Chapter 6

Psoriasis in Pregnancy

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INTRODUCTION

The prevalence of psoriasis ranges from 0.1 to 3% as reported from various studies. It is not infrequent to encounter psoriasis in pregnancy. Various forms of clinical presentations of the disease are seen in pregnancy. Effect on fetus may occur due to psoriasis or medications used for treatment. It is important for physician to be aware of the drugs that can be used as well as those which are contraindicated during pregnancy or lactation.

The effect of pregnancy on psoriasis is variable. Pregnancy may influence the severity of psoriasis. In fact, psoriasis often improves during pregnancy. The alterations in immunity from Th1 to Th2 dominance due to hormonal changes in pregnancy leads to the improvement in psoriasis.[1] These females subsequently develop a "postpartum flare" of their psoriasis. Interleukin-10 (IL-10) levels are raised in pregnancy.[2] It has anti-inflammatory and immune suppressive effect which may be responsible for improvement in psoriasis.

On the other hand, some females may experience exacerbation of psoriasis. This exacerbation usually recurs in subsequent pregnancies.

Pregnancy can act as precipitating factor for development of erythrodermic or pustular psoriasis. Pregnancy may act as a triggering factor for the articular disease and psoriatic arthritis can occur in postpartum period.[3]

Placental vasculopathy in mothers suffering from psoriasis can cause intrauterine growth retardation and low birth weight.[4, 5] Also, psoriasis is associated with high rates of comorbidities, such as diabetes mellitus, cardiovascular diseases, obesity and metabolic syndrome that may also lead to complications during pregnancy and increase the risk of malformations. It should also be kept in mind that fetus may be affected by medications that are used for psoriasis.

Impetigo herpetiformis:[6] It is characteristic form of pustular psoriasis seen in pregnancy. It commonly occurs in third trimester. It can be associated with hypocalcemia and hypoparathyroidism. Erythematous plaques appear initially in flexures. The pustules appear at periphery of plaques. Centrifugal spread occurs to involve entire body relatively sparing face, hands and feet. It is accompanied by fever, dehydration and tachycardia. The condition tends to improve postpartum. There is risk of recurrence with even higher severity in subsequent pregnancies. The differential diagnoses include erythema multiforme, dermatitis herpetiformis and subcorneal pustular dermatosis. The treatment of choice is systemic corticosteroids with daily 30–60 mg of prednisone in tapering doses. Cyclosporine may be used in refractory cases. Correction of hypocalcemia is required along with fluids and electrolytes management.

MANAGEMENT OF PSORIASIS IN PREGNANCY

Topical treatment is the first-line treatment of psoriasis in pregnant and lactating women.

Emollients should be added to low to medium potency corticosteroids due to lack of adverse effects. Percutaneous absorption of corticosteroids depends on dose, excipient, treatment surface and application site, treatment duration, use of occlusive dressings and frequency of applications. It is useful to advise the patient not to apply excessive amounts over large areas, or on those under occlusion, to avoid excessive absorption and possible risk of low birth weight.[3,7]

Phototherapy with broadband (290–320 nm) ultraviolet B (UVB) and narrowband UVB (311–312 nm) appear to be safe during pregnancy. It was not associated with increased risk of fetal abnormalities or prematurity though data is limited. It is preferred for treatment for extensive disease.

PUVA therapy constitutes use of psoralens with ultraviolet light. It is not recommended due to mutagenicity although some consider topical PUVA safe.

Tacrolimus has been used to treat psoriasis on face as well as intertriginous areas. There are no adequate studies on the use of topical tacrolimus during pregnancy. The advantages are lack of skin atrophy and it is absorbed percutaneously to lesser extent compared to steroids.

Treatment with topical salicylic acid is controversial. No studies have been published on the use of topical salicylic acid in pregnant women.

Other agents like anthralin, coal tar, calcipotriol, vitamin D_3 analogue are used topically in psoriasis. However, these are generally not preferred due to lack of proven safety and limited data is available.

Tazarotene is not used in pregnancy due to risk of teratogenicity—fetal death and malformations found in animal studies.

Systemic corticosteroids are not routinely used in the treatment of psoriasis. Although their use is associated with rapid clearing of lesions, exacerbation occurs after stopping. They are indicated in erythroderma unresponsive to other therapies and fulminant generalized pustular psoriasis when other drugs are ineffective or contraindicated.

The use of cyclosporine showed no increased risk to the fetus and may be an option in psoriasis. It can be considered in extensive disease not responding to topical therapy and UVB phototherapy. The disadvantages are adverse effects like hypertension and nephrotoxicity which can complicate pregnancy.

Methotrexate can cause growth retardation, spontaneous miscarriage, cleft palate and other skeletal abnormalities. Hence, it is absolutely contraindiacted in pregnancy.[8]

Acitretin and systemic retinoid can cause cardiac, craniofacial and central nervous system malformations and thus are contraindicated during pregnancy.

Psoriatic arthritis can be treated with sulphasalazine, steroids or cyclosporine during pregnancy.

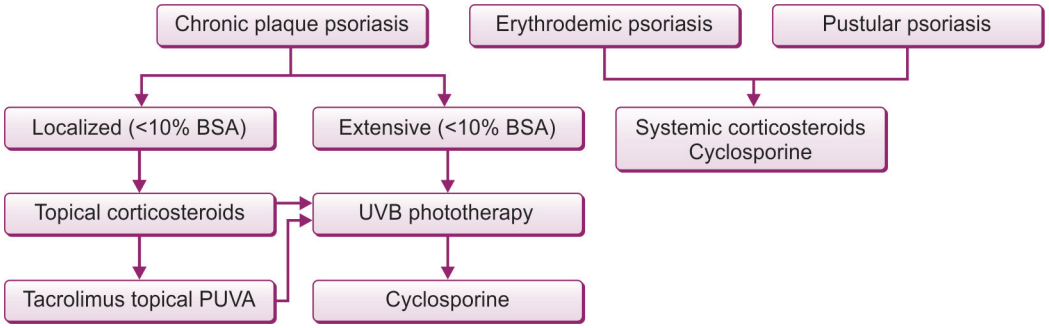
Treatment in Lactation

Regarding lactating women, the first line of treatment is with emollients and low to medium potency corticosteroids. UVB therapy in lactating women is considered to be safe and is indicated as a second-line treatment in these patients. Other drugs such as methotrexate, acitretin, cyclosporine and psoralen (PUVA) are contraindicated during breastfeeding.

Biologicals like adalimumab, etanercept and infliximab (anti-TNF-α) and ustekinumab (IL-12 and 23). The data and experience with these agents is limited for use during pregnancy or breastfeeding.

Topical therapies consisting of emollients and low- to moderate-potency topical steroids constitute first-line therapy for patients with limited psoriasis in pregnancy or lactation. The second-line treatment for pregnant women is narrowband ultraviolet B phototherapy or broadband ultraviolet B, if narrowband ultraviolet B is not available. The tumor necrosis factor-α inhibitors (adalimumab, etanercept, and infliximab) as well as cyclosporine and systemic steroids (in second and third trimesters) may be used with caution in cases unresponsive to above.[9]

Treatment of Psoriasis in Pregnancy



Drugs used in Psoriasis

Drug	*Pregnancy category*	*Remarks*
Corticosteroids	C	Topicals used for limited disease. Systemic used rarely in pustular or erythrodermic psoriasis
Tacrolimus	C	Preferred in flexures or face
Coal tar	C	Usually not preferred
Tazarotene	X	Teratogenic
Anthralin	C	Unacceptable. Not preferred
Calcipotriol	C	Limited data
UVB	—	Safe. Used for extensive disease or limited form not responding to topical therapy
PUVA	C	Topical can be used in localized (psoralen) cases, e.g. palmoplantar psoariasis. Systemic not used
Methotrexate	X	Teratogenic. Contraindicated. Avoid pregnancy for 3 months after stopping the drug
Azathioprine	D	—
Acitretin	X	Teratogenic. Contraindicated. Avoid pregnancy for 3 years after stopping the drug
Biologicals adalimumab, etanercept, infliximab, ustekinumab	B	Limited data available for use in pregnancy

Key Points

- Psoriasis usually improves in pregnancy.
- Such females often have postpartum flare.
- Role of IL-10, altered immune response (Th2 dominance over Th1).
- Pregnancy can precipitate erythrodermic or pustular psoriasis.
- Impetigo herpetiformis: Form of pustular psoriasis in pregnancy.
- Therapeutic options include topical and systemic corticosteroids, tacrolimus, UVB phototherapy, cyclosporine.

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