

DERMATOSES OF PREGNANCY

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DERMATOSES IN PREGNANCY

- Physiologic changes associated with pregnancy
- Preexisting dermatoses affected by pregnancy
- Dermatoses specific to pregnancy

PHYSIOLOGICAL CHANGES

Hormonal changes

↑)MSH, estrogen, progesterone(

Hair Nail

Vascular

Pigmentation

Connective tissue



PIGMENTARY CHANGES

- Melasma
- Hyperpigmentation around areolae
- Linea nigra on abdomen
- Darkening of nevi





VASCULAR CHANGES

- Spider angiomas
- Palmar erythema
- Varicosities
- Non-pitting edema
- Pyogenic granulomas





CONNECTIVE TISSUE

- Striae gravidarum



HAIR CHANGES

- Hypertrichosis (prolongation of anagen phase(
- Postpartum telogen effluvium (synchronized transition into telogen phase(
- Androgenetic alopecia





NAIL CHANGES

- Onycholysis
- Brittleness





PREEXISTING DERMATOSES AFFECTED BY PREGNANCY

- Diseases potentially improved during pregnancy
  - Allergic contact dermatitis
  - Hidradenitis suppurativa
    - ↓ in the apocrine gland function
  - Psoriasis (40% to 63% of pregnant women(
    - ↑ levels of IL-10 in pregnancy

DISEASES POTENTIALLY WORSENED DURING PREGNANCY

Infections

- Candida vaginitis
- Condyloma acuminate
- Human papilloma virus
- Herpes simplex infection
- Leprosy
- Trichomoniasis
- Varicella

Immune-mediated diseases

- Systemic lupus erythematosus (SLE)

Dermatomyositis and polymyositis

Metabolic diseases

- Acrodermatitis enteropathica
- Porphyria cutanea tarda

Connective tissue disorders

- Ehlers-Danlos syndrome Type 1 and 4
    - Excessive bleeding, wound gaping and uterine laceration
- Pseudoxanthoma elasticum

DERMATOSES SPECIFIC TO PREGNANCY







CLASSIFICATIONS

Holmes and Black, 1983

1. Pemphigoid gestationis (herpes gestationis)
2. Polymorphic eruption of pregnancy)pruritic urticarial papules and plaques of pregnancy(
3. Prurigo of pregnancy
4. Pruritic folliculitis of pregnancy

Shornick, 1998

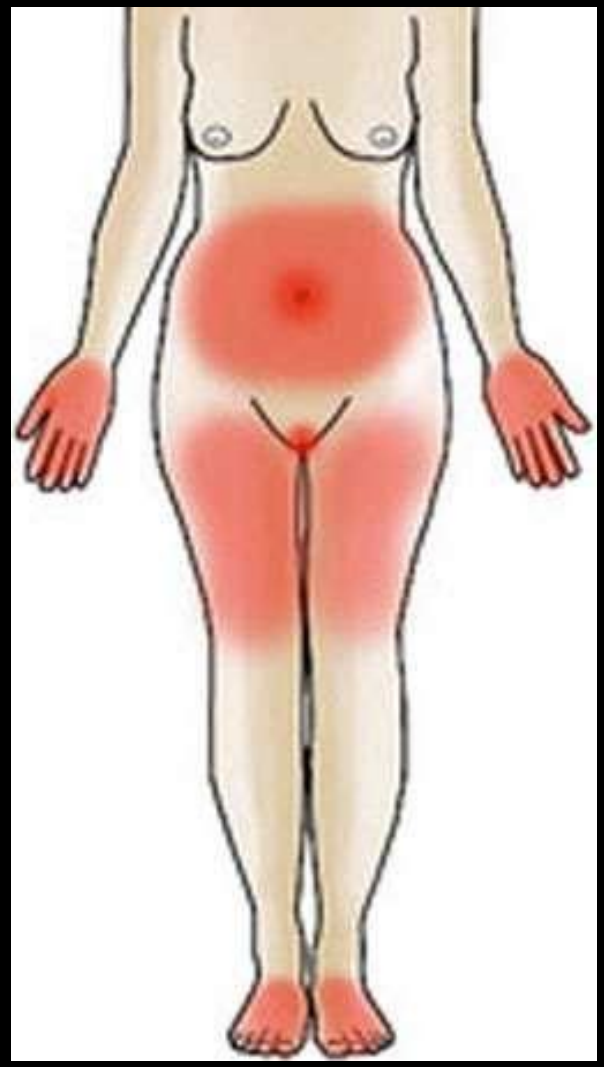
- Added intrahepatic cholestasis of pregnancy (ICP) in addition to PG, PEP and PP.

Ambros-Rudolph et al, 2006

1. Atopic eruption of pregnancy
   a. Eczema in pregnancy
   b. Prurigo of pregnancy
   c. Pruritic folliculitis of pregnancy
2. Polymorphic eruption of pregnancy
3. Pemphigoid gestationis
4. Intrahepatic cholestasis of pregnancy

PEMPHIGOID GESTATIONIS (HERPES GESTATIONIS(

- Incidence: approximately 1 in 50,000 pregnancies
- Usually begins with urticarial papules and plaques *around the umbilicus* and extremities.
- Bullous lesions tend to develop as the disease progresses, and are often not present on first presentation.
- Lesions of PG tend to spare the face, palms, and soles.
- Mucosal surfaces are involved in fewer than 20% of cases.









PATHOPHYSIOLOGY

- An autoimmune bullous disorder
- Involves IgG immune response directed at a 180-kDa hemidesmosome transmembrane glycoprotein
- IgG Abs bind to the lamina lucida and fix compliment
- Activated eosinophils, neutrophils, T- cells)Th2 predominant) involved in blister formation
- Increased frequency of HLA- DR3, DR4 and C4 null alleles in PG patients
- Black women rarely manifest PG (possibly due to low incidence of HLA- DR(4
- May be associated with menstruating women, those taking OCPs
- May be associated with hydatidiform mole and choriocarcinoma

DIFFERENTIAL DIAGNOSIS

- Pruritic urticarial papules and plaques of pregnancy
- Erythema multiforme
- Intrahepatic cholestasis of pregnancy
- Contact dermatitis
- Drug reactions

DIAGNOSIS AND SEQUALAE

- Mean onset at 21 weeks; postpartum in 20% of cases
- Histology: papillary dermal edema resulting in subepidermal bulla with eosinophil-rich infiltrate, ±keratinocyte necrosis, perivascular infiltrate
- DIF: linear C3 deposition ±IgG at basement membrane (c.f. PUPPP(
- IIF: epidermal base (roof of blister like BP(
- Newborn may be small for gestational age, but no associated morbidity or mortality
- In about %75 of cases, PG flares around the time of delivery, regressing spontaneously after the baby is born.
- Recurrence in future pregnancies: 8%
- May be provoked by subsequent menstrual periods or OCPs

TREATMENT

- Oral corticosteroids: 20 to 60 mg/dof prednisone
- Intravenous immunoglobulin (IVIG(
- Cyclosporine in refractory cases

PRURITICURTICARIAL PAPULES AND PLAQUES OF PREGNANCY

- Incidence: 1 in 120 to 1 in 240 pregnancies
- Itchy, erythematous papules that coalesce into plaques
- Classically found on the abdomen, *sparing the umbilical area*, and are found primarily in the abdominal striae





- Most lesions dispersed on the abdomen, legs, arms, buttocks, chest, and back.
- No reported cases of mucosal involvement
- Pruritus severe enough to interfere with sleep



PATHOPHYSIOLOGY

- Strongly associated with maternal weight gain and multiple gestations
- One working hypothesis: rapid abdominal distention observed in the third trimester leads to damage of the connective tissue, which then releases antigenic molecules, causing an inflammatory reaction
- Another hypothesis: increased levels of fetal DNA that have been detected in the skin of PUPPP patients may contribute to the pathology
- There is some evidence that patients with atopy may be predisposed to PUPPP, as well as patients who are hypertensive or obese.

DIFFERENTIAL DIAGNOSIS

- Pemphigoid gestationis
- Atopic dermatitis
- Superficial urticarial allergic eruption
- Viral exanthema
- Contact dermatitis

DIAGNOSIS AND SEQUALAE

- Occurs in primigravidas 75% of the time
- Usually presents after 34th week but can present at any stage
- Diagnosis is clinical
- No laboratory findings specific for PUPPP
- Histology and immunofluorescence help differentiate it from PG.
- Histology: Nonspecific findings- epidermal changes (spongiosis, parakeratosis) and perivascular lymphocytic infiltrate with dermal edema
- DIF : negative
- Resolves with delivery; recurrence uncommon
- No increase in fetal morbidity or mortality

TREATMENT

- Aimed solely at symptomatic relief
- Mild-to-potent topical corticosteroids (triamcinolone/ fluocinonide(
- Antihistamines
- Low-dose systemic corticosteroids may also be used

- Nonpharmaceutical treatment
  - Oil baths and emollients

NTRAHEPATIC CHOLESTASIS OF PREGNANCY

- No primary skin lesions
- Present with sudden onset of severe pruritus on palms and soles which quickly becomes generalized
- Itching is often so severe that it leads to chronic insomnia
- Secondary skin lesions: erythema and excoriations
- Observable jaundice occurs 10% to 20% of patients



PATHOPHYSIOLOGY

- Disruption of hepatic bile flow resulting in ↑serum bile acids
- Severe pruritus in themother
- Bile acids can pass into fetal circulation→ deleterious effects on the fetus due to acute placental anoxia and cardiac depression
- Multifactorial reason: genetic, hormonal, and exogenousfactors
- Genetic: Endemic clustering and familial occurrence
- Mutations of certain genes encoding for transport proteins for bile excretion (e.g. ABCB4 [MDR 3] gene) have been identified in some ICP patients
- Furthermore, estrogen and progesterone metabolites are cholestatic themselves

DIFFERENTIAL DIAGNOSIS

- Viral hepatitis
- Gallbladder disease
- PG
- PUPPP
- Drug hepatotoxicity
- Primary biliary cirrhosis
- Uremia

DIAGNOSIS AND SEQUALAE

- Onset after 30th week in 80% of patients
- Gold standard: serum bile acid level >11 µmol/L (N:6.6-11 µmol/L)
- Recent study: ↑urine bile acids have 100% sensitivity and 83% specificity for ICP.
- 55% to 60% of cases: mildly ↑ aspartate aminotransferase and alanine aminotransferase
- Steatorrhea often noted by the patient, followed by vitamin K deficiency
- Resolves after delivery
- Recurs with subsequent pregnancies
- Increased fetal mortality

TREATMENT

- Reduction of serum bile acid levels in order to prolong pregnancy and reduce both fetal risks and maternal symptoms
- Ursodeoxycholic acid: reduces maternal pruritus and improves fetal prognosis
  - Dose: 15 mg/kg/day or, independent of body weight, 1 g/day either as a single dose or divided into two to three doses until delivery
- Antihistamines
- Close obstetric surveillance and weekly fetal cardiotocographic)CTG) registration at least from 34 weeks' gestation
- Interdisciplinary management by dermatologists, hepatologists, gynecologists, and pediatricians absolutely mandatory

PRURITIC FOLLICULITIS OF PREGNANCY

- Prevalence: 1 in every 10,000 pregnancies
- Presents as papules and pustules concentrated around hair follicles
- Often, lesions begin on the abdomen and spread to the extremities.
- May be pruritic



PATHOPHYSIOLOGY

- Unknown
- Little evidence: immunologically or hormonally mediated
- No evidence of an infectious component.

DIFFERENTIAL DIAGNOSIS

- Infectious folliculitis
- Acneiform disorders
- HIV-associated eosinophilic folliculitis
- Drug reaction

DIAGNOSIS AND SEQUALAE

- Onset most often in third trimester
- Clinical diagnosis
- Increased incidence of (fetal) low birth weight
- No associated fetal morbidity or mortality

TREATMENT

- Low- or mid potency topical corticosteroid
- Benzoyl peroxide wash

PUSTULAR PSORIASIS OF PREGNANCY

- Aka Impetigo herpetiformis
- Often appears without personal/ family history of psoriasis
- Erythematous plaques with pustules on the inner thighs, flexural areas, and groin and spread to the trunk and extremities
- Flu-like symptoms are often present.
- Poor general condition, fever, diarrhea, dehydration, tachycardia and seizures



- As plaques enlarge, the center becomes eroded and crusted.
- Nails: onycholytic
- Hands, feet, face: spared
- Oral, esophageal erosions
- Mild pruritus, painful lesions





DIFFERENTIAL DIAGNOSIS

- Pustular psoriasis
- Dermatitis herpetiformis
- Erythema multiforme
- Pustular subcorneal dermatosis
- Gestational pemphigoid

DIAGNOSIS AND SEQUALAE

- Rare gestational dermatosis with typical onset in the last trimester of pregnancy and rapid resolution in the postpartum period
- Histology
  - Neutrophilc inflammatory infiltrate, epidermal acanthosis and papillomatosis with focal parakeratosis
  - Neutrophils collections, forming intraepidermal multilocular microabscesses, called spongiform pustules of Kogoj
- Leukocytosis, increased ESR and negative bacterial culture of pustules and peripheral blood
- ↓Levels of calcium, phosphate and albumin
- Maternal deaths are rare but there are risks of stillbirth

TREATMENT

- Systemic corticosteroids, 30-60mg of prednisone per day
- Cyclosporin may be used in refractory cases
- *Even if the pustules are sterile, some authors recommend adjuvant treatment with cephalosporin*
- Replacement of calcium, fluids and electrolytes

ATOPIC ERUPTION OF PREGNANCY

- Benign pruritic disorder of pregnancy
- %20of patients suffer from an exacerbation of pre-existing atopic dermatitis with atypical clinical picture.
- %80experience atopic skin changes for the first time ever or after a long remission (e.g., since childhood.(



- 2/3rd present with widespread eczematous changes (*so-called E-type AEP*) often affecting typical atopic sites such as face, neck, upper chest, and the flexural surfaces of the extremities.
- 1/3rd have papular lesions (*P-type AEP*.(
- Small erythematous papules disseminated on trunk and limbs, as well as typical prurigo nodules, mostly located on the shins and arms.
- Extreme dryness of the skin



PATHOPHYSIOLOGY

- Thought to be triggered by pregnancy-specific immunological changes
- Reduced cellular immunity and reduced production of Th1 cytokines (IL-2, interferon gamma, IL-12) stands in contrast to the dominant humoral immunity and increased secretion of Th2 cytokines (IL-4, IL-10).
- Thus, the exacerbation of preexisting atopic dermatitis as well as the first manifestation of atopic skin changes can be explained by a predominant Th2 immune response that is typical for pregnancy.

DIFFERENTIAL DIAGNOSIS

- *Tinea* infection
- Scabies
- Contact dermatitis
- ICP
- Pruritic folliculitis ofpregnancy
- PG

DIAGNOSIS AND SEQUALAE

- Onset at any point in pregnancy
- Diagnosis is made clinically.
- Serology, histopathology, and immunofluorescence are nonspecific.
- No increase in fetal morbidity or mortality

TREATMENT

- Symptomatic treatment
  - Topical corticosteroids
  - Antihistamines
- Severe cases
  - Short course of systemic corticosteroids and antihistamines
  - Phototherapy (UVB) is a helpful additional measure and considered safe in pregnancy

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THANK YOU