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Original Research Article

A PROSPECTIVE OBSERVATIONAL STUDY OF PREGNANCY-SPECIFIC DERMATOSES IN A TERTIARY CARE HOSPITAL

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ABSTRACT

Background: The physiological adaptations that occur during pregnancy involve complex endocrine, metabolic, and immunological mechanisms, many of which are reflected in the skin. This study aims to characterize the spectrum of dermatoses occurring during pregnancy, estimate their prevalence among women attending the antenatal outpatient clinic, and investigate the association of these cutaneous manifestations with gravidity and gestational age.

Materials and Methods: Antenatal women referred from OBG department to Dermatology department for skin condition and diagnosed with pregnancy specific dermatoses at Dr. Patnam Mahender Reddy institute of medical sciences during September 2025 to August 2026 were taken up for study.

Results: A total of 180 antenatal women diagnosed with pregnancy specific dermatoses. Atopic eruption of pregnancy was the most common condition. 70.6% of pregnancy specific dermatoses were in 20–29-year age group. Atopic eruption of pregnancy (AEP) and Polymorphic eruption of pregnancy (PEP) were more common among primiparous women. Pemphigoid gestationis (PG) and Intrahepatic cholestasis of pregnancy (ICP) were more frequent among multiparous women. AEP was observed during the first trimester. PEP was more common in twin pregnancies. There was no association between the presence of specific dermatoses and mode of delivery.

Conclusion: Pregnancy-specific dermatoses are a group of skin disorders unique to pregnancy that can significantly affect maternal comfort and quality of life. Although most are benign and self-limiting, accurate diagnosis is essential to identify disorders associated with potential maternal or fetal complications. A multidisciplinary approach involving dermatologists and obstetricians is therefore important for the effective care of pregnant women with these conditions.

Keywords: Pregnancy, Dermatoses

INTRODUCTION

Dermatoses of pregnancy comprise a heterogeneous group of skin disorders that occur specifically during pregnancy and the postpartum period. These conditions are associated with the complex hormonal, immunological, metabolic, and physiological changes that take place during pregnancy. They exhibit varied clinical presentations, ranging from pruritic skin eruptions to more severe conditions that may adversely affect maternal health and fetal outcomes. Interactions of hormonal factors with the immune system play a significant role in the pathogenesis of skin diseases specific to pregnancy.[1] The classification of pregnancy-specific dermatoses has evolved over time with advances in clinical research and understanding of these conditions. In 1983, Holmes and Black.[2] proposed the first classification, which comprised four disorders: 1) pemphigoid gestationis (PG), (formerly known as herpes gestationis); 2) polymorphic eruption of pregnancy (PEP), also referred to as pruritic urticarial papules and plaques of pregnancy (PUPPP);3) prurigo of pregnancy (PP); and 4) pruritic folliculitis

of pregnancy (PF). In 1998, Shornick.[3] revised this classification by incorporating intrahepatic cholestasis of pregnancy (ICP) alongside PG, PEP, and PP.

Subsequently, in 2006, Ambros-Rudolph et al,[4] proposed a revised classification based on a retrospective, two-Centre study involving 505 pregnant women. They introduced the term atopic eruption of pregnancy (AEP) to encompass eczema of pregnancy, prurigo of pregnancy, and pruritic folliculitis of pregnancy, owing to their overlapping clinical features. AEP was identified as the most common pregnancy-specific dermatosis in their study. Accordingly, the revised classification grouped pregnancy-specific dermatoses into four major categories:

1. Atopic eruption of pregnancy (AEP)
2. Polymorphic eruption of pregnancy (PEP)
3. Pemphigoid gestationis (PG)
4. Intrahepatic cholestasis of pregnancy. (ICP)

MATERIALS AND METHODS

Antenatal women referred from Obstetrics and Gynecology department to Dermatology department for skin condition at Dr. Patnam Mahender Reddy institute of medical sciences during September 2025 to August 2026 were taken up for study.

A total of 180 antenatal women diagnosed with pregnancy specific dermatoses were enrolled in our study for a period of 1 year, irrespective of gestational age and gravidity. A written informed consent was taken from all the patients before the study. A detailed obstetric and medical history was obtained from each participant, followed by a thorough general physical and dermatological examination.

Participants were followed up until delivery, and relevant pregnancy outcomes, including the sex and birth weight of the neonate and the mode of delivery, were documented. Women who declined to participate in the study or could not be followed up until delivery were excluded.

RESULTS

A total of 180 cases were analyzed. Atopic eruption of pregnancy was the most common condition, accounting for 101 cases (56.11%), followed by polymorphic eruption of pregnancy in 71 cases (39.44%). Intrahepatic cholestasis of pregnancy was observed in 6 cases (3.33%), while pemphigoid gestationis was the least common condition, accounting for 2 cases (1.11%). [Table 1]

Table 1: Distribution of Pregnancy-Specific Dermatoses Among Study Participants

Pregnancy-Specific Dermatoses	Number of cases	Percentage
Atopic eruption of pregnancy	101	56.11%
Polymorphic eruption of pregnancy	71	39.44%
Pemphigoid gestationis	2	1.11%
Intrahepatic cholestasis of pregnancy.	6	3.33%

Most women in the present study belonged to the 20–29-year age group, accounting for 127 cases (70.6%). Women aged 30–39 years constituted 50 cases (27.78%), while only 3 women (1.7%) were aged 40 years and above. [Table 2]

Table 2: Age-wise Distribution of Specific Dermatoses of Pregnancy

Pregnancy specific dermatoses	20-29 yrs	30-39 yrs	40 and above
AEP	68	31	2
PEP	56	14	1
PG	1	1	-
ICP	2	4	-
Total	127 (70.6%)	50 (27.78%)	3 (1.7%)

AEP – Atopic eruption of pregnancy; PEP – Polymorphic eruption of pregnancy; PG – Pemphigoid gestationis; ICP – Intrahepatic cholestasis of pregnancy.

The parity-wise distribution of pregnancy-specific dermatoses revealed that atopic eruption of pregnancy (AEP) was more common among primiparous women, accounting for 66 cases (65.35%), compared with 35 cases (34.65%) among multiparous women. Polymorphic eruption of pregnancy (PEP) was predominantly observed in primiparous women, with 61 cases (85.92%), while 10 cases (14.08%) occurred among multiparous women. Both cases of pemphigoid gestationis (PG) were observed in multiparous women. Intrahepatic cholestasis of pregnancy (ICP) was more frequent among multiparous women, with 4 cases (66.67%), compared with 2 cases (33.33%) among primiparous women. [Table 3]

Table 3: Distribution of parity among pregnancy specific dermatoses

Pregnancy specific dermatoses	Primi para	Multi para
AEP	66	35
PEP	61	10
PG	-	2
ICP	2	4

In the present study, the distribution of pregnancy-specific dermatoses varied across the three trimesters. Atopic eruption of pregnancy was observed in 62 cases (61.39%) during the first trimester and 39 cases (38.61%) during the second trimester. Polymorphic eruption of pregnancy was predominantly observed in the third trimester, accounting for 65 cases (91.55%), while 6 cases (8.45%) occurred during the second trimester. All cases of pemphigoid gestationis (2 cases) and intrahepatic cholestasis of pregnancy (6 cases) were observed during the third trimester. [Table 4]

Table 4: Trimester-wise Distribution of Specific Dermatoses of Pregnancy

Trimester	AEP	PEP	PG	ICP	Total
First trimester	62	-	-	-	
Second trimester	39	6	-	-	
Third trimester	-	65	2	6	

Polymorphic eruption of pregnancy (PEP) was more common in twin pregnancies than in singleton pregnancies. However, no significant difference was observed in distribution of other pregnancy-specific dermatoses between singleton and twin gestations, as presented in [Table 5].

Table 5: Distribution of Pregnancy-Specific Dermatoses in Singleton and Twin Pregnancies

Pregnancy	AEP	PEP	PG	ICP
Singleton	52	6	1	4
Twins	49	65	1	2

[Table 6] shows that there was no association between the presence of specific dermatoses and mode of delivery.

Table 6: Mode of delivery in patients with pregnancy-specific dermatoses.

Mode of delivery	AEP	PEP	PG	ICP
Normal delivery	51	36	1	3
LSCS	50	35	1	3

DISCUSSION

Pregnancy is a unique physiological state associated with metabolic, immunological, and hormonal adaptations, which may lead to various changes in the skin and mucous membranes. In addition to these physiological changes, pregnancy may be associated with specific pruritic dermatoses that require clinical evaluation and appropriate management.

An 1-year observational study was conducted from September 2025 to August 2026, involving 180 antenatal women. The participants were evaluated for pregnancy-associated dermatoses and followed up to assess maternal and fetal outcomes.

In the present study, Atopic eruption of pregnancy was the most common condition, accounting 56.11%, followed by polymorphic eruption of pregnancy in 39.44% which is similar to study done by Agarwal P5. In a study conducted by Chitikela MR et al,[6] Polymorphic eruption of pregnancy was the most prevalent condition, observed in 40.8% followed by Atopic Eruption of Pregnancy in 34.4%. The prevalence of intrahepatic cholestasis of pregnancy in the present study was 3.33%, whereas Chitikela MR et al6 reported a higher incidence of 17.2%, indicating variation in the observed prevalence between the two studies. It is reported to have a familial predisposition and a considerable tendency to recur in subsequent pregnancies, with recurrence rates estimated to range between 45% and 70%.[7,8] Pemphigoid gestationis is a rare autoimmune bullous disease of pregnancy with incidence of 1 in 10000 – 1 in 50000 pregnancies. In the present study, pemphigoid gestationis was the least common condition, accounting for 2 cases (1.11%).

Most women in the present study belonged to the 20–29-year age group, accounting for 70.6% Which is similar to the study done by Dabette KL et al.[9] In present study, Atopic eruption of pregnancy (AEP) was more common among primiparous women, accounting for 66 cases (65.35%). AEP is fundamentally driven by an underlying genetic predisposition combined with intense hormonal and immune shifts. Polymorphic eruption of pregnancy (PEP) was predominantly observed in primiparous women with 61 cases (85.%) becausee of the lax abdominal wall in multi gravida resulting in less stretching. Both cases of pemphigoid gestationis (PG) were observed in multiparous women. Intrahepatic cholestasis of pregnancy (ICP) was more frequent among multiparous women.

Atopic eruption of pregnancy was observed in 62 cases (61.39%) during the first trimester. Polymorphic eruption of pregnancy, Pemphigoid gestationis and intrahepatic cholestasis of pregnancy were predominantly observed in the third trimester. Vaughan Jones et al,[10] reported that approximately 49% of pregnancy-specific dermatoses manifested during the third trimester. Puri & Puri study,[11] also showed similar results. This higher incidence may be attributed to the progressive hormonal fluctuations and physiological changes that occur as pregnancy advances, reaching their peak during the third trimester.

Polymorphic eruption of pregnancy (PEP) was more common in twin pregnancies than in singleton pregnancies. This is due to excessive abdominal

stretching. The association with multiple gestation is supported by the study conducted by Elling et al,[12] Lesions usually fade after delivery or during postpartum period with a favorable prognosis for both mother and baby.[13]

There was no association between the presence of specific dermatoses and mode of delivery. Although the risk of adverse fetal outcomes is generally low, approximately 5–10% of neonates may develop transient skin manifestations. Intrahepatic cholestasis of pregnancy is specific to pregnancy and typically resolves after delivery, but it can cause adverse neonatal outcomes.[14] So, careful antenatal monitoring is advisable. Recurrence of Pemphigoid Gestationalis may also occur outside pregnancy, particularly in association with oral contraceptive use or menstrual cycles.[15] Pruritic eruption of pregnancy usually resolves within 3–6 weeks postpartum.[16] No significant adverse maternal or fetal outcomes were observed in our study. This favorable outcome may be attributed to the availability of comprehensive antenatal surveillance, timely diagnosis, and appropriate obstetric management at our tertiary care center.

CONCLUSION

Physiological skin changes are frequently encountered during pregnancy. However, pregnancy-specific dermatoses should be carefully identified and differentiated, as they can cause considerable discomfort and psychological distress to pregnant women. Early recognition and appropriate therapeutic management are essential to ensure optimal maternal well-being and favorable pregnancy outcomes. A multidisciplinary approach involving dermatologists and obstetricians is therefore important for the effective care of pregnant women with these conditions.

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