International Journal of Women's Dermatology 3 (2017) 30–36

Contents lists available at ScienceDirect

International Journal of Women's Dermatology

Review

Dermatologic conditions in patients of color who are pregnant☆

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ARTICLE INFO

Article history:
Received 25 November 2016
Received in revised form 6 February 2017
Accepted 8 February 2017

Keywords:
skin of color
dermatoses
pregnancy

ABSTRACT

Certain dermatoses that present during pregnancy have a predilection for populations with skin of color (SOC). Additionally, certain systemic diseases such as systemic lupus erythematosus tend to be more aggressive during pregnancy and confer worse prognoses in women with SOC. The purpose of this review is to highlight the unique implications of selected diseases during pregnancy as it relates to SOC. Dermatologists should be vigilant for the unique clinical variations of dermatological conditions in patients of color who are pregnant to ensure correct diagnoses and optimize treatment outcomes.

Introduction

Certain dermatoses that present during pregnancy have a predilection for populations with skin of color (SOC). Additionally, certain systemic diseases such as systemic lupus erythematosus (SLE) tend to be more aggressive during pregnancy and confer worse prognoses in women with SOC. This review highlights the unique implications of selected diseases during pregnancy as it relates to SOC.

Connective tissue changes

Striae gravidarum (SG) is the most common connective tissue change during pregnancy and is more common in women with black, Hispanic, or Asian ethnicities (Chang et al. 2004). The clinical evolution of SG starts with immature, red striae (striae rubra [SR]) that progress to mature, white striae (striae alba [SA]). In the SOC population, the hue of the striae can be more darkly pigmented (striae nigra [SN]) and there may be absence of SR, or the color can be a combination of hyperpigmentation and erythema (Fig. 1). Dermoscopy shows hypermelanosis of the epidermal rete ridges that transversally crosses lesions in a ladder-like fashion in SN but minimal melanosis is observed in SA (Piérard-Franchimont et al. 2005).

There is no strong evidence that topical treatments are effective to prevent SG (Brennan et al. 2012) although there is limited evidence on the use of over-the-counter remedies such as centella and bitter almond oil (Korgavkar and Wang 2015). The treatment approach should be based on the stage of striae (SR vs SA). Postpartum, topical tretinoin (pregnancy category C) can lead to improvement of SR (Kang et al. 1996) and SG (Rangel et al. 2001) but no studies have been done exclusively in a SOC population. Products that contain glycolic acid improve SA in patients with skin types I through V (Ash et al. 1998). Microdermabrasion may also benefit patients (Hexsel et al. 2014).

Various lasers have become popular as a therapeutic alternative but all have a risk of causing hyperpigmentation. A 585-nm pulsed dye laser (PDL) can be beneficial but should be avoided or used with great caution in patients with skin types IV through VI (Jiménez et al. 2003; Nouri et al. 1999). Non-ablative fractional lasers (1540-nm, 1550-nm, and 1560-nm) can be beneficial, but whether they are more beneficial to treat SR versus SA is unclear (Graber et al. 2008; Malekzad et al. 2014; Stotland et al. 2008; Tretti Clementoni and Lavagno 2015). Ablative lasers have a greater risk of causing complications when compared with nonablative lasers and treatment in patients with skin types IV and higher are associated with scarring and hyperpigmentation (Metelitsa and Alster 2010; Savas et al. 2014). Overall, due to the higher risk of hyperpigmentation in the SOC population, patients should be adequately counseled on the risks and benefits of treatment with laser therapy.

Beneficial nonlaser treatments include intense pulsed light (IPL; Hernández-Pérez et al. 2002) and radiation frequency (Manuskiatti

☆ Conflicts of interest: None.

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http://dx.doi.org/10.1016/j.ijwd.2017.02.019

et al. 2009). The safety and efficacy of other potential laser and nonlaser treatments require further research (Alexiades-Armenakas et al. 2004; Goldman et al. 2008; Park et al. 2012; Sadick et al. 2007).

Hypertrophic scars and keloids

Hypertrophic scars and keloids are particularly common in patients of black, Hispanic, or Asian descent (Shridharani et al. 2010). There may be a genetic predisposition in these populations that leads to excessive fibroblast proliferation and collagen synthesis during wound healing (Fujiwara et al. 2005; Nakaoka et al. 1995; Wolfram et al. 2009). During pregnancy, keloid formation is a concern in surgical sites and particularly in caesarean sections (Tulandi et al. 2011). There are no reliable preventive measures but risks can be reduced with careful surgical techniques and wound care. For example, when performing surgical procedures on women who are pregnant, careful surgical techniques should be used to achieve atraumatic and precise hemostasis and skin edge eversion closure.

Caesarean sections that use an absorbable subcuticular stitch closure lead to better cosmetic results than those with surgical staples (Alderdice et al. 2003). Bilayered closures of trunk and extremities with subcuticular running polyglactin 910 suture left in place also has a better appearance than simple running epidermal closures (Alam et al. 2006). Proper wound care and infection prevention are important. Silicone gel sheets or pressure therapy can be used for surgical sites as well as intralesional corticosteroid medications (pregnancy category C). Triamcinolone acetonide (10-40 mg/mL) is the most commonly used among intralesional corticosteroid medications and injections are repeated several times at 4- to 6-week intervals (Lumenta et al. 2014). There is limited evidence to support the use of lasers for the treatment of hypertrophic scars and keloids (Gauglitz 2013). Surgical resection is associated with a high recurrence rate up to 100% (Berman and Bieley 1996).

Pigmentary changes

Melasma

Ninety percent of women experience some form of hyperpigmentation during pregnancy (Kroumpouzos and Cohen 2001). The pigmentary change may be more obvious in the SOC population (Nakama et al. 2009). Melasma (chloasma) is the most cosmetically disturbing form of hyperpigmentation and occurs during up to 75% of pregnancies (McHugh and Laurent 1989). It is most common in women of black, Hispanic, or Asian descent (Grimes 1995).

Prevention includes counseling on sun protection. Topical treatment options are summarized in Table 1. Azelaic acid is a pregnancy category B drug (Intendis 2005) that is generally considered safe to take during pregnancy. Less is known about hydroquinone (pregnancy category C) in terms of safety and it is generally not recommended to be taken during pregnancy (Nussbaum and Benedetto 2006). Topical steroid medications (pregnancy category C) are often mixed with tretinoin and hydroquinone and need to be used with caution in order to not result in steroid-induced acne (Plewig and Kligman 1973).

Postpartum, topical therapy can include hydroquinone, tretinoin, azelaic acid, or topical corticosteroid combinations. Both hyper- and hypopigmentation may be a side effect with combination use (Kligman and Willis 1975) and long-term use of hydroquinone can lead to ochronosis (Katsambas and Antoniou 1995). Chemical peels and laser therapies should be administered with caution in the SOC population due to the risk for postinflammatory hyperpigmentation (PIH; Graber et al. 2008; Ingber 2009; Kroumpouzos and Cohen 2001; Malekzad et al. 2014; Metelitsa and Alster 2010; Nouri et al. 1999; Stotland et al. 2008; Tretti Clementoni and Lavagno 2015). Botanicals such as Chinese herbs and various plant extracts have also become increasingly popular (Fisk et al. 2014).

Dermatoses of pregnancy

Intrahepatic cholestasis of pregnancy

Higher incidence of intrahepatic cholestasis of pregnancy (ICP) has been noted in certain groups with SOC including American Indian (Reyes et al. 1978), Indian, and Pakistani populations (Abedin et al. 1999). Although ICP resolves with delivery, untreated ICP can lead to fatal fetal outcomes (Rioseco et al. 1994); thus, a timely diagnosis is important. Pruritus without rash is common and characteristic but clinical jaundice only occurs in approximately 10% to 15% of patients (Lunzer 1989). Jaundice may not be apparent or reliable on the basis of an examination of the skin in patients with SOC; thus, an assessment should focus on the sclera of eyes, hard palate, palms of the hand, and soles of the feet to identify yellow discoloration. It is important to note that the diagnosis of ICP is not made on the basis of clinical findings but by confirmation of elevated serum bile acid and/or elevated aminotransferase levels (Pusl and Beuers 2007). Thus, laboratory tests should be considered for any woman who is pregnant and suspected of having ICP such as those

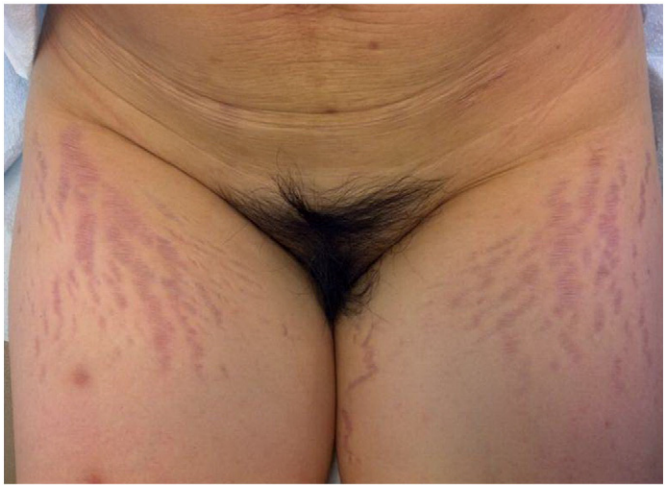

Fig. 1. A 35-year-old Chinese female who experienced polymorphic eruption of pregnancy that presented with striae on her thighs postpartum, which was likely the result of the pregnancy and the use of topical steroid medications.