GEMOQ
Groupe d'étude
en médecine obstétricale
du Québec

ASMIQ
Spécialistes en Médecine Interne

Canadian Society of Internal Medicine

Annual Meeting 2016

Montreal, QC

Dermatological Disorders of Pregnancy

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NASOM
North American Society of Obstetric Medicine

Canadian Society of Internal Medicine
Société Canadienne de Médecine Interne

Canadian Society of Internal Medicine

Annual Meeting 2016

Montreal, QC

The following presentation represents the views of the speaker at the time of the presentation. This information is meant for educational purposes, and should not replace other sources of information or your medical judgment.

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Montreal, QC

Conflict Disclosures

I have NO conflicts to disclose

I am a member of GÉMOQ and NASOM

Some of the drugs or treatment modalities mentioned in this presentation are:
Dermatological creams in general
Oral prednisone

Set objectives

1. Evaluate a pregnant woman with cutaneous lesions and diagnose the major dermatoses specific to pregnancy (PUPPP, pemphigoid gestationis, atopic eruption of pregnancy, pustular psoriasis).
2. Decide when a biopsy is needed.
3. Start treatment for dermatoses of pregnancy.
4. Plan the fetal follow-up required for gestational pemphigoid and advise the patient about possible neonatal lesion and risk of recurrence in a future pregnancy.

Your objectives?

My objectives

- Do NOT panic
- Remember what I know
- Think within a framework
- Know one set of creams

What do we already know?

Game 1: Pre-test

Problems with skin lesions in pregnancy

1. Recent changes in nomenclature

2. So many rashes look alike (at least to my Internal Medicine eyes)

Game 2: AKA

A. PUPPP

B. Pemphigoid gestationis

C. Pustular psoriasis

D. Atopic eruption of pregnancy

Classification of pruritic pregnancy-specific dermatoses PSD

- Polymorphic eruption pregnancy PEP
- Atopic eruption of pregnancy AEP
  - Prurigo of pregnancy
  - Pruritic folliculitis of pregnancy
  - Eczema of pregnancy
- Intrahepatic cholestasis of pregnancy ICP
- Pemphigoid gestationis PG

How does the patient present?

- Oh and by the way, doctor….
- Referral for rash: Please assess… (HELP!)
- Referral for pruritus
- Systemic illness (and rash present on careful clinical exam)
- QUESTION**: What are the skin findings of the normal pregnant patient?

Increased hormone levels	• Hyperpigmentation • Spider angioma, telangiectasia, palmar erythema • Gingivial hyperemia, pyogenic granuloma • Hypertrichosis, telogen effluvium • Molluscum fibrosum gravidarum
Vascular expansion	• Oedema, varicosities
Abdominal distension	• Striae gravidarum
Glandular function	• Milaria, • Hyperhydrosis
Nails changes	• Increased brittleness, onycholysis • Transverse grooving

Frameworks

Proposed framework

PRURITUS	**Pregnancy-related**	**Unrelated**
Commonly turns out to be		
Must NOT be missed		

Proposed framework

RASH	**Pregnancy-related**	**Unrelated**
Commonly turns out to be		
Must NOT be missed		

Rash

- Ddx: do not miss
  - Pemphigoid gestationis
  - Pustular psoriasis
  - Drug reaction

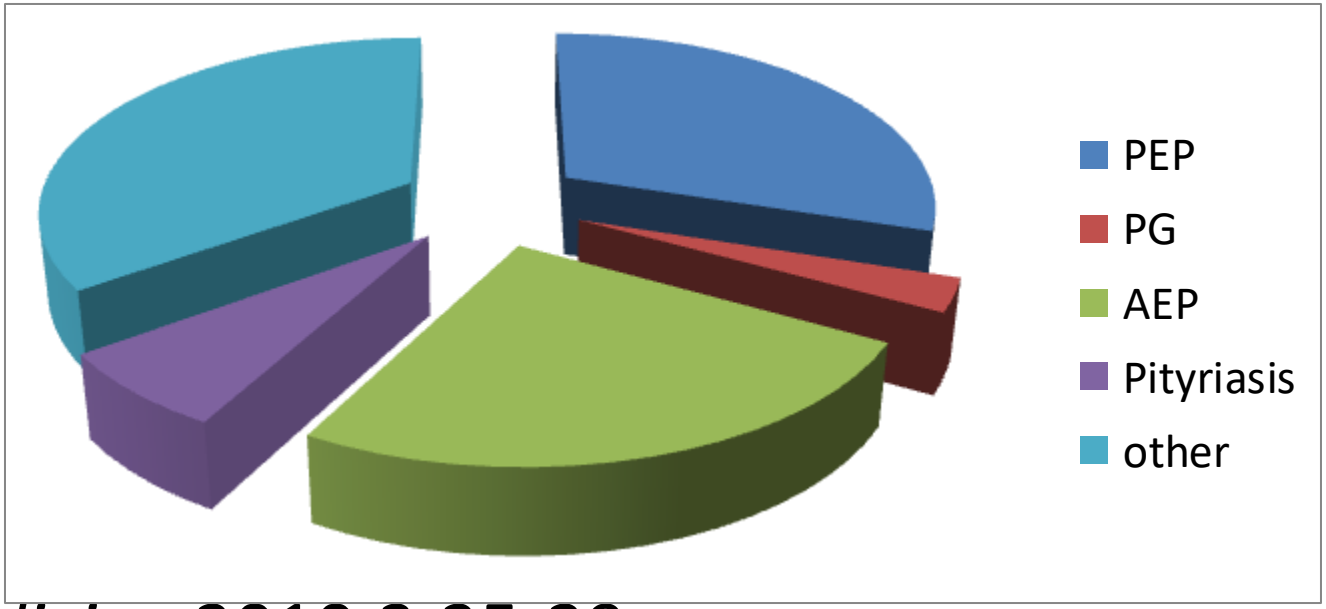
- Commonly turns out to be:
  - PEP
  - Pregnancy-unrelated conditions

Pruritus

- Ddx: do not miss
  - Obstetric cholestasis
  - Early PG
  - Scabies!
  - Opioid withdrawal
- Commonly turns out to be:
  - Pruritus of pregnancy
  - Xerosis

Pruritus

- 20% reported pruritus as early as T1
- 44% developed a rash



Obstetric Medicine 2010;3:25-29.

High yield information

- Systemic features
- Type of rash*
  - Bulla are bad
  - (Bulla may arise LATER)
- Distribution
- Prior history
- Medication exposure and contacts

Useful clues

	PEP	AEP	ICP	PG
Primiparous	73%	44%	47%	48%
Multiple	16%	1%	0%	0%
Recurrence	7%	34%	88%	9%
Early	3%	75%	20%	29%
Abdomen	98%	68%	36%	95%
Only pruritus (excoriations)	0	0	100%	0

PEP

- Classical features:
  - Primiparous, T3 or immediately pp
  - ? associated with males fetuses and Gest Diabetes
  - Starts within striae with umbilical sparing

- Importance:
  - More common 1:160 pregnancies
  - Must be distinguished from PG

PEP 2

- Maternal investigations:
  - Biopsy? Not diagnostic
  - Helps to rule-out PG
- Fetal investigations:
  - None in particular

PEP 3

- Maternal management:
  - Reassurance
  - Recurrence rare except if multiple gestation
  - Symptomatic:
    - Oral antihistamines
    - Topical corticosteroids
  - If severe:
    - Short course of prednisone 20-40 mg po qd in tapering doses
- Fetal management:
  - none

PEP 4

- Maternal complications:
  - none
- Fetal complications:
  - none

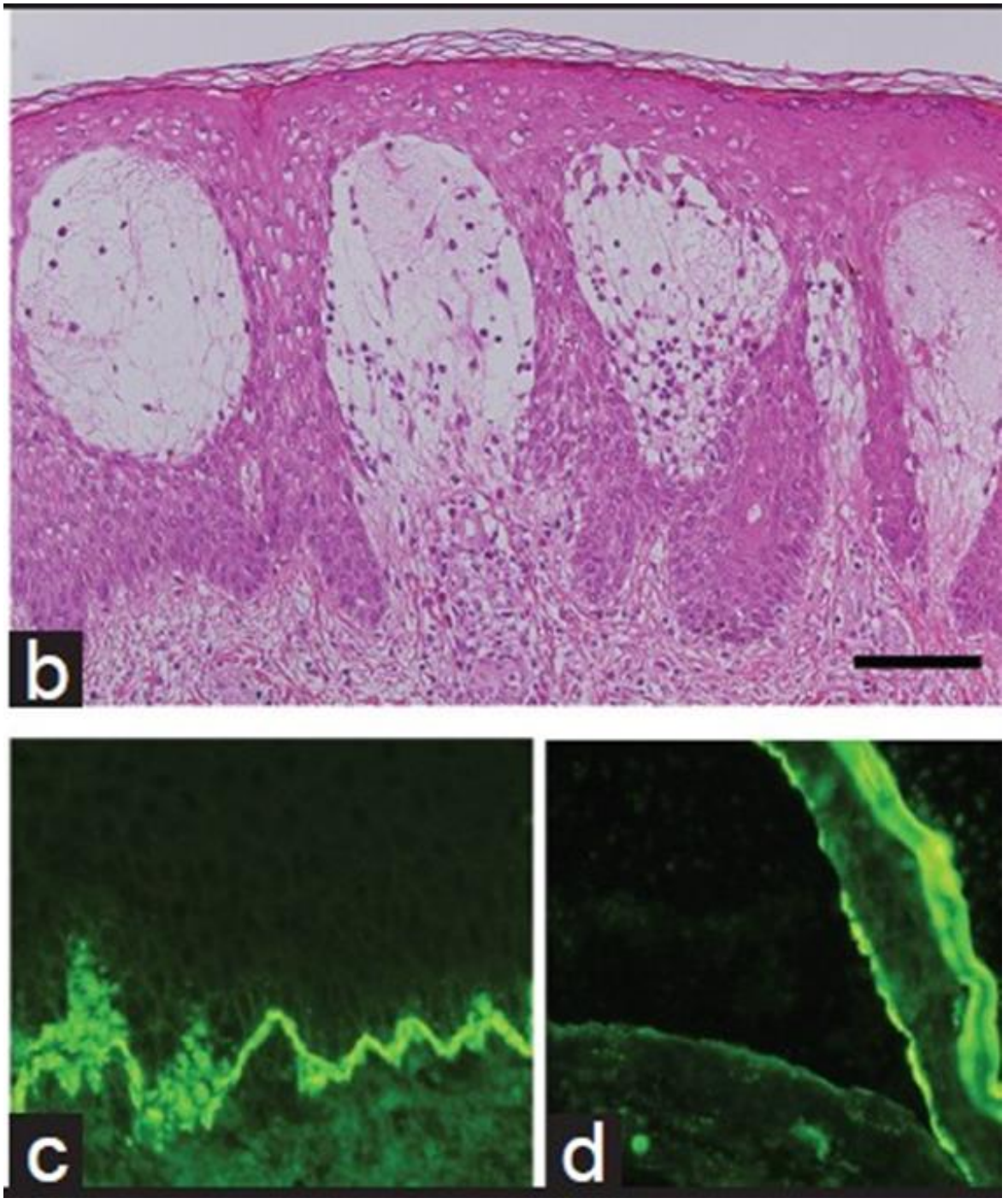
Pemphigoid gestationis

- Classical features:
  - Rare, autoimmune bullous disorder
  - T3 or early pp
  - Pruritus→papules →spread →bullae
- Importance:
  - Maternal impact
    - May recur earlier, risk of secondary infection
  - Fetal impact
    - Placental and fetal involvement

Pemphigoid gestationis 2

- Maternal investigations:
  - Biopsy? **YES** and must be **PERI**-lesional skin
  - With direct immunofluorescence

- Fetal investigations:
  - Fetal surveillance (growth, movements, well being)
  - Risk of prematurity and SGA
  - Prognosis generally good (10% with mild skin lesions)


b
c
d

Pemphigoid gestationis 3

- Maternal management:
  - Treatment varies with stage and severity
  - Mild pre-bullous
    - topical corticosteroids (+/- oral antihistamines)
  - All others
    - Oral prednisone 0.5-1.0 mg/kg/day
  - Unresponsive cases
    - Immunoapheresis, IVIG, azathioprine, dapsone

- Fetal management:
  - Follow growth curve

Australasian J of Dermatology 2012;53:66-69.

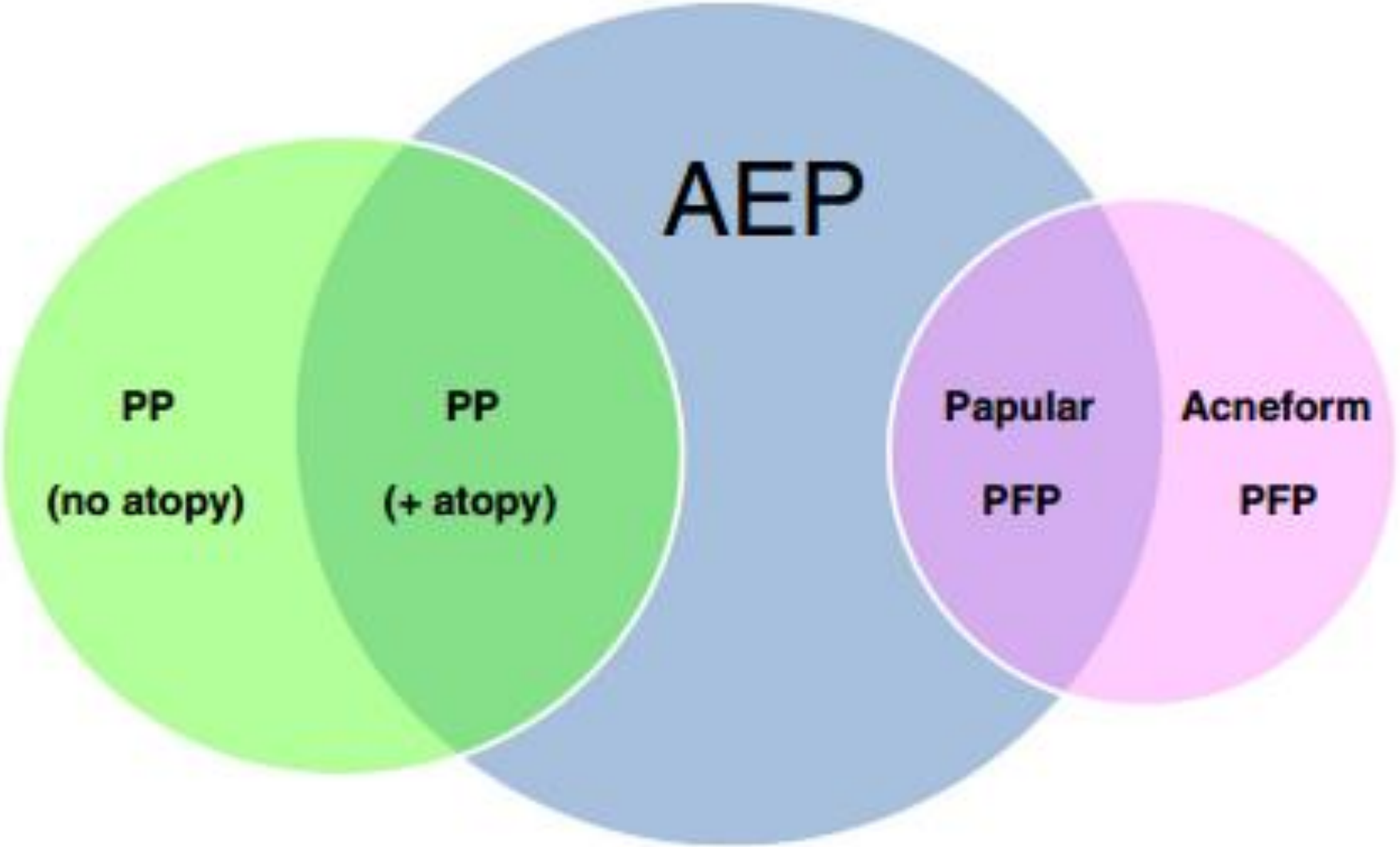
Pemphigoid gestationis 4

- Maternal complications:
  - Counseling on course and risk of recurrence

- Fetal complications:
  - SGA babies: if diagnosis in T1 or T2
  - Prematurity: if diagnosis in T2 and blisters present
  - 5-10% neonates with mild skin lesions with spontaneous resolution

Atopic eruption of pregnancy

- Classical features:
  - Common, starts early
  - Tends to recur
  - Triggered by pregnancy-specific immunological changes
  - Includes atopic dermatitis that can be aggravated by pregnancy
- Importance:
  - Most common dermatosis in pregnancy accounting for 50% of patients
  - 80% experience first signs of atopy



Roth *Clinics in Dermatology* 2016;34:392-400.

AEP 2

- Maternal investigations:
  - E-type AEP:
    - Affects typical atopic sites (face,neck, décolleté, and flexural surfaces)
  - P-type AEP:
    - Papular lesions (trunk and limbs with typical prurigo nodules)
  - Biopsy? Rarely required
  - ? w-up for obstetric cholestasis
- Fetal investigations:
  - None in particular

AEP 3

- Maternal management:
  - Treat underlying dry skin
  - Oral antihistamines
  - Topical corticosteroid cream
  - Short course oral prednisone in severe cases
  - Narrowband UVB safe for severe, early cases (folic acid supplementation)

- Fetal management:
  - None in particular
  - Probiotics in infancy RR=0.79 (0.71-0.88)

Pelucchi 2014)

AEP 4

- Maternal complications:
  - Rapid response to therapy
  - Resolves 2-3 months postpartum
  - Recurrence in subsequent pregnancies

- Fetal complications:
  - Certain heredity

Pustular psoriasis

- Classical features:
  - Rare >200 cases described
  - Systemic symptoms, third trimester, rapid resolution pp
  - Widespread tiny pustules on erythemato-squamous plaques
  - Exact etiology is not known but it is known to be triggered by hypocalcaemia, hypoparathyroidism, infections and stress.
- Importance:
  - Maternal complications (hypocalcemia)
  - Fetal impact

Razvi J Med Allied Sci 2015; 5(2): 51-53

Pustular psoriasis 2

- Maternal investigations:
  - CBC, electrolytes (Ca++, Mg++), renal, LFTs, PTH
  - Urgent dermatology consult
  - ICU may be necessary
  - Biopsy: yes
  - Sterile cultures
- Fetal investigations:
  - Monitoring

Pustular psoriasis 3

- Maternal management:
  - Prednisone 20-30mg po daily
  - Supportive fluids, calcium
  - Refractory cases:
    - Prednisone 60-80mg po daily
    - UVA
    - Cyclosporine 5 mg/kg/day.
- Fetal management:
  - Fetal monitoring
  - Early delivery

Pustular psoriasis 4

- Maternal complications:
  - Beware of bacterial superinfection
  - Dehydration
  - Electrolyte imbalance
  - Delirium, tetanic seizures from hypocalcemia

- Fetal complications:
  - Placental complications including IUFD

Classification of pregnancy-specific dermatoses PSD

- Polymorphic eruption pregnancy PEP
- Atopic eruption of pregnancy AEP
  - Prurigo of pregnancy
  - Pruritic folliculitis of pregnancy
  - Eczema of pregnancy
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- Pemphigoid gestationis PG

Summary 1

	Classical features	Importance	Treatment
Pemphigoid gestations			
PEP			
Atopic eruption of pregnancy			
Pustular psoriasis			
Obstetric cholestasis			

Summary 2

- Indications for biopsy
  - Bullous lesions
  - Unclear diagnosis
  - Unwell patient
  - Any other suspicious lesion
    - Do not miss melanoma

Potency	Name	Vehicle	Dose
I Super high			
II High	Methylprednisolone aceponate		
III High	Triamcinolone acetonide Bmethasone Amcinonide	O, **C** O, C, L, F C, L	0.5 0.05 0.1
IV Medium	Hydrocortisone Triamcinolone Mometasone furoate	O O, C **C**, L, S	0.2 0.1 0.1
V Lower-mid	Hydrocortisone butyrate Fluticasone propionate	O, **C**, L, S C, L	0.1 0.05
VI Low	Fluocinolone	C, S	0.01
VII Super low			

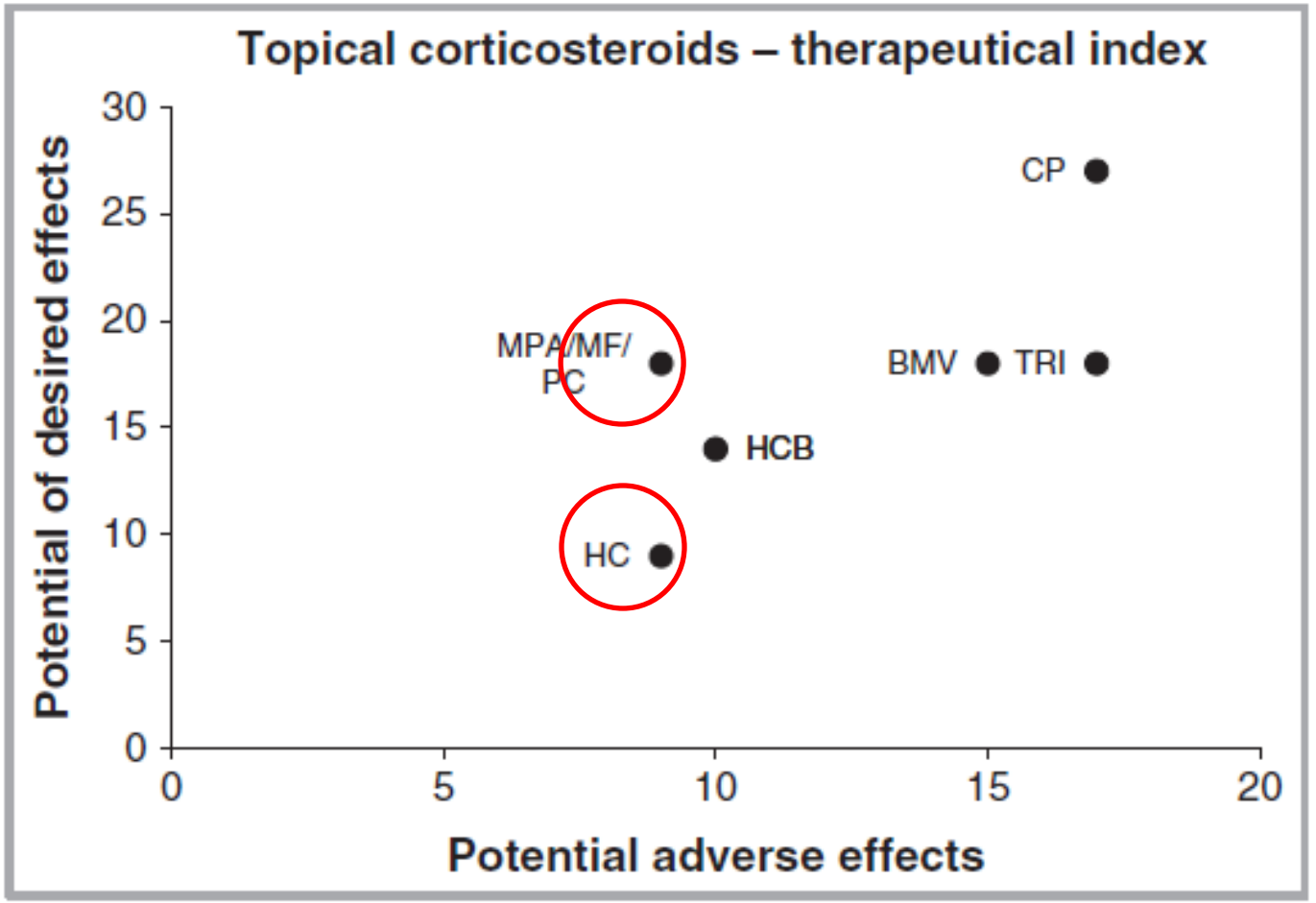


Fig 1. Therapeutic index of topical corticosteroids (modified from Luger *et al.*[62]). BMV, betamethasone valerate; CP, clobetasol propionate; HC, hydrocortisone; HCB, hydrocortisone butyrate; MF, mometasone furoate; MPA, methylprednisolone acetate; PC, prednicarbate; TRI, triamcinolone acetonide.

Kirtschig 2013

Topical steroid creams

- Pregnancy

1 systematic review (7 studies) + 2 studies since

No increased risk of:

  - Cleft lip/palate or other malformations
  - Prematurity
  - SGA babies (except for 1 study at high doses)
  - IUFD

- Lactation

Few studies; low excretion; careful if treating areola

Kirtschig *British J Dermatol* 2011
Ferreira *Grossesse et allaitement* 2nd Ed 2013

Vehicle selection for specific body sites

Vehicle	Smooth, nonhairy skin; thick, hyperkeratotic lesions	Hairy areas	Palms, soles	Infected areas	Between skin folds; moist, macerated lesions
Ointment	+++		+++		
Cream	++	+	++	+	++
Lotion		++		++	++
Solution		+++		+++	++
Gel		++		+	+
Foam	++	+++	++	++	++

+: infrequently used; ++: acceptable vehicle; +++: preferred vehicle.
Adapted from Goldstein, BG, Goldstein, AO, Practical Dermatology 2nd ed, Mosby-Year Book, Inc, St. Louis, MO, 1997.

Amount of topical medication for adult use

	BID/1 week	TID/2 week	BID/4 week
Face and neck	15 g	45 g	60 g
Trunk	60 g	180 g	240 g
One arm	15 g	45 g	60 g
One leg	30 g	90 g	120 g
Hands and feet	15 g	45 g	60 g
Body	180 g	0.75 to 1 kg	1.25 to 2 kg

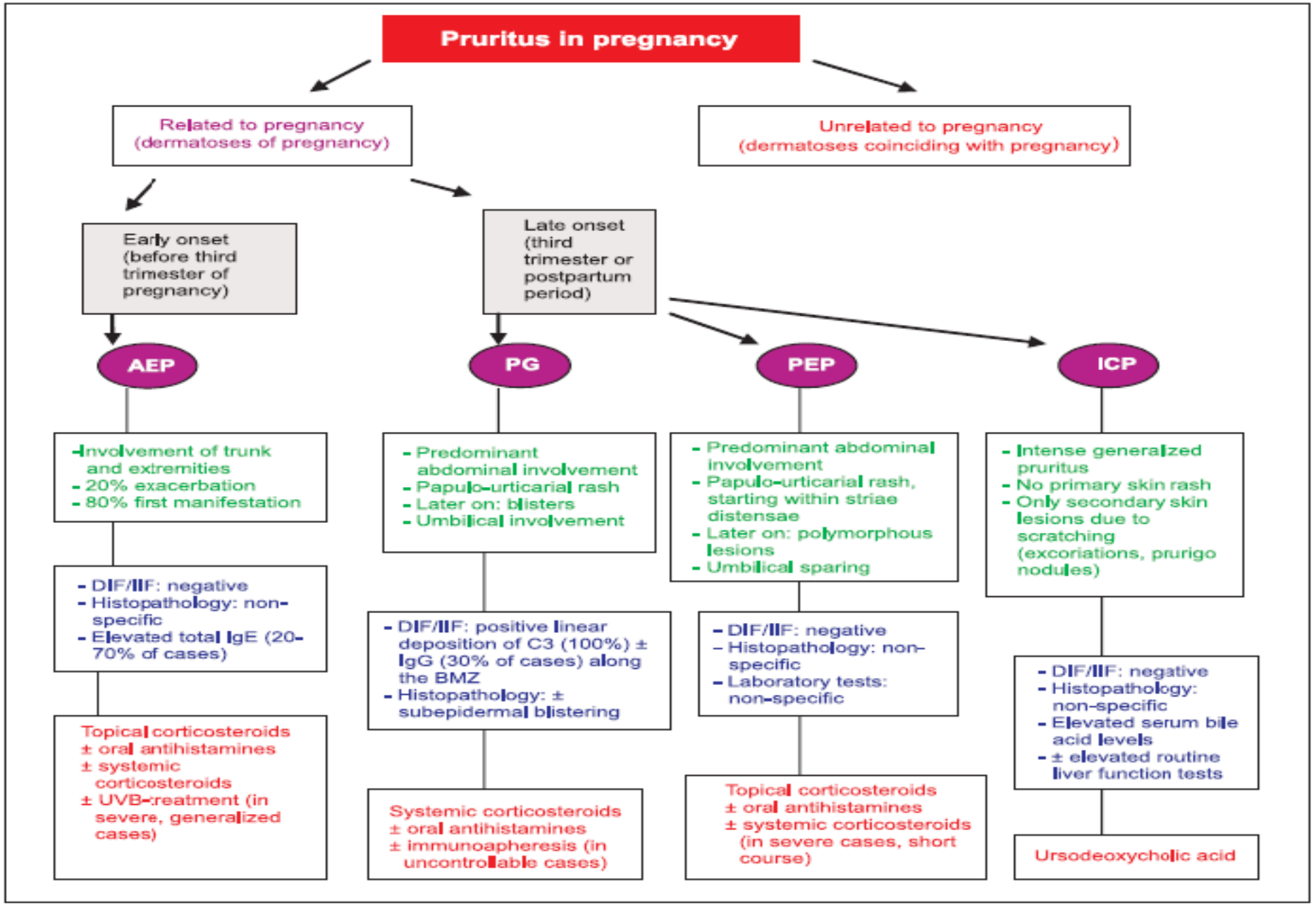
For children use one-third to one-half these amounts.
BID: two times per day; TID: three times per day.
Adapted from: Goldstein BG, Goldstein AO, Practical Dermatology 2nd ed, Mosby-Year Book, Inc, St. Louis, MO, 1997.

Antihistamines

- Pregnancy:
  - Diphenhydramine 25-50mg po q 4-6 hours
  - Hydroxyzine 25mg po q 6-8 hours
  - Cetirizine 5-10mg po qd
  - Loratidine 10mg po qd

- Lactation:
  - Diphenhydramine: maximal dose=0.3% of pediatric dose
  - Loratidine: 1% of maternal dose

Table 2. Algorithmic approach to pregnant patients with pruritus.



AEP = atopic eruption of pregnancy, PG = pemphigoid gestationis, PEP = polymorphic eruption of pregnancy, ICP = intrahepatic cholestasis of pregnancy, DIF = direct immunofluorescence, IIF = indirect immunofluorescence, BMZ = basal membrane zone.

Set objectives

- ✓ Evaluate a pregnant woman with cutaneous lesions and diagnose the major dermatoses specific to pregnancy (PUPPP, pemphigoid gestationis, atopic eruption of pregnancy, pustular psoriasis).
- ✓ Decide when a biopsy is needed.
- ✓ Start treatment for dermatoses of pregnancy.
- ✓ Plan the fetal follow-up required for gestational pemphigoid and advise the patient about possible neonatal lesion and risk of recurrence in a future pregnancy.

Back to your objectives

- Further questions?

Game 3: Post-test

Extra learning

Articles

- Ambros-Rudolph *Ann Dermatol*. 23(3) 2011
- Kirtschig *British J Dermatol* 2011
- Sävervall *Derm Research and Practice* 2015
- Razvi *J Med Allied Sci* 2015;5 (2) 51-53
- Roth *Clinics in Dermatol* 2016;34:392-400.

Cases and Modules

American College of Dermatology Module

THANK YOU!