Pregnancy Dermatoses

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What’s New?

Eruptions specific to pregnancy
Recently reclassified/ simplified
  * PUPPP
  * Pemphigoid gestationis
  * Atopic eruption of pregnancy
  * Pustular psoriasis of pregnancy
  * Intrahepatic cholestasis of pregnancy

Review of safety of dermatologic medicines in pregnancy
Pruritic Urticarial Papules and Plaques of Pregnancy (PUPPP)

Synonymous with:

- Polymorphic eruption of pregnancy
- Toxic erythema of pregnancy
- Bourne’s toxemia of pregnancy
- Linear IgM dermatosis of pregnancy
- Nurses late onset prurigo
PUPPP

1/300 pregnancies

75% nulliparous

10x risk multiples, increased weight gain, male fetus

Late 3rd trimester, 15% postpartum

Extremely pruritic

?excessive stretching – connective tissue antigen exposure

?immunological response to fetal antigens
PUPPP

Erythematous papules
Within abdominal striae
Periumbilical sparing
Spreads to extremities
Spares face, palms and soles
May be targetoid or vesicular
Diagnosis

Bloods unnecessary

Biopsy - if considering PG (+ immunofluorescence!!)

Spongiosis, perivasc lymphocytes, occas eos

DIF – granular IgM & C3
Prognosis

No fetal or maternal morbidity

Itch and poor sleep

May worsen post partum

Resolves in 6 weeks

Recurrence in 5%

Not triggered by OCP
Management

General

- Avoid scratching and overheating
- Soap substitutes
- Emollients
- Cool compress/ice pack
- Colloidal oatmeal baths and menthol creams
Management 2

Topical corticosteroids (ointments, adequate amount)

- Soak and smear or wet dressings
- Mid potency (betamethasone valerate)
- Potent (betamethasone dipropionate)

Antihistamines

- Modest relief

Oral steroids

- Prednisolone 0.5 mg/kg
Pemphigoid Gestationis

= Herpes gestationis

Foetal morbidity

1/1700 – 1/50000 pregnancies

Onset 2\textsuperscript{nd} to 3\textsuperscript{rd} trimester
Pemphigoid Gestationis

Develop IgG antibodies towards BP 180 in BMZ
Pemphigoid Gestationis

Pruritis

Urticarial plaques and papules surrounding umbilicus

Rapidly spreads

Vesicles and bullae

May involve acral sites and mucous membranes
Investigations

Punch biopsy of vesicle - H+E
- Sub epidermal vesicle with eos
- Basal vacuolar change

Punch biopsy of adjacent normal skin - DIF
- Linear C3 at BMZ
- IgG in 30%

Bloods
- skin auto antibodies (25% positive)
- thyroid autoantibodies and function
Management

Symptom relief

High potency steroid ointment

betamethasone dipropionate (Diprosone®)

Prednisolone 0.5mg/kg

taper towards end of pregnancy

inc post partum
Foetal Prognosis

Placental Insufficiency (immune response against placental antigens)

35% Preterm birth or growth restriction

<10% newborns have blisters (mild course)

Poor prognostic factors

Early onset (1st or 2nd trimester)

Maternal vesicles
Maternal Prognosis

- Post partum flare
- High risk recurrence
  - Further pregnancies
  - OCP
- High risk of thyroid autoimmune disease
  - Graves
Remember!

Urticarial = PUPPP or pemphigoid gestationis

Striae = PUPPP

Umbilical involvement = pemphigoid gestationis

Biopsy

  Rash - 3mm punch biopsy in formalin

  DIF - nearby **NORMAL** skin

    fresh (saline soaked gauze)

    urgent delivery
Atopic Eruption of Pregnancy

- Eczema in pregnancy
- Prurigo of pregnancy
- Pruritic folliculitis of pregnancy

History of atopy

20% previous eczema

Onset 1st or 2nd trimester
Presentation

Eczematous patches
Excoriated papules
Flexural
Biopsy not necessary
Management

No fetal or maternal adverse effects

General measures

Emollients

Topical corticosteroids

NB-UVB phototherapy

Oral steroids
Pustular Psoriasis of Pregnancy

= impetigo herpetiformis

NO past history psoriasis

Very rare

Any stage of pregnancy

Cause  ?hormonal

?hypoparathyroidism/ hypocalcaemia
Pustular Psoriasis of Pregnancy

Erythematous plaques with peripheral pustules
Concentric enlargement
Nail involvement (onycholysis)

Systemic symptoms
  Fever
  Malaise
  Nausea, vomiting and diarrhoea

NOT itchy
Investigations

Biopsy - parakeratosis, psoriasiform hyperplasia, neutrophilic pustule

Swabs are sterile

Bloods - FBE, U&E, Ca, ESR, urinalysis, PTH

Hypocalcaemia***

Foetal biophysical profile and fetal growth monitoring
Foetal Prognosis

Placental insufficiency

miscarriage

foetal growth restriction

stillbirth
Maternal Prognosis

Clears postpartum

Recurs (more severely)

Subsequent pregnancies

menses

OCP
Management

High dose Prednisolone (1mg/kg)

Cyclosporin (3mg/kg)

Infliximab

Postpartum retinoids

methotrexate
Intrahepatic Cholestasis of Pregnancy

0.5% pregnancies (higher in Chile and Bolivia)

Increased in twins and triplets

Progesterone exposure (inc sulfated prog metabolites)

Genes ABCB4 gene codes for multidrug resistance 3 protein

  homozygous – progressive familial intrahepatic cholestasis

  heterozygous – 16% Caucasian cases
Intrahepatic Cholestasis of Pregnancy

Severe generalised pruritis

No rash

Acral

No response to antihistamines

2\textsuperscript{nd} or 3\textsuperscript{rd} trimester
# Laboratory Findings

- Increased total serum bile acids
- Increased cholic: chenodeoxycholic acid ratio (not help diagnosis)
- LFTs
  - inc ALP
  - normal GGT (raised in other cholestasis)
  - inc ALT/ AST
- Fat soluble vitamin deficiency uncommon
  - vit K deficiency
- Normal liver ultrasound
Management

Ursodeoxycholic acid 500mg BD (15mg/kg)

Meta-analysis of 9 RCT (454 patients)¹

Lower premature delivery rate (16 vs 34%; OR 0.44)

Improves pruritis (61% vs 27%, OR 0.27)

Cholestyramine

Less effective, may exacerbate vit K deficiency

S-adenosyl-methionine

Controversial, improve pruritis but not reduce bile salts

Foetal Prognosis

Prematurity (41% singleton, earlier pruritis)

Meconium stained amniotic fluid

Neonatal respiratory distress syndrome (bile acids lungs)

Still birth

fetal arrhythmia

vasospasm of placental chorionic vessels
Intrauterine Demise

90% after 37 weeks, mean 38wks

0.3% ICP pregnancies (16 stillbirths/ 5477 ICP)

Maternal bile acid level >40micromol/L

predicts probability of fetal complication

?foetal deaths- 27 (twin tight knot umb cord), 94, 130

1. Williamson C et al. Clinical outcome in a series of cases of obstetric cholestasis identified via a patient support group. BJOG 2004; 111:676
Management

No ideal method

Biophysical profile assessment (no evidence of lack of value)

Early delivery 37 vs. 38 wks

37 wks (>40mmol) – intrauterine fetal demise & asphyxia same as general obstetric pop¹

37 wk vs. expectant = similar rate c/section²

Severe cholestasis/ jaundice- earlier if fetal lungs matured

Maternal Prognosis

Resolves within days of delivery

70% recurrence (variable severity)

Inc risk gallstones

Subset – underlying liver disease (Hep C, liver cirrhosis)

OCP – rarely causes cholestasis (LFTs 3/12)
Safety of topical steroids in Pregnancy

3% absorption after 8 hours contact

An association between very potent topical steroids and low birth weight

No association - congenital abnormalities

- preterm delivery

- stillbirth

Ching-Chi et al. Systematic review of the safety of topical corticosteroids in pregnancy JAAD 2010 62(4) 694-705
# Category A topical Steroids

<table>
<thead>
<tr>
<th>Potency Level</th>
<th>Steroids</th>
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<tbody>
<tr>
<td>Low potency</td>
<td>Hydrocortisone ointment 0.5% and 1% (Sigmacort, Derm-Aid, Cortic DS, Egocort)</td>
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<tr>
<td>Moderate potency</td>
<td>Betamethasone valerate 0.02% and 0.05% (Antroquoril, Celestone, Betnovate 1/5)</td>
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<td>Clobetasone butyrate 0.05% (Eumovate)</td>
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<tr>
<td>High potency</td>
<td>Betamethasone dipropionate 0.05% (Diprosone/Betnovate)</td>
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<tr>
<td>Ultrahigh potency</td>
<td>Betamethasone dipropionate in optimized vehicle (Diprosone OV)</td>
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Safety of antihistamines

First Generation H1

cyproheptadine (Periactin)

promethazine (Phenergan) – C (neurological disturbance in foetus when high dose in late pregnancy)

Second Generation H1

loratadine (Claratyne) - B1

cetirizine (Zyrtec) - B2

fexofenadine (Telfast) - B2
Pregnancy Categories

Category A  Drugs which have been taken by a large number of pregnant women and women of childbearing age without any proven increase in the frequency of malformations or other direct or indirect harmful effects on the fetus having been observed.

Category B1 Drugs which have been taken by only a limited number of pregnant women and women of childbearing age, without an increase in the frequency of malformation or other direct or indirect harmful effects on the human fetus having been observed.

Studies in animals have not shown evidence of an increased occurrence of fetal damage.

Category B2 Drugs which have been taken by only a limited number of pregnant women and women of childbearing age, without an increase in the frequency of malformation or other direct or indirect harmful effects on the human fetus having been observed.

Studies in animals are inadequate or may be lacking, but available data show no evidence of an increased occurrence of fetal damage.
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