The Skin in Pregnancy

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Abstract

Background: Physiologic skin changes are common during pregnancy due to a temporary shift in hormonal, metabolic, and immunologic factors. Physicians may mistake normal skin changes in pregnancy as pathologic change within the skin, and so an appreciation of the common and less common skin manifestations will assist in appropriate patient care.

Objective: This review highlights the normal physiologic skin changes in pregnancy, which include pigmentedary changes, changes to the hair and nails, alterations in glandular activity, vascular and hematological changes, cutaneous tumors, and mucous membrane changes.

Conclusion: Physiologic changes to the skin in pregnancy can be complex and confusing. Pregnancy can be a stressful time for women so it is imperative that physicians be aware of the normal skin changes during pregnancy in order to prevent unnecessary investigations and treatments.

Antécédents: Les changements physiologiques de la peau, dus à un dérèglement hormonal, métabolique et immunologique temporaire, sont courants durant la grossesse. Les médecins peuvent confondre un changement cutané normal avec un changement pathologique, d’où la nécessité de bien connaître les manifestations fréquentes et moins fréquentes en vue de fournir aux patientes les soins adéquats.

Objectif: Cet exposé met l’accent sur les changements cutanés normaux durant la grossesse, notamment : les altérations pigmentaires, les changements qui surviennent aux cheveux et aux ongles, la modification de l’activité glandulaire, les changements aux fonctions vasculaires et hématologiques, les tumeurs cutanées et l’altération des muqueuses.

Conclusion: Les changements physiologiques cutanés durant la grossesse peuvent être complexes et déroutants. Vu que la grossesse peut être une période éprouvante pour les femmes, il importe que les médecins puissent reconnaître les changements cutanés normaux afin d’éviter les tests et les traitements superflus.

Pregnancy is a time of great change as well as stress for a woman. Some of these changes are cutaneous, so it is important that all healthcare workers dealing with pregnant patients have a knowledge of the normal and abnormal changes in the skin during pregnancy. Skin changes during pregnancy are influenced by hormonal, metabolic, and immunologic factors. Physiologic changes occur frequently and are often considered a normal part of pregnancy; they include pigmentedary changes, changes to the hair and nails, alterations in glandular activity, vascular and hematological changes, and mucous membrane changes. In addition, cutaneous disease specific to pregnancy and skin diseases aggravated by pregnancy must be considered. Accurate diagnosis with an assessment of the impact of the change on the pregnancy and also of the possible effect of any planned treatment on the pregnancy is paramount in reassuring the patient and relieving unnecessary stress.

Pigmentation

Hyperpigmentation
Hyperpigmentation of varying degrees is common during pregnancy and may occur in up to 90% of women.1,2 It is more pronounced in women with darker hair and skin color.3,4 Areas that are already pigmented become darker, including the areolae, genitalia, neck, axillae, inner thighs, and periumbilical skin.5 The linea alba darkens to become the linea nigra, a hyperpigmented linear streak on the midline of the abdomen extending from the umbilicus to the symphysis pubis (Fig. 1). Recent scars, freckles, and nevi can also darken and even enlarge during gestation.6–10 A recent study of 22 patients found that pregnancy is not associated with any significant change in
melanocytic nevi. To date, there is no convincing evidence that proves pregnancy induces malignant degeneration of moles. Pigmentary demarcation lines are abrupt transitions from areas of normal pigmentation to areas of hypopigmentation. In pregnancy, these present on the posteromedial aspect of the lower extremities and regress following parturition. Longitudinal melano-nychia has also been reported to develop during pregnancy. Hyperpigmentation is thought to be related to increased levels of progesterone, estrogen, and melano-ocyte-stimulating hormones which are known to stimulate melanogenesis, although this is still under dispute. While the pigmentation often fades in the postpartum period, complete regression is less likely.

**Melasma**
Formerly called chloasma or the “mask of pregnancy,” melasma is symmetric, blotchy brown hyperpigmentation of the face presenting during the second half of pregnancy. More common in dark-skinned individuals, it occurs in 45%–75% of pregnant women in either centrofacial, malar, or mandibular patterns. The centrofacial pattern involves the cheeks, forehead, upper lip, nose, and chin. The malar pattern and mandibular pattern involve the cheeks and nose and the chin, respectively. The etiology of melasma is considered to be a combination of environmental exposure to the sun and cosmetics, genetics, and an increase in estrogen, progesterone, and melanocyte-stimulating hormone. Histologically, there is an epidermal and a dermal type of melasma, classified by the location of melanin. Frequently, a combination of both types is found. Fortunately, unlike the melasma associated with oral contraceptives, the melasma of pregnancy regresses in the postpartum period with fewer than 10% of cases persisting. Treatment of persistent melasma is difficult and success depends on the depth of the pigment. For the epidermal type, present in 72% of cases in pregnancy, various forms of hydroquinone creams 2%–5% are effective. Addition of retinoic acid and a corticosteroid cream may enhance efficacy as seen in the Kligman formulation of tretinoin (0.1%), hydroquinone (5%), and dexamethasone (0.1%) nightly with depigmentation occurring in approximately six weeks. Sunscreens and avoidance of ultraviolet radiation and irritating cosmetics should be encouraged to prevent exacerbation of melasma.

**Striae Distensae (also called Striae Gravidarum)**
Striae, or “stretch marks,” usually develop late in the second trimester of pregnancy, occurring in as much as 90% of white women, and much less frequently in Asian or black females. The skin most commonly affected includes the abdomen, breasts, axillae, lower back, buttocks, arms, and thighs. Initially, striae appear as atrophic violaceous bands progressing to persistent, but much improved, flesh-colored to pale atrophic bands in the postpartum period (Fig. 2). The etiopathogenesis may be related to a combination of genetic predisposition, hormones, and the weight gain of pregnancy. There may be an increase in relaxin, estrogen, and corticosteroids, all of which decrease adhesiveness between collagen fibers and promote formation of ground substance causing separation and clinical striae at areas of distention. Striae may form due to structural changes which include realignment and reduced elastin and fibrillin fibers in the dermis.

Unfortunately, there is no good treatment for striae. Some women resort to the application of vitamin E or aloe oils. It is unproven, that they work and they may be associated with a contact dermatitis reaction. There have been reports of topical tretinoin having limited benefit.

**Pruritus in Pregnancy**
Pruritus is a common symptom in pregnancy, observed in 3%–14% of all pregnancies. Pruritus can occur in both the presence and the absence of underlying skin lesions. When primary skin lesions are absent, it is in-