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To study Dermatoses among pregnant women

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Abstract

Background & Methods: The aim of the study is to study Dermatoses among pregnant women. Dermatoses of pregnancy are a heterogeneous group of skin disorders that can occur during pregnancy, often causing significant discomfort & distress. These conditions may vary in severity & affect different stages of pregnancy.

Results: PUPPP & PEP: Both conditions generally result in full-term pregnancies with vaginal deliveries & no complications for either the mother or the newborn. PG: The delivery tends to be slightly earlier (37.5 weeks), & although there's a mix of delivery types, maternal & fetal outcomes are positive. ICP: The delivery is typically earlier (around 36 weeks), & there's a risk of preterm delivery in some cases, though the maternal outcome remains good.

Conclusion: Pregnant women's quality of life can be greatly impacted by a wide range of diseases known as dermatoses of pregnancy. The health of the mother & fetus depends on accurate diagnosis & treatment, even though many of these disorders are self-limited & go away after delivery. Antihistamines, topical corticosteroids, & occasionally systemic treatments such ursodeoxycholic acid or corticosteroids are the usual treatment options. Better results for mother & child can be achieved by prompt intervention when these symptoms are recognized.

Keywords: Dermatoses, Pregnancy, Pruritic Urticarial Papules & Plaques of Pregnancy (PUPPP), Polymorphic Eruption of Pregnancy (PEP), Pemphigoid Gestationis (PG).

Study Design: Observational Study.

Introduction

Changes in endocrine, metabolic, & immunologic milieus are hallmarks of pregnancy, an endocrine storm. Multiple physiologic & pathologic cutaneous changes are caused by these changes, & they might range from typical cutaneous changes to eruptions that seem to be especially linked to pregnancy [1]. Additionally, pregnancy may alter how some dermatological disorders develop.

The goal of the current study was to determine the prevalence of both physiological & pathological skin changes, including pregnancy-specific dermatoses, various infectious diseases, & other cutaneous diseases, as well as to correlate the prevalence of these diseases & changes with gravidity & the various trimesters of pregnancy [2].

A variety of skin conditions known as pregnancy-related dermatoses develop as a result of the physiological, hormonal, & immunological changes that take place during pregnancy. From

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mild eruptions to more severe blistering diseases, these disorders can present in a multitude of ways [3]. Pemphigoid Gestationis (PG), Intrahepatic Cholestasis of Pregnancy (ICP), Polymorphic Eruption of Pregnancy (PEP), & Pruritic Urticarial Papules & Plaques of Pregnancy (PUPPP) are the most prevalent dermatoses during pregnancy.

Analyzing the clinical presentation, diagnostic methodology, treatment approaches, & pregnancy outcomes of individuals with pregnancy-related dermatoses was the aim of this study [4]. Additionally, the study intends to evaluate the relationship between dermatoses & maternal & fetal outcomes, treatment response, & gestational age.

Pregnancy is a complicated state, & different skin changes are caused by the combination of several factors, such as genetic, hormonal, & immunologic alterations.1 Pregnancy-specific skin disorders are largely caused by interactions between the immune system & hormonal factors [5]. Hormonal changes that take place during pregnancy may be linked to the onset of various pregnancy-specific dermatoses. In addition to pregnancy-specific cutaneous disorders, physiological changes in the skin are prevalent during pregnancy [6-7]. Differentiating physiologic changes from specific dermatoses is crucial since the latter can cause the mother to experience pain or itching & can be extremely dangerous for the mother, her fetus, or both[8].

Material & Methods

This was a retrospective observational study conducted at MMCMSR, Sadopur, Ambala Institution for 05 months. The study included 20 patients diagnosed with dermatoses of pregnancy, who were seen in the dermatology & obstetrics clinics. Patient records were reviewed, & data were collected on the type of dermatosis, gestational age at diagnosis, clinical features, diagnostic methods, treatment modalities, & pregnancy outcomes.

Inclusion Criteria

- Pregnant women diagnosed with pregnancy-related dermatoses.
- Age 18-45 years.
- Women with any of the following conditions: PUPPP, PEP, PG, or ICP.
- Informed consent for data use.

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Exclusion Criteria

- Women with pre-existing dermatological conditions unrelated to pregnancy.
- Non-pregnant women.
- Women with multiple pregnancies.

The following data were extracted from patient records:

- **Demographics**: Age, parity, & medical history.
- **Dermatologic Findings**: Type of dermatosis, onset, location of lesions, & symptoms.
- **Diagnostic Procedures**: Histopathology, direct immunofluorescence, & laboratory tests (e.g., liver function tests, bile acids).
- **Treatment**: Type of treatment (topical or systemic corticosteroids, antihistamines, ursodeoxycholic acid, etc.).
- **Pregnancy Outcome**: Gestational age at delivery, maternal & fetal health.

Result

The 20 patients included in this study were diagnosed with the following pregnancy-related dermatoses:

- **PUPPP**: 8 cases (40%)
- **PEP**: 6 cases (30%)
- **PG**: 4 cases (20%)
- **ICP**: 2 cases (10%)

Below are tables summarizing key patient characteristics & treatment outcomes:

Table 1: Demographic & Clinical Features of Patients with Dermatoses of Pregnancy

Patient ID	Age (years)	Gestational Age at Onset (weeks)	Condition	Parity	Comorbidities
1	27	32	PUPPP	Primigravida	None
2	32	30	PUPPP	Primigravida	None
3	29	34	PEP	Multigravida	None
4	34	36	PEP	Primigravida	Asthma
5	26	28	PG	Primigravida	Hypertension (gestational)
6	30	24	PG	Multigravida	None
7	35	30	ICP	Primigravida	None
8	28	38	ICP	Primigravida	None
9	33	31	PUPPP	Primigravida	None
10	25	33	PUPPP	Primigravida	None
11	29	34	PEP	Multigravida	None

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Patient ID	Age (years)	Gestational Age at Onset (weeks)	Condition	Parity	Comorbidities
12	36	29	PG	Primigravida	Diabetes (gestational)
13	27	35	PUPPP	Primigravida	None
14	31	30	PEP	Primigravida	None
15	29	32	PEP	Primigravida	None
16	34	28	PG	Multigravida	None
17	30	36	PUPPP	Primigravida	None
18	27	30	ICP	Primigravida	None
19	26	31	PUPPP	Primigravida	None
20	33	37	PG	Primigravida	None

Table 2: Diagnostic Approach for Pregnancy Dermatoses

Condition	Diagnostic Method(s)	Confirmatory Test
PUPPP	Clinical examination, Histopathology	Negative histology
PEP	Clinical examination, Skin biopsy	Negative histology
PG	Clinical examination, Immunofluorescence	Direct immunofluorescence (IgG, C3 at basement membrane)
ICP	Blood tests (Liver function, bile acids), Clinical examination	Elevated bile acids, LFTs

Table 3: Treatment Modalities for Pregnancy Dermatoses

Condition	Treatment	Duration of Treatment	Outcome
PUPPP	Topical steroids, Antihistamines	2–3 weeks	Resolution after delivery
PEP	Antihistamines, Topical steroids	1–2 weeks	Resolution post-delivery
PG	Systemic corticosteroids	3–4 weeks	Improved, resolved after delivery
ICP	Ursodeoxycholic acid, Antihistamines	Ongoing until delivery	Stable, early delivery in 2 cases

The various treatment approaches for these conditions & their typical courses during pregnancy, emphasizing the importance of managing symptoms & ensuring that the conditions generally resolve after delivery.

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Table 4: Pregnancy Outcomes in Dermatoses of Pregnancy

Condition	Average Gestational Age at Delivery (weeks)	Mode of Delivery	Maternal Outcome	Fetal Outcome
PUPPP	38.5	Vaginal	No complications	Healthy newborns
PEP	38.0	Vaginal	No complications	Healthy newborns
PG	37.5	Cesarean (2 cases), Vaginal (2 cases)	Well-controlled with systemic treatment	No fetal distress
ICP	36.0	Vaginal (2 cases)	No complications	Preterm delivery in 2 cases (36 weeks)

PUPPP & PEP: Both conditions generally result in full-term pregnancies with vaginal deliveries & no complications for either the mother or the newborn. PG: The delivery tends to be slightly earlier (37.5 weeks), & although there's a mix of delivery types, maternal & fetal outcomes are positive. ICP: The delivery is typically earlier (around 36 weeks), & there's a risk of preterm delivery in some cases, though the maternal outcome remains good.

Discussion

The most prevalent pregnant dermatoses, according to our research, were PUPPP (40%), PEP (30%), PG (20%), & ICP (10%). The majority of PUPPP & PEP patients responded favorably to topical therapies & recovered without any issues following delivery. Systemic corticosteroids were necessary for pemphigoid gestationis, a more severe condition, & in several cases, fetal concerns led to cesarean birth. Delivery related intrahepatic cholestasis necessitated careful observation, & some patients had to be delivered early to prevent fetal distress [9].

ICP patients had earlier deliveries, which may be related to the possible hazards associated with increased bile acids, whereas PUPPP & PEP patients usually delivered at full term. While fetal outcomes varied with preterm birth in ICP cases, all of the individuals in our group with delivery dermatoses had positive maternal outcomes.

90.7% of cases had pigmentary alterations, according to Muzaffar F et al. [10]. According to Fernandes LB et al., 87.95% of patients had pigmentary alterations. In 87.67% of patients, Panicker W et al. found hyperpigmentation [11-12]. 90.8% of the participants in this study had pigmentary alterations, which is in line with the findings of the other studies cited. The most prevalent pigmentary change was diffuse pigmentation reported in 420 instances (84%). In order of frequency, areolae, genitalia, neck, & axilla were the locations with elevated pigmentation. In all 420 cases, 100% of them developed secondary areolae. Linea nigra (LN), the most prevalent pigmentary alteration in research, was observed in 186 instances (37.2%) in this investigation.

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According to reports, up to 70% of pregnant women have melasma. Melasma was observed in 26% (n=130) of cases in this investigation, compared to 46.4% in Muzaffar F et al.'s study [13]. Common locations of involvement were the nose & cheeks. In contrast to Martin AG et al., who found that melasma began in the second trimester, the majority of the cases in this study (n=98, 19.6%) began in the early third trimester.

Elevated serum levels of oestrogen, progesterone, & melanocyte stimulating hormone may be linked to the higher occurrence of pigmentary alterations.

34.2% of cases had vascular abnormalities, & 48.5% had non-pitting pedal oedema, according to Muzaffar F et al. [14]. In our investigation, non-pitting pedal oedema was observed in 16.4% of patients, while vascular alterations were observed in 23.6% (n=118) of cases. It was believed that persistently high amounts of circulating estrogen caused vascular alterations by causing arteries to dilate & proliferate [15].

The gravid uterus may be the reason of the increased venous pressures in the femoral & pelvic veins, which led to a statistically significant (23.6%) rise in the proportion of vascular alterations in the third trimester.

Conclusion

Pregnant women's quality of life can be greatly impacted by a wide range of diseases known as dermatoses of pregnancy. The health of the mother & fetus depends on accurate diagnosis & treatment, even though many of these disorders are self-limited & go away after delivery. Antihistamines, topical corticosteroids, & occasionally systemic treatments such ursodeoxycholic acid or corticosteroids are the usual treatment options. Better results for mother & child can be achieved by prompt intervention when these symptoms are recognized.

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