

## Pregnancy-Related Skin Changes and Diseases

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During pregnancy, skin changes are common. Many of these changes are normal, directly related to the physiological changes of pregnancy and should not be mistaken for a skin disorder<sup>1</sup>. Fortunately, most of these skin diseases are of no risk to the mother or baby and are simply the marks of motherhood.

The skin changes associated with pregnancy are broadly classified into physiological changes, dermatoses modified by pregnancy and dermatoses of pregnancy<sup>2</sup>.

### 1. Physiological Changes

Pigmentation occurs following the increase in MSH. Generalized increase in pigmentation is seen with accentuation of normally hyperpigmented areas as areolae, axillae and genitalia. This occurs in 90% of patients usually in the 1<sup>st</sup> trimester. It regresses postpartum. Linea nigra is a dark line that appears on the abdomen, running straight down from the umbilicus. Moles increase size and in number. Melasma (Figure 1) is seen in centrofacial, malar and mandibular pattern. It occurs in 75 % of patients and appears in the 2<sup>nd</sup> or 3<sup>rd</sup> trimester and usually regresses within a year after delivery. It worsens with UVB exposure<sup>1</sup>.



Figure 1. Showing the distribution and appearance of melasma<sup>4</sup>

Hair changes include retention of hairs in the anagen phase of hair cycle, hirsutism (face, limbs and back): which usually regresses postpartum and telogen effluvium post partum. Nail changes include softening of the nails, distal onycholysis and subungual keratosis. During pregnancy, some pregnant women experience thicker hair and stronger nails<sup>1,2</sup>.

Eccrine sweating glands show increased activity with hyperhidrosis, miliaria and dyshidrotic eczema while apocrine glands show decreased activity.

Sebaceous glands show increased activity, giving rise to Montgomery tubercles on the areolae. If there is acne vulgaris, it either improves dramatically or gets worse<sup>1</sup>.

Vascular changes are due to the increase in oestrogens and are in the form of palmar erythema, spider naevi, haemangiomas, varicose veins, haemorrhoids, non pitting oedema of face, hands and feet<sup>1</sup>.

Striae gravidarum (stretch marks of pregnancy) are red lines or bands that can appear on the abdomen during pregnancy or the breasts after breastfeeding, which later become white, smooth and shiny (Figure 2). It occurs when elastic tissue stretches as the abdomen and breasts enlarge<sup>1</sup>.



Figure 2. Showing the distribution and appearance of striae gravidarum<sup>4</sup>

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Skin tags are small, harmless skin outgrowths that occur especially on the neck, but can be found on any part of body<sup>1</sup>.

### ***Are these skin changes permanent or harmful?***

Most of these changes disappear within a few months after the baby is born, but tend to reappear in subsequent pregnancies. Striae gravidarum do not disappear completely, but in time they become less noticeable. Except for affecting the mother's appearance (cosmetic effects), these skin changes do not harm mother or baby in any way<sup>1</sup>.

## **2. Dermatoses modified by pregnancy**

### ***Skin diseases aggravated by pregnancy***

In the form of infections due to reduced cell mediated immunity, as candidal vaginitis, pityrosporum folliculitis, trichomoniasis, condyloma accuminata, herpes simplex, varicella/zoster and leprosy. Pregnancy seems to accelerate the development of AIDS in asymptomatic HIV-positive persons. Severe seborrheic dermatitis or recalcitrant orovulval candidiasis should raise the suspicion of HIV. Autoimmune diseases are affected by pregnancy.

Systemic lupus erythematosus may be exacerbated and usually presents by cutaneous flares as well as arthritis. Systemic sclerosis, polymyositis/dermatomyositis and pemphigus may all be exacerbated in pregnancy. Other diseases that may flare during pregnancy include metabolic diseases as porphyria cutanea tarda, connective tissue disorders as Ehlers-Danlos syndrome and miscellaneous conditions such as acne vulgaris, urticaria, lichen planus, neurofibromatosis and keloids<sup>3</sup>.

### ***Skin diseases which may improve during pregnancy***

These include hidradenitis suppurativa, atopic dermatitis, sarcoidosis and psoriasis (although exacerbations may occur)<sup>3,4</sup>.

## **3. Dermatoses of Pregnancy (Specific dermatoses of pregnancy)**

These are rashes that only occur in pregnancy.

### ***Pruritus Gravidarum (cholestasis of pregnancy)***

It has no primary lesions, manifested only by generalized pruritus and jaundice, Secondary excoriations may be present. It occurs after the 6<sup>th</sup> week, progresses throughout pregnancy and

resolves after delivery. It is widely accepted that the sluggish flow and retention of bile salts that occurs in pregnancy, is the cause of the itch<sup>4</sup>.

Treatment involves use of itch-reduction measures such as cooling the skin, applying anti-itch lotions and oral antihistamines if the itch is severe. Vitamin K supplements and bile salts chelators as cholestyramine are useful. The use of steroids or ursocolic acid is still under evaluation by clinical research. The condition may recur with subsequent pregnancies or if the woman takes certain oral contraceptives. There is increased incidence of fetal complications<sup>4</sup>.

### ***Prurigo gestationis***

The onset of this disease is usually in the 2<sup>nd</sup> or 3<sup>rd</sup> trimester. It presents by pruritic excoriated papules and nodules on the extensors of the extremities and abdomen. It clears postpartum and usually does not recur. Fetal and maternal outcomes are not affected and treatment is symptomatic<sup>4,5</sup>.

### ***Pruritic Urticarial Papules and Plaques of Pregnancy (PUPPP)***

The onset is usually in the 3<sup>rd</sup> trimester, usually in the first pregnancy. It resolves spontaneously within 1 week of parturition and is unlikely to recur in subsequent pregnancy. It presents as urticarial papules and plaques. Occasionally small vesicles and target

lesions are present but larger bullae do not occur. It starts in striae and then spreads peripherally, the rash is associated with intense itching. Fetal and maternal outcomes are not affected (Figure 3).



**Figure 3.** Showing the distribution and appearance of PUPPP<sup>4</sup>

Treatment is by topical steroids are usually effective. If not, systemic steroids may safely be used to bring the eruption under control. Oral antihistamines are only mildly effective<sup>3,4,5</sup>.

***Impetigo herpetiformis***

This is a severe form of pustular psoriasis whose onset is in 3rd trimester. The disease is acute, usually febrile with a rash in the form of grouped pustules on erythematous base, which begin in the flexures.

Progression occurs until large areas of the skin are involved. The face, hands and feet are spared.

Resolution occurs with delivery, but recurrence with subsequent pregnancies may be expected. Fetal death is not uncommon due to placental insufficiency.

Treatment consists of systemic steroids in the form of 40-60 mg of oral prednisolone per day<sup>4,5</sup>.

***Herpes (Pemphigoid) Gestationis***

This is an autoimmune bullous disorder whose onset is usually in the 2<sup>nd</sup> or 3<sup>rd</sup> trimester. It can recur with increased severity in subsequent pregnancies or with the use of oral contraceptives. In most cases, urticarial papules and plaques begin periumbilically with intense itching. Tense vesicles and bullae may develop<sup>3,4,5</sup>.

The disease is associated with low birth weight and prematurity. Both are due to placental insufficiency. Post partum flare often occurs<sup>5</sup>.

Treatment consists of topical steroids for mild cases, antihistamines. Systemic steroids are reserved to severe cases<sup>5</sup>.

***Pruritic folliculitis of pregnancy***

Presents as small follicular pustules scattered widely over the trunk and limbs, starting usually in the 2<sup>nd</sup> or 3<sup>rd</sup> trimester. Resolution occurs within 2-3 weeks post-partum. Maternal and fetal outcome is normal<sup>4,5</sup>.

**References**

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