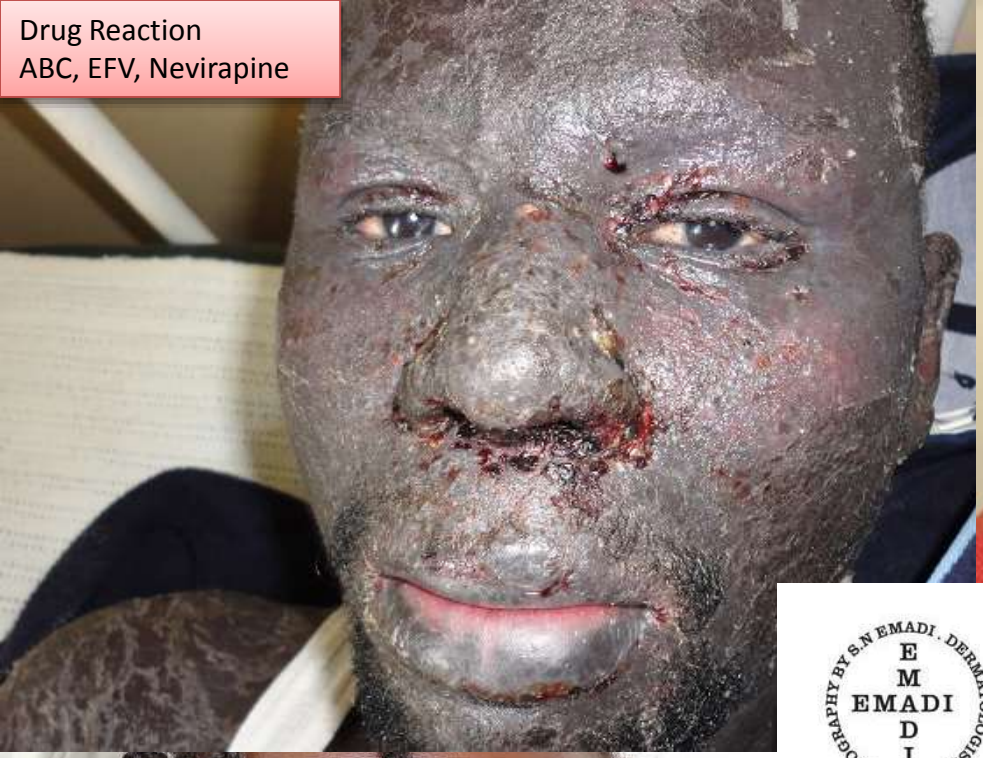
Papules, vesicles, crust

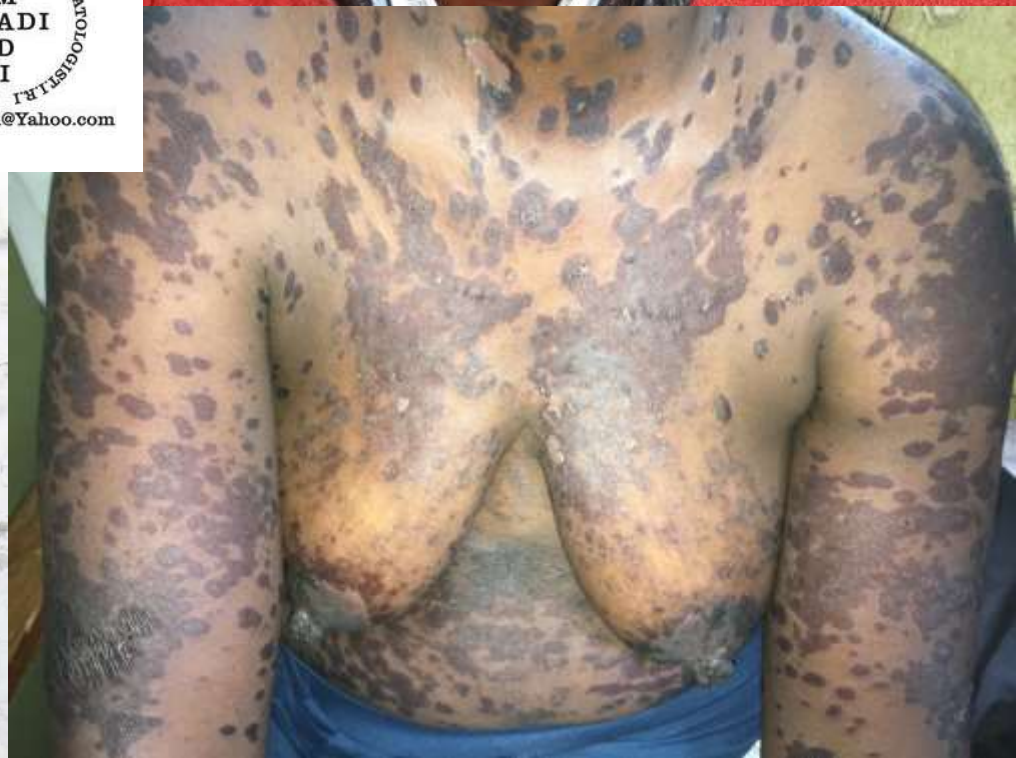


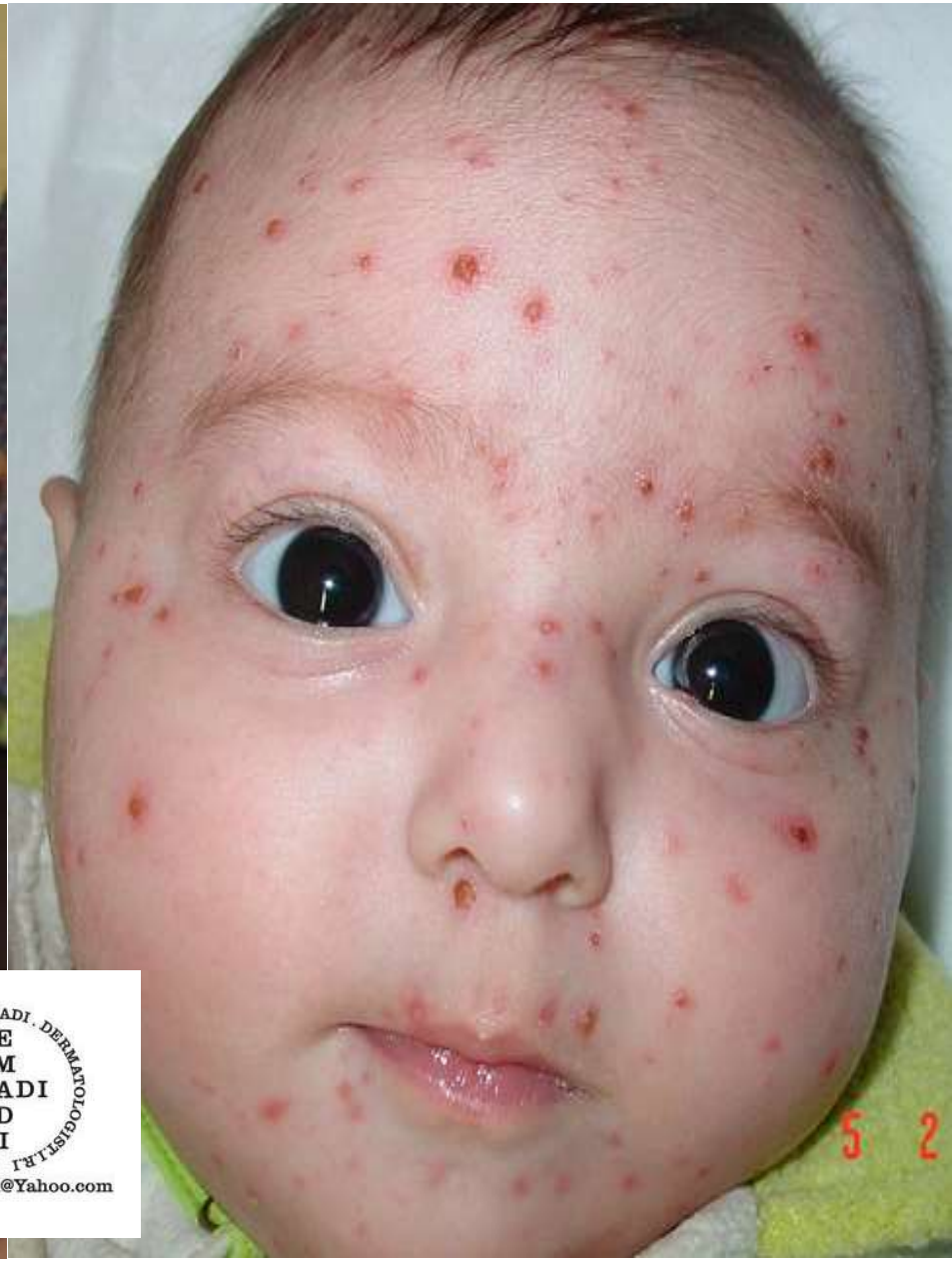




Drug Reaction
ABC, EFV, Nevirapine





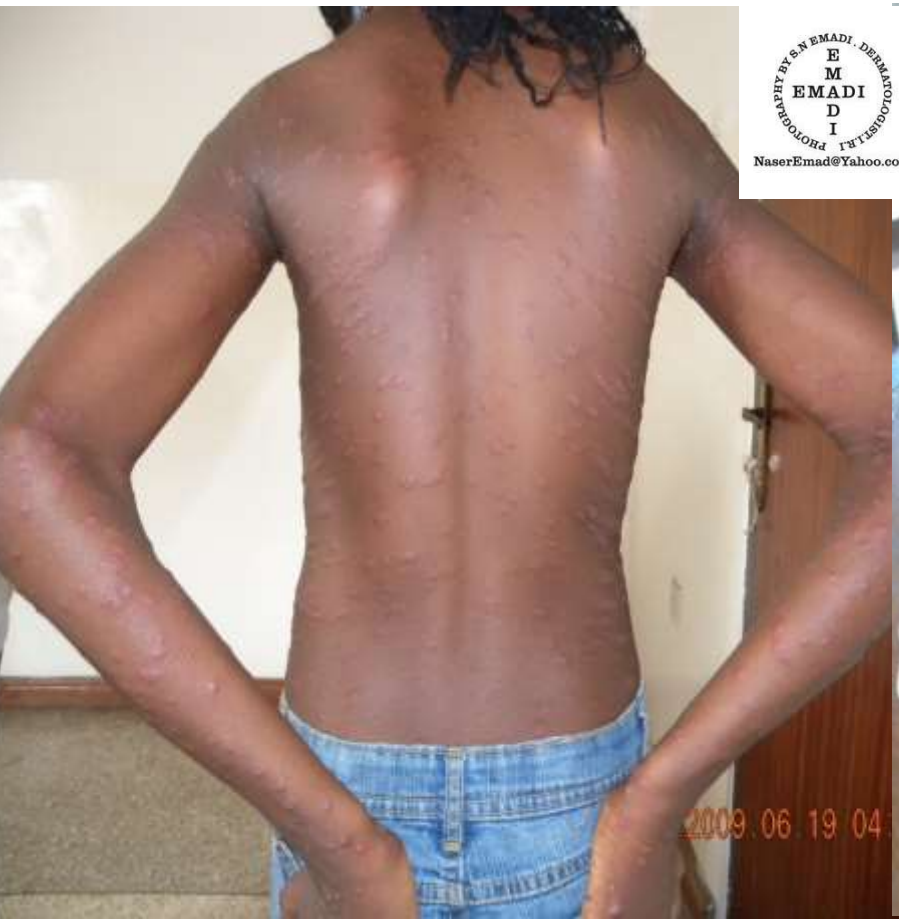


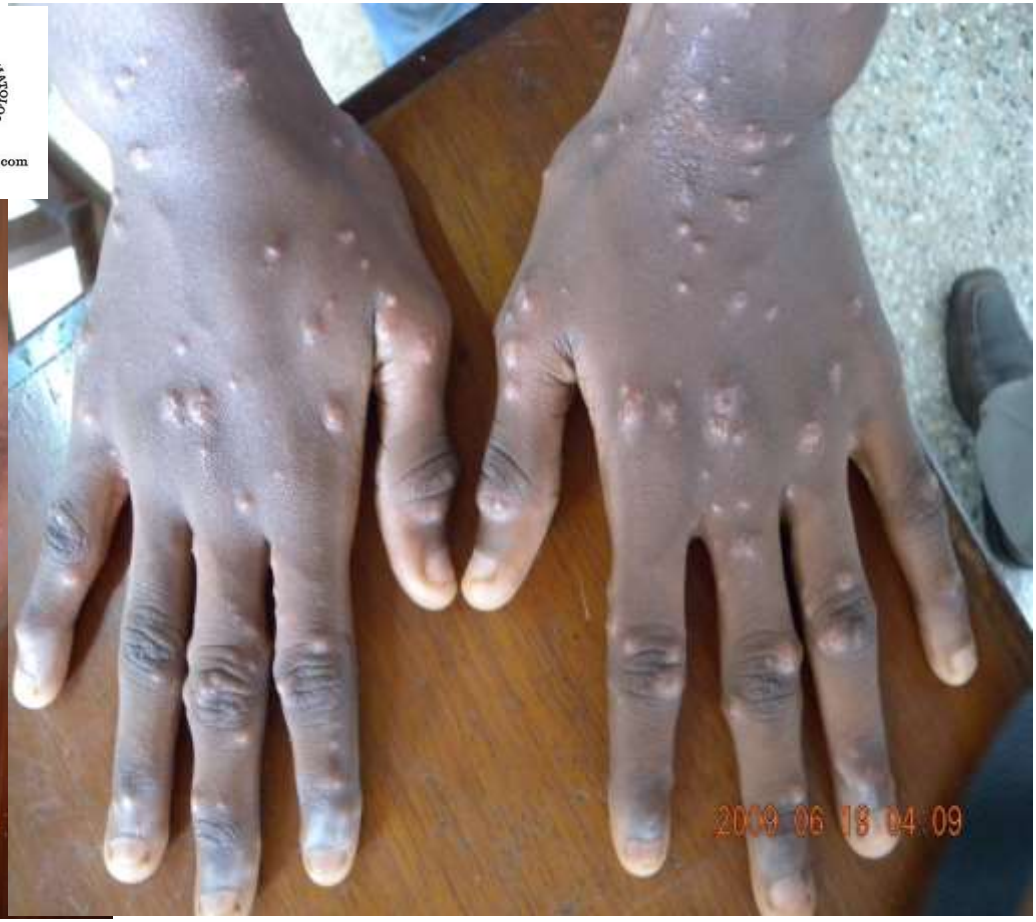
2- Insect Bite

- Similar eruptive Papules
- Black dot at the Center
- Urticarial like lesions
- Linear and Arranged
- Severe localized Itching
- Most happen Exposed Area
- Less association with systemic illnes

Insect bites

Insect bite reactions can be severe in HIV-infected patients and should be differentiated from other causes of pruritus, in particular those associated with HIV infection.



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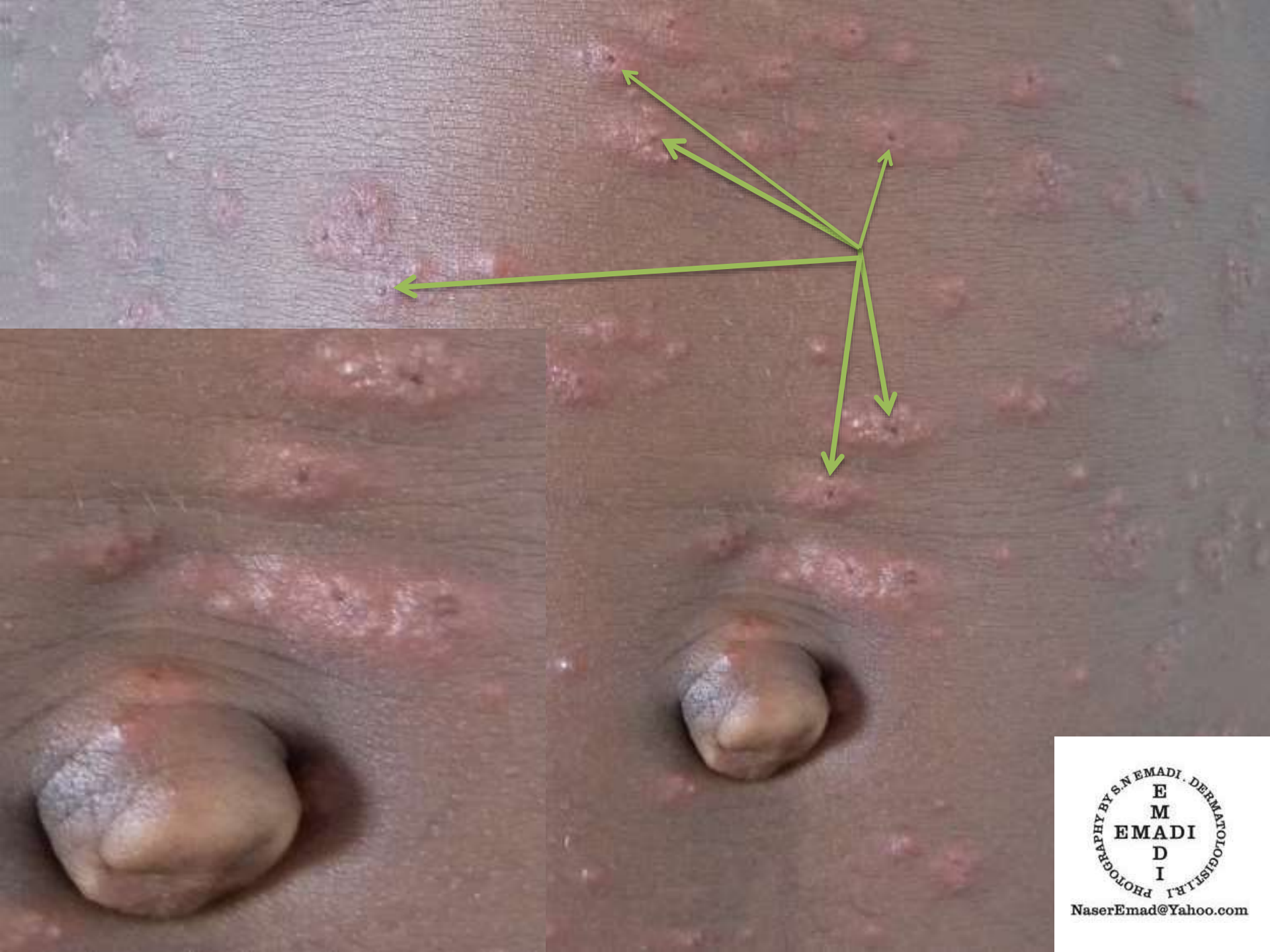
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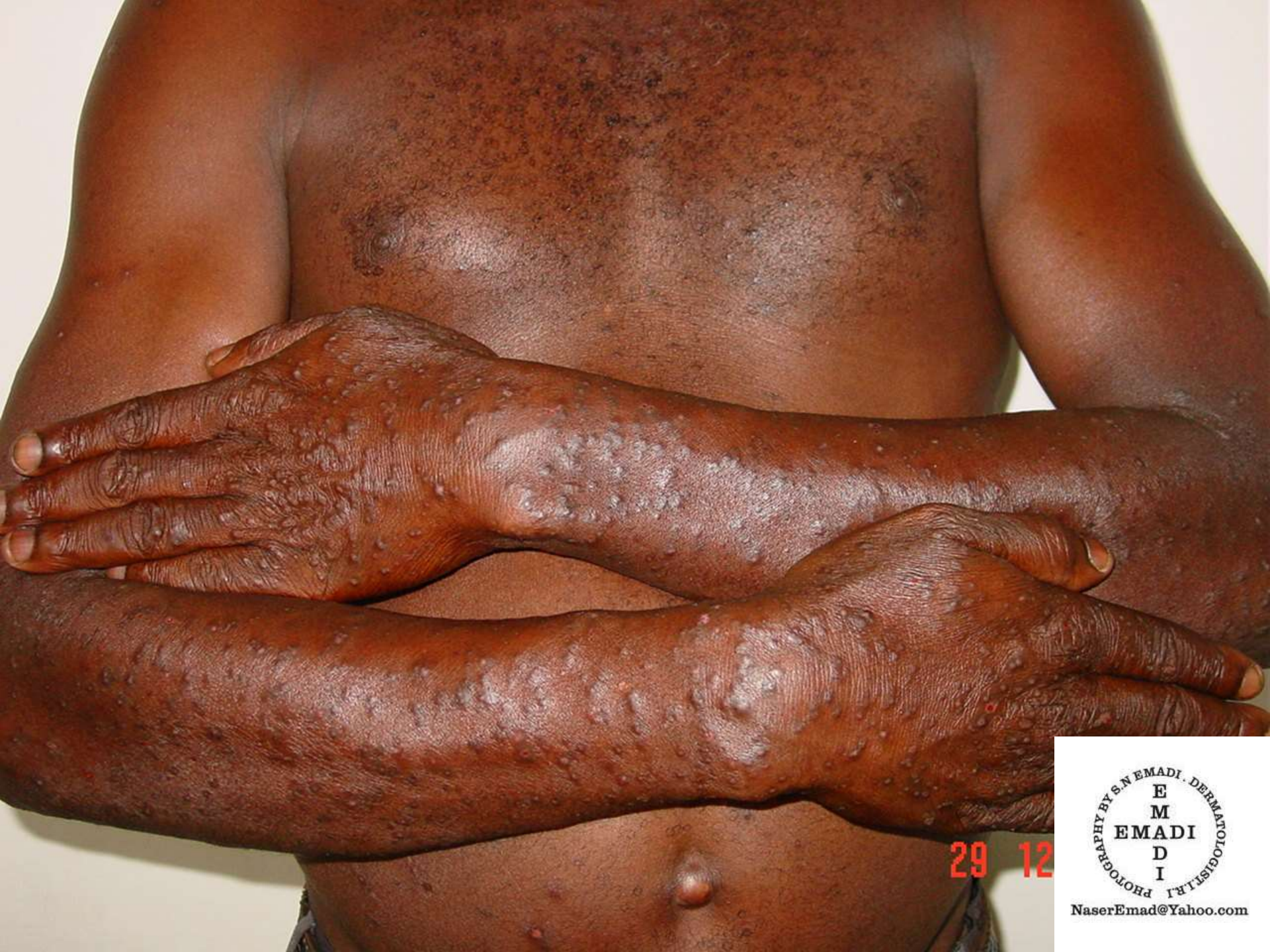
3- Dermatitis & Bullous Disorder

- Chronic
- Location
- Age
- Sign
- Symptoms
- History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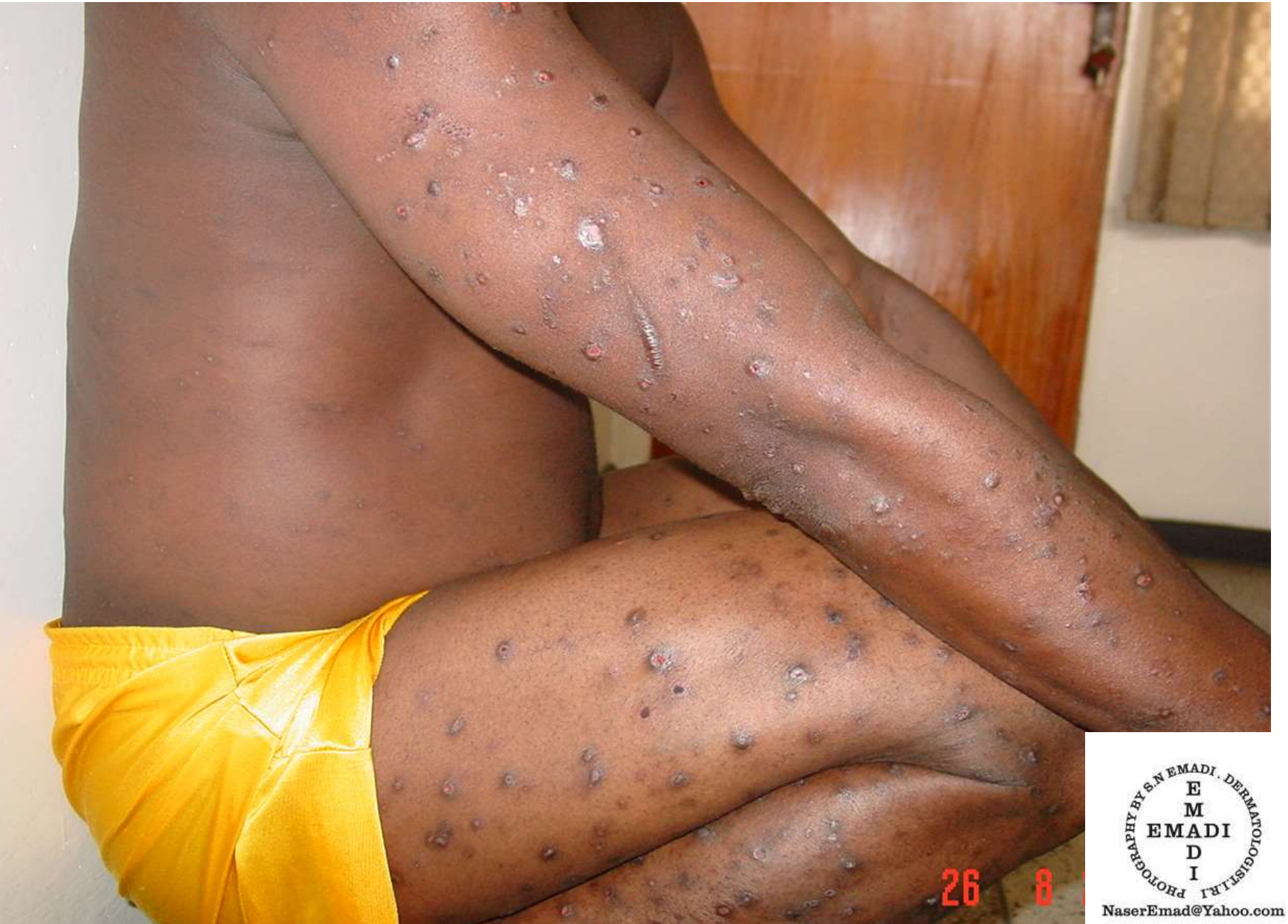
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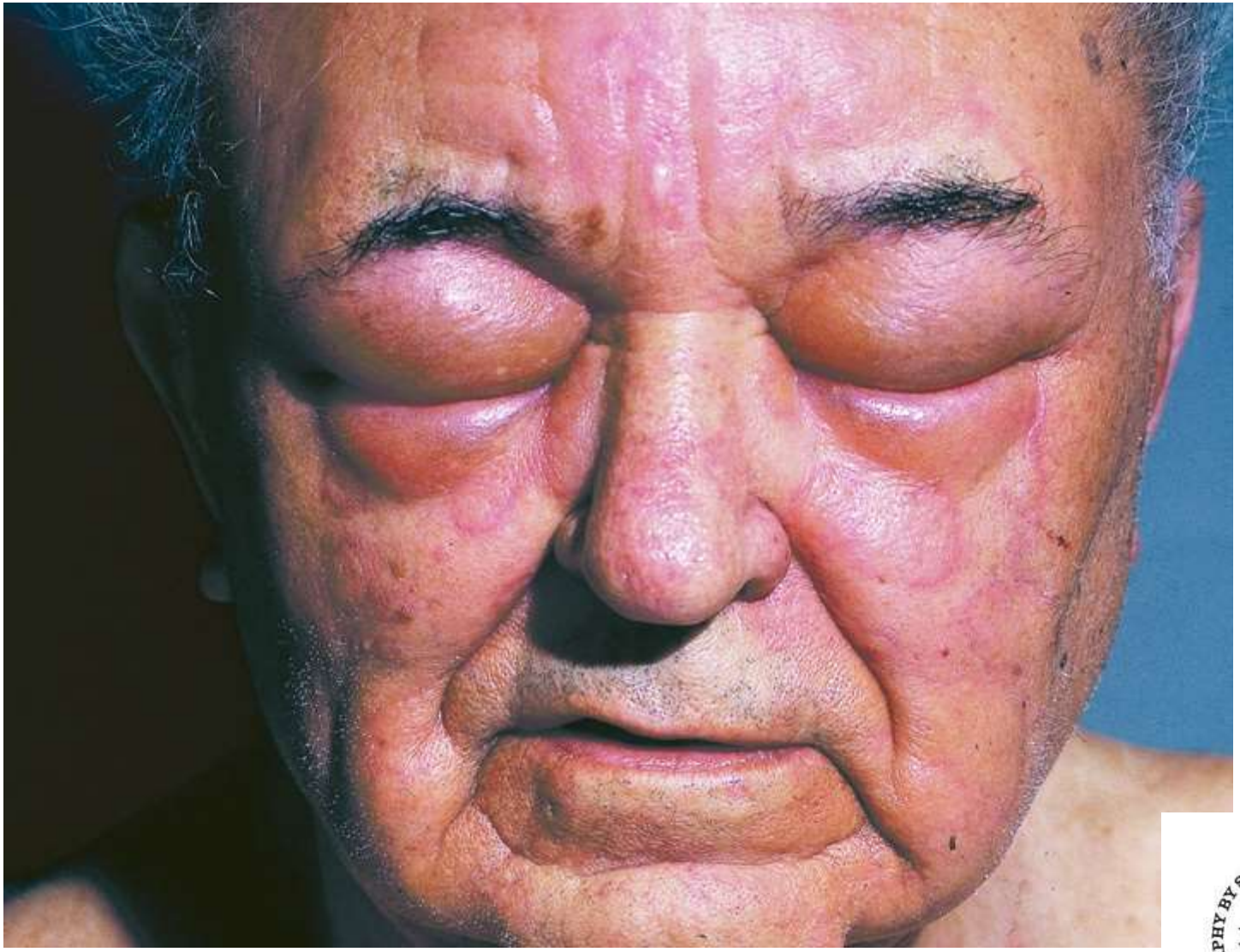
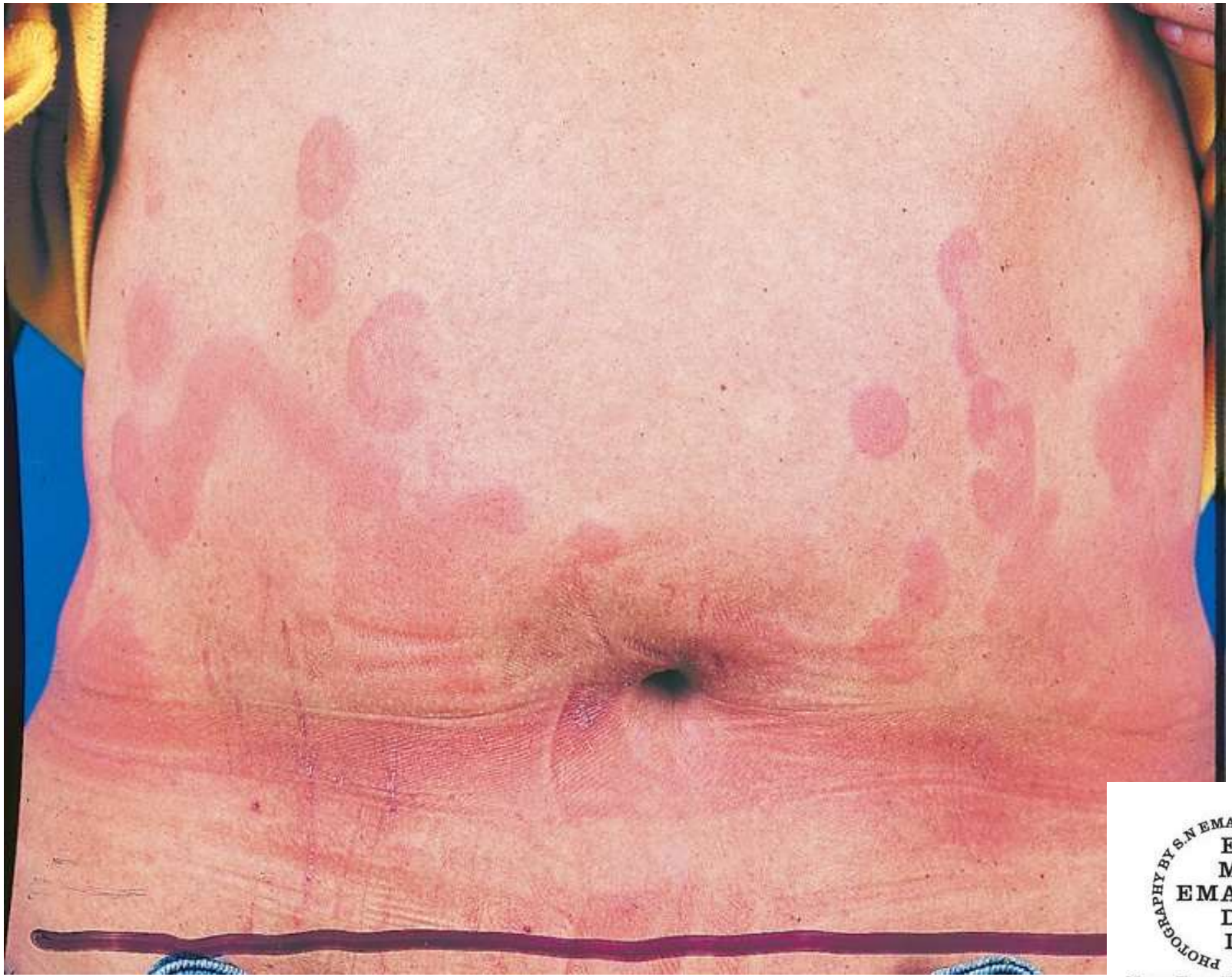
4- Food Poison

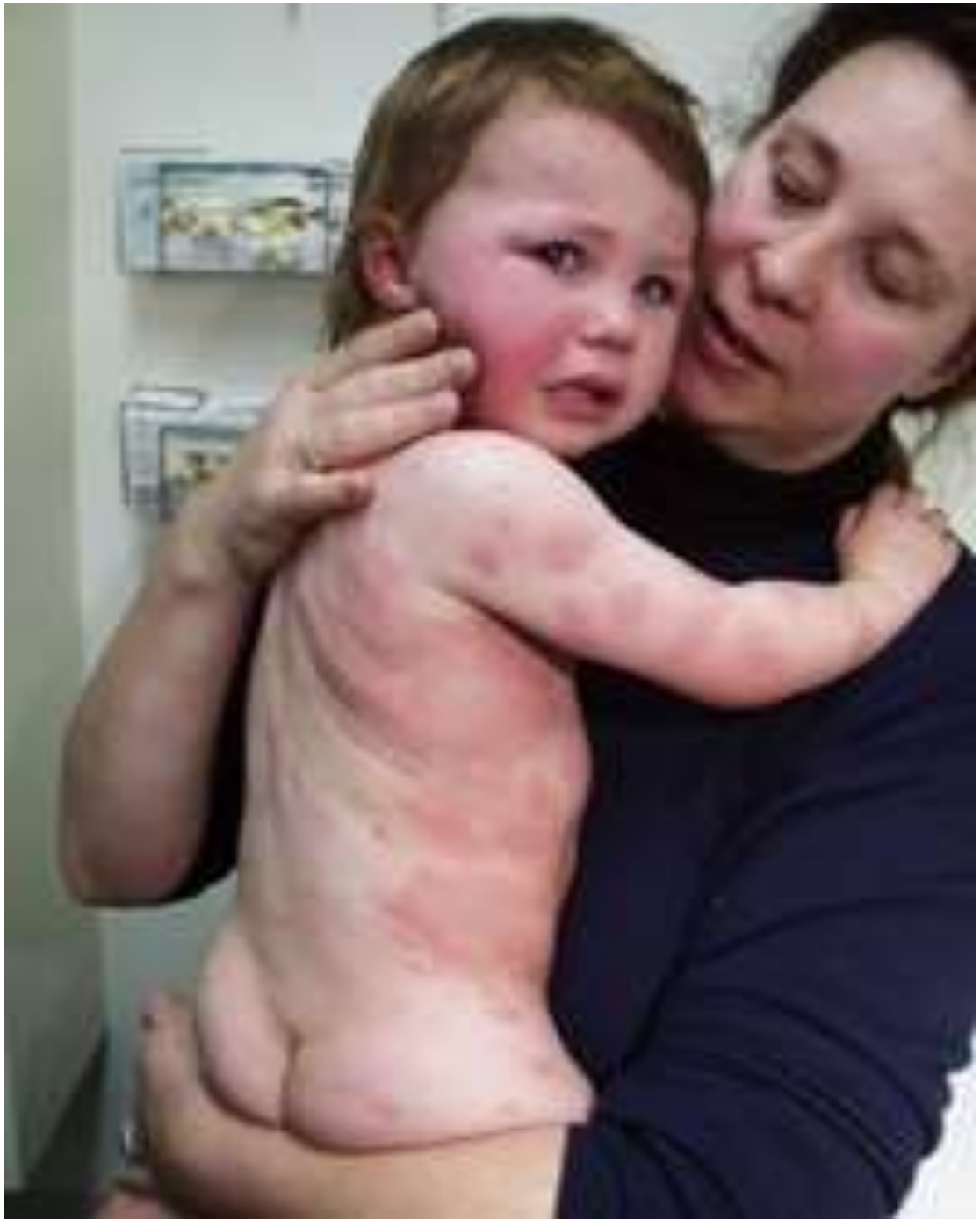
- History of new feeding
- History of out door feeding

- History of GI problems
- Generalized Itching

- Generalized Urticaria
- Less systemic illness

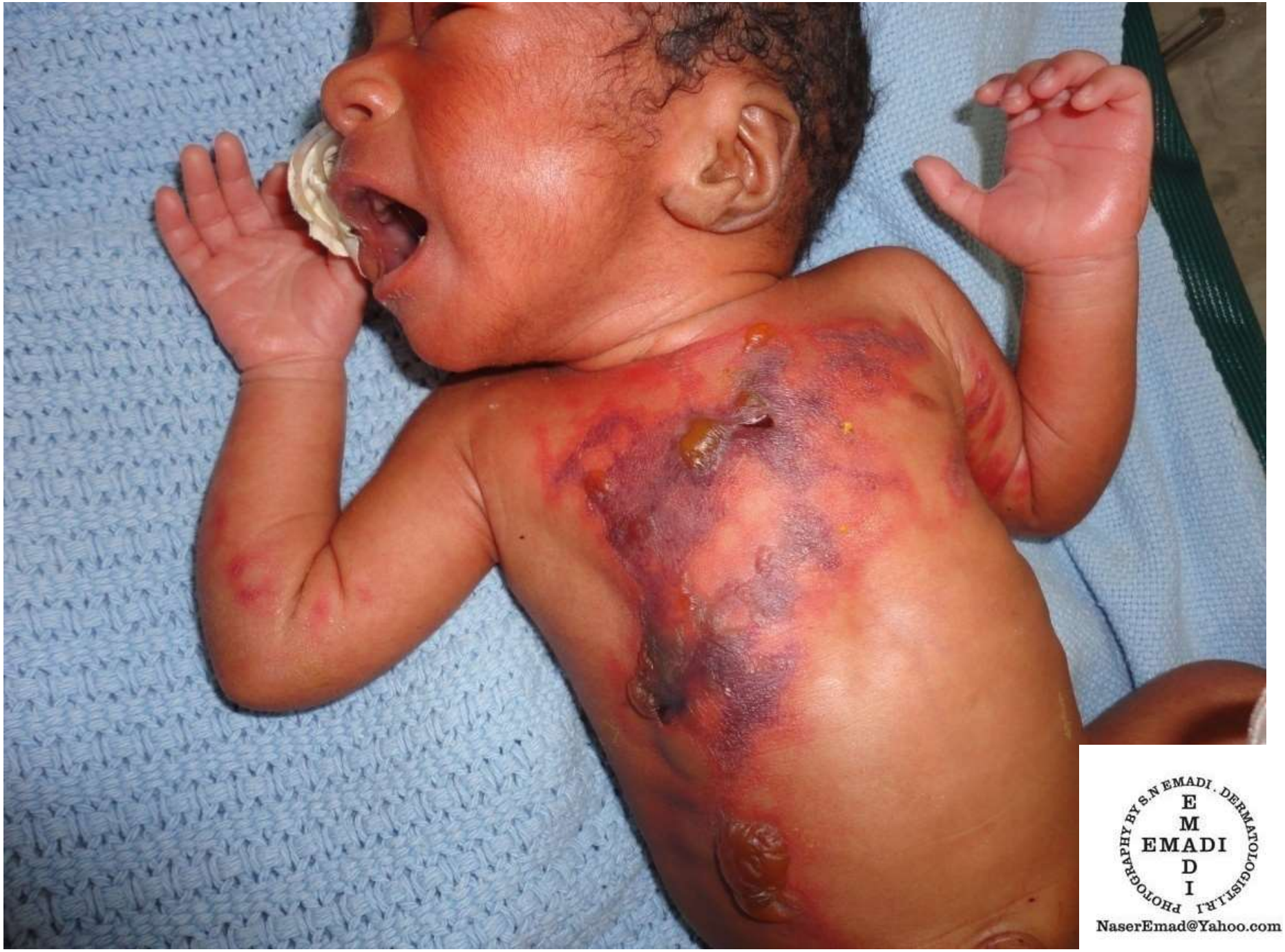






5- Contact Dermatitis

- After exposure with Allergen
- Localized or Generalized
- Burning then Itching
- No Systemic illness
- Urticaria
- History of Hair Color, Herbal Medicine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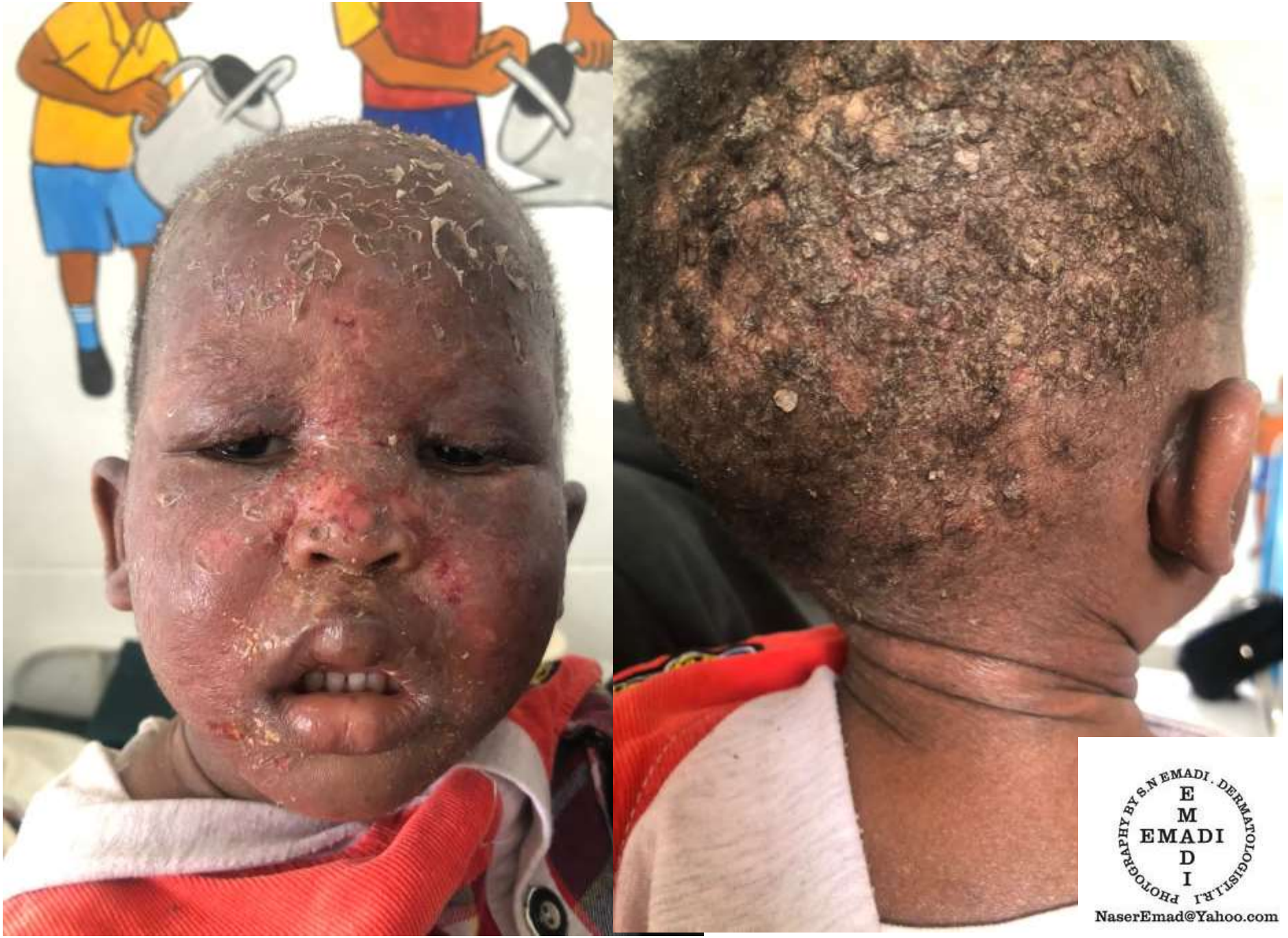
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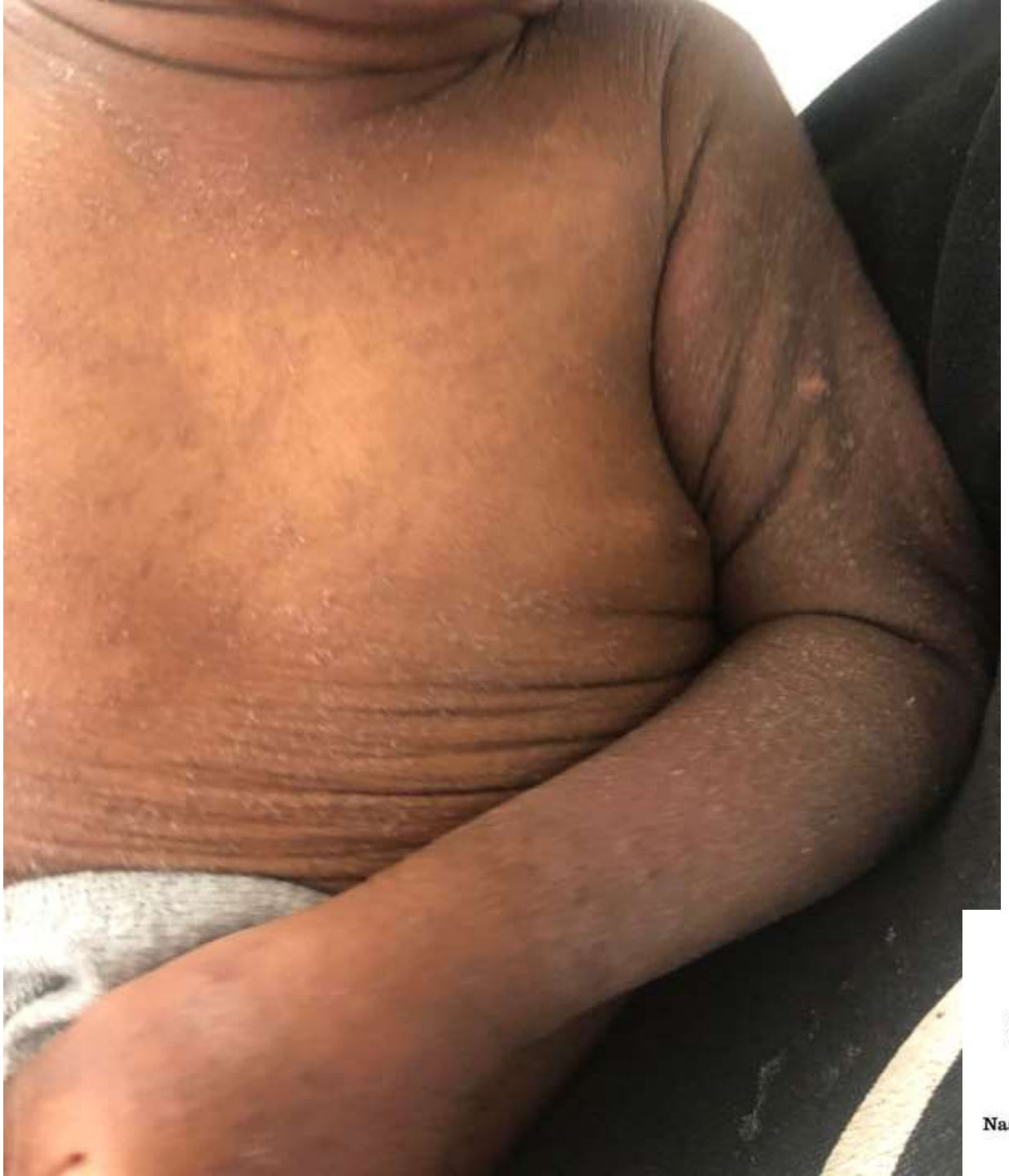
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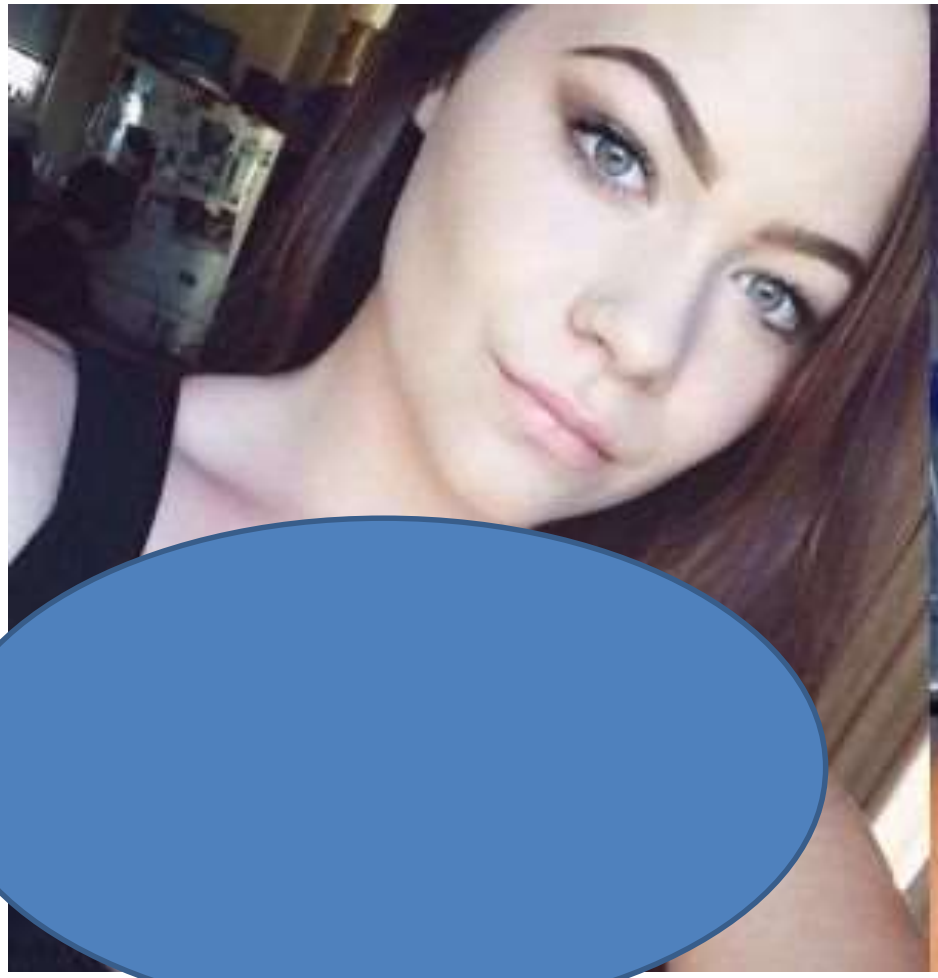
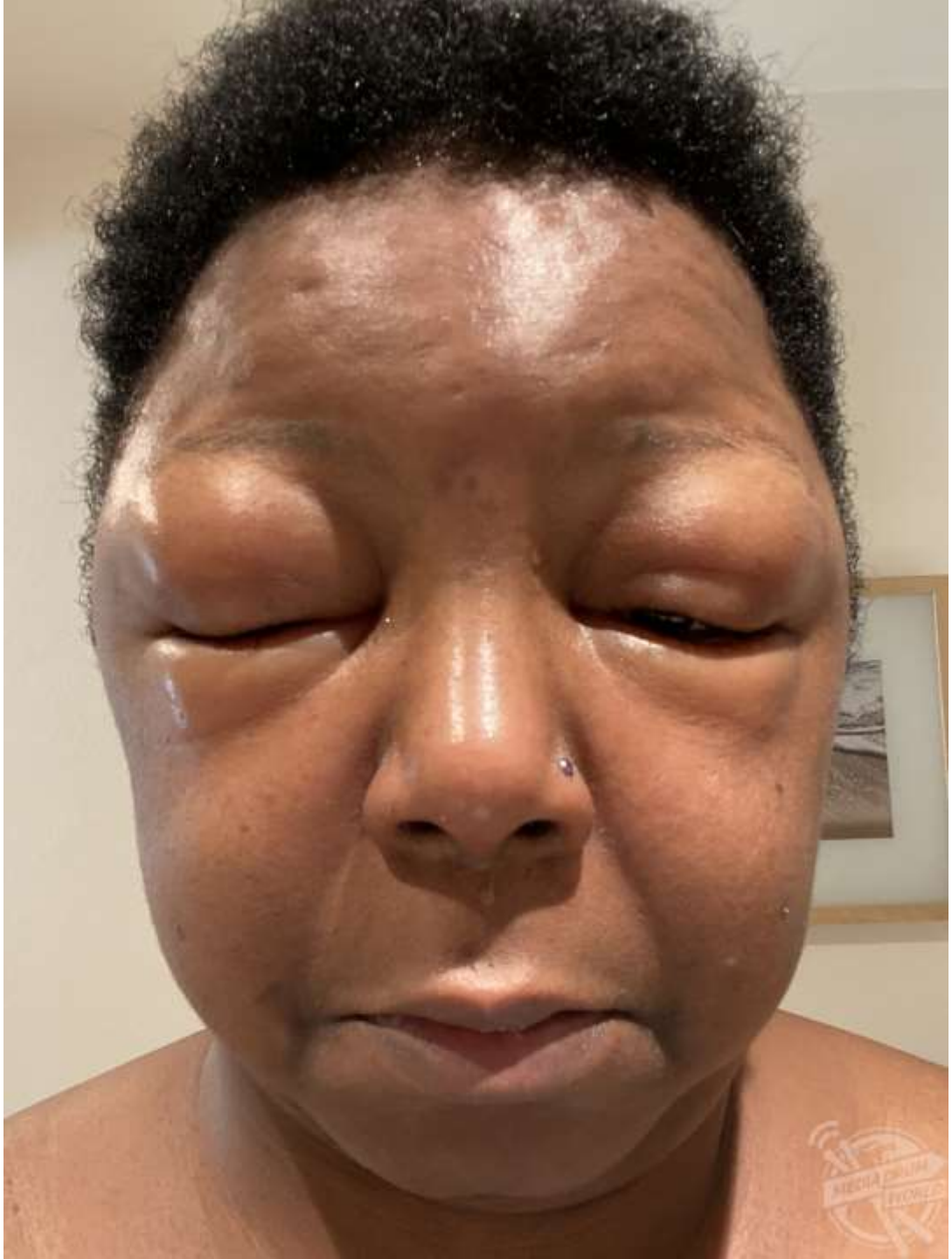


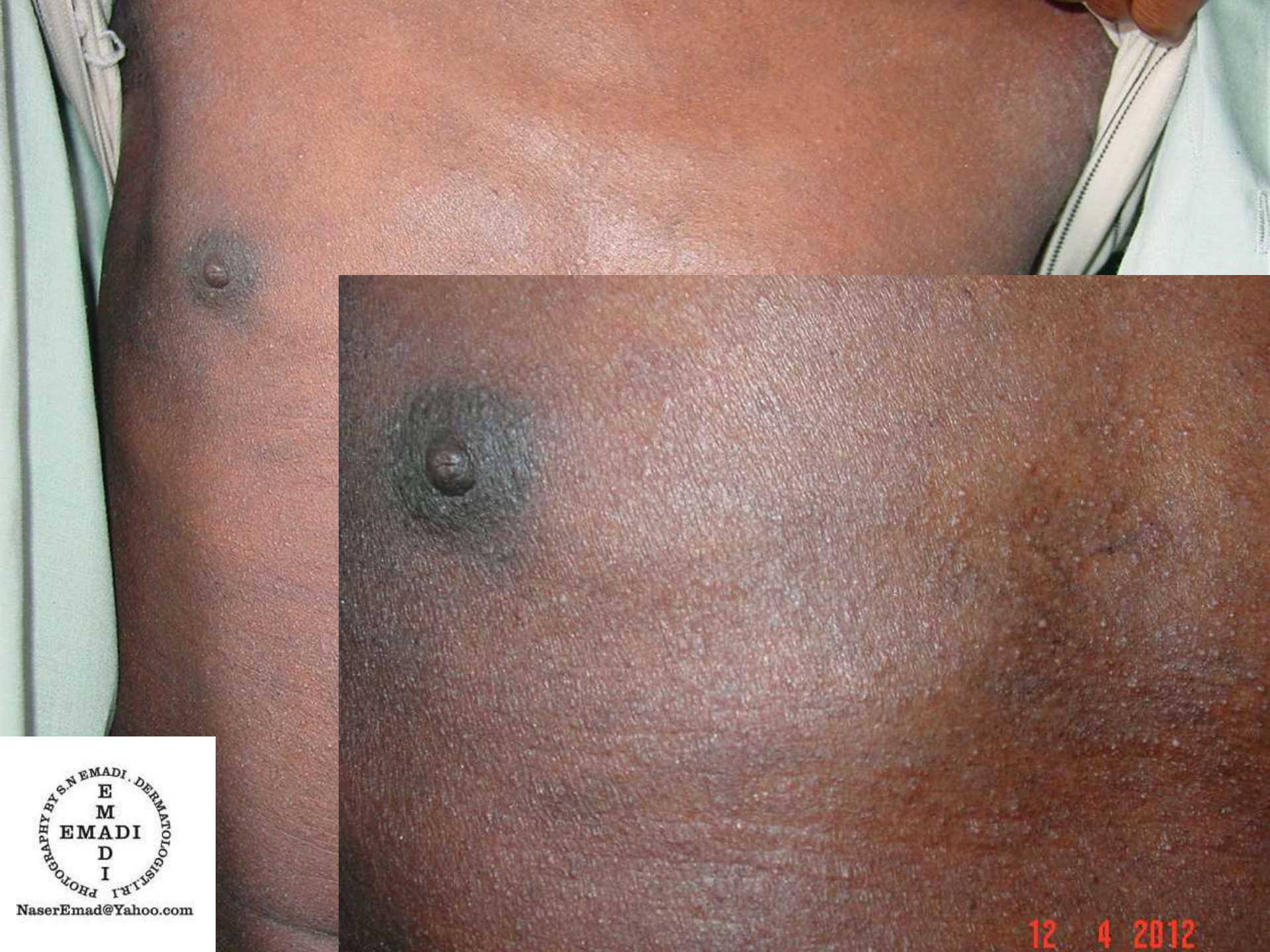


What is the specification of skin condition in emergency case

Are like other skin problem in normal people

BUT tend to be appear

1- Unusual age
2- Unusual location
3- Unusual presentation(atypical)
4- More severe
5- Hidden and Explosive
6- Extensive
7- Eruptive
8- Resistant
9- Recurrent
10- progressive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Drug Interaction

-Immune deficient patient

- Below 5 and above 50 years old patients

- Patient under chemo

- Patient with under lying disorder

- Patient with other medication

  - Epileptic kids and fungal infection

  - Acne and Isotretinoin, hyperlipid

What other reminding in ADR

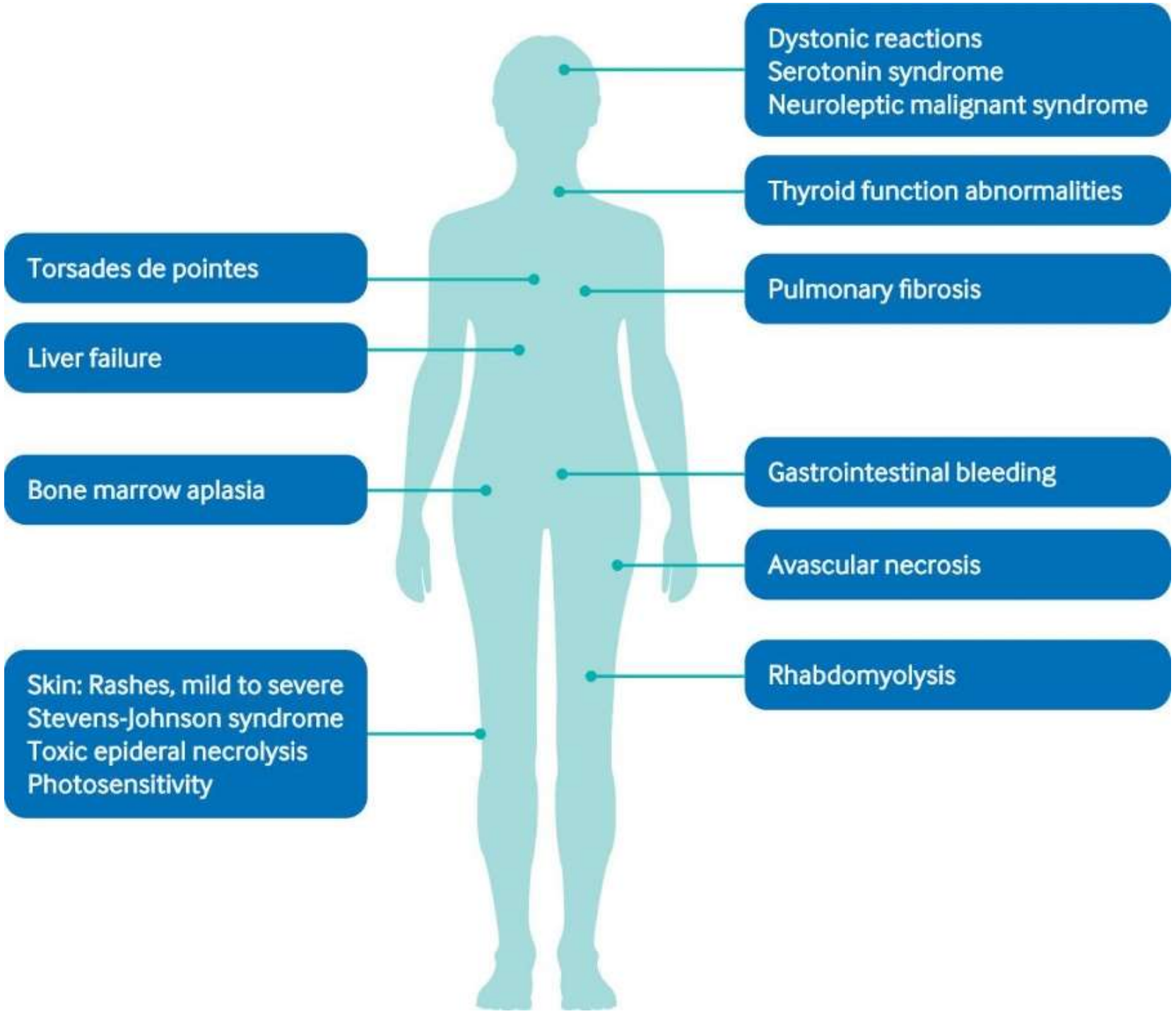
Except skin

Considering other rest of Body

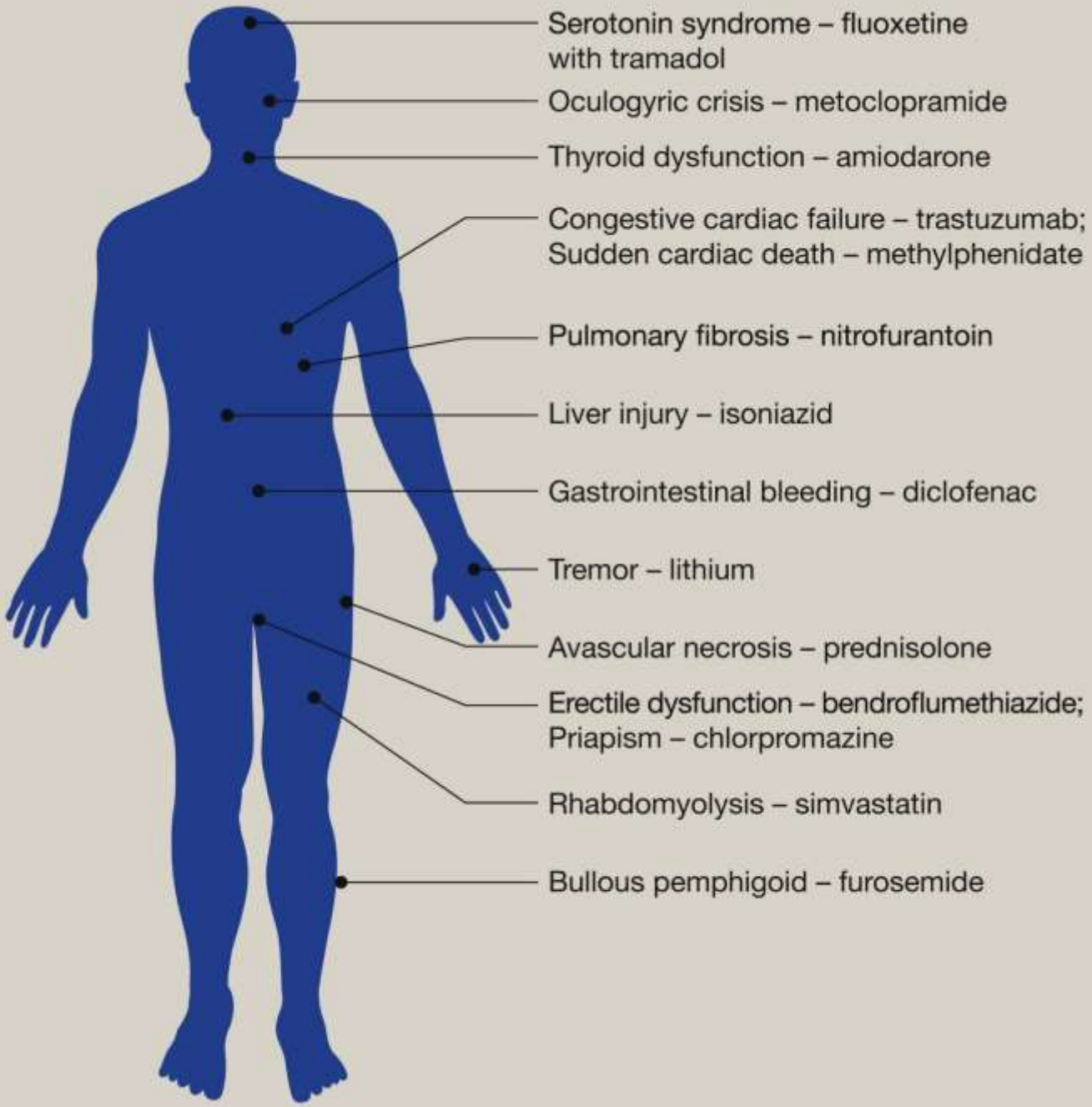
Internal

Or

External


Dystonic reactions
Serotonin syndrome
Neuroleptic malignant syndrome
Thyroid function abnormalities
Torsades de pointes
Pulmonary fibrosis
Liver failure
Bone marrow aplasia
Gastrointestinal bleeding
Avascular necrosis
Skin: Rashes, mild to severe
Stevens-Johnson syndrome
Toxic epideral necrolysis
Photosensitivity
Rhabdomyolysis

A map of some important ADRs illustrating their diverse nature



Para-clinical Finding

CBC diff

ESR

CRP

IgE

EOS

Platelet

Dose depended

Very important comment

Idiosyncratic: even small amount of dosage

Non- idiosyncratic: correlation with dosage

Example: Dapson 100 mg Anemia

Management: Blood, Liver and Kidney tests

Before and after treatment

Drug Interaction with Light

- **Photosesevity**

  Tetracycline, Doxycycline, Anti Malaria

- **LUPUS, MCTD**

  malar rash, DLE

- **ARVs**

  AZT or Zedovudin,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Skin pigmentation and LIGHT

AZT

Zidovudin


LAMIVUDINE,
ZIDOVUDINE &
NEVIRAPINE
TABLETS
Zidolam - N
60 Tablets
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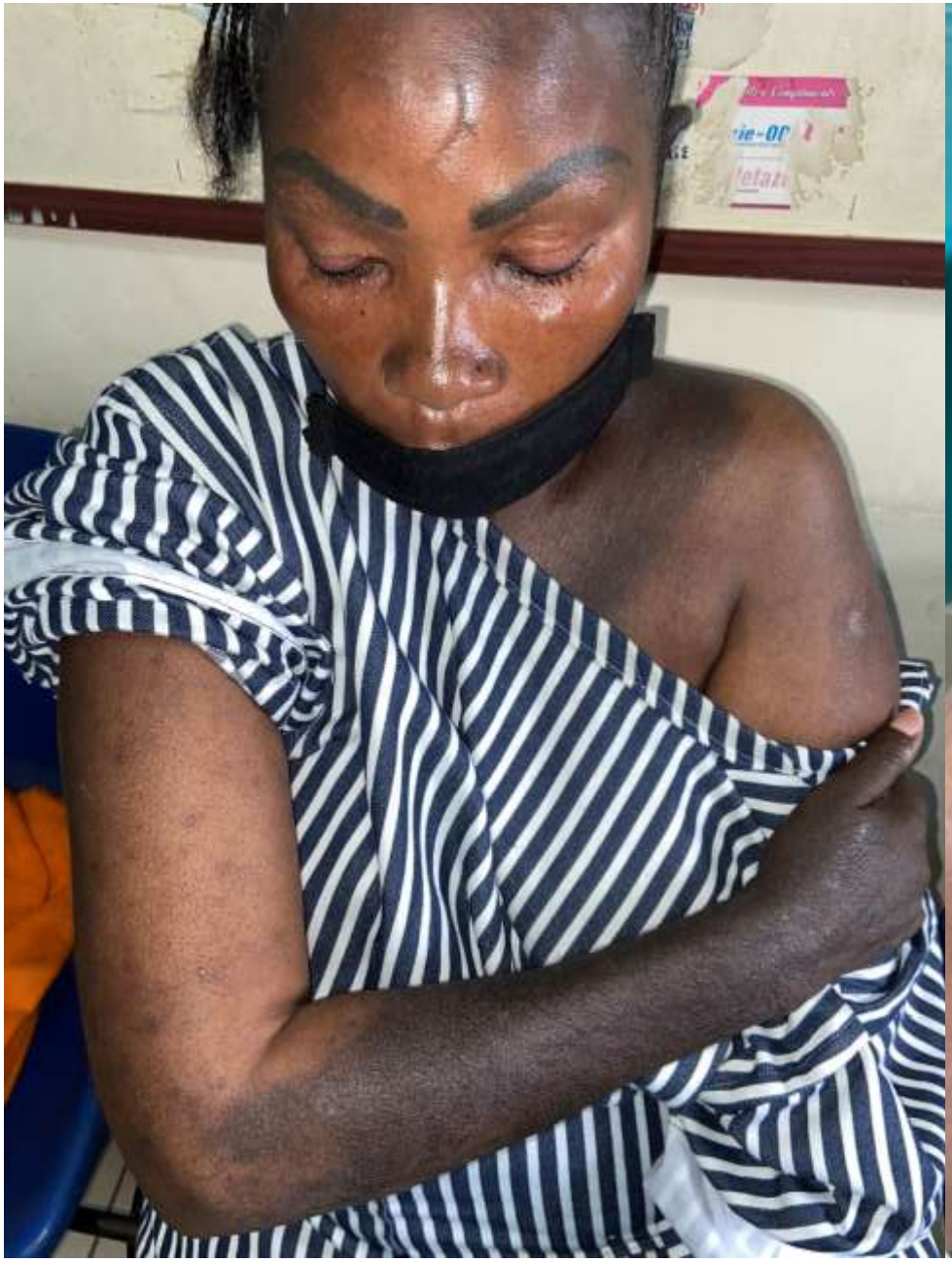


Metabolic Changes *Lipodystrophy*

D4T=

lipodystrophy or fat redistribution Syndrome.
Patients may present with various constellations of findings including

lipoatrophy of the face, limbs and buttocks .
Central obesity, dorsocervical lipomatosis and breast hypertrophy.

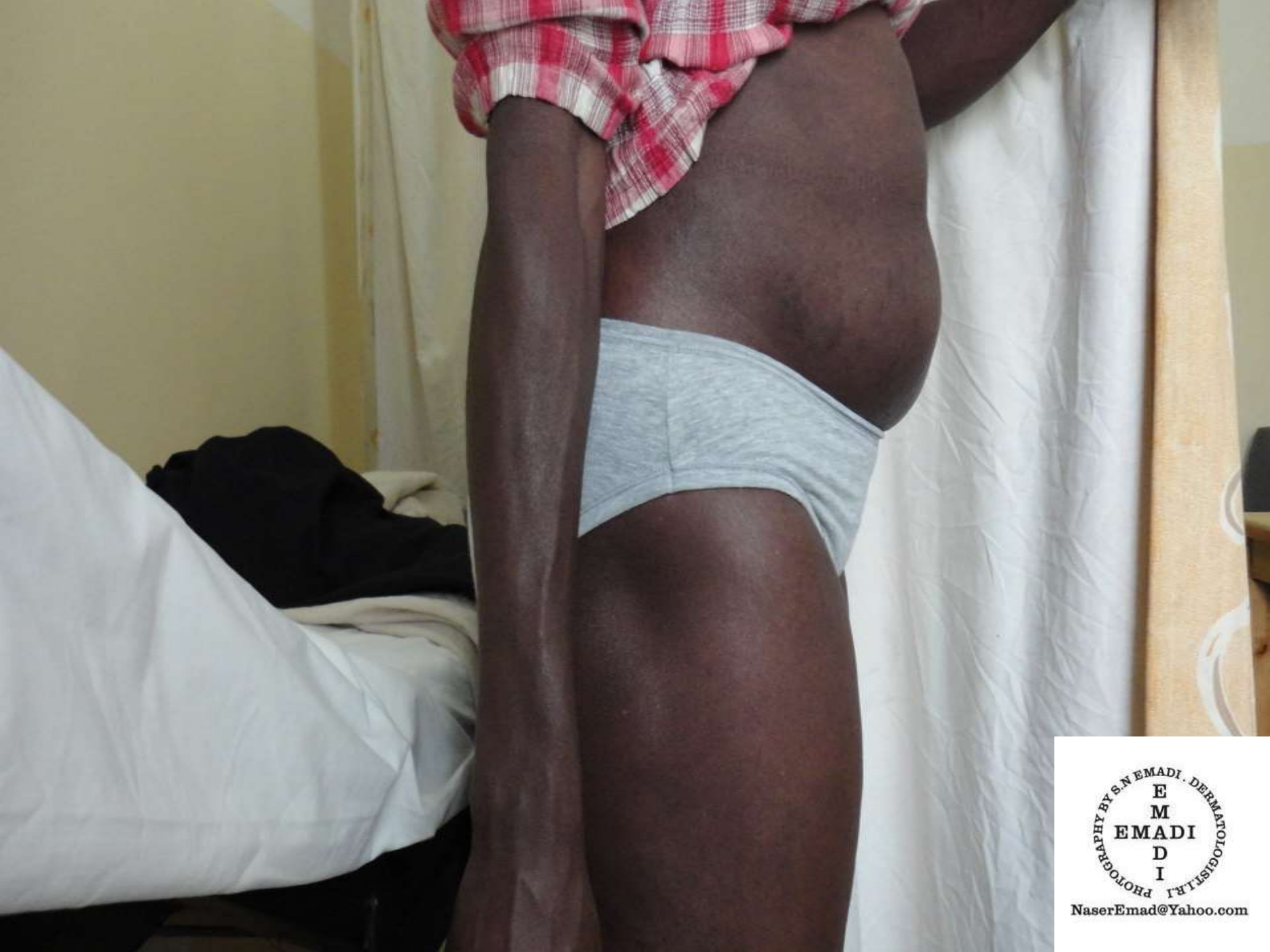
Cyclosporine=

gingiva hyperplasia, hypertrichosis, renal damaged and hypertension

LIPODYSTROPHY SYNDROME

Peripheral fat loss (presumed lipoatrophy with loss of buccal fat and thinning of extremities and buttocks).

Central fat accumulation within abdomen (crix –belly or protease paunch), breasts (gyneacomastia) and over dorsocervical spine (buffalo hump) and other peripheral lipomatosis.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Hair & Nail

Thricomegalia

Hypertrichosis

Hair loss

Nail Changes


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Metabolic Changes, Tricomegalia

Most experiences :

From Monitoring UPTO stop medicine

Itching
papules
Mucosal involvement,
Blistering,
Exfoliation,
Hepatic dysfunction
Renal involvement

Staging of ADR patient

1- Patient Situation

- age, sex, underlying Disease,

2- Type & Numbers of Medication

one pill or many, injection ….

3- Time duration of Medication

- in comparer onset of skin illness

4- Sing and Symptoms

itching, papule, erythrodermy, bulla, generalaized, localize

What should we do after staging

1- Do not need pay attention
2- Wait and see (close monitor)
3- Decrease the dosage
4- Stop and switching of responsible medicine
5- Stop without switching
6- Stop all medicine
7-Stop and Starting anti histaminic
8- Adding strong and steroidal medicine
9- Balancing of body fluid /electrolyte
10- Special care (ICU, Dialysis, plasmphrosis,

Clinical feature	n	%	Number of patients histologically confirmed
Acute urticaria	163	52.9	4
Fixed drug eruption	57	18.5	30
Exanthematous eruption	46	14.9	18
Erythema multiforme	7	2.3	7
Acute generalized exanthematous pustulosis	7	2.3	7
Vasculitis	7	2.3	7
Angioedema	7	2.3	–
Erythroderma	4	1.3	4
Stevens–Johnson syndrome	3	1	3
Serum sickness	3	1	0
Exfoliative dermatitis	2	0.6	2
DRESS syndrome	1	0.3	1
Photosensitive dermatitis	1	0.3	1
Total	308	100	84

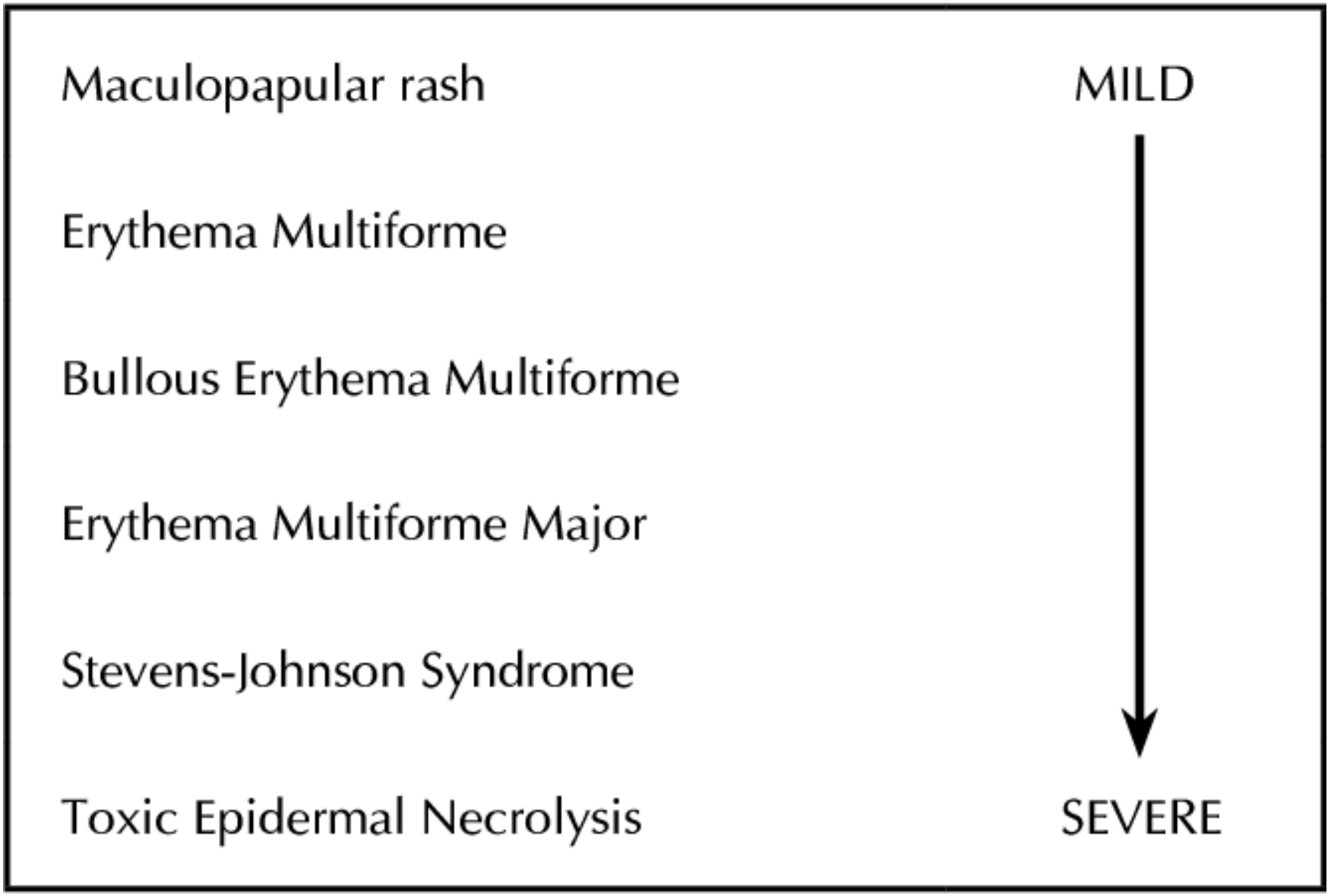
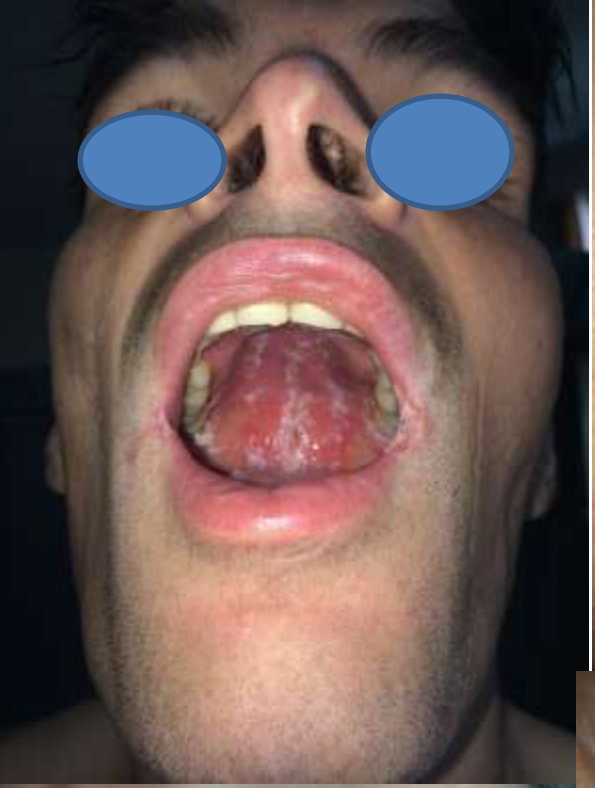


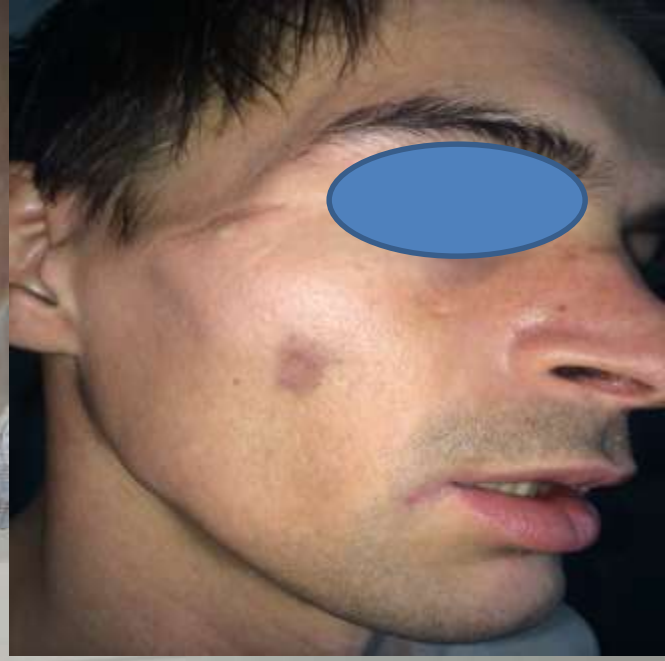
Table 2 summarises the spectrum of cutaneous drug reactions ranging from mild maculopapular rash to life-threatening TEN

After Initiating Treatment

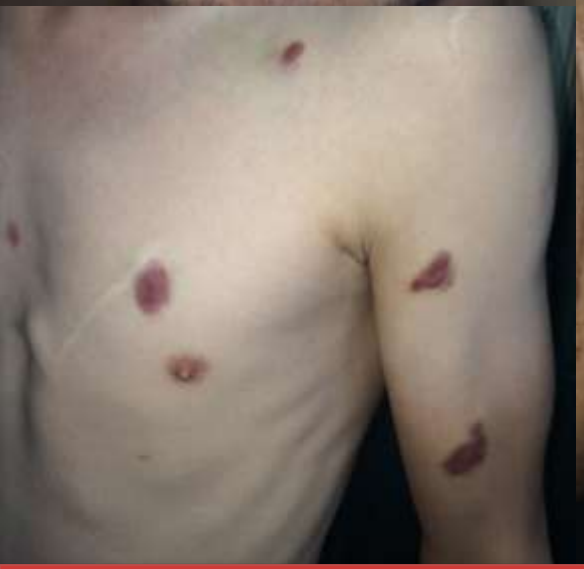
1- Adverse drug reaction (ARDs).

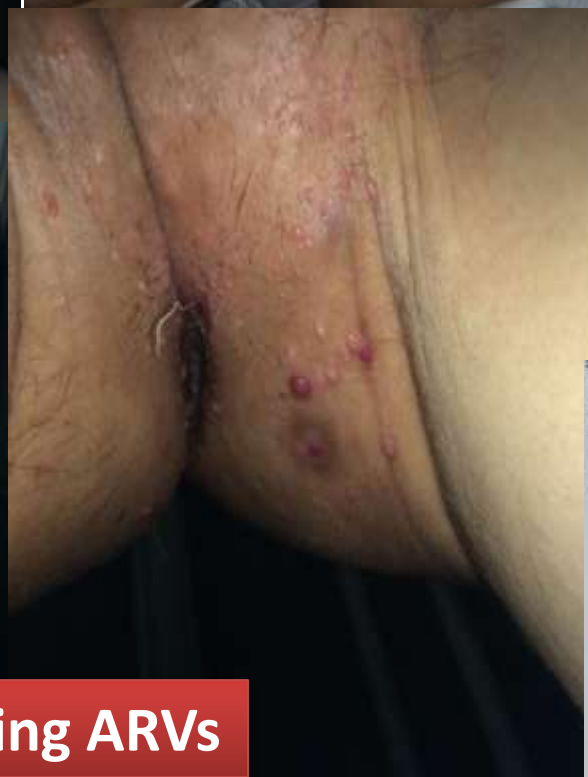
2- Immune Reconstitution Syndrome (IRIS).





Test			
Immunology			
HIV -I, II			Negative
HBsAg			Negative
Anti-HCV			Negative
Serology			
CRP	119 High	mg/L	up to 6.0
VDRL/RPR	Negative		Negative



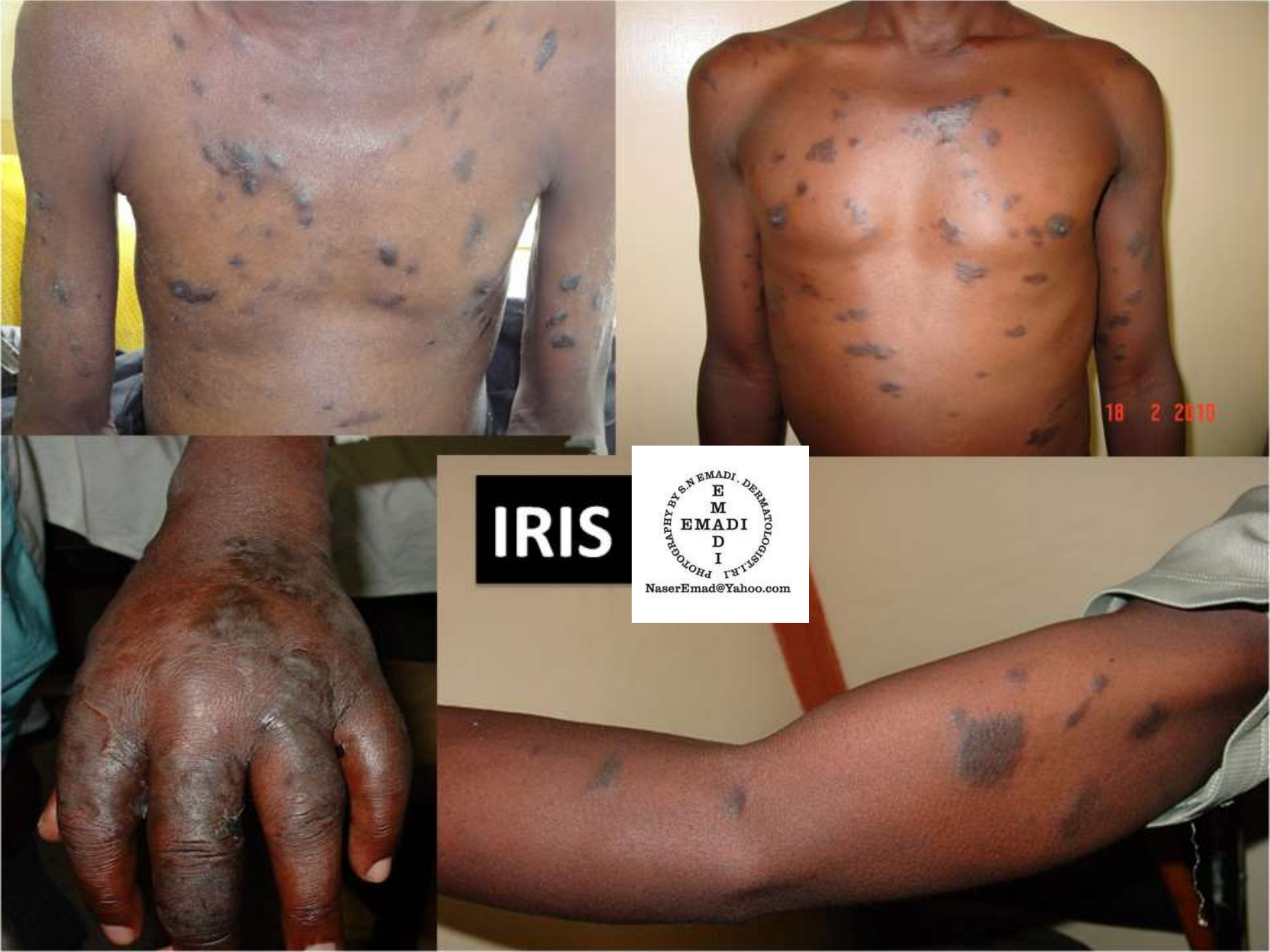


Infectious agent: HIV Virus
Protocol: Qualitative Real-Time PCR method using Rotor-Gene Q (QIAGEN) apparatus.
Sensitivity : More than 95%
Analytical detection limit : 200 IU/ml

Patient Result:

Test	Sample	Result
HIV Type1 RNA	Plasma	Positive

Appeared after starting ARVs


IRIS
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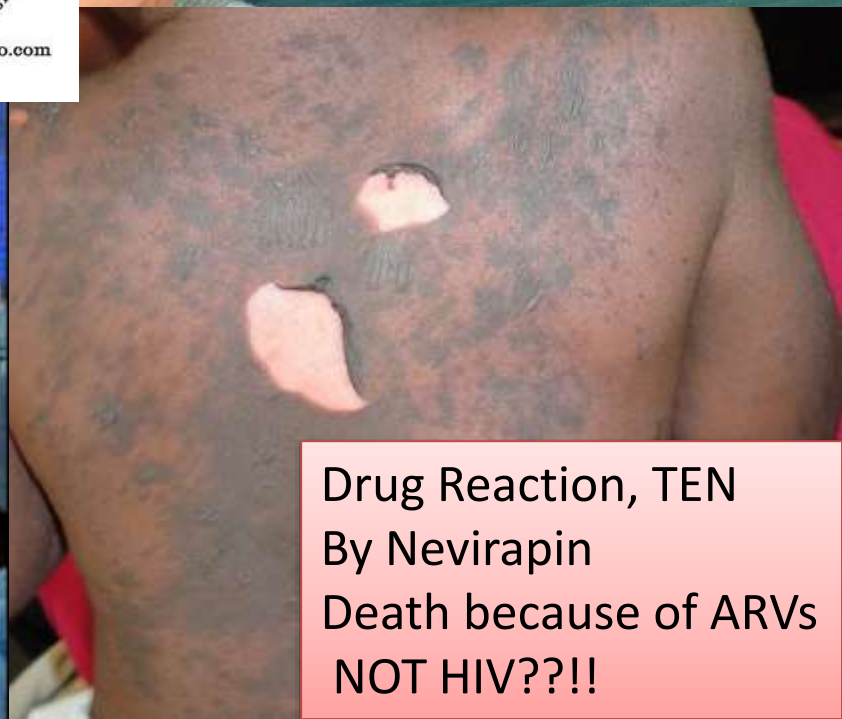
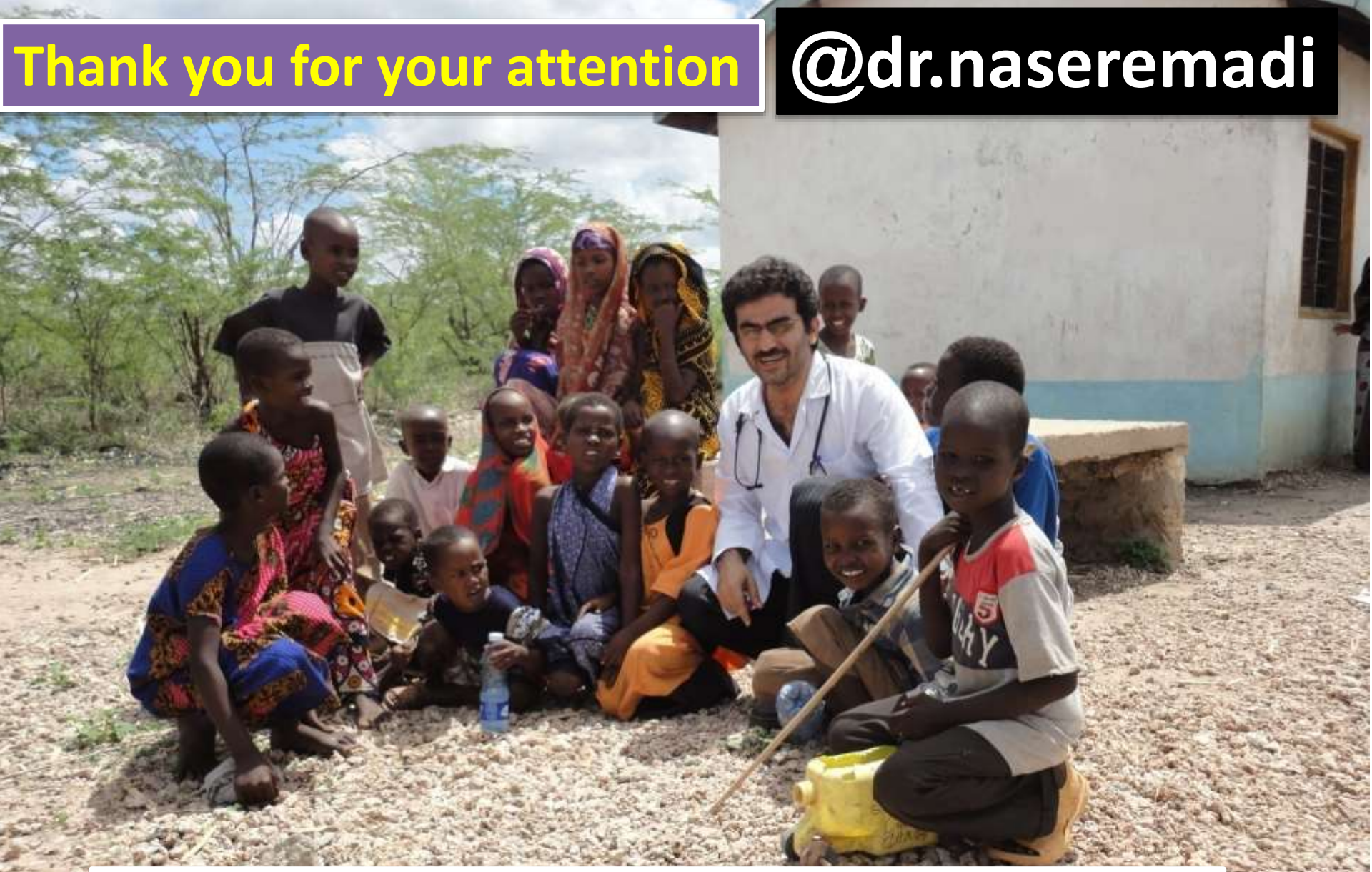


Drug Reaction, TEN
By Nevirapin
Death because of ARVs
NOT HIV??!!

Thank you for your attention

@dr.naseremadi



سعی کنیم انسان مفیدی باشیم تا آدم مهم

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